

2017年度

九州歯科大学 シラバス

大学院

歯学研究科 歯学専攻

# 目次

大学院

歯学研究科 歯学専攻

|   |              |     |
|---|--------------|-----|
| Fresher ' s Research Training Program ..... | 歯学研究科長 ..... | 406 |
|   | 中原 孝洋        |     |
|   | 瀬田 祐司        |     |
|   | 自見 英治郎       |     |
|   | 有吉 渉         |     |
|   | 竹内 弘         |     |
|   | 安細 敏弘        |     |

|  |   |     |
|--|---|-----|
| Seminar in Biomaterials (Basic Course)                     | 森本 泰宏<br>中島 秀彰<br>日高 勝美<br>清水 博史<br>永松 有紀<br>池田 弘 | 408 |
| Seminar in Biomaterials (Advanced Course)                  | 清水 博史<br>永松 有紀<br>池田 弘                            | 410 |
| Dental Biomaterials  | 清水 博史<br>永松 有紀<br>池田 弘                            | 412 |
| Advanced Biomaterials                                      | 清水 博史<br>永松 有紀<br>池田 弘                            | 414 |
| Advanced Biomaterials                                      | 清水 博史<br>永松 有紀<br>池田 弘                            | 416 |
| Anatomy (Basic course)                                     | 瀬田 祐司<br>中富 満城<br>豊野 孝<br>片岡 真司                   | 418 |
| Anatomy (Advanced course)                                  | 瀬田 祐司<br>中富 満城<br>豊野 孝<br>片岡 真司                   | 421 |
| Anatomy Practice (Basic course)                            | 瀬田 祐司<br>中富 満城<br>豊野 孝<br>片岡 真司                   | 424 |
| Anatomy Practice (Advanced course)                         | 瀬田 祐司<br>中富 満城<br>豊野 孝<br>片岡 真司                   | 426 |
| Anatomy Practice   | 瀬田 祐司<br>中富 満城<br>豊野 孝<br>片岡 真司                   | 428 |
| Anatomy Advanced course                                    | 瀬田 祐司<br>中富 満城<br>豊野 孝<br>片岡 真司                   | 430 |
| Head and Neck Dissection Course                            | 瀬田 祐司<br>中富 満城<br>豊野 孝<br>片岡 真司                   | 432 |
| Physiology Practice  | 小野 堅太郎<br>人見 涼露                                   | 434 |
| Physiology Practice  | 小野 堅太郎<br>人見 涼露                                   | 436 |
| Physiology Practice  | 小野 堅太郎<br>人見 涼露                                   | 438 |
| Physiology Division Colloquium                             | 小野 堅太郎<br>人見 涼露                                   | 440 |
| Molecular and Cell Biology Training Program (Basic Class)  | 自見 英治郎<br>古株 彰一郎<br>松原 琢磨                         | 442 |
| Molecular and Cell Biology Training Program (Middle Class) | 自見 英治郎<br>古株 彰一郎<br>松原 琢磨                         | 445 |

|  |              |     |
|--|--------------|-----|
| Molecular and Cell Biology Training Program (Advanced Class) ..... | 自見 英治郎 ..... | 448 |
|  | 古株 彰一郎       |     |
|  | 松原 琢磨        |     |
| Bone Journal Club .....  | 自見 英治郎 ..... | 451 |
|  | 古株 彰一郎       |     |
|  | 松原 琢磨        |     |
| Oral Pathology .....   | 松尾 拓 .....   | 453 |
|  | 矢田 直美        |     |
|  | 張 皿          |     |
| Practice of Oral Pathology (basic course) .....                    | 松尾 拓 .....   | 455 |
|  | 張 皿          |     |
| Practice of Oral Pathology (advanced course) .....                 | 松尾 拓 .....   | 457 |
| Colloquium of Oral Pathology .....                                 | 松尾 拓 .....   | 459 |
| Clinical Diagnostic Pathology .....                                | 松尾 拓 .....   | 461 |
|  | 矢田 直美        |     |
| Practice of Clinical Diagnostic Pathology .....                    | 矢田 直美 .....  | 463 |
| Infectious Diseases .....  | 西原 達次 .....  | 465 |
|  | 有吉 渉         |     |
|  | 沖永 敏則        |     |
| Infectious Diseases .....  | 西原 達次 .....  | 467 |
|  | 有吉 渉         |     |
|  | 沖永 敏則        |     |
| Infectious Diseases .....  | 西原 達次 .....  | 469 |
|  | 有吉 渉         |     |
|  | 沖永 敏則        |     |
| Pharmacology .....   | 竹内 弘 .....   | 471 |
|  | 大住 伴子        |     |
|  | 東 泉          |     |
| Pharmacology .....   | 竹内 弘 .....   | 473 |
|  | 大住 伴子        |     |
|  | 東 泉          |     |
| Pharmacology .....   | 竹内 弘 .....   | 475 |
|  | 大住 伴子        |     |
|  | 東 泉          |     |
| Pharmacology .....   | 竹内 弘 .....   | 477 |
|  | 大住 伴子        |     |
|  | 東 泉          |     |
| Journal Club - Current Topics for Drug Discovery - .....           | 竹内 弘 .....   | 479 |
|  | 大住 伴子        |     |
|  | 東 泉          |     |
| Seminar in Molecular Pharmacology .....                            | 竹内 弘 .....   | 481 |
|  | 大住 伴子        |     |
|  | 東 泉          |     |
| Seminar in Cellular and Molecular Pharmacology .....               | 竹内 弘 .....   | 483 |
|  | 大住 伴子        |     |
|  | 東 泉          |     |
| Seminar in Pharmacology .....                                      | 竹内 弘 .....   | 485 |
|  | 大住 伴子        |     |
|  | 東 泉          |     |
| Clinical Epidemiology .....  | 角舘 直樹 .....  | 487 |
| Clinical Epidemiology .....  | 角舘 直樹 .....  | 490 |
| Clinical Epidemiology .....  | 角舘 直樹 .....  | 493 |
| Clinical Epidemiology Practice .....                               | 角舘 直樹 .....  | 496 |
| Journal Club in Clinical Epidemiology .....                        | 角舘 直樹 .....  | 498 |
| Oral Health Science .....  | 日高 勝美 .....  | 500 |
|  | 秋房 住郎        |     |
|  | 園木 一男        |     |
|  | 吉野 賢一        |     |
|  | 辻澤 利行        |     |
|  | 引地 尚子        |     |

|   |  |     |
|---|--|-----|
| Oral Health Science .....   | 中道 敦子<br>日高 勝美 .....                               | 502 |
|   | 秋房 住郎<br>園木 一男<br>吉野 賢一<br>辻澤 利行<br>引地 尚子<br>中道 敦子 |     |
| Oral Health Science .....   | 日高 勝美 .....  | 504 |
|   | 秋房 住郎<br>園木 一男<br>吉野 賢一<br>辻澤 利行<br>引地 尚子<br>中道 敦子 |     |
| Training Program in Public Health and Social Security Policy .....  | 福泉 隆喜 .....  | 506 |
| Training Program in Public Health and Social Security Policy .....  | 福泉 隆喜 .....  | 509 |
| Training Program in Public Health and Social Security Policy .....  | 福泉 隆喜 .....  | 512 |
| Training Program in Public Health and Social Security Policy .....  | 福泉 隆喜 .....  | 515 |
| Practice of Public Health and Social Security Policy .....          | 福泉 隆喜 .....  | 518 |
| Practice of Public Health and Social Security Policy .....          | 福泉 隆喜 .....  | 520 |
| Colloquium of Public Health and Social Security Policy .....        | 福泉 隆喜 .....  | 523 |
| Primary Dental Care (Clinical Basic Course) .....                   | 栗野 秀慈 .....  | 525 |
|   | 村岡 宏祐  |     |
| Primary Dental Care (Clinical Advance Course) .....                 | 栗野 秀慈 .....  | 527 |
|   | 村岡 宏祐<br>邵 仁浩                                      |     |
| Primary Dental Care (Clinical Conference) .....                     | 栗野 秀慈 .....  | 529 |
|   | 村岡 宏祐  |     |
| Educational Research of Comprehensive Clinical Dentistry .....      | 栗野 秀慈 .....  | 531 |
|   | 村岡 宏祐  |     |
| Educational Research of Comprehensive Clinical Dentistry .....      | 栗野 秀慈 .....  | 533 |
|   | 村岡 宏祐  |     |
| Comprehensive dentistry (Basic course) .....                        | 木尾 哲朗 .....  | 535 |
|   | 永松 浩<br>鬼塚 千絵                                      |     |
| Comprehensive dentistry (advanced course) .....                     | 木尾 哲朗 .....  | 538 |
|   | 永松 浩<br>鬼塚 千絵                                      |     |
| Research of the dental education .....                              | 木尾 哲朗 .....  | 541 |
|   | 永松 浩<br>鬼塚 千絵                                      |     |
| Research of the dental education .....                              | 木尾 哲朗 .....  | 543 |
|   | 永松 浩<br>鬼塚 千絵                                      |     |
| Research of the dental education .....                              | 木尾 哲朗 .....  | 545 |
|   | 永松 浩<br>鬼塚 千絵                                      |     |
| Education and research of the general dentistry .....               | 木尾 哲朗 .....  | 547 |
|   | 永松 浩<br>鬼塚 千絵                                      |     |
| Education and research of the general dentistry .....               | 木尾 哲朗 .....  | 549 |
|   | 永松 浩<br>鬼塚 千絵                                      |     |
| Education and research of the general dentistry .....               | 木尾 哲朗 .....  | 551 |
|   | 永松 浩<br>鬼塚 千絵                                      |     |
| Endodontics and Restorative Dentistry (Clinical Basic Course) ..... | 北村 知昭 .....  | 553 |
|   | 諸富 孝彦<br>鷺尾 絢子                                     |     |

|   |   |       |     |
|---|---|-------|-----|
| Endodontics and Restorative Dentistry (Clinical Advance Course S) | 吉居 慎二<br>宮下 桂子<br>北村 知昭<br>諸富 孝彦<br>鷺尾 絢子<br>吉居 慎二<br>宮下 桂子 | ..... | 556 |
| Endodontics and Restorative Dentistry (Clinical Advance Course H) | 北村 知昭<br>諸富 孝彦<br>鷺尾 絢子<br>吉居 慎二<br>宮下 桂子                   | ..... | 558 |
| Endodontics and Restorative Dentistry (Research Seminar)          | 北村 知昭<br>諸富 孝彦<br>鷺尾 絢子<br>吉居 慎二<br>宮下 桂子                   | ..... | 560 |
| Endodontics and Restorative Dentistry (Research Practice)         | 北村 知昭<br>諸富 孝彦<br>鷺尾 絢子<br>吉居 慎二<br>宮下 桂子                   | ..... | 562 |
| Periodontology (Clinical Basic Course)                            | 中島 啓介<br>臼井 通彦<br>中村 太志<br>守下 昌輝<br>花谷 智哉                   | ..... | 564 |
| Periodontology  | 中島 啓介<br>臼井 通彦<br>中村 太志<br>守下 昌輝<br>花谷 智哉                   | ..... | 567 |
| Periodontology (Clinical Conference)                              | 中島 啓介<br>臼井 通彦<br>中村 太志<br>守下 昌輝<br>花谷 智哉                   | ..... | 569 |
| Periodontology (Advanced Periodontal Surgery)                     | 中島 啓介<br>臼井 通彦<br>中村 太志<br>守下 昌輝<br>花谷 智哉                   | ..... | 571 |
| Removable Prosthesis (Basic Course)                               | 有田 正博<br>中村 恵子  | ..... | 573 |
| Removable Prosthesis (Advanced Course )                           | 鱒見 進一<br>槇原 絵理  | ..... | 576 |
| Removable Prosthesis (Advanced Course )                           | 鱒見 進一<br>槇原 絵理  | ..... | 578 |
| Removable Prosthodontics (Clinical Research Design)               | 鱒見 進一<br>槇原 絵理  | ..... | 580 |
| Removable Prosthodontics (Medical Engineering Devices)            | 有田 正博   | ..... | 582 |
| Prosthodontics Implant supported Prosthesis                       | 細川 隆司<br>正木 千尋<br>小城 辰郎<br>近藤 祐介<br>柄 慎太郎                   | ..... | 584 |
| Prosthodontics Implant supported Prosthesis                       | 細川 隆司<br>正木 千尋<br>小城 辰郎<br>近藤 祐介                            | ..... | 586 |

|   |                                 |     |
|---|---------------------------------|-----|
| Oral Reconstruction and Rehabilitation .....                          | 柄 慎太郎<br>細川 隆司 .....            | 588 |
|   | 正木 千尋<br>小城 辰郎<br>近藤 祐介         |     |
| Oral Reconstruction and Rehabilitation .....                          | 柄 慎太郎<br>細川 隆司 .....            | 590 |
|   | 正木 千尋<br>小城 辰郎<br>近藤 祐介         |     |
| Oral Reconstruction and Rehabilitation .....                          | 柄 慎太郎<br>細川 隆司 .....            | 592 |
|   | 正木 千尋<br>小城 辰郎<br>近藤 祐介         |     |
| Advanced Oral Reconstruction and Rehabilitation .....                 | 柄 慎太郎<br>細川 隆司 .....            | 594 |
|   | 正木 千尋<br>小城 辰郎<br>近藤 祐介         |     |
| Basic Studies in Community Oral Health .....                          | 柄 慎太郎<br>安細 敏弘 .....            | 596 |
|   | 岩崎 正則<br>邵 仁浩<br>角田 聡子          |     |
| Advanced Studies in Community Oral Health .....                       | 安細 敏弘 .....                     | 598 |
|   | 岩崎 正則<br>邵 仁浩<br>角田 聡子          |     |
| Practice in Community Oral Health .....                               | 岩崎 正則 .....                     | 600 |
|   | 邵 仁浩                            |     |
| Practice in Community Oral Health .....                               | 安細 敏弘 .....                     | 603 |
|   | 岩崎 正則<br>角田 聡子                  |     |
| Current Topics in Community Oral Health .....                         | 安細 敏弘 .....                     | 605 |
|   | 岩崎 正則<br>角田 聡子                  |     |
| Internal Medicine for Dentistry .....                                 | 中道 郁夫 .....                     | 607 |
| Diagnosis and Treatment of Hypertension .....                         | 福原 正代 .....                     | 609 |
| Introduction of Internal Medicine .....                               | 福原 正代 .....                     | 611 |
| Pediatric Dentistry (Basic Course) .....                              | 牧 憲司 .....                      | 613 |
|   | 西田 郁子<br>藤田 優子<br>森川 和政<br>佐伯 桂 |     |
| Pediatric Dentistry (Advanced Course) .....                           | 牧 憲司 .....                      | 618 |
|   | 西田 郁子                           |     |
| Developmental Stomatognathic Function Science .....                   | 牧 憲司 .....                      | 622 |
|   | 西田 郁子<br>藤田 優子<br>森川 和政<br>佐伯 桂 |     |
| Developmental Stomatognathic Function Science (Case Conference) ..... | 牧 憲司 .....                      | 625 |
|   | 西田 郁子<br>藤田 優子<br>森川 和政<br>佐伯 桂 |     |
| Orthodontics (Basic) .....  | 川元 龍夫 .....                     | 627 |
|   | 瀧口 玲子<br>郡司掛 香織<br>黒石 加代子       |     |



|  |                                    |     |
|--|------------------------------------|-----|
| Orthodontics (Basic) .....                                 | 森田 淳平<br>川元 龍夫 .....               | 631 |
|  | 瀧口 玲子<br>郡司掛 香織<br>黒石 加代子<br>森田 淳平 |     |
| Orthodontics (Typodont exercise) .....                     | 川元 龍夫 .....                        | 634 |
|  | 瀧口 玲子<br>郡司掛 香織<br>黒石 加代子<br>森田 淳平 |     |
| Orthodontics (Clinical training) .....                     | 川元 龍夫 .....                        | 637 |
|  | 瀧口 玲子<br>郡司掛 香織<br>黒石 加代子<br>森田 淳平 |     |
| Orofacial Function and Orthodontics .....                  | 川元 龍夫 .....                        | 639 |
|  | 瀧口 玲子<br>郡司掛 香織<br>黒石 加代子<br>森田 淳平 |     |
| Orofacial Function and Orthodontics .....                  | 川元 龍夫 .....                        | 641 |
|  | 瀧口 玲子<br>郡司掛 香織<br>黒石 加代子<br>森田 淳平 |     |
| Orofacial Function and Orthodontics .....                  | 川元 龍夫 .....                        | 643 |
|  | 瀧口 玲子<br>郡司掛 香織<br>黒石 加代子<br>森田 淳平 |     |
| Oral and Maxillofacial Radiology .....                     | 森本 泰宏 .....                        | 645 |
|  | 田中 達朗<br>鬼頭 慎司<br>小田 昌史<br>松本 忍    |     |
| Conference of Oral and Maxillofacial Radiology .....       | 森本 泰宏 .....                        | 649 |
|  | 田中 達朗<br>鬼頭 慎司<br>小田 昌史<br>松本 忍    |     |
| Outline of Oral and Maxillofacial Radiology .....          | 森本 泰宏 .....                        | 651 |
|  | 田中 達朗<br>鬼頭 慎司<br>小田 昌史<br>松本 忍    |     |
| Practice of Oral and Maxillofacial Radiology .....         | 森本 泰宏 .....                        | 654 |
|  | 田中 達朗<br>鬼頭 慎司<br>小田 昌史<br>松本 忍    |     |
| Practice of Oral and Maxillofacial Radiology .....         | 森本 泰宏 .....                        | 657 |
|  | 田中 達朗<br>鬼頭 慎司<br>小田 昌史<br>松本 忍    |     |
| A reading circle on Oral and Maxillofacial Radiology ..... | 森本 泰宏 .....                        | 660 |
|  | 田中 達朗<br>鬼頭 慎司<br>小田 昌史            |     |

|  |  |     |
|--|--|-----|
| Basic treatment strategy of Oral and Maxillofacial Surgery .....         | 松本 忍<br>富永 和宏 .....<br>笹栗 正明<br>上原 雅隆<br>土生 学<br>吉賀 大午<br>岩永 賢二郎<br>三次 翔<br>高橋 理<br>河野 通直<br>藤井 誠子 | 662 |
| Basic diagnostic strategy of Oral and Maxillofacial Surgery .....        | 富永 和宏 .....<br>笹栗 正明<br>上原 雅隆<br>土生 学<br>吉賀 大午<br>岩永 賢二郎<br>三次 翔<br>高橋 理<br>河野 通直<br>藤井 誠子         | 665 |
| Oral and Maxillofacial Surgery 1(Pathology and disease mechanisms) ..... | 富永 和宏 .....<br>笹栗 正明<br>上原 雅隆<br>土生 学<br>吉賀 大午<br>岩永 賢二郎<br>三次 翔<br>高橋 理<br>河野 通直<br>藤井 誠子         | 668 |
| Oral and Maxillofacial Surgery 2 (Drug and gene induction) .....         | 富永 和宏 .....<br>笹栗 正明<br>上原 雅隆<br>土生 学<br>吉賀 大午<br>岩永 賢二郎<br>三次 翔<br>高橋 理<br>河野 通直<br>藤井 誠子         | 670 |
| Oral and Maxillofacial Surgery 3 (Conferences) .....                     | 富永 和宏 .....<br>笹栗 正明<br>上原 雅隆<br>土生 学<br>吉賀 大午<br>岩永 賢二郎<br>三次 翔<br>高橋 理<br>河野 通直<br>藤井 誠子         | 672 |
| Oral Medicine (Basic Course) .....                                       | 吉岡 泉 .....<br>宮本 郁也<br>國領 真也   | 674 |
| Oral Medicine (Advanced Course ) .....                                   | 吉岡 泉 .....<br>宮本 郁也<br>國領 真也<br>鶴島 弘基<br>坂口 修<br>大澤 賢次   | 676 |

|   |  |     |
|---|--|-----|
| Oral Medicine (Advanced Course )  | 田中 純平<br>吉岡 泉  | 679 |
| Oral Medicine (Advanced Course )  | 鶴島 弘基<br>大澤 賢次<br>坂口 修                                     | 681 |
| Oral Medicine (Jaw Deformity)   | 大澤 賢次<br>田中 純平<br>吉岡 泉                                     | 683 |
| Oral Medicine   | 鶴島 弘基<br>坂口 修<br>宮本 郁也                                     | 685 |
| Oral Medicine   | 國領 真也<br>田中 純平<br>吉岡 泉                                     | 687 |
| Dental Anesthesiology   | 宮本 郁也<br>國領 真也<br>鶴島 弘基<br>坂口 修<br>大澤 賢次<br>田中 純平<br>渡邊 誠之 | 689 |
| Dental Anesthesiology   | 椎葉 俊司<br>原野 望<br>左合 徹平<br>渡邊 誠之                            | 691 |
| Dental Anesthesiology   | 椎葉 俊司<br>原野 望<br>左合 徹平<br>渡邊 誠之                            | 693 |
| Anesthesiology  | 椎葉 俊司<br>原野 望<br>左合 徹平<br>渡邊 誠之                            | 696 |
| Dental Anesthesiology (Cardiac physiology & Cardiac Medicine )                | 渡邊 誠之  | 698 |
| Dental Anesthesiology (Cardiac physiology & Cardiac Medicine )                | 渡邊 誠之  | 700 |
| Dental Anesthesiology (Respiratory physiology and Pulmonary Pathophysiology ) | 渡邊 誠之  | 702 |
| Dental Anesthesiology (Respiratory physiology and Pulmonary Pathophysiology ) | 渡邊 誠之  | 704 |
| Dental Anesthesiology Basic course (practice)                                 | 渡邊 誠之  | 706 |
| Dental Anesthesiology (Advanced course)                                       | 渡邊 誠之  | 708 |
| Clinical Dental Anesthesiology  | 渡邊 誠之<br>椎葉 俊司<br>原野 望<br>左合 徹平                            | 710 |
| Oral Care and Rehabilitation (Basic)  | 柿木 保明<br>藤井 航<br>多田 葉子<br>木村 貴之<br>久保田 潤平                  | 712 |
| Oral Care and Rehabilitation (Advanced)                                       | 柿木 保明<br>藤井 航<br>多田 葉子<br>木村 貴之                            | 716 |
| Geriatric Dentistry   | 柿木 保明<br>藤井 航<br>多田 葉子<br>木村 貴之                            | 719 |
| Geriatric Dentistry   | 柿木 保明  | 721 |

|  |                     |     |
|--|---------------------|-----|
|  | 藤井 航                |     |
|  | 多田 葉子               |     |
|  | 木村 貴之               |     |
|  | 久保田 潤平              |     |
| Geriatric and Special Needs Dentistry (Advanced) .....     | 柿木 保明 .....         | 723 |
|  | 藤井 航                |     |
|  | 多田 葉子               |     |
|  | 木村 貴之               |     |
|  | 久保田 潤平              |     |
| Basic surgical skills .....                                | 中島 秀彰 .....         | 725 |
| Advanced Lecture .....                                     | 歯学研究科長 .....        | 727 |
|  | 福泉 隆喜               |     |
|  | 木尾 哲朗               |     |
|  | 北村 知昭               |     |
|  | 細川 隆司               |     |
|  | 瀬田 祐司               |     |
|  | 小野 堅太郎              |     |
|  | 自見 英治郎              |     |
|  | 竹内 弘                |     |
|  | 安細 敏弘               |     |
|  | 牧 憲司                |     |
|  | 川元 龍夫               |     |
|  | 森本 泰宏               |     |
| Molecular Biological Morphology .....                      | 瀬田 祐司 .....         | 730 |
|  | 中富 満城               |     |
|  | 豊野 孝                |     |
|  | 片岡 真司               |     |
| Molecular Biology Training Program .....                   | 自見 英治郎 .....        | 732 |
|  | 古株 彰一郎              |     |
|  | 松原 琢磨               |     |
| Molecular Biology Training Program .....                   | 自見 英治郎 .....        | 734 |
|  | 古株 彰一郎              |     |
|  | 松原 琢磨               |     |
| Neurophysiological Techniques .....                        | 小野 堅太郎 .....        | 736 |
|  | 人見 涼露               |     |
| Imaging technique and its analysis .....                   | 森本 泰宏 .....         | 738 |
|  | 田中 達朗               |     |
|  | 鬼頭 慎司               |     |
|  | 小田 昌史               |     |
|  | 松本 忍                |     |
| Risk management of the medically compromised patient ..... | 大渡 凡人 .....         | 740 |
| Advanced Analytical Chemistry .....                        | 〔非常勤講師〕竹中 繁織 .....  | 742 |
| Advanced Bioanalytical chemistry .....                     | 〔非常勤講師〕佐藤 しのぶ ..... | 744 |
| Advanced Intelligent System .....                          | 〔非常勤講師〕金 亨燮 .....   | 746 |
| Environmental Bio-adaptation .....                         | 〔非常勤講師〕前田 憲成 .....  | 748 |
| Functional Biomaterials .....                              | 〔非常勤講師〕宮崎 敏樹 .....  | 751 |
|  | 〔非常勤講師〕城崎 由紀        |     |
| Biomechanics .....   | 〔非常勤講師〕山田 宏 .....   | 753 |
| Advanced Biology of Chemosensory Organs .....              | 瀬田 祐司 .....         | 756 |
| Outline of Tooth Therapeutics and Research .....           | 北村 知昭 .....         | 758 |
| Periodontology .....                                       | 中島 啓介 .....         | 761 |
| Introduction to Oral and Maxillofacial Radiology .....     | 森本 泰宏 .....         | 763 |
| Oral and Maxillofacial Surgery .....                       | 富永 和宏 .....         | 765 |
| Clinical Research Design .....                             | 角館 直樹 .....         | 767 |
|  | 日高 勝美               |     |
|  | 唐木 純一               |     |
| Clinical Research Design .....                             | 角館 直樹 .....         | 769 |
|  | 日高 勝美               |     |
|  | 唐木 純一               |     |
| Geriatric Dentistry .....                                  | 日高 勝美 .....         | 771 |

|  |                             |     |
|--|-----------------------------|-----|
| Geriatric Dentistry .....                | 唐木 純一<br>日高 勝美 .....        | 773 |
| Introduction to Polymer Physics .....    | 唐木 純一<br>〔非常勤講師〕櫻井 和朗 ..... | 775 |
| Biomaterials .....                       | 〔非常勤講師〕中澤 浩二 .....          | 777 |
| Introduction to physical chemistry ..... | 〔非常勤講師〕竹中 繁織 .....          | 779 |
|  | 〔非常勤講師〕横野 照尚                |     |

2017年度

# Fresher ' s Research Training Program (Fresher ' s Research Training Program)

|       |   |     |          |    |                     |     |   |
|-------|---|-----|----------|----|---------------------|-----|---|
| 開講年次  | 1 grade   | 期区分 | 前期       | 科目 | Compulsory (Basic ) | 単位数 | 1 |
| 授業方法  | 講義  | 時間数 | 16 hours | 曜日 |                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                     |     |   |
| 科目責任者 | Dean, Graduate School of Dentistry                          |     |          |    |                     |     |   |
| 担当教員  | 日高 勝美、安細 敏弘、森本 泰宏、歯学研究科長、瀬田 祐司、自見 英治郎、有吉 渉、竹内 弘、中原 孝洋、中島 秀彰 |     |          |    |                     |     |   |

## 授業の概要

【Language】 English and Japanese

In order to start the research in graduate school, to understand the actual and the theory of the basic knowledge you need to know.

## 学生の到達目標

1. You can understand the laws and regulations and various guidelines for scientific research can respond
2. You can learn how use of the library, and practice the data retrieval methods using the planning and PubMed of research plan based on EBM
3. You can learn a minimum of knowledge of radiation exposure needed to use the X-ray imaging apparatus in animal research center and practice them. You can also explain about typical infection of the experimental animals in detail, particularly about the “ zoonotic disease ”
4. You can determine whether the reagents you use are non-medical of deleterious substances or poisons. You can explain the management for non-medical of deleterious substances or poisons. You can explain the safety measures in the laboratory
5. You can explain the critical medical ethics as medical professionals
6. You can understand the standard infection prevention required in practice to understand the basic procedure of nosocomial infection prevention and carry out them

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目       | 割合   |
|------------|------|
| attendance | 100% |

## その他

2017年度

# Fresher ' s Research Training Program (Fresher ' s Research Training Program)

|       |   |     |          |    |                     |     |   |
|-------|---|-----|----------|----|---------------------|-----|---|
| 開講年次  | 1 grade   | 期区分 | 前期       | 科目 | Compulsory (Basic ) | 単位数 | 1 |
| 授業方法  | 講義  | 時間数 | 16 hours | 曜日 |                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                     |     |   |
| 科目責任者 | Dean, Graduate School of Dentistry                          |     |          |    |                     |     |   |
| 担当教員  | 日高 勝美、安細 敏弘、森本 泰宏、歯学研究科長、瀬田 祐司、自見 英治郎、有吉 渉、竹内 弘、中原 孝洋、中島 秀彰 |     |          |    |                     |     |   |

## 授業計画

| 回 | 学習内容   | 授業方法    | 担当教員  | 事前・事後学習<br>学習課題   |
|---|--|---------|---|---|
| 1 | Ethics in scientific research I<br>Learn an overview of the laws, regulations and various guidelines for epidemiological studies and clinical research.  | Lecture | Hidaka K  | Review of lecture   |
| 2 | Literature search and use of library<br>Learn how use of the library, and practice the data retrieval methods using the planning and PubMed of research plan based on EBM.                                       | Lecture | Anasai T.<br>Morimoto Y.  | Read the textbook prior or post lecture                                     |
| 3 | Animal experiments and genetic recombination<br>Learn about infectious diseases of experimental animals, radiation exposure in animal research center, and gene recombination.                                   | Lecture | Dean, Graduate School of Dentistry.<br>Director of Animal Research Center.<br>Jimi E.<br>Morimoto Y.<br>Ariyoshi W. | Review of lecture   |
| 4 | Handling of poisonous and deleterious substances, management of the laboratory<br>Learn about safety measures in the laboratory on the handling of poisonous and deleterious substances used in the experiments. | Lecture | Takeuchi H.   | Check the storage and usage of reagents in the laboratory after the lecture |
| 5 | Ethics in scientific research II   | Lecture | Nakahara T.   | Review of lecture   |
| 6 | Infection control in medical care activities<br>Learn a nosocomial infection control and medical accident measures that are required in medical care activities.   | Lecture | Nakashima H.  | Review of lecture   |
| 7 | Industry-university cooperation<br>Learn about industry-university cooperation in order to take advantage of the research at the university in the industry.   | Lecture | Extramural Lecturer   | Review of lecture   |
| 8 | Bioethics<br>Learn about problems of bioethics and medical ethics.   | Lecture | Seta Y.   | Review of lecture   |

2017年度

# Seminar in Biomaterials (Basic Course) (Seminar in Biomaterials (Basic Course))

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades                                      | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習   | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                       |     |   |
| 科目責任者 | Shimizu H.  |     |          |    |                       |     |   |
| 担当教員  | 清水 博史、永松 有紀、池田 弘<br>Shimizu<br>Nagamatsu<br>Ikeda |     |          |    |                       |     |   |

## 授業の概要

【Language】 English and Japanese

In this course, you will learn basic knowledge, handling and experimental test method of dental materials in order to research organic material, metal material and inorganic material. For this purpose, we will teach you the knowledge and skills with regards of denture base resin, composite resin, gold alloy, titanium alloy, porcelain, and fine ceramics in response to your research theme.

## 学生の到達目標

You should achieve following assignments;  
Knowledge and handling of organic material  
Casting of dental alloys, especially gold alloys  
Knowledge and handling of dental porcelain and fine ceramics  
Material test methods  
Preparation of test piece and practice of three point loading test  
Preparation of test piece and practice of shear test  
Preparation of test piece and practice of bonding test  
Using casting machine in response to dental alloy  
Knowledge and handling of component analysis

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                                   | 割合  |
|--|-----|
| contents or the research report        | 80% |
| meeting and techniques of presentation | 20% |

## その他

Related text books



2017年度

# Seminar in Biomaterials (Basic Course) (Seminar in Biomaterials (Basic Course))

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades                                      | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習   | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                       |     |   |
| 科目責任者 | Shimizu H.  |     |          |    |                       |     |   |
| 担当教員  | 清水 博史、永松 有紀、池田 弘<br>Shimizu<br>Nagamatsu<br>Ikeda |     |          |    |                       |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法     | 担当教員                          | 事前・事後学習<br>学習課題             |
|----|---|----------|-------------------------------|-----------------------------|
| 1  | Orientation   | lecture  | Shimizu<br>Nagamatsu<br>Ikeda | Review of lecture           |
| 2  | Impression material   | lecture  | Shimizu<br>Nagamatsu<br>Ikeda | Review of lecture           |
| 3  | Denture base resin  | lecture  | Shimizu<br>Nagamatsu<br>Ikeda | Review of lecture           |
| 4  | Composite resin   | lecture  | Shimizu<br>Nagamatsu<br>Ikeda | Review of lecture           |
| 5  | Dental noble metal alloy  | lecture  | Shimizu<br>Nagamatsu<br>Ikeda | Review of lecture           |
| 6  | Dental base metal alloy   | lecture  | Shimizu<br>Nagamatsu<br>Ikeda | Review of lecture           |
| 7  | Dental porcelain  | lecture  | Shimizu<br>Nagamatsu<br>Ikeda | Review of lecture           |
| 8  | Dental fine ceramics  | lecture  | Shimizu<br>Nagamatsu<br>Ikeda | Review of lecture           |
| 9  | Elastic and permanent strain of impression materials                                      | Practice | Shimizu<br>Nagamatsu<br>Ikeda | Review of lecture           |
| 10 | Transverse strength of dental resins  | Practice | Shimizu<br>Nagamatsu<br>Ikeda | Review of lecture           |
| 11 | Bond strength of composite resins   | Practice | Shimizu<br>Nagamatsu<br>Ikeda | Review of lecture           |
| 12 | Fabrication of wax pattern for gold alloy and casting using centrifugal casting machine   | Practice | Shimizu<br>Nagamatsu<br>Ikeda | Review of lecture           |
| 13 | Fabrication of wax pattern for titanium alloy and casting using argon arc casting machine | Practice | Shimizu<br>Nagamatsu<br>Ikeda | Review of lecture           |
| 14 | Shear strength test of dental porcelain and fine ceramics                                 | Practice | Shimizu<br>Nagamatsu<br>Ikeda | Review of lecture           |
| 15 | Research report meeting   | Practice | Shimizu<br>Nagamatsu<br>Ikeda | Preparation of presentation |

2017年度

# Seminar in Biomaterials (Advanced Course)

## (Seminar in Biomaterials (Advanced Course))

|       |                  |     |          |    |                       |     |   |
|-------|------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades     | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 演習               | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻       |     |          |    |                       |     |   |
| 科目責任者 | Shimizu H.       |     |          |    |                       |     |   |
| 担当教員  | 永松 有紀、清水 博史、池田 弘 |     |          |    |                       |     |   |

### 授業の概要

【Language】 English and Japanese

The dimensional accuracy and surface property of the working cast significantly affect the fitness of denture base or restorations. In the present course, you will study the effect of how to use hydrocolloid impression material on the various properties of the working cast.

### 学生の到達目標

You should achieve following assignments;

Gathering of information of various types of impression material and cast material

Learning the principles and using of the method of measurement equipment that is required for the analysis

Fabrication of test specimens and operating measurement equipment in the preliminary experiment

Calculation of the data obtained in the experiment and graphing and presentation

### テキスト

出)

著)

### 参考書

出)

著)

### 成績評価方法・基準

| 評価項目                                    | 割合  |
|---|-----|
| contents of the research report meeting | 80% |
| techniques of presentation              | 20% |

### その他

2017年度

# Seminar in Biomaterials (Advanced Course)

## (Seminar in Biomaterials (Advanced Course))

|       |                  |     |          |    |                       |     |   |
|-------|------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades     | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 演習               | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻       |     |          |    |                       |     |   |
| 科目責任者 | Shimizu H.       |     |          |    |                       |     |   |
| 担当教員  | 永松 有紀、清水 博史、池田 弘 |     |          |    |                       |     |   |

### 授業計画

| 回     | 学習内容   | 授業方法     | 担当教員                          | 事前・事後学習<br>学習課題                |
|-------|--|----------|-------------------------------|--------------------------------|
| 1     | Fabrication of test specimens I<br>Immediately after taking impression   | Practice | Shimizu<br>Nagamatsu<br>Ikeda | Review of<br>lecture           |
| 2     | Fabrication of test specimens II<br>After disinfection of the impression | Practice | Shimizu<br>Nagamatsu<br>Ikeda | Review of<br>lecture           |
| 3     | Fabrication of test specimens III<br>after leaving impression            | Practice | Shimizu<br>Nagamatsu<br>Ikeda | Review of<br>lecture           |
| 4     | Fabrication of test specimens IV<br>under a variety of conditions        | Practice | Shimizu<br>Nagamatsu<br>Ikeda | Review of<br>lecture           |
| 5,6   | Measurement of the dimensional precision of cast specimens               | Practice | Shimizu<br>Nagamatsu<br>Ikeda | Review of<br>lecture           |
| 7-9   | Measurement of the surface roughness of cast specimens                   | Practice | Shimizu<br>Nagamatsu<br>Ikeda | Review of<br>lecture           |
| 10    | Measurement of the shape of cast specimens                               | Practice | Shimizu<br>Nagamatsu<br>Ikeda | Review of<br>lecture           |
| 11,12 | Statistical analysis and graphs of all data                              | Practice | Shimizu<br>Nagamatsu<br>Ikeda | Review of<br>lecture           |
| 13,14 | Creating a presentation  | Practice | Shimizu<br>Nagamatsu<br>Ikeda | Review of<br>lecture           |
| 15    | Research report meeting  | Practice | Shimizu<br>Nagamatsu<br>Ikeda | Preparation of<br>presentation |

2017年度

# Dental Biomaterials (Dental Biomaterials)

|       |                  |     |          |    |                                  |     |   |
|-------|------------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades     | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習               | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻       |     |          |    |                                  |     |   |
| 科目責任者 | Shimizu H.       |     |          |    |                                  |     |   |
| 担当教員  | 清水 博史、永松 有紀、池田 弘 |     |          |    |                                  |     |   |

## 授業の概要

【Language】 English and Japanese

In the present course, you will read a textbook ‘ Clinical Aspects of Dental Materials ’ in turn as well as a variety of biomaterials science-related English papers.

## 学生の到達目標

You should achieve following assignments;  
Cultivating the reading comprehension of English  
Understanding the difference between Japanese and English methods of representation  
Learning how to study Biomaterials Sciences  
Learning the latest trends in dental materials from a clinical point of view

## テキスト

Clinical Aspects of Dental Materials

出 )Journals e.g. Dental Materials 著 )M. Gladwin, M. Bagby

## 参考書

出 ) 著 )

## 成績評価方法・基準

| 評価項目                                    | 割合  |
|---|-----|
| contents of the research report meeting | 80% |
| techniques of presentation              | 20% |

## その他

2017年度

# Dental Biomaterials (Dental Biomaterials)

|       |                  |     |          |    |                                  |     |   |
|-------|------------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades     | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習               | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻       |     |          |    |                                  |     |   |
| 科目責任者 | Shimizu H.       |     |          |    |                                  |     |   |
| 担当教員  | 清水 博史、永松 有紀、池田 弘 |     |          |    |                                  |     |   |

## 授業計画

| 回    | 学習内容  | 授業方法     | 担当教員                          | 事前・事後学習<br>学習課題      |
|------|---|----------|-------------------------------|----------------------|
| 1-15 | Gathering information from the English research papers<br>Training of English thinking of clinical trends in the dental materials | Practice | Shimizu<br>Nagamatsu<br>Ikeda | Review of<br>lecture |

2017年度

# Advanced Biomaterials (Advanced Biomaterials )

|       |   |     |    |    |                       |     |   |
|-------|---|-----|----|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 4 grades  | 期区分 | 通年 | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 演習  | 時間数 | 30 | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |    |    |                       |     |   |
| 科目責任者 | Shimizu H   |     |    |    |                       |     |   |
| 担当教員  | 清水 博史、永松 有紀、池田 弘<br>Shimizu H<br>Nagamatsu Y<br>Ikeda H |     |    |    |                       |     |   |

## 授業の概要

【Language】 English and Japanese

In this course, you will select one of the following research subjects and read articles related to the subject. You should know the research background and current status of the field, then summarize what you have learned, and present it. Through this procedure, you will receive advices from the faculty in our division and they will help you for planning your own research.

- 1 Mechanism of alumina air abrasion on metal surface
- 2 Relationship between adhesive strength and Young's modulus
- 3 Bonding mechanism of highly filled composite resin
- 4 Development of antibacterial dental stone
- 5 Creation of new dental material which has similar properties to human enamel

## 学生の到達目標

You should achieve the following assignments;

- 1 Reading English literature
- 2 Explaining the history and current status of the area
- 3 Critical evaluation of literature
- 4 Writing an introduction
- 5 Drawing your own research plan with references

## テキスト

You should select by yourself.

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                                    | 割合  |
|---|-----|
| contents of the research report         | 80% |
| techniques of presentation and attitude | 20% |

## その他

2017年度

# Advanced Biomaterials (Advanced Biomaterials )

|       |   |     |    |    |                       |     |   |
|-------|---|-----|----|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 4 grades  | 期区分 | 通年 | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 演習  | 時間数 | 30 | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |    |    |                       |     |   |
| 科目責任者 | Shimizu H   |     |    |    |                       |     |   |
| 担当教員  | 清水 博史、永松 有紀、池田 弘<br>Shimizu H<br>Nagamatsu Y<br>Ikeda H |     |    |    |                       |     |   |

## 授業計画

| 回    | 学習内容  | 授業方法     | 担当教員                                | 事前・事後学習<br>学習課題  |
|------|---|----------|-------------------------------------|--|
| 1-15 | Gathering articles related to your own research subject, read them, compile them in a prescribed format, and present them. Response to questions. Correct the indicated matters and complete the documents. | Practice | Shimizu H<br>Nagamatsu Y<br>Ikeda H | Preparation and review of practices<br>(Preparation of handouts and correction of matters pointed out) |

2017年度

# Advanced Biomaterials (Advanced Biomaterials )

|       |   |     |    |    |                       |     |   |
|-------|---|-----|----|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 4 grades  | 期区分 | 通年 | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 演習  | 時間数 | 30 | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |    |    |                       |     |   |
| 科目責任者 | Shimizu H   |     |    |    |                       |     |   |
| 担当教員  | 清水 博史、永松 有紀、池田 弘<br>Shimizu H<br>Nagamatsu Y<br>Ikeda H |     |    |    |                       |     |   |

## 授業の概要

In this course, you will learn the latest information on the following research results and future prospects of the faculty members.

- 1 Dental adhesion
- 2 Bactericidal and antimicrobial properties of dental materials
- 3 Ceramics and composite materials
- 4 Digital dentistry

## 学生の到達目標

You should achieve the following assignments;

- 1 Explaining the latest knowledge of the field
- 2 Developing a new research plan in the field
- 3 Explaining the relationship between the basic knowledge of the field and clinical practice

## テキスト

The faculty member in charge prepares.

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                      | 割合  |
|---------------------------|-----|
| Knowledge and proficiency | 60% |
| Aggressiveness            | 40% |

## その他



2017年度

# Advanced Biomaterials (Advanced Biomaterials )

|       |   |     |    |    |                       |     |   |
|-------|---|-----|----|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 4 grades  | 期区分 | 通年 | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 演習  | 時間数 | 30 | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |    |    |                       |     |   |
| 科目責任者 | Shimizu H   |     |    |    |                       |     |   |
| 担当教員  | 清水 博史、永松 有紀、池田 弘<br>Shimizu H<br>Nagamatsu Y<br>Ikeda H |     |    |    |                       |     |   |

## 授業計画

| 回    | 学習内容   | 授業方法     | 担当教員                                | 事前・事後学習<br>学習課題                 |
|------|--|----------|-------------------------------------|---------------------------------|
| 1-15 | Gathering information from faculty lecture<br>Learning presentation method | Practice | Shimizu H<br>Nagamatsu Y<br>Ikeda H | Review of lectures and practice |

2017年度

# Anatomy (Basic course) (Anatomy (Basic course))

|       |                        |     |          |    |                       |     |   |
|-------|------------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades           | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 4 |
| 授業方法  | 講義・演習                  | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻             |     |          |    |                       |     |   |
| 科目責任者 | Seta Y.                |     |          |    |                       |     |   |
| 担当教員  | 瀬田 祐司、豊野 孝、中富 満城、片岡 真司 |     |          |    |                       |     |   |

## 授業の概要

【Language】English and Japanese

This course introduces the foundations of anatomy and molecular biology of sensory organs to students taking this course.

## 学生の到達目標

The goals of this course are to

- (1) be able to explain the structure and function of sensory organ,
- (2) be able to explain the synapse transduction,
- (3) be able to explain the mechanism of sensory reception,
- (4) be able to explain the differentiation of neuron,
- (5) be able to explain the taste receptors.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                                | 割合  |
|-------------------------------------|-----|
| Usual performance score             | 60% |
| experimental performance in the lab | 40% |

## その他

2017年度

# Anatomy (Basic course) (Anatomy (Basic course))

|       |                        |     |          |    |                       |     |   |
|-------|------------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades           | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 4 |
| 授業方法  | 講義・演習                  | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻             |     |          |    |                       |     |   |
| 科目責任者 | Seta Y.                |     |          |    |                       |     |   |
| 担当教員  | 瀬田 祐司、豊野 孝、中富 満城、片岡 真司 |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容  | 授業方法                | 担当教員                                  | 事前・事後学習<br>学習課題 |
|-------|---|---------------------|---------------------------------------|-----------------|
| 1-2   | Introduction<br>The foundation of sensory organs                  | Lecture             | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 3-4   | The morphology of sensory organs (1): visual organ                | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 5-6   | The morphology of sensory organs (2): vestibulocochlear apparatus | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 7-8   | The morphology of sensory organs (3): taste organ                 | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 9-10  | The morphology of sensory organs (4): olfactory organ             | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 11-12 | Action potential  | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 13-14 | Neurotransmission :Synapse  | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 15-16 | Sensory neuron (1): photoreceptor cell                            | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 17-18 | Sensory neuron (2): olfactory neuron                              | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 19-20 | Sex hormone in nervous system                                     | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 21-22 | Sensory neuron (3): taste receptor cell                           | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 23-24 | Taste receptors   | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |

2017年度

# Anatomy (Basic course) (Anatomy (Basic course))

|       |                        |     |          |    |                       |     |   |
|-------|------------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades           | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 4 |
| 授業方法  | 講義・演習                  | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻             |     |          |    |                       |     |   |
| 科目責任者 | Seta Y.                |     |          |    |                       |     |   |
| 担当教員  | 瀬田 祐司、豊野 孝、中富 満城、片岡 真司 |     |          |    |                       |     |   |

| 回     | 学習内容  | 授業方法                | 担当教員                                  | 事前・事後学習<br>学習課題 |
|-------|---|---------------------|---------------------------------------|-----------------|
| 25-26 | Development and differentiation of neuron         | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 27-28 | Development and differentiation of sensory organs | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 29-30 | Sex hormone in taste organ                        | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |

2017年度

# Anatomy (Advanced course) (Anatomy (Advanced course))

|       |                        |     |          |    |                       |     |   |
|-------|------------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades           | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 4 |
| 授業方法  | 講義・演習                  | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻             |     |          |    |                       |     |   |
| 科目責任者 | Seta Y.                |     |          |    |                       |     |   |
| 担当教員  | 瀬田 祐司、豊野 孝、中富 満城、片岡 真司 |     |          |    |                       |     |   |

## 授業の概要

【Language】English and Japanese

This course deals with the basis of fundamental morphological analysis. It also enhances the development of students' skill in carrying out a morphological experiment.

## 学生の到達目標

The goals of this course are to

- (1) be able to understand morphological analysis,
- (2) be able to prepare tissue section
- (3) be able to carry out immunohistochemistry
- (4) be able to carry out RT-PCR
- (5) be able to carry out cell culture

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                                | 割合  |
|-------------------------------------|-----|
| Usual performance score             | 60% |
| experimental performance in the lab | 40% |

## その他

2017年度

# Anatomy (Advanced course) (Anatomy (Advanced course))

|       |                        |     |          |    |                       |     |   |
|-------|------------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades           | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 4 |
| 授業方法  | 講義・演習                  | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻             |     |          |    |                       |     |   |
| 科目責任者 | Seta Y.                |     |          |    |                       |     |   |
| 担当教員  | 瀬田 祐司、豊野 孝、中富 満城、片岡 真司 |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容   | 授業方法                | 担当教員                                  | 事前・事後学習<br>学習課題 |
|-------|--|---------------------|---------------------------------------|-----------------|
| 1-2   | Introduction<br>What is morphological analysis.                                | Lecture             | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 3-4   | Preparing method of tissue section (1): Fixation                               | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 5-6   | Preparing method of tissue section (2): Embedding tissue                       | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 7-8   | Preparing method of tissue section (3): Sectioning tissue using paraffin block | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 9-10  | Preparing method of tissue section (4): Sectioning tissue using frozen block   | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 11-12 | Immunohistochemistry (1): Apply first antibody                                 | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 13-14 | Immunohistochemistry (2): Apply second antibody                                | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 15-16 | Fluorescence microscope and fluorescence observation method                    | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 17-18 | RT-PCR (1): RNA preparation and cDNA synthesis                                 | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 19-20 | RT-PCR (2): Prepare gene-specific primers and PCR                              | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 21-22 | Cloning gene fragment: TA cloning  | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 23-24 | in situ hybridization (1): Probe preparation                                   | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |

2017年度

# Anatomy (Advanced course) (Anatomy (Advanced course))

|       |                        |     |          |    |                       |     |   |
|-------|------------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades           | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 4 |
| 授業方法  | 講義・演習                  | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻             |     |          |    |                       |     |   |
| 科目責任者 | Seta Y.                |     |          |    |                       |     |   |
| 担当教員  | 瀬田 祐司、豊野 孝、中富 満城、片岡 真司 |     |          |    |                       |     |   |

| 回     | 学習内容  | 授業方法                | 担当教員                                  | 事前・事後学習<br>学習課題 |
|-------|---|---------------------|---------------------------------------|-----------------|
| 25-26 | in situ hybridization (2): Pre-treatment of section and antibody visualization of digoxigenin | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 27-28 | Cell culture (1): prepare culture medium  | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 29-30 | Cell culture (2): cell culture method   | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |

2017年度

# Anatomy Practice (Basic course) (Anatomy Practice (Basic course))

|       |                        |     |          |    |                       |     |   |
|-------|------------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades           | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習                  | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻             |     |          |    |                       |     |   |
| 科目責任者 | Seta Y.                |     |          |    |                       |     |   |
| 担当教員  | 瀬田 祐司、豊野 孝、中富 満城、片岡 真司 |     |          |    |                       |     |   |

## 授業の概要

【Language】English and Japanese

This course deals with the basis of fundamental morphological analysis. It also enhances the development of students' skill in carrying out a morphological experiment.

## 学生の到達目標

The goals of this course are to

- (1) be able to understand morphological analysis,
- (2) be able to prepare tissue section
- (3) be able to carry out immunohistochemistry
- (4) be able to carry out RT-PCR
- (5) be able to carry out cell culture

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                                | 割合  |
|-------------------------------------|-----|
| Usual performance score             | 60% |
| experimental performance in the lab | 40% |

## その他



2017年度

# Anatomy Practice (Basic course) (Anatomy Practice (Basic course))

|       |                        |     |          |    |                       |     |   |
|-------|------------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades           | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習                  | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻             |     |          |    |                       |     |   |
| 科目責任者 | Seta Y.                |     |          |    |                       |     |   |
| 担当教員  | 瀬田 祐司、豊野 孝、中富 満城、片岡 真司 |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容   | 授業方法                | 担当教員                                  | 事前・事後学習<br>学習課題 |
|-------|--|---------------------|---------------------------------------|-----------------|
| 1     | Introduction<br>What is morphological analysis.                                | Lecture             | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 2-3   | Cell culture (1): prepare culture medium                                       | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 4-5   | Cell culture (2): cell culture method  | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 6-7   | Preparing method of tissue section (1): Fixation                               | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 8-9   | Preparing method of tissue section (2): Sectioning tissue using paraffin block | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 10-11 | Immunohistochemistry: Detection target protein in section.                     | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 12-13 | RT-PCR (1): RNA preparation and cDNA synthesis                                 | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 14-15 | RT-PCR (2): Prepare gene-specific primers and PCR                              | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |

2017年度

# Anatomy Practice (Advanced course) (Anatomy Practice (Advanced course))

|       |                        |     |          |    |                       |     |   |
|-------|------------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades           | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習                  | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻             |     |          |    |                       |     |   |
| 科目責任者 | Seta Y.                |     |          |    |                       |     |   |
| 担当教員  | 瀬田 祐司、豊野 孝、中富 満城、片岡 真司 |     |          |    |                       |     |   |

## 授業の概要

【Language】English and Japanese

This course deals with the basis of fundamental molecular biological analysis. It also enhances the development of students' skill in carrying out molecular biological experiment.

## 学生の到達目標

The goals of this course are to

- (1) be able to understand molecular biological analysis,
- (2) be able to carry out PCR cloning
- (3) be able to carry out transfection
- (4) be able to carry out cell culture
- (5) be able to carry out luciferase assay

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                                | 割合  |
|-------------------------------------|-----|
| Usual performance score             | 60% |
| experimental performance in the lab | 40% |

## その他

2017年度

# Anatomy Practice (Advanced course) (Anatomy Practice (Advanced course))

|       |                        |     |          |    |                       |     |   |
|-------|------------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades           | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習                  | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻             |     |          |    |                       |     |   |
| 科目責任者 | Seta Y.                |     |          |    |                       |     |   |
| 担当教員  | 瀬田 祐司、豊野 孝、中富 満城、片岡 真司 |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容  | 授業方法                | 担当教員                                  | 事前・事後学習<br>学習課題 |
|-------|---|---------------------|---------------------------------------|-----------------|
| 1     | Introduction  | Lecture             | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 2-3   | PCR Cloning (1): PCR  | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 4-5   | PCR Cloning (2): TA cloning                                       | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 6-7   | PCR cloning (3): Transformation of plasmid DNA into E coli        | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 8-9   | Transfection (1): Introduction of gene transfer technology        | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 10-11 | Transfection (2): Expression vector transfect into cultured cells | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 12-13 | Luciferase assay (1): Introduction of luciferase assay            | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 14-15 | Luciferase assay (2): Promotor analysis using luciferase assay    | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |

2017年度

# Anatomy Practice (Anatomy Practice )

|       |                        |     |          |    |                       |     |   |
|-------|------------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades           | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 演習                     | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻             |     |          |    |                       |     |   |
| 科目責任者 | Seta Y.                |     |          |    |                       |     |   |
| 担当教員  | 瀬田 祐司、豊野 孝、中富 満城、片岡 真司 |     |          |    |                       |     |   |

## 授業の概要

【Language】 English and Japanese

The aim of this course is help students acquire the necessary skills and knowledge needed to achieve student ' research.

## 学生の到達目標

The goals of this course are to

- (1) be able to construct research plan,
- (2) be able to understand and explain research methods
- (3) be able to discuss data from results

## テキスト

出) \_\_\_\_\_ 著) \_\_\_\_\_

## 参考書

出) \_\_\_\_\_ 著) \_\_\_\_\_

## 成績評価方法・基準

| 評価項目                                | 割合  |
|-------------------------------------|-----|
| Usual performance score             | 60% |
| experimental performance in the lab | 40% |

## その他

2017年度

# Anatomy Practice (Anatomy Practice )

|       |                        |     |          |    |                       |     |   |
|-------|------------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades           | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 演習                     | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻             |     |          |    |                       |     |   |
| 科目責任者 | Seta Y.                |     |          |    |                       |     |   |
| 担当教員  | 瀬田 祐司、豊野 孝、中富 満城、片岡 真司 |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容   | 授業方法                | 担当教員                                  | 事前・事後学習<br>学習課題 |
|-------|--|---------------------|---------------------------------------|-----------------|
| 1     | Introduction   | Lecture             | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 2-3   | Cell culture of T1R1 expressing cell (1): Cloning T1R1 gene                                  | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 4-5   | Cell culture of T1R1 expressing cell (2): Construction of T1R1 expression vector             | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 6-7   | Cell culture of T1R1 expressing cell (3): Transfection expression vector into cultured cells | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 8-9   | Cell culture of T1R1 expressing cell (2):  | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 10-11 | Promotor assay of T1R1 gene (1):<br>Construct reporter vector for T1R1 gene                  | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 12-13 | Promotor assay of T1R1 gene (2):<br>Promotor analysis using luciferase assay                 | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 14-15 | Review   | Lecture<br>Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |

2017年度

# Anatomy Advanced course (Anatomy Advanced course)

|       |                        |     |          |    |                                  |     |   |
|-------|------------------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades           | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習                     | 時間数 | 30 hours | 曜日 | 火曜日                              | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻             |     |          |    |                                  |     |   |
| 科目責任者 | Seta Y.                |     |          |    |                                  |     |   |
| 担当教員  | 瀬田 祐司、豊野 孝、中富 満城、片岡 真司 |     |          |    |                                  |     |   |

## 授業の概要

【Language】 Japanese

The aim of this course is to help students acquire an understanding and introducing articles about current topics of life sciences.

## 学生の到達目標

The goals of this course are to

- (1) be able to read scientific articles logically
- (2) be able to understand and review articles about life sciences
- (3) be able to introduce articles to let the audience understand the content

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                                | 割合  |
|-------------------------------------|-----|
| Usual performance score             | 60% |
| experimental performance in the lab | 40% |

## その他

Textbooks and Reference Books : Choose an article that you would like to introduce and discuss with the members

2017年度

# Anatomy Advanced course (Anatomy Advanced course)

|       |                        |     |          |    |                                  |     |   |
|-------|------------------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades           | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習                     | 時間数 | 30 hours | 曜日 | 火曜日                              | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻             |     |          |    |                                  |     |   |
| 科目責任者 | Seta Y.                |     |          |    |                                  |     |   |
| 担当教員  | 瀬田 祐司、豊野 孝、中富 満城、片岡 真司 |     |          |    |                                  |     |   |

## 授業計画

| 回    | 学習内容  | 授業方法                 | 担当教員                                  | 事前・事後学習<br>学習課題                             |
|------|---|----------------------|---------------------------------------|---|
| 1-15 | Understand the article and introduce it including the background of the study | Lecture and Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka | Choose a topic and prepare for presentation |

2017年度

# Head and Neck Dissection Course (Head and Neck Dissection Course)

|       |                        |     |    |    |                                  |     |   |
|-------|------------------------|-----|----|----|----------------------------------|-----|---|
| 開講年次  | 1～4                    | 期区分 | 通年 | 科目 | Compulsory / Elective (Research) | 単位数 | 1 |
| 授業方法  | 実習                     | 時間数 | 30 | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻             |     |    |    |                                  |     |   |
| 科目責任者 | Kataoka S.             |     |    |    |                                  |     |   |
| 担当教員  | 片岡 真司、瀬田 祐司、中富 満城、豊野 孝 |     |    |    |                                  |     |   |

## 授業の概要

【Language】English and Japanese

This course introduces head and neck anatomy through cadaveric dissection to students taking this course.

## 学生の到達目標

The goals of this course are to be able to explain the structure of head and neck anatomy.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                                     | 割合  |
|--|-----|
| Usual performance score                  | 60% |
| quality of performance in the dissection | 40% |

## その他



2017年度

# Head and Neck Dissection Course (Head and Neck Dissection Course)

|       |                        |     |    |    |                                  |     |   |
|-------|------------------------|-----|----|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4                  | 期区分 | 通年 | 科目 | Compulsory / Elective (Research) | 単位数 | 1 |
| 授業方法  | 実習                     | 時間数 | 30 | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻             |     |    |    |                                  |     |   |
| 科目責任者 | Kataoka S.             |     |    |    |                                  |     |   |
| 担当教員  | 片岡 真司、瀬田 祐司、中富 満城、豊野 孝 |     |    |    |                                  |     |   |

## 授業計画

| 回    | 学習内容                     | 授業方法             | 担当教員                            | 事前・事後学習<br>学習課題   |
|------|--------------------------|------------------|---------------------------------|-------------------|
| 1-2  | Introduction             | Lecture          | Kataoka, Seta, Toyono, Nakatomi | Related textbooks |
| 3-4  | Skull                    | Lecture Practice | Kataoka, Seta, Toyono, Nakatomi | Related textbooks |
| 5-15 | Head and Neck Dissection | Practice         | Kataoka, Seta, Toyono, Nakatomi | Related textbooks |

2017年度

# Physiology Practice (Physiology Practice )

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習        | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Ono K.       |     |          |    |                       |     |   |
| 担当教員  | 小野 堅太郎、人見 涼露 |     |          |    |                       |     |   |

## 授業の概要

【Language】 English and Japanese

In this course, you will learn and practice basic knowledge and skills about studies for thirsty, oral dryness, salivary functions and pain mechanisms. Under the management by supervisors, you will carry out animal behavior analyses, preparation of brain slices, cell dissociation, molecular biological techniques, immunohistochemistry, intracellular dynamics analysis and electrophysiology, based on your research theme.

## 学生の到達目標

1. To develop techniques of behavioral analysis in thirsty and oral dry.
2. To develop techniques of behavioral analysis in pain.
3. To develop techniques of brain slices.
4. To develop techniques of patch-clamp recording.
5. To develop techniques of immunohistochemistry.

## テキスト

出) \_\_\_\_\_ 著) \_\_\_\_\_

## 参考書

出) \_\_\_\_\_ 著) \_\_\_\_\_

## 成績評価方法・基準

| 評価項目              | 割合  |
|-------------------|-----|
| course attendance | 30% |
| report            | 70% |

## その他

2017年度

# Physiology Practice (Physiology Practice )

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習        | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Ono K.       |     |          |    |                       |     |   |
| 担当教員  | 小野 堅太郎、人見 涼露 |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容  | 授業方法     | 担当教員       | 事前・事後学習<br>学習課題     |
|-------|---|----------|------------|---------------------|
| 1     | Orientation   | Lecture  | Ono Hitomi | Review of practices |
| 2-4   | Animal behavior analyses<br>To learn animal handling and behavioral analyses  | Practice | Ono Hitomi | Review of practices |
| 5-7   | Brain slice preparation<br>To learn how to make slice preparation of theist centers and electrophysiological recordings | Practice | Ono Hitomi | Review of practices |
| 8-10  | Making of oral ulcer model<br>To learn how to make orofacial pain models and its evaluation of pain                     | Practice | Ono Hitomi | Review of practices |
| 10-15 | Analyses of signal transduction in pain   | Practice | Ono Hitomi | Review of practices |

2017年度

# Physiology Practice (Physiology Practice )

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 演習           | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Ono K.       |     |          |    |                       |     |   |
| 担当教員  | 小野 堅太郎、人見 涼露 |     |          |    |                       |     |   |

## 授業の概要

【Language】 English and Japanese

In this course, you will learn and practice basic knowledge and skills about studies for thirsty, oral dryness, salivary functions and pain mechanisms. Under the management by supervisors, you will carry out animal behavior analyses, preparation of brain slices, cell dissociation, molecular biological techniques, immunohistochemistry, intracellular dynamics analysis and electrophysiology, with high reliability.

## 学生の到達目標

1. To improve techniques of behavioral analysis in thirsty and oral dry.
2. To improve techniques of behavioral analysis in pain.
3. To improve techniques of brain slices.
4. To improve techniques of patch-clamp recording.
5. To improve techniques of immunohistochemistry.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目              | 割合  |
|-------------------|-----|
| course attendance | 30% |
| report            | 70% |

## その他

2017年度

# Physiology Practice (Physiology Practice )

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 演習           | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Ono K.       |     |          |    |                       |     |   |
| 担当教員  | 小野 堅太郎、人見 涼露 |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容  | 授業方法     | 担当教員       | 事前・事後学習<br>学習課題     |
|-------|---|----------|------------|---------------------|
| 1-3   | Experiments for water drinking<br>To learn how to inject drinking-inducible drugs and observe the drinking behavior | Practice | Ono Hitomi | Review of practices |
| 4-7   | Salivary secretion<br>To measure salivary secretion following injection of saliva-inducible drugs                   | Practice | Ono Hitomi | Review of practices |
| 8-10  | Oral mucositis and pain<br>To learn pain mechanism in oral ulcer model  | Practice | Ono Hitomi | Review of practices |
| 11-13 | Analysis of pain-related behaviors<br>To observe behaviors following application of pain-inducible drugs            | Practice | Ono Hitomi | Review of practices |
| 14-15 | Analyses of signal transduction in pain<br>To learn pain mechanisms   | Practice | Ono Hitomi | Review of practices |

2017年度

# Physiology Practice (Physiology Practice )

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 演習           | 時間数 | 30 hours | 曜日 | 火曜日                   | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Ono K.       |     |          |    |                       |     |   |
| 担当教員  | 小野 堅太郎、人見 涼露 |     |          |    |                       |     |   |

## 授業の概要

【Language】 English and Japanese

In this course, you will learn how to analyze data and describe manuscripts for studies for thirsty, oral dryness, salivary functions and pain mechanisms. In necessary, you will perform additional experiments.

## 学生の到達目標

1. To develop manuscripts for thirsty and oral dry.
2. To develop manuscripts for pain.
3. To develop manuscripts for salivary secretion.
4. To improve research ability

## テキスト

出) \_\_\_\_\_ 著) \_\_\_\_\_

## 参考書

出) \_\_\_\_\_ 著) \_\_\_\_\_

## 成績評価方法・基準

| 評価項目                | 割合  |
|---------------------|-----|
| course attendance   | 30% |
| report/presentation | 70% |

## その他

2017年度

# Physiology Practice (Physiology Practice )

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 演習           | 時間数 | 30 hours | 曜日 | 火曜日                   | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Ono K.       |     |          |    |                       |     |   |
| 担当教員  | 小野 堅太郎、人見 涼露 |     |          |    |                       |     |   |

## 授業計画

| 回    | 学習内容  | 授業方法     | 担当教員          | 事前・事後学習<br>学習課題        |
|------|---|----------|---------------|------------------------|
| 1-2  | Analyses of animal behaviors<br>To analyze and consider behavioral results              | Practice | Ono<br>Hitomi | Review of<br>practices |
| 3-4  | Analyses of salivary secretion<br>To analyze and consider results of salivary secretion | Practice | Ono<br>Hitomi | Review of<br>practices |
| 5-8  | Analyses of pain signaling<br>To analyze and consider results from pain models          | Practice | Ono<br>Hitomi | Review of<br>practices |
| 9-15 | Research presentation   | Practice | Ono<br>Hitomi | Review of<br>practices |

2017年度

# Physiology Division Colloquium (Physiology Division Colloquium)

|       |                 |     |          |    |                                  |     |   |
|-------|-----------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades    | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習           | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻      |     |          |    |                                  |     |   |
| 科目責任者 | Hitomi S        |     |          |    |                                  |     |   |
| 担当教員  | 小野 堅太郎、人見 涼露    |     |          |    |                                  |     |   |
|       | Ono K, Hitomi S |     |          |    |                                  |     |   |

## 授業の概要

You can increase scientific information and understand recent research trend, related to oral physiology, by reading and presenting English-language journals in turns.

## 学生の到達目標

1. To develop reading skill of English-language journals
2. To develop presentation skill
3. To develop an ability to criticize the journals
4. To understand the background on own research field

## テキスト

Journals for presentation should be selected by each one.

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目               | 割合  |
|--------------------|-----|
| oral presentations | 70% |
| attendance         | 30% |

## その他

At every time, we are waiting for your visits about your study-counsel and advices at our departments in the 10th floor of Faculty Building.



2017年度

# Physiology Division Colloquium (Physiology Division Colloquium)

|       |                 |     |          |    |                                  |     |   |
|-------|-----------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades    | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習           | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻      |     |          |    |                                  |     |   |
| 科目責任者 | Hitomi S        |     |          |    |                                  |     |   |
| 担当教員  | 小野 堅太郎、人見 涼露    |     |          |    |                                  |     |   |
|       | Ono K, Hitomi S |     |          |    |                                  |     |   |

## 授業計画

| 回    | 学習内容  | 授業方法  | 担当教員          | 事前・事後学習<br>学習課題                          |
|------|---|---|---------------|--|
| 1-15 | English-language journals<br>To learn the background and future prospect of own research work, current topics and so on | Reading and presenting<br>English-language journals in<br>turns | Ono<br>Hitomi | Pre- and post-<br>reading of<br>journals |

2017年度

# Molecular and Cell Biology Training Program (Basic Class) (Molecular and Cell Biology Training Program (Basic Class))

|       |                     |     |          |    |                       |     |   |
|-------|---------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades        | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 4 |
| 授業方法  | 講義・演習               | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻          |     |          |    |                       |     |   |
| 科目責任者 | Jimi E.             |     |          |    |                       |     |   |
| 担当教員  | 自見 英治郎、古株 彰一郎、松原 琢磨 |     |          |    |                       |     |   |

## 授業の概要

【Language】 English and Japanese

In order to understand the life science, you will understand the principles of the important molecular biology techniques and perform the experiments to obtain the results.

## 学生の到達目標

1. You can perform cell culture.
2. You can handle mice and prepare tissue or cells from mice.
3. You can prepare RNA or protein from tissue or cells.
4. You can understand the principles of the RT-PCR, and perform it.
5. You can understand the principles of the Western blotting, and perform it.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目 | 割合   |
|------|------|
| *1   | 100% |

\*1 Evaluate your presentation and content in the data at the meetings once a month.

## その他

You can use the protocols in our laboratory. If you would like to buy protocol books interested in, we suggest which one is best.

2017年度

# Molecular and Cell Biology Training Program (Basic Class) (Molecular and Cell Biology Training Program (Basic Class))

|       |                     |     |          |    |                       |     |   |
|-------|---------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades        | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 4 |
| 授業方法  | 講義・演習               | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻          |     |          |    |                       |     |   |
| 科目責任者 | Jimi E.             |     |          |    |                       |     |   |
| 担当教員  | 自見 英治郎、古株 彰一郎、松原 琢磨 |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容  | 授業方法             | 担当教員        | 事前・事後学習<br>学習課題                                     |
|-------|---|------------------|-------------|---|
| 1,2   | Orientation<br>An overview of this lecture, and to learn about the basis of molecular biology.            | Lecture          | Jimi E      | Review of lecture                                   |
| 3,4   | Basis of cell culture I<br>Cell handling<br>How to prepare the culture media                              | Lecture practice | Jimi E      | Preparation about cell culture                      |
| 5,6   | Basis of cell culture II<br>Cell passage<br>Cell stock  | Lecture practice | Jimi E      | Review about cell culture                           |
| 7,8   | How to handle mice I<br>Basis of mouse handling<br>Treatment with drugs<br>Blood collection               | Lecture practice | Jimi E      | Review about mouse handling                         |
| 9,10  | How to handle mice II<br>Anesthesia for mice<br>Preparation of thymocytes and bone marrow cells from mice | Lecture practice | Jimi E      | Review about the preparation of tissue and cells    |
| 11,12 | How to handle mice III<br>Preparation of primary osteoblasts<br>Osteoclast differentiation                | Lecture practice | Jimi E      | Review about the osteoblast or osteoclast culture   |
| 13,14 | RT-PCR I<br>Preparation of RNA from cells or tissue<br>Measurement of RNA                                 | Lecture practice | Matsubara T | Preparation about the principle of RT-PCR           |
| 15,16 | RT-PCR II<br>cDNA synthesis<br>Primer design using computer soft  | Practice         | Matsubara T | Preparation about the principle of primer design    |
| 17,18 | RT-PCR III<br>PCR<br>Agarose gel electrophoresis  | Practice         | Matsubara T | Review about the principle of RT-PCR                |
| 19,20 | Real-time PCR I<br>Principle of Real-time PCR<br>Real-time PCR  | Lecture practice | Kokabu S    | Preparation about the principle of real-time PCR    |
| 21,22 | Real-time PCR II<br>Data analysis   | Lecture practice | Kokabu S    | Review about the data analysis                      |
| 23,24 | Western Blotting I<br>Preparation of protein from tissue or cells<br>Measurement of protein               | Lecture practice | Kokabu S    | Preparation about the protein preparation           |
| 25,26 | Western Blotting II<br>SDS-PAGE<br>Transfer to PVDF membrane  | Lecture practice | Kokabu S    | Preparation about the principle of Western blotting |

2017年度

# Molecular and Cell Biology Training Program (Basic Class) (Molecular and Cell Biology Training Program (Basic Class))

|       |                     |     |          |    |                       |     |   |
|-------|---------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades        | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 4 |
| 授業方法  | 講義・演習               | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻          |     |          |    |                       |     |   |
| 科目責任者 | Jimi E.             |     |          |    |                       |     |   |
| 担当教員  | 自見 英治郎、古株 彰一郎、松原 琢磨 |     |          |    |                       |     |   |

| 回     | 学習内容  | 授業方法     | 担当教員     | 事前・事後学習<br>学習課題                                    |
|-------|---|----------|----------|--|
| 27,28 | Western Blotting III<br>Blocking<br>Reaction with 1st antibody<br>Reaction with 2nd antibod | Practice | Kokabu S | Preparation about the protocol of Western blotting |
| 29,30 | Western Blotting IV<br>Stripping<br>Reblotting  | Practice | Kokabu S | Review about Western blotting                      |

2017年度

# Molecular and Cell Biology Training Program (Middle Class) (Molecular and Cell Biology Training Program (Middle Class))

|       |                     |     |          |    |                       |     |   |
|-------|---------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades        | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 4 |
| 授業方法  | 講義・演習               | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻          |     |          |    |                       |     |   |
| 科目責任者 | Jimi E.             |     |          |    |                       |     |   |
| 担当教員  | 自見 英治郎、古株 彰一郎、松原 琢磨 |     |          |    |                       |     |   |

## 授業の概要

【Language】 English and Japanese

In order to understand the life science, you will understand the principles of the important molecular biology techniques and perform the experiments to obtain the results. You further will learn the technique that was developed the techniques learned in the basic course, and developed the ability to get a reliable data.

## 学生の到達目標

1. You can understand the principles of gene recombination.
2. You can clone a known gene.
3. You can explain the types and principle of gene transfer, and perform them.
4. You can explain the principle of immunoprecipitation, and perform them.
5. You can explain the types of tag, and detect them.
6. You can explain the principle of luciferase assay, and perform them.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目 | 割合   |
|------|------|
| *1   | 100% |

\*1 Evaluate your presentation and content in the data at the meetings once a month.

## その他

You can use the protocols in our laboratory. If you would like to buy protocol books interested in, we suggest which one is best.

2017年度

# Molecular and Cell Biology Training Program (Middle Class) (Molecular and Cell Biology Training Program (Middle Class))

|       |                     |     |          |    |                       |     |   |
|-------|---------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades        | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 4 |
| 授業方法  | 講義・演習               | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻          |     |          |    |                       |     |   |
| 科目責任者 | Jimi E.             |     |          |    |                       |     |   |
| 担当教員  | 自見 英治郎、古株 彰一郎、松原 琢磨 |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容   | 授業方法             | 担当教員        | 事前・事後学習<br>学習課題   |
|-------|--|------------------|-------------|---|
| 1,2   | PCR cloning I<br>Gene cloning using PCR method<br>Digestion of vector and PCR products with restriction enzyme   | Lecture・practice | Jimi E      | Preparation about gene cloning  |
| 3,4   | PCR cloning II<br>Dephosphorylation of vector by ALP<br>Ligation   | Lecture・practice | Jimi E      | Preparation about ligation  |
| 5,6   | PCR cloning III<br>How to prepare competent cells<br>Transformation  | Lecture・practice | Jimi E      | Preparation about transformation                                      |
| 7,8   | PCR cloning IV<br>Pick up colonies<br>Mini-scale culture   | Lecture・practice | Jimi E      | Review of the previous step   |
| 9,10  | PCR cloning V<br>Mini-preparation<br>Agarose gel electrophoresis   | Lecture・practice | Jimi E      | Preparation about mini-scale culture                                  |
| 11,12 | PCR cloning VI<br>Midi-preparation<br>Purification of plasmid  | Lecture・practice | Jimi E      | Preparation about Midi-prep   |
| 13,14 | Gene function analysis I<br>Types of gene transfer<br>Gene transfer using lipofection method                     | Lecture・practice | Jimi E      | Preparation about gene transfer                                       |
| 15,16 | Gene function analysis II<br>Point mutation based on PCR<br>Screening  | Lecture・practice | Matsubara T | Preparation about gene transfer                                       |
| 17,18 | Gene function analysis III<br>Principle of luciferase assay<br>Measurement of luciferase activity by luminometer | Lecture・practice | Matsubara T | Preparation about luciferase assay                                    |
| 19,20 | Gene function analysis IV<br>Generation of dominant negative form or constitutive active form for gene transfer  | practice         | Matsubara T | Preparation about dominant negative form and constitutive active form |
| 21,22 | Immunoprecipitation I<br>Preparation of protein from cells<br>Measurement of protein<br>Immunoprecipitation      | Lecture・practice | Kokabu S    | Preparation about handling of protein                                 |
| 23,24 | Immunoprecipitation II<br>SDS-PAGE<br>Transfer to PVDF membrane<br>Blocking                                      | practice         | Kokabu S    | Preparation about immunoprecipitation                                 |

2017年度

# Molecular and Cell Biology Training Program (Middle Class) (Molecular and Cell Biology Training Program (Middle Class))

|       |                     |     |          |    |                       |     |   |
|-------|---------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades        | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 4 |
| 授業方法  | 講義・演習               | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻          |     |          |    |                       |     |   |
| 科目責任者 | Jimi E.             |     |          |    |                       |     |   |
| 担当教員  | 自見 英治郎、古株 彰一郎、松原 琢磨 |     |          |    |                       |     |   |

| 回     | 学習内容  | 授業方法             | 担当教員     | 事前・事後学習<br>学習課題                              |
|-------|---|------------------|----------|--|
| 25,26 | Immunoprecipitation III<br>Reaction with 1st antibody<br>Reaction with 2nd antibody                             | practice         | Kokabu S | Review about immunoprecipitation             |
| 27,28 | Tagged I<br>Kind and principle of tag<br>Cloning your interesting gene into FLAG-, HA-, Myc-, GFP-tagged vector | Lecture・practice | Kokabu S | Preparation of the kind and principle of Tag |
| 29,30 | Tagged II<br>Detection of tagged protein by anti-tag antibody   | practice         | Kokabu S | Review of immunoprecipitation                |

2017年度

# Molecular and Cell Biology Training Program (Advanced Class) (Molecular and Cell Biology Training Program (Advanced Class))

|       |                     |     |          |    |                       |     |   |
|-------|---------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades        | 期区分 | 通年       | 科目 | Compulsory (research) | 単位数 | 4 |
| 授業方法  | 講義・演習               | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻          |     |          |    |                       |     |   |
| 科目責任者 | Jimi E.             |     |          |    |                       |     |   |
| 担当教員  | 自見 英治郎、古株 彰一郎、松原 琢磨 |     |          |    |                       |     |   |

## 授業の概要

【Language】 English and Japanese

In order to understand the life science, you will understand the principles of the important molecular biology techniques and perform the experiments to obtain the results. You further will learn the technique related to bone biology and perform them. You also will learn oral presentation and writing article.

## 学生の到達目標

1. You can understand the principles of viral vector and perform gene transfer using retroviral vector.
2. You can explain the principle of chromatin immunoprecipitation, and perform it.
3. You can explain the types and principle of genetically modified mice.
4. You can explain the principle of flow cytometry, and perform it.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目 | 割合   |
|------|------|
| *1   | 100% |

\*1 Evaluate your presentation and content in the data at the meetings once a month.

## その他

You can use the protocols in our laboratory. If you would like to buy protocol books interested in, we suggest which one is best.



2017年度

# Molecular and Cell Biology Training Program (Advanced Class) (Molecular and Cell Biology Training Program (Advanced Class))

|       |                     |     |          |    |                       |     |   |
|-------|---------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades        | 期区分 | 通年       | 科目 | Compulsory (research) | 単位数 | 4 |
| 授業方法  | 講義・演習               | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻          |     |          |    |                       |     |   |
| 科目責任者 | Jimi E.             |     |          |    |                       |     |   |
| 担当教員  | 自見 英治郎、古株 彰一郎、松原 琢磨 |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容   | 授業方法             | 担当教員        | 事前・事後学習<br>学習課題   |
|-------|--|------------------|-------------|---|
| 1,2   | Gene transfer using viral vector I<br>Principle of retroviral vector<br>Generation of retroviral vector 1<br>・ Digestion of vector and PCR products by restriction enzyme<br>・ Dephosphorylation of vector<br>・ Ligation | Lecture・practice | Matsubara T | Preparation about the principle of retroviral vector        |
| 3,4   | Gene transfer using viral vector II<br>Generation of retroviral vector 2<br>・ Preparation of competent cells<br>・ Transformation   | Lecture・practice | Matsubara T | Preparation about the generation of retroviral vector       |
| 5,6   | Gene transfer using viral vector III<br>Generation of retroviral vector 3<br>・ Pick up colonies<br>・ Mini-scale culture  | Lecture          | Matsubara T | Preparation about the generation of retroviral vector       |
| 7,8   | Gene transfer using viral vector IV<br>Generation of retroviral vector 4<br>・ Mid-scale culture<br>・ Preparation of packaging cell   | Practice         | Matsubara T | Preparation about the gene transfer using retroviral vector |
| 9,10  | Gene transfer using viral vector V<br>Generation of retroviral vector 5<br>・ Collection of viral supernatant<br>・ Measurement of MOI   | Practice         | Matsubara T | Preparation about the gene transfer using retroviral vector |
| 11,12 | Gene transfer using viral vector VI<br>Generation of retroviral vector 6<br>・ Gene transfer by retroviral vector containing GFP<br>・ Detection of GFP expression by microscop  | Lecture          | Matsubara T | Preparation about the gene transfer using retroviral vector |
| 13,14 | Chromatin immunoprecipitation (ChIP) I<br>Principle of ChIP  | Lecture          | Kokabu S    | Preparation about the principle of ChIP                     |
| 15,16 | Chromatin immunoprecipitation II<br>Preparation of cells and cross-linking<br>Immunoprecipitation  | Practice         | Kokabu S    | Preparation about ChIP                                      |
| 17,18 | Chromatin immunoprecipitation III<br>PCR   | Practice         | Kokabu S    | Review about ChIP   |
| 19,20 | Genetically modified mice I<br>Principle of transgenic mice<br>Principle of knockout mice  | Lecture          | Jimi E      | Preparation about transgenic or knockout mice               |
| 21,22 | Genetically modified mice II<br>Principle of knockin mice<br>Principle of conditional KO mice  | Lecture          | Jimi E      | Preparation about knockin or conditional knockout mice      |

2017年度

# Molecular and Cell Biology Training Program (Advanced Class) (Molecular and Cell Biology Training Program (Advanced Class))

|       |                     |     |          |    |                      |     |   |
|-------|---------------------|-----|----------|----|----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades        | 期区分 | 通年       | 科目 | Compulsory (research | 単位数 | 4 |
| 授業方法  | 講義・演習               | 時間数 | 60 hours | 曜日 |                      | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻          |     |          |    |                      |     |   |
| 科目責任者 | Jimi E.             |     |          |    |                      |     |   |
| 担当教員  | 自見 英治郎、古株 彰一郎、松原 琢磨 |     |          |    |                      |     |   |

| 回     | 学習内容  | 授業方法             | 担当教員   | 事前・事後学習<br>学習課題   |
|-------|---|------------------|--------|---|
| 23,24 | Analysis of the phenotype of the genetically modified mice I<br>Genotyping by PCR<br>Phenotype analyzed by histology              | Lecture・practice | Jimi E | Preparation<br>about mouse<br>genotyping                        |
| 25,26 | Analysis of the phenotype of the genetically modified mice II<br>Preparation of primary osteoblasts<br>Osteoclast differentiation | Practice         | Jimi E | Preparation<br>about<br>osteoblast and<br>osteoclast<br>culture |
| 27,28 | Analysis of the phenotype of the genetically modified mice III<br>Analysis of lymphocyte markers by flow cytometry                | Practice         | Jimi E |   |
| 29,30 | Analysis of the phenotype of the genetically modified mice IV   | Practice         | Jimi E |   |

2017年度

# Bone Journal Club (Bone Journal Club)

|       |                     |     |          |    |                                  |     |   |
|-------|---------------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades        | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習                  | 時間数 | 30 hours | 曜日 | 月曜日                              | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻          |     |          |    |                                  |     |   |
| 科目責任者 | Jimi E.             |     |          |    |                                  |     |   |
| 担当教員  | 自見 英治郎、古株 彰一郎、松原 琢磨 |     |          |    |                                  |     |   |

## 授業の概要

【Language】\*English , Japanese

We read the literature describing the current topics of bone metabolism and molecular biology to understand the trends of important, up-to-date research.

## 学生の到達目標

1. You can read English literature and understand its content.
2. You can understand the experimental procedures in the literature.
3. You can evaluate the contents of the literature objectively.
4. You can understand the research background.
5. You can introduce the other person to understand easily the contents of the literature.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                 | 割合  |
|----------------------|-----|
| Selection of article | 50% |
| Oral presentation    | 50% |

## その他

Choose an article that you would like to share the content and discuss about it with members.

2017年度

# Bone Journal Club (Bone Journal Club)

|       |                     |     |          |    |                                  |     |   |
|-------|---------------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades        | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習                  | 時間数 | 30 hours | 曜日 | 月曜日                              | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻          |     |          |    |                                  |     |   |
| 科目責任者 | Jimi E.             |     |          |    |                                  |     |   |
| 担当教員  | 自見 英治郎、古株 彰一郎、松原 琢磨 |     |          |    |                                  |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法  | 担当教員                              | 事前・事後学習<br>学習課題                              |
|----|---|---|-----------------------------------|--|
| 30 | Understand the content and trends of important, up-to-date research in bone biology and molecular biology area and explained their importance to other persons. | Lecture and practice including presentation and discussion. | Jimi E<br>Kokabu S<br>Matsubara T | Choose a topic and prepare for presentation. |

2017年度

# Oral Pathology (Oral Pathology)

|       |                |     |          |    |                        |     |   |
|-------|----------------|-----|----------|----|------------------------|-----|---|
| 開講年次  | 1 ~ 2 grades   | 期区分 | 通年       | 科目 | Compulsory (Resesarch) | 単位数 | 4 |
| 授業方法  | 講義             | 時間数 | 60 hours | 曜日 |                        | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻     |     |          |    |                        |     |   |
| 科目責任者 | Min Zhang      |     |          |    |                        |     |   |
| 担当教員  | 張 皿、矢田 直美、松尾 拓 |     |          |    |                        |     |   |

## 授業の概要

Provide the latest knowledge and information about oral and maxillofacial diseases, to serve as a basis for the future studies on mechanism, diagnosis and treatment of those diseases.

## 学生の到達目標

1. Acquire the latest information and expertise in caries and dentin-pulp complex disease.
2. Acquire the latest information and expertise in periapical lesion.
3. Acquire the latest information and expertise in periodontal lesion.
4. Acquire the latest information and expertise in diseases of jaw and temporomandibular joint.
5. Acquire the latest information and expertise in oral mucosal diseases.
6. Acquire the latest information and expertise in oral cancer and premalignant lesion.
7. Acquire the latest information and expertise in odontogenic tumors and cystic lesions.
8. Acquire the latest information and expertise in non-odontogenic tumors.
9. Acquire the latest information and expertise in non-neoplastic salivary gland diseases.
10. Acquire the latest information and expertise in salivary gland tumors.

## テキスト

出) \_\_\_\_\_ 著) \_\_\_\_\_

## 参考書

出) \_\_\_\_\_ 著) \_\_\_\_\_

## 成績評価方法・基準

| 評価項目   | 割合   |
|--------|------|
| Report | 100% |

## その他

2017年度

# Oral Pathology (Oral Pathology)

|       |                |     |          |    |                        |     |   |
|-------|----------------|-----|----------|----|------------------------|-----|---|
| 開講年次  | 1 ~ 2 grades   | 期区分 | 通年       | 科目 | Compulsory (Resesarch) | 単位数 | 4 |
| 授業方法  | 講義             | 時間数 | 60 hours | 曜日 |                        | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻     |     |          |    |                        |     |   |
| 科目責任者 | Min Zhang      |     |          |    |                        |     |   |
| 担当教員  | 張 皿、矢田 直美、松尾 拓 |     |          |    |                        |     |   |

## 授業計画

| 回     | 学習内容  | 授業方法    | 担当教員  | 事前・事後学習<br>学習課題 |
|-------|---|---------|-------|-----------------|
| 1-3   | Obtain the latest knowledge on caries and dentin-pulp complex disease from the covered topics.      | lecture | Zhang | report          |
| 4-6   | Obtain the latest knowledge on periapical lesion from the covered topics.                           | lecture | Zhang | report          |
| 7-9   | Obtain the latest knowledge on periodontal lesion from the covered topics.                          | lecture | Zhang | report          |
| 10-12 | Obtain the latest knowledge on diseases of jaw and temporomandibular joint from the covered topics. | lecture | Zhang | report          |
| 13-15 | Obtain the latest knowledge on oral mucosal diseases from the covered topics.                       | lecture | Zhang | report          |
| 16-18 | Obtain the latest knowledge on oral cancer and premalignant lesion from the covered topics.         | lecture | Yada  | report          |
| 19-21 | Obtain the latest knowledge on odontogenic tumors and cystic lesions from the covered topics.       | lecture | Yada  | report          |
| 22-24 | Obtain the latest knowledge on non-odontogenic tumors from the covered topics.                      | lecture | Yada  | report          |
| 25-27 | Obtain the latest knowledge on non-neoplastic salivary gland diseases from the covered topics.      | lecture | Yada  | report          |
| 28-30 | Obtain the latest knowledge on salivary gland tumors from the covered topics.                       | lecture | Yada  | report          |

2017年度

# Practice of Oral Pathology (basic course) (Practice of Oral Pathology (basic course))

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 演習           | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Min Zhang    |     |          |    |                       |     |   |
| 担当教員  | 張 皿、松尾 拓     |     |          |    |                       |     |   |

## 授業の概要

Learn the basic knowledge and skills required for carrying out a study on the main theme of research at our laboratory. Teach the knowledge and skills of the preparation of histopathologic specimens, histochemical, immunohistochemical and ultrastructural analyses. According to the theme of the postgraduate work, teach the required knowledge and skills of biochemical, molecular, microbiological and immunological techniques.

## 学生の到達目標

1. Acquire expertise in the preparation of histopathologic specimen
2. Acquire expertise in the preparation of histochemical specimen
3. Acquire expertise in the preparation of immunohistochemical specimen
4. Acquire expertise in the preparation of electron microscopic specimen
5. (According to the theme) acquire expertise in cell culture
6. (According to the theme) acquire expertise in extraction of DNA and RNA
7. (According to the theme) acquire expertise in extraction of protein
8. (According to the theme) acquire expertise in electrophoresis and western blotting
9. (According to the theme) acquire expertise in gene cloning and recombination

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目   | 割合   |
|--------|------|
| Report | 100% |

## その他

2017年度

# Practice of Oral Pathology (basic course) (Practice of Oral Pathology (basic course))

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 演習           | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Min Zhang    |     |          |    |                       |     |   |
| 担当教員  | 張 皿、松尾 拓     |     |          |    |                       |     |   |

## 授業計画

| 回    | 学習内容   | 授業方法     | 担当教員  | 事前・事後学習<br>学習課題 |
|------|--|----------|-------|-----------------|
| 1,2  | Practice of the preparation of histopathologic specimen      | practice | Zhang | report          |
| 3,4  | Practice of the preparation of histochemical specimen        | practice | Zhang | report          |
| 5,6  | Practice of the preparation of immunohistochemical specimen  | practice | Zhang | report          |
| 7,8  | Practice of the preparation of electron microscopic specimen | practice | Zhang | report          |
| 9,10 | Practice of cell culture                                     | practice | Zhang | report          |
| 11   | Practice of the extraction of DNA and RNA                    | practice | Zhang | report          |
| 12   | Practice of the extraction of protein                        | practice | Zhang | report          |
| 13   | Practice of RT-PCR and agarose gel electrophoresis           | practice | Zhang | report          |
| 14   | Practice of protein electrophoresis and western blotting     | practice | Zhang | report          |
| 15   | Practice of gene cloning and recombination                   | practice | Zhang | report          |



2017年度

# Practice of Oral Pathology (advanced course)

## (Practice of Oral Pathology (advanced course))

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 演習           | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Matsuo K.    |     |          |    |                       |     |   |
| 担当教員  | 松尾 拓         |     |          |    |                       |     |   |

### 授業の概要

Promote the study on the given theme of research.

Train to produce reliable data in experiments using histopathologic, histochemical, immunohistochemical, ultra-structural, biological, molecular, microbial, immunological techniques.

### 学生の到達目標

1. Improve the skill in preparation of histopathologic specimen.
2. Obtain data from histochemical specimens for a research paper.
3. Obtain data from immunohistochemical specimens for a research paper.
4. Obtain data from electron microscopic specimens for a research paper.
5. Obtain data from cell culture experiments for a research paper.
6. Obtain data from extracted DNA and RNA for a research paper.
7. Obtain data from extracted protein for a research paper.
8. Increase reliability of the experimental data.
9. Improve the skills in designing experiments and developing research.

### テキスト

出) 著)

### 参考書

出) 著)

### 成績評価方法・基準

| 評価項目   | 割合   |
|--------|------|
| Report | 100% |

### その他

2017年度

# Practice of Oral Pathology (advanced course)

## (Practice of Oral Pathology (advanced course))

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 演習           | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Matsuo K.    |     |          |    |                       |     |   |
| 担当教員  | 松尾 拓         |     |          |    |                       |     |   |

### 授業計画

| 回     | 学習内容   | 授業方法     | 担当教員   | 事前・事後学習<br>学習課題 |
|-------|--|----------|--------|-----------------|
| 1,2   | Analyze data obtained from microscopic specimens. Discuss and summarize them.                                  | Practice | Matsuo | report          |
| 3,4   | Analyze data obtained from electron microscopic specimens. Discuss and summarize them.                         | Practice | Matsuo | report          |
| 5,6   | Analyze data obtained from cell culture. Discuss and summarize them.   | Practice | Matsuo | report          |
| 7,8   | Analyze data obtained from experiments using biochemical and molecular techniques. Discuss and summarize them. | Practice | Matsuo | report          |
| 9-11  | Presentation of research findings  | Practice | Matsuo | report          |
| 12-15 | Learn how to write a research paper and come up with the outline of thesis paper.                              | Practice | Matsuo | report          |

2017年度

# Colloquium of Oral Pathology (Colloquium of Oral Pathology)

|       |              |     |          |    |                                  |     |   |
|-------|--------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習           | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Matsuo K.    |     |          |    |                                  |     |   |
| 担当教員  | 松尾 拓         |     |          |    |                                  |     |   |

## 授業の概要

Read intensively the related literatures and discuss their contents to understand new trends of general pathological and oral pathological research. Also present each participant ' s research results and discuss them.

## 学生の到達目標

1. Improve the ability to understand exactly the meaning of English literatures.
2. Understand exactly the contents of research paper and presentation.
3. Improve the ability to assess research.
4. Understand background and trend of research.
5. Improve the skills in research presentation.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目   | 割合   |
|--------|------|
| Report | 100% |

## その他

2017年度

# Colloquium of Oral Pathology (Colloquium of Oral Pathology)

|       |              |     |          |    |                                  |     |   |
|-------|--------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習           | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Matsuo K.    |     |          |    |                                  |     |   |
| 担当教員  | 松尾 拡         |     |          |    |                                  |     |   |

## 授業計画

| 回     | 学習内容  | 授業方法     | 担当教員   | 事前・事後学習<br>学習課題 |
|-------|---|----------|--------|-----------------|
| 1     | Orientation. Explanation of the outline of research performed at the division of Oral Pathology and discussion. | practice | Matsuo | report          |
| 2,3   | Know the recent trend of research on premalignant lesion and carcinoma in situ, and discuss it.                 | practice | Matsuo | report          |
| 4     | Introduce and discuss participant ' s research and related literatures (I).                                     | practice | Matsuo | report          |
| 5,6   | Know the recent trend of research on tumor marker, and discuss it.  | practice | Matsuo | report          |
| 7     | Introduce and discuss participant ' s research and related literatures (II).                                    | practice | Matsuo | report          |
| 8,9   | Know the recent trend of research on wound healing, and discuss it (I).   | practice | Matsuo | report          |
| 10    | Introduce and discuss participant ' s research and related literatures (III).                                   | practice | Matsuo | report          |
| 11,12 | Know the recent trend of research on wound healing, and discuss it (II).  | practice | Matsuo | report          |
| 13    | Introduce and discuss participant ' s research and related literatures (IV).                                    | practice | Matsuo | report          |
| 14,15 | Summarize the discussion about participants ' research, and discuss the future development of the research.     | practice | Matsuo | report          |

2017年度

# Clinical Diagnostic Pathology (Clinical Diagnostic Pathology)

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 4 |
| 授業方法  | 講義           | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Matsuo K.    |     |          |    |                       |     |   |
| 担当教員  | 松尾 拡、矢田 直美   |     |          |    |                       |     |   |

## 授業の概要

Teach clinical diagnostic pathology to perform a diagnostic task as a routine work at the division of Oral Pathology. Also provide the latest information on oral and maxillofacial diseases, focusing on the pathological diagnosis.

## 学生の到達目標

1. Learn and practice pathological anatomy (autopsy).
2. Learn and practice biopsy diagnosis.
3. Learn handling of the surgical materials and practice diagnosis.
4. Learn and practice cytological diagnosis.
5. Learn and practice intraoperative rapid diagnosis.
6. Learn and practice preparation of histopathologic specimens.
7. Learn and practice histochemical and immunohistochemical staining.
8. Acquire expertise in pathological diagnosis of oral and maxillofacial diseases.
9. Acquire expertise in differential diagnosis of benign and malignant tumors.

## テキスト

出) 著)

## 参考書

Pathologic basis of disease, 9th edition  
出)Elsevier 著)Robbins & Cotran

Pathology and Genetics of Tumours of the Head and Neck (IARC)  
出)WHO Classification of Tumours 著)

## 成績評価方法・基準

| 評価項目   | 割合   |
|--------|------|
| Report | 100% |

## その他

2017年度

# Clinical Diagnostic Pathology (Clinical Diagnostic Pathology)

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 4 |
| 授業方法  | 講義           | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Matsuo K.    |     |          |    |                       |     |   |
| 担当教員  | 松尾 拡、矢田 直美   |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容  | 授業方法    | 担当教員           | 事前・事後学習<br>学習課題 |
|-------|---|---------|----------------|-----------------|
| 1,2   | Learn outline of human pathology  | lecture | Matsuo         | report          |
| 3-5   | Learn outline of pathological anatomy (autopsy)   | lecture | Matsuo         | report          |
| 6-8   | Learn outline of biopsy   | lecture | Matsuo         | report          |
| 9-11  | Learn outline of handling of the surgical materials   | lecture | Matsuo         | report          |
| 12-14 | Learn outline of cytological diagnosis  | lecture | Yada           | report          |
| 15-17 | Learn outline of intraoperative rapid diagnosis   | lecture | Yada           | report          |
| 18-20 | Learn outline of the preparation of histopathologic specimens   | lecture | Yada           | report          |
| 21-23 | Learn outline of histochemical and immunohistochemical staining   | lecture | Yada           | report          |
| 24-26 | Learn outline and specificity of pathological diagnosis of oral and maxillofacial diseases, and also obtain the latest specific information on oral pathological diagnosis. | lecture | Matsuo<br>Yada | report          |
| 27-30 | Learn differential diagnosis of benign and malignant tumors.  | lecture | Matsuo<br>Yada | report          |

2017年度

# Practice of Clinical Diagnostic Pathology (Practice of Clinical Diagnostic Pathology)

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 演習           | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Yada N.      |     |          |    |                       |     |   |
| 担当教員  | 矢田 直美        |     |          |    |                       |     |   |

## 授業の概要

Acquire skills in clinical diagnostic pathology, and develop an ability to make pathological diagnosis

## 学生の到達目標

1. Acquire the skill of handling biopsy materials.
2. Acquire the skill of handling surgical materials.
3. Acquire the skill of cytological materials.
4. Acquire the skill of materials of intraoperative rapid diagnosis.
5. Experience autopsy and expand the knowledge of it.
6. Acquire expertise in diagnosis of main diseases of oral and maxillofacial region.
7. Acquire expertise in diagnosis of main general diseases.
8. Acquire the skill in pathological diagnostic report writing.
9. Acquire the skill in preparing manuscript of case report.

## テキスト

出) 著)

## 参考書

Pathologic basis of disease, 9th  
出)Elsevier 著)Robbins & Cotran

Pathology and Genetics of Tumours of the Head and Neck (IARC)  
出)WHO Classification of Tumours 著)

## 成績評価方法・基準

| 評価項目   | 割合   |
|--------|------|
| Report | 100% |

## その他

2017年度

# Practice of Clinical Diagnostic Pathology (Practice of Clinical Diagnostic Pathology)

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 演習           | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Yada N.      |     |          |    |                       |     |   |
| 担当教員  | 矢田 直美        |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容   | 授業方法     | 担当教員 | 事前・事後学習<br>学習課題 |
|-------|--|----------|------|-----------------|
| 1     | orientation  | practice | Yada | report          |
| 2,3   | Learn and practice the procedure of handling of biopsy and surgical materials.               | practice | Yada | report          |
| 4,5   | Learn and practice the procedure of handling of cytological materials.                       | practice | Yada | report          |
| 6     | Learn and practice the procedure of handling of materials of intraoperative rapid diagnosis. | practice | Yada | report          |
| 7     | Learn and practice the procedure of autopsy.   | practice | Yada | report          |
| 8,9   | Learn outline of main diseases of oral and maxillofacial region and practice diagnosis.      | practice | Yada | report          |
| 10,11 | Learn outline of main general diseases and practice diagnosis.                               | practice | Yada | report          |
| 12,13 | Learn and practice the pathological diagnostic report writing.                               | practice | Yada | report          |
| 14,15 | Learn and practice the preparation of manuscript of case report.                             | practice | Yada | report          |



2017年度

# Infectious Diseases (Infectious Diseases )

|       |                  |     |          |    |                       |     |   |
|-------|------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1-2grades        | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習            | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻       |     |          |    |                       |     |   |
| 科目責任者 | Nishihara T.     |     |          |    |                       |     |   |
| 担当教員  | 西原 達次、有吉 渉、沖永 敏則 |     |          |    |                       |     |   |

## 授業の概要

You can obtain novel information and knowledge concerning life sciences for infection and immunity, including “ virulence factors ” , “ apoptosis ” , and “ cell cycle ” in cell biology. At this course, you should perform a group study for individual themes, “ periodontopathic bacteria ” and “ bone metabolism disorders”, etc.

## 学生の到達目標

To obtain novel information and knowledge for

- Factors responsible for infection
- Virulence factors
- Host defense in oral lesion
- Immune system
- Cytokine
- Inflammatory mediators
- Intracellular signaling
- Regulation of transcription
- Apoptosis
- Cell cycle

## テキスト

Recent reports in our laboratory Publications and reference papers concerning this lecture

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目   | 割合   |
|--|------|
| Reports after the group studies and lectures | 100% |

## その他

At any time, we accept your visits about your study-counsel and advices at our department in the 11th floor of main building.

2017年度

# Infectious Diseases (Infectious Diseases )

|       |                  |     |          |    |                       |     |   |
|-------|------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1-2grades        | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習            | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻       |     |          |    |                       |     |   |
| 科目責任者 | Nishihara T.     |     |          |    |                       |     |   |
| 担当教員  | 西原 達次、有吉 渉、沖永 敏則 |     |          |    |                       |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法        | 担当教員                             | 事前・事後学習<br>学習課題            |
|----|---|-------------|----------------------------------|----------------------------|
| 1  | Outline of infectious diseases<br>Fundamental knowledge for molecular biology and microbiology.                         | Group study | Nishihara<br>Ariyoshi<br>Okinaga | Pre-reading of<br>textbook |
| 2  | Virulence factors<br>Knowledge for adhesion and invasiveness of pathogens.  | Group study | Nishihara<br>Ariyoshi<br>Okinaga | Pre-reading of<br>textbook |
| 3  | Virulence factors<br>Knowledge for exotoxin and endotoxin produced by pathogenic bacteria.                              | Group study | Nishihara<br>Ariyoshi<br>Okinaga | Pre-reading of<br>textbook |
| 4  | Immune systems in oral lesion<br>Host defense mediated by saliva and humoral immunity in oral lesion.                   | Group study | Nishihara<br>Ariyoshi<br>Okinaga | Pre-reading of<br>textbook |
| 5  | Immune systems in oral lesion<br>Host defense mediated by cellular immunity in oral lesion.                             | Group study | Nishihara<br>Ariyoshi<br>Okinaga | Pre-reading of<br>textbook |
| 6  | Host Defense<br>Structure and function of cytokines.  | Group study | Nishihara<br>Ariyoshi<br>Okinaga | Pre-reading of<br>textbook |
| 7  | Host Defense<br>Interaction between innate and acquired immunity.   | Group study | Nishihara<br>Ariyoshi<br>Okinaga | Pre-reading of<br>textbook |
| 8  | Molecular biology for host defense against infection<br>Role of inflammasome in inflammatory response.                  | Group study | Nishihara<br>Ariyoshi<br>Okinaga | Pre-reading of<br>textbook |
| 9  | Molecular biology for host defense against infection<br>Intracellular signaling induced by pathogens.                   | Group study | Nishihara<br>Ariyoshi<br>Okinaga | Pre-reading of<br>textbook |
| 10 | Molecular biology for host defense against infection<br>Knowledge for transcriptional factors involved in host defense. | Group study | Nishihara<br>Ariyoshi<br>Okinaga | Pre-reading of<br>textbook |
| 11 | Histopathology for infection<br>Histologic features of infected tissues.  | Group study | Nishihara<br>Ariyoshi<br>Okinaga | Pre-reading of<br>textbook |
| 12 | Apoptosis<br>Molecular mechanisms of programmed cell death induced by pathogens.  | Group study | Nishihara<br>Ariyoshi<br>Okinaga | Pre-reading of<br>textbook |
| 13 | Cell cycle<br>Effects on cell cycle of host by virulence factors.   | Group study | Nishihara<br>Ariyoshi<br>Okinaga | Pre-reading of<br>textbook |
| 14 | Periodontopathic bacteria<br>Biological effects of periodontopathic bacteria on host cells.                             | Lecture     | Nishihara<br>Ariyoshi<br>Okinaga | Pre-reading of<br>textbook |
| 15 | Bone metabolism disorders<br>Mechanisms of bone turnover and metabolic bone diseases.                                   | Lecture     | Nishihara<br>Ariyoshi<br>Okinaga | Pre-reading of<br>textbook |

2017年度

# Infectious Diseases (Infectious Diseases )

|       |                  |     |          |    |                                  |     |   |
|-------|------------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades     | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習            | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻       |     |          |    |                                  |     |   |
| 科目責任者 | Okinaga T.       |     |          |    |                                  |     |   |
| 担当教員  | 沖永 敏則、有吉 渉、西原 達次 |     |          |    |                                  |     |   |

## 授業の概要

You can study novel issue of infectious diseases and immunity through scientific papers, which were recently published on scientific journal concerning infection and immunity. At this course, you should explain the objects, methods, results and discussion in detail and we can share novel knowledge, which require to your experiments, through our discussion on this seminar.

## 学生の到達目標

- Bring up your ability on reading scientific papers
- Bring up your ability on critically thinking
- Bring up your ability on logically thinking

## テキスト

Novel scientific papers, Nature, Cell, Science, etc  
出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                               | 割合   |
|------------------------------------|------|
| oral presentations and discussions | 100% |

## その他

At any time, we accept your visits about your study-counsel and advices at our department in the 11rd floor of main building.

2017年度

# Infectious Diseases (Infectious Diseases )

|       |                  |     |          |    |                                  |     |   |
|-------|------------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades     | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習            | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻       |     |          |    |                                  |     |   |
| 科目責任者 | Okinaga T.       |     |          |    |                                  |     |   |
| 担当教員  | 沖永 敏則、有吉 渉、西原 達次 |     |          |    |                                  |     |   |

## 授業計画

| 回    | 学習内容  | 授業方法                                       | 担当教員                             | 事前・事後学習<br>学習課題   |
|------|---|--|----------------------------------|---|
| 1-15 | 1. Understanding the object and details of novel experiments<br>2. Discussion about experimental view | Introduction of novel paper and discussion | Nishihara<br>Ariyoshi<br>Okinaga | Reading paper intensively and investigating issues on the area related your experiments |

2017年度

# Infectious Diseases (Infectious Diseases )

|       |                  |     |          |    |                                  |     |   |
|-------|------------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades     | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習            | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻       |     |          |    |                                  |     |   |
| 科目責任者 | Ariyoshi W.      |     |          |    |                                  |     |   |
| 担当教員  | 有吉 渉、沖永 敏則、西原 達次 |     |          |    |                                  |     |   |

## 授業の概要

You can share novel information and knowledge concerning infection and immunity. At this course, you should explain the objects, methods and results of your experiments. The instructors point out the critical points, which require to your experiments, through our discussion on this seminar.

## 学生の到達目標

- Bring up your ability on presentation about the experimental data
- Bring up your ability on critically thinking
- Bring up your ability on logically thinking

## テキスト

Research lab notebook and reference papers concerning your project  
出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                               | 割合  |
|------------------------------------|-----|
| Attendance                         | 10% |
| Oral presentations and discussions | 60% |
| Research presentations             | 30% |

## その他

At any time, we accept your visits about your study-counsel and advices at our department in the 11th floor of main building.

2017年度

# Infectious Diseases (Infectious Diseases )

|       |                  |     |          |    |                                  |     |   |
|-------|------------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades     | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習            | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻       |     |          |    |                                  |     |   |
| 科目責任者 | Ariyoshi W.      |     |          |    |                                  |     |   |
| 担当教員  | 有吉 涉、沖永 敏則、西原 達次 |     |          |    |                                  |     |   |

## 授業計画

| 回    | 学習内容  | 授業方法   | 担当教員                             | 事前・事後学習<br>学習課題   |
|------|---|--|----------------------------------|---|
| 1-15 | 1. Understanding the background, methods and results of your experiments<br>2. Discussion about experimental data | Presentation about the data of your experiments and discussion | Nishihara<br>Ariyoshi<br>Okinaga | Reading paper intensively and investigating issues on the area related your experiments |

2017年度

# Pharmacology (Pharmacology )

|       |  |     |          |    |                                  |     |   |
|-------|--|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習  | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Ohsumi T.  |     |          |    |                                  |     |   |
| 担当教員  | 竹内 弘、大住 伴子、東 泉<br>Takeuchi H., Ohsumi T., Higashi S. |     |          |    |                                  |     |   |

## 授業の概要

【Language】 Japanese

In the present, the elderly is administrated a large number of drugs for systemic disease. In this course, you will study the hematologic drugs (anticoagulant drugs and antiplatelet drugs) and central nerves system drugs (antidepressants, etc.).

## 学生の到達目標

1. You will administer the proper drug to the patient with systemic disease.
2. You will treat the patient with systemic disease with safety.
3. You will explain the drugs used in systemic disease.

## テキスト

出) \_\_\_\_\_ 著) \_\_\_\_\_

## 参考書

出) \_\_\_\_\_ 著) \_\_\_\_\_

## 成績評価方法・基準

| 評価項目              | 割合  |
|-------------------|-----|
| oral presentation | 40% |
| discussions       | 10% |
| attendance        | 50% |

## その他

2017年度

# Pharmacology (Pharmacology )

|       |                                    |     |          |    |                                  |     |   |
|-------|------------------------------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades                       | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習                              | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                         |     |          |    |                                  |     |   |
| 科目責任者 | Ohsumi T.                          |     |          |    |                                  |     |   |
| 担当教員  | 竹内 弘、大住 伴子、東 泉                     |     |          |    |                                  |     |   |
|       | Takeuchi H., Ohsumi T., Higashi S. |     |          |    |                                  |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法                 | 担当教員                          | 事前・事後学習<br>学習課題            |
|----|---|----------------------|-------------------------------|----------------------------|
| 1  | Outline of hematologic drugs and central nervous system drugs   | Lecture              | Takeuchi<br>Ohsumi<br>Higashi |                            |
| 2  | Hematologic drugs 1<br>You will obtain knowledge of anticoagulant drug (heparin).   | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 3  | Hematologic drugs 2<br>You will obtain knowledge of anticoagulant drug (low molecular weight heparin).                            | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 4  | Hematologic drugs 3<br>You will obtain knowledge of anticoagulant drug (warfarin).  | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 5  | Hematologic drugs 4<br>You will obtain knowledge of antiplatelet drug (aspirin).  | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 6  | Hematologic drugs 5<br>You will obtain knowledge of new antiplatelet drugs .  | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 7  | Hematologic drugs 6<br>You will study the things to be careful about the patients who take hematologic drugs in dental treatment. | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 8  | Hematologic drugs 7<br>You will study the things to be careful about the patients who take hematologic drugs in dental treatment. | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 9  | Central nerves system drugs 1<br>You will obtain knowledge of mental disorder.  | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 10 | Central nerves system drugs 2<br>You will obtain knowledge of drugs used in Parkinsonism.   | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 11 | Central nerves system drugs 3<br>You will obtain knowledge of antidepressants.  | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 12 | Central nerves system drugs 4<br>You will obtain knowledge of drugs used in Alzheimer disease.                                    | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 13 | Central nerves system drugs 5<br>You will obtain knowledge of drugs used in epilepsy.   | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 14 | Central nerves system drugs 6<br>You will study the drugs used in the elderly.  | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 15 | Summary<br>You will study the relationship between dental treatments and hematologic or central nerves system drugs.              | Lecture              | Takeuchi<br>Ohsumi<br>Higashi |                            |



2017年度

# Pharmacology (Pharmacology )

|       |                                     |     |          |    |                                  |     |   |
|-------|-------------------------------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades                        | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習                               | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                          |     |          |    |                                  |     |   |
| 科目責任者 | Ohsumi T.                           |     |          |    |                                  |     |   |
| 担当教員  | 竹内 弘、大住 伴子、東 泉                      |     |          |    |                                  |     |   |
|       | Takeuchi H., Ohsumi T., Higashi, S. |     |          |    |                                  |     |   |

## 授業の概要

【Language】 Japanese

In the present, the elderly is administrated a large number of drugs for systemic disease. In this course, you will study the cardiovascular drugs (drugs used in hypertension, etc.) and central nerves system drugs (antidepressants, etc.).

## 学生の到達目標

1. You will administer the proper drug to the patient with systemic disease.
2. You will treat the patient with systemic disease with safety.
3. You will explain the drugs used in systemic disease.

## テキスト

出) (著)

## 参考書

Goodman & Gilman 's the Pharmacological Basis of Therapeutics  
出) (著)

## 成績評価方法・基準

| 評価項目              | 割合  |
|-------------------|-----|
| oral presentation | 40% |
| discussions       | 10% |
| attendance        | 50% |

## その他

2017年度

# Pharmacology (Pharmacology )

|       |   |     |          |    |                                  |     |   |
|-------|---|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades  | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習   | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                  |     |   |
| 科目責任者 | Ohsumi T.   |     |          |    |                                  |     |   |
| 担当教員  | 竹内 弘、大住 伴子、東 泉<br>Takeuchi H., Ohsumi T., Higashi, S. |     |          |    |                                  |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法                 | 担当教員                          | 事前・事後学習<br>学習課題            |
|----|---|----------------------|-------------------------------|----------------------------|
| 1  | Outline of cardiovascular drugs and central nervous system drugs  | Lecture              | Takeuchi<br>Ohsumi<br>Higashi |                            |
| 2  | Cardiovascular drugs 1<br>You will obtain knowledge of drugs used in hypertension.  | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 3  | Cardiovascular drugs 2<br>You will obtain knowledge of drugs used in hypertension.  | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 4  | Cardiovascular drugs 3<br>You will obtain knowledge of drugs used in heart failure.   | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 5  | Cardiovascular drugs 4<br>You will obtain knowledge of drugs used in the treatment of angina pectoris.                                  | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 6  | Cardiovascular drugs 5<br>You will obtain knowledge of antiarrhythmic drugs.  | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 7  | Cardiovascular drugs 6<br>You will study the things to be careful about the patients who take cardiovascular drugs in dental treatment. | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 8  | Cardiovascular drugs 7<br>You will study the things to be careful about the patients who take cardiovascular drugs in dental treatment. | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 9  | Central nerves system drugs 1<br>You will obtain knowledge of mental disorder.  | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 10 | Central nerves system drugs 2<br>You will obtain knowledge of antidepressants.  | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 11 | Central nerves system drugs 3<br>You will obtain knowledge of drugs used in mania.  | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 12 | Central nerves system drugs 4<br>You will obtain knowledge of drugs used in Alzheimer disease.  | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 13 | Central nerves system drugs 5<br>You will obtain knowledge of antipsychotic drugs.  | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 14 | Central nerves system drugs 6<br>You will study alcoholism and drug dependence.   | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 15 | Summary<br>You will study the relationship between dental treatments and cardiovascular drugs or central nerves system drugs.           | Lecture              | Takeuchi<br>Ohsumi<br>Higashi |                            |

2017年度

# Pharmacology (Pharmacology )

|       |                                    |     |          |    |                                  |     |   |
|-------|------------------------------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades                       | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習                                 | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                         |     |          |    |                                  |     |   |
| 科目責任者 | Ohsumi T.                          |     |          |    |                                  |     |   |
| 担当教員  | 竹内 弘、大住 伴子、東 泉                     |     |          |    |                                  |     |   |
|       | Takeuchi T., Ohsumi T., Higashi S. |     |          |    |                                  |     |   |

## 授業の概要

【Language】 Japanese

In this course, you will read the literature of drug which has a close relationship with dental treatments and obtain the up-to-date knowledge of drugs. You will study the adverse effects of drugs used in dental treatment.

## 学生の到達目標

1. You will administer drugs to patients with effectively and safety.
2. You will obtain the up-to-date knowledge of drugs.
3. You will read scientific articles logically.

## テキスト

出) (著)

## 参考書

The antimicrobial stewardship textbook for lifelong continuing education  
出) (著)

## 成績評価方法・基準

| 評価項目              | 割合  |
|-------------------|-----|
| oral presentation | 40% |
| discussions       | 10% |
| attendance        | 50% |

## その他

2017年度

# Pharmacology (Pharmacology )

|       |                                    |     |          |    |                                  |     |   |
|-------|------------------------------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades                       | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習                                 | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                         |     |          |    |                                  |     |   |
| 科目責任者 | Ohsumi T.                          |     |          |    |                                  |     |   |
| 担当教員  | 竹内 弘、大住 伴子、東 泉                     |     |          |    |                                  |     |   |
|       | Takeuchi T., Ohsumi T., Higashi S. |     |          |    |                                  |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法                 | 担当教員                          | 事前・事後学習<br>学習課題            |
|----|---|----------------------|-------------------------------|----------------------------|
| 1  | You will discuss the lecture and practice in this course.   | Lecture              | Takeuchi<br>Ohsumi<br>Higashi |                            |
| 2  | Antimicrobial drugs 1<br>You will obtain knowledge of the theory of PK-PD.  | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 3  | Antimicrobial drugs 2<br>You will obtain knowledge of the theory of PK-PD.  | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 4  | Antimicrobial drugs 3<br>You will study resistant bacteria.   | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 5  | Antimicrobial drugs 4<br>You will obtain knowledge of carbapenem antibiotics.   | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 6  | Antiviral drugs<br>You will obtain knowledge of new anti-influenza drugs.   | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 7  | Antiplatelet drugs 1<br>You will study the coagulation of blood and fibrinolytic system.  | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 8  | Antiplatelet drugs 2<br>You will obtain knowledge of new antiplatelet drugs.  | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 9  | Antiplatelet drugs 3<br>You will study the relationship between dental treatment and new antiplatelet drugs.                                    | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 10 | You will study the guideline for use of the coagulation of blood inhibitors.  | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 11 | Antifungal drugs 1<br>You will obtain knowledge of antifungal drugs.<br>You will study the application of antifungal drugs in dental treatment. | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 12 | Antifungal drugs 2<br>You will study the drug-interaction of antifungal drugs.  | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 13 | Pharmaceuticals for osteoporosis 1<br>You will obtain knowledge of bisphosphonates.   | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 14 | Pharmaceuticals for osteoporosis 2<br>You will study the adverse effect of bisphosphonates.   | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 15 | Summary<br>You will study the administration of drugs in dental treatment with safety.  | Lecture              | Takeuchi<br>Ohsumi<br>Higashi |                            |

2017年度

# Pharmacology (Pharmacology )

|       |                                    |     |          |    |                                  |     |   |
|-------|------------------------------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades                       | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習                              | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                         |     |          |    |                                  |     |   |
| 科目責任者 | Ohsumi T.                          |     |          |    |                                  |     |   |
| 担当教員  | 竹内 弘、大住 伴子、東 泉                     |     |          |    |                                  |     |   |
|       | Takeuchi H., Ohsumi T., Higashi S. |     |          |    |                                  |     |   |

## 授業の概要

【Language】 Japanese

In this course, you will study the anti-infective drugs (antimicrobial drugs, antifungal drugs and antiviral drugs) and the up-to-date pharmacological therapeutics in infectious disease.

## 学生の到達目標

1. You will administer the proper anti-infective drug to the patient.
2. You will explain the up-to-date anti-infective drugs.
3. You will administer the anti-infective drugs based on the theory.

## テキスト

出) (著)

## 参考書

The antimicrobial stewardship textbook for lifelong continuing education  
出) (著)

## 成績評価方法・基準

| 評価項目              | 割合  |
|-------------------|-----|
| oral presentation | 40% |
| discussions       | 10% |
| attendance        | 50% |

## その他

2017年度

# Pharmacology (Pharmacology )

|       |                                    |     |          |    |                                  |     |   |
|-------|------------------------------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades                       | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習                              | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                         |     |          |    |                                  |     |   |
| 科目責任者 | Ohsumi T.                          |     |          |    |                                  |     |   |
| 担当教員  | 竹内 弘、大住 伴子、東 泉                     |     |          |    |                                  |     |   |
|       | Takeuchi H., Ohsumi T., Higashi S. |     |          |    |                                  |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法                 | 担当教員                          | 事前・事後学習<br>学習課題            |
|----|---|----------------------|-------------------------------|----------------------------|
| 1  | Outline of the anti-infective drugs<br>You will study the outline of the anti-infective drugs.  | Lecture              | Takeuchi<br>Ohsumi<br>Higashi |                            |
| 2  | Outline of antimicrobial drugs 1<br>You will study the outline of antimicrobial drugs and resistant bacteria.                                 | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 3  | Outline of antimicrobial drugs 2<br>You will obtain knowledge of the theory of PK-PD.   | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 4  | Detailed explanations of antimicrobial drugs 1<br>You will obtain knowledge of $\beta$ -lactam antibiotics.                                   | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 5  | Detailed explanations of antimicrobial drugs 2<br>You will obtain knowledge of $\beta$ -lactam antibiotics.                                   | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 6  | Detailed explanations of antimicrobial drugs 3<br>You will obtain knowledge of antibiotics except $\beta$ -lactam antibiotics.                | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 7  | Detailed explanations of antimicrobial drugs 4<br>You will obtain knowledge of antibiotics except $\beta$ -lactam antibiotics.                | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 8  | Detailed explanations of antimicrobial drugs 5<br>You will study of the application of antibiotics in dental treatment.                       | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 9  | Detailed explanations of antimicrobial drugs 6<br>You will obtain knowledge of new quinolone antimicrobial drugs.                             | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 10 | Detailed explanations of antimicrobial drugs 7<br>You will study of the application of new quinolone antimicrobial drugs in dental treatment. | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 11 | Detailed explanations of antifungal drugs 1<br>You will obtain knowledge of antifungal drugs.   | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 12 | Detailed explanations of antifungal drugs 2<br>You will study of the application of antifungal drugs in dental treatment.                     | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 13 | Detailed explanations of antiviral drugs 1<br>You will obtain knowledge of antiviral drugs.   | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 14 | Detailed explanations of antiviral drugs 2<br>You will study of the application of antiviral drugs in dental treatment.                       | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 15 | Summary<br>You will study the administration of the proper anti-infective drug to the patient.  | Lecture              | Takeuchi<br>Ohsumi<br>Higashi |                            |

2017年度

# Journal Club - Current Topics for Drug Discovery - (Journal Club - Current Topics for Drug Discovery -)

|       |                                    |     |          |    |                                     |     |   |
|-------|------------------------------------|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades                       | 期区分 | 通年       | 科目 | Compulsory / Elective<br>(Research) | 単位数 | 2 |
| 授業方法  | 講義・演習                              | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                         |     |          |    |                                     |     |   |
| 科目責任者 | Takeuchi H.                        |     |          |    |                                     |     |   |
| 担当教員  | 竹内 弘、大住 伴子、東 泉                     |     |          |    |                                     |     |   |
|       | Takeuchi H., Ohsumi T., Higashi S. |     |          |    |                                     |     |   |

## 授業の概要

Understand and introduce articles about current topics of life sciences to provide hints for drug discovery.

## 学生の到達目標

1. You can read scientific articles logically.
2. You can understand and review articles about basic life science.
3. You can introduce articles about basic life science to let the audience understand the content.

## テキスト

Choose an article that you would like to introduce and discuss with the members.

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                       | 割合  |
|----------------------------|-----|
| oral presentations         | 70% |
| Discussions and activities | 30% |

## その他

Anytime, but an appointment is required prior to visit our office.

2017年度

# Journal Club - Current Topics for Drug Discovery - (Journal Club - Current Topics for Drug Discovery -)

|       |                                    |     |          |    |                                     |     |   |
|-------|------------------------------------|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades                       | 期区分 | 通年       | 科目 | Compulsory / Elective<br>(Research) | 単位数 | 2 |
| 授業方法  | 講義・演習                              | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                         |     |          |    |                                     |     |   |
| 科目責任者 | Takeuchi H.                        |     |          |    |                                     |     |   |
| 担当教員  | 竹内 弘、大住 伴子、東 泉                     |     |          |    |                                     |     |   |
|       | Takeuchi H., Ohsumi T., Higashi S. |     |          |    |                                     |     |   |

## 授業計画

| 回    | 学習内容  | 授業方法  | 担当教員                          | 事前・事後学習<br>学習課題                              |
|------|---|---|-------------------------------|--|
| 1-15 | Understand the article and introduce it including the background of the study, discuss about the possible application for drug discovery. | Lecture and Practice including<br>Presentation and Discussion | Takeuchi<br>Ohsumi<br>Higashi | Choose a topic and prepare for presentation. |



2017年度

# Seminar in Molecular Pharmacology (Seminar in Molecular Pharmacology)

|       |  |     |          |    |                                  |     |   |
|-------|--|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習  | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Takeuchi H.  |     |          |    |                                  |     |   |
| 担当教員  | 竹内 弘、大住 伴子、東 泉<br>Takeuchi T., Ohsumi T., Higashi S. |     |          |    |                                  |     |   |

## 授業の概要

【Language】English and Japanese

Learn basic techniques required for pharmacological experiments.

Learn the methods to prepare recombinant protein and examine effects of drugs using it.

## 学生の到達目標

1. You can explain how to prepare recombinant proteins.
2. You can design and prepare DNA constructs for preparing recombinant proteins.
3. You can prepare recombinant proteins.
4. You can perform in vitro pharmacological experiments using recombinant proteins.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目         | 割合  |
|--------------|-----|
| presentation | 40% |
| Discussions  | 15% |
| Attendances  | 45% |

## その他

Lecture with writing on the whiteboard. Textbooks will be recommended to referring the course contents.

2017年度

# Seminar in Molecular Pharmacology (Seminar in Molecular Pharmacology)

|       |                                    |     |          |    |                                  |     |   |
|-------|------------------------------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades                       | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習                              | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                         |     |          |    |                                  |     |   |
| 科目責任者 | Takeuchi H.                        |     |          |    |                                  |     |   |
| 担当教員  | 竹内 弘、大住 伴子、東 泉                     |     |          |    |                                  |     |   |
|       | Takeuchi T., Ohsumi T., Higashi S. |     |          |    |                                  |     |   |

## 授業計画

| 回  | 学習内容   | 授業方法     | 担当教員                          | 事前・事後学習<br>学習課題   |
|----|--|----------|-------------------------------|---|
| 1  | Orientation<br>Learn overall process of the examination.   | Lecture  | Takeuchi<br>Ohsumi            | Careful reading of the handout                          |
| 2  | Pre-preparation of bacterial expression DNA construct<br>Learn how to obtain the information of the genes of interest and design the construct.                              | Practice | Takeuchi<br>Ohsumi<br>Higashi | Recording the results                                   |
| 3  | Preparation of bacterial expression DNA construct (1)<br>Learn how to prepare the gene of interest by PCR and the vector for cloning.  | Practice | Takeuchi<br>Ohsumi<br>Higashi | Recording the results                                   |
| 4  | Preparation of bacterial expression DNA construct (2)<br>Learn how to judge the result of cloning.   | Practice | Takeuchi<br>Ohsumi<br>Higashi | Recording the results                                   |
| 5  | Confirming expression of recombinant protein (1)<br>Learn how to culture bacteria to induce expression of recombinant protein and prepare sample for analysis of expression. | Practice | Takeuchi<br>Ohsumi<br>Higashi | Recording the results                                   |
| 6  | Confirming expression of recombinant protein (2)<br>Learn how to analyze the expression of recombinant protein; SDS-PAGE.  | Practice | Takeuchi<br>Ohsumi<br>Higashi | Recording the results                                   |
| 7  | Preparation of recombinant protein (1)<br>Learn how to optimize introducing condition in large scale culture for preparing recombinant protein.                              | Practice | Takeuchi<br>Ohsumi<br>Higashi | Recording the results                                   |
| 8  | Preparation of recombinant protein (2)<br>Learn how to purify recombinant protein from the lysate of bacteria.   | Practice | Takeuchi<br>Ohsumi<br>Higashi | Recording the results                                   |
| 9  | Preparation of recombinant protein (3)<br>Learn how to examine concentration and purity of the prepared protein.   | Practice | Takeuchi<br>Ohsumi<br>Higashi | Recording the results                                   |
| 10 | In vitro assay using the recombinant protein (1)<br>Learn how to prepare samples for examining binding activity of the prepared protein.                                     | Practice | Takeuchi<br>Ohsumi<br>Higashi | Recording the results                                   |
| 11 | In vitro assay using the recombinant protein (2)<br>Learn how to examine binding activity of the prepared protein: SDS-PAGE.   | Practice | Takeuchi<br>Ohsumi<br>Higashi | Recording the results                                   |
| 12 | In vitro assay using the recombinant protein (3)<br>Learn how to examine enzymatic activity of the prepared protein.   | Practice | Takeuchi<br>Ohsumi<br>Higashi | Recording the results                                   |
| 13 | In vitro assay using the recombinant protein (4)<br>Learn how to examine effects of drugs on enzymatic activity of the prepared protein.                                     | Practice | Takeuchi<br>Ohsumi<br>Higashi | Recording the results                                   |
| 14 | Summarizing the data<br>Summarize your data and prepare for the presentation.  | Practice | Takeuchi<br>Ohsumi<br>Higashi | Summarize your results and prepare for the presentation |
| 15 | Presentation of the summarized data<br>Present your summarized data and discuss about the result.  | Practice | Takeuchi<br>Ohsumi<br>Higashi | Summarize your results and prepare for the presentation |

2017年度

# Seminar in Cellular and Molecular Pharmacology (Seminar in Cellular and Molecular Pharmacology)

|       |  |     |          |    |                                     |     |   |
|-------|--|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective<br>(Research) | 単位数 | 2 |
| 授業方法  | 講義・演習  | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                     |     |   |
| 科目責任者 | Takeuchi H.  |     |          |    |                                     |     |   |
| 担当教員  | 竹内 弘、大住 伴子、東 泉<br>Takeuchi T., Ohsumi T., Higashi S. |     |          |    |                                     |     |   |

## 授業の概要

【Language】English and Japanese

Learn basic techniques required for pharmacological experiments.

Learn the methods to examine effects of drugs using techniques for gene modification and mammalian cell culture.

## 学生の到達目標

1. You can explain how to control exogenous gene expression in cultured cells.
2. You can design and prepare DNA constructs for gene expression.
3. You can transfect exogenous gene into cultured cells.
4. You can examine effect of drugs using genetically modified cultured cells.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目         | 割合  |
|--------------|-----|
| Presentation | 40% |
| Discussions  | 15% |
| Attendances  | 45% |

## その他

Lecture with writing on the whiteboard. Textbooks will be recommended to referring the course contents.

2017年度

# Seminar in Cellular and Molecular Pharmacology (Seminar in Cellular and Molecular Pharmacology)

|       |  |     |          |    |                                     |     |   |
|-------|--|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective<br>(Research) | 単位数 | 2 |
| 授業方法  | 講義・演習  | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                     |     |   |
| 科目責任者 | Takeuchi H.  |     |          |    |                                     |     |   |
| 担当教員  | 竹内 弘、大住 伴子、東 泉<br>Takeuchi T., Ohsumi T., Higashi S. |     |          |    |                                     |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法     | 担当教員                          | 事前・事後学習<br>学習課題  |
|----|---|----------|-------------------------------|--|
| 1  | Orientation<br>Learn overall process of the examination.  | Lecture  | Takeuchi<br>Ohsumi            | Careful reading<br>of the handout                                |
| 2  | Pre-preparation of mammalian expression DNA construct<br>Learn how to obtain the information of the genes of interest and design the construct.   | Practice | Takeuchi<br>Ohsumi<br>Higashi | Recording the<br>results   |
| 3  | Preparation of mammalian expression DNA construct (1)<br>Learn how to prepare the interest gene and the vector for cloning.   | Practice | Takeuchi<br>Ohsumi<br>Higashi | Recording the<br>results   |
| 4  | Preparation of mammalian expression DNA construct (2)<br>Learn how to judge the result of cloning.  | Practice | Takeuchi<br>Ohsumi<br>Higashi | Recording the<br>results   |
| 5  | Introducing genes into cultured cells and confirming the expression (1)<br>Learn how to introduce the prepared expression constructs into cultured cells.   | Practice | Takeuchi<br>Ohsumi<br>Higashi | Recording the<br>results   |
| 6  | Introducing genes into cultured cells and confirming the expression (2)<br>Learn how to introduce the prepared expression constructs into cultured cells.   | Practice | Takeuchi<br>Ohsumi<br>Higashi | Recording the<br>results   |
| 7  | Introducing genes into cultured cells and confirming the expression (3)<br>Learn how to check expression of the introduced gene. (Microscopic examination and electrophoresis of the protein).          | Practice | Takeuchi<br>Ohsumi<br>Higashi | Recording the<br>results   |
| 8  | Introducing genes into cultured cells and confirming the expression (4)<br>Learn how to check expression of the gene (Western blotting).  | Practice | Takeuchi<br>Ohsumi<br>Higashi | Recording the<br>results   |
| 9  | Examining the effect of drugs using the transfected cells (1)<br>Learn how to observe translocation of the intracellular protein in response to drug treatment.   | Practice | Takeuchi<br>Ohsumi<br>Higashi | Recording the<br>results   |
| 10 | Examining the effect of drugs using the transfected cells (2)<br>Learn how to evaluate effect of the drug based on phosphorylation of the intracellular protein (Preparation of samples).               | Practice | Takeuchi<br>Ohsumi<br>Higashi | Recording the<br>results   |
| 11 | Examining the effect of drugs using the transfected cells (3)<br>Learn how to evaluate effect of the drug based on phosphorylation of the intracellular protein (Electrophoresis).                      | Practice | Takeuchi<br>Ohsumi<br>Higashi | Recording the<br>results   |
| 12 | Examining the effect of drugs using the transfected cells (4)<br>Learn how to evaluate effect of the drug based on phosphorylation of the intracellular protein (Detection and judgment of the result). | Practice | Takeuchi<br>Ohsumi<br>Higashi | Recording the<br>results   |
| 13 | Examining the effect of drugs using the transfected cells (5)<br>Learn how to evaluate effect of the drug based on intracellular calcium level (Preparation of cells).                                  | Practice | Takeuchi<br>Ohsumi<br>Higashi | Recording the<br>results   |
| 14 | Examining the effect of drugs using the transfected cells (6)<br>Learn how to evaluate effect of the drug based on intracellular calcium level (Calcium imaging).                                       | Practice | Takeuchi<br>Ohsumi<br>Higashi | Recording the<br>results   |
| 15 | Summary of the data and discussion<br>Summarize your data and present/discuss the result.   | Practice | Takeuchi<br>Ohsumi<br>Higashi | Summarize your<br>results and<br>prepare for the<br>presentation |

2017年度

# Seminar in Pharmacology (Seminar in Pharmacology)

|       |                                    |     |          |    |                                  |     |   |
|-------|------------------------------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades                       | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習                              | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                         |     |          |    |                                  |     |   |
| 科目責任者 | Ohsumi T.                          |     |          |    |                                  |     |   |
| 担当教員  | 竹内 弘、大住 伴子、東 泉                     |     |          |    |                                  |     |   |
|       | Takeuchi T., Ohsumi T., Higashi S. |     |          |    |                                  |     |   |

## 授業の概要

【Language】 Japanese

In this course, you will study the basic knowledge and experimental procedures for animal experiment. You will study the animal experiment protocol drafting.

## 学生の到達目標

1. You will explain the laboratory animals.
2. You will draft an animal experiment protocol.
3. You will administer drugs to animals.
4. You will explain and practice the basic pharmacological experiment.

## テキスト

出) (著)

## 参考書

Guidelines for proper conduct of animal experiments  
出) (著)

## 成績評価方法・基準

| 評価項目              | 割合  |
|-------------------|-----|
| oral presentation | 40% |
| discussions       | 10% |
| attendance        | 50% |

## その他

2017年度

# Seminar in Pharmacology (Seminar in Pharmacology)

|       |                                    |     |          |    |                                  |     |   |
|-------|------------------------------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades                       | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習                              | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                         |     |          |    |                                  |     |   |
| 科目責任者 | Ohsumi T.                          |     |          |    |                                  |     |   |
| 担当教員  | 竹内 弘、大住 伴子、東 泉                     |     |          |    |                                  |     |   |
|       | Takeuchi T., Ohsumi T., Higashi S. |     |          |    |                                  |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法                 | 担当教員                          | 事前・事後学習<br>学習課題            |
|----|---|----------------------|-------------------------------|----------------------------|
| 1  | You will discuss the lecture and practice in this course.   | Lecture              | Takeuchi<br>Ohsumi<br>Higashi |                            |
| 2  | Laboratory animal science 1<br>You will study the outline of laboratory animals.  | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 3  | Laboratory animal science 2<br>You will obtain knowledge of laws and guidelines for laboratory animals.                                   | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 4  | Laboratory animal science 3<br>You will obtain knowledge of animal welfare for laboratory animals.  | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 5  | Laboratory animal science 4<br>You will obtain knowledge of the administration of drug, anesthetics management and euthanasia procedures. | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 6  | Laboratory animal science 5<br>You will obtain knowledge of the administration of drug, anesthetics management and euthanasia procedures. | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 7  | Laboratory animal science 6<br>You will obtain knowledge of the administration of drug, anesthetics management and euthanasia procedures. | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 8  | Pharmacological experiment 1<br>You will obtain knowledge of the acute toxicity test.   | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 9  | Pharmacological experiment 2<br>You will obtain knowledge of the chronic toxicity test.   | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 10 | Pharmacological experiment 3<br>You will obtain knowledge of the local irritation test.   | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 11 | Pharmacological experiment 4<br>You will obtain knowledge of another toxicity tests.  | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 12 | Drafting of animal experiment protocol 1<br>You will study the method of drafting the animal experiment protocol.                         | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 13 | Drafting of animal experiment protocol 2<br>You will study the method of drafting the animal experiment protocol.                         | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 14 | Drafting of animal experiment protocol 3<br>You will draft the animal experiment protocol.  | Lecture and practice | Takeuchi<br>Ohsumi<br>Higashi | Careful reading of handout |
| 15 | Summary<br>You will summarize pharmacological experiments.  | Lecture              | Takeuchi<br>Ohsumi<br>Higashi |                            |

2017年度

# Clinical Epidemiology (Clinical Epidemiology )

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 4 |
| 授業方法  | 講義・演習        | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Kakudate N.  |     |          |    |                       |     |   |
| 担当教員  | 角館 直樹        |     |          |    |                       |     |   |

## 授業の概要

【Language】 English and Japanese

In this lecture, you will learn basic aspects of clinical epidemiology and study designs. You will learn about critical appraisal of research articles according to each study design, which will lead to develop practical skills in Evidence-Based Dentistry (EBD).

## 学生の到達目標

At the completion of this course, you will be able to:

1. Understand the outlines of clinical epidemiology.
2. Understand how to read the structure of research articles and abstracts on clinical epidemiology
3. Understand the outlines of clinical epidemiological study designs.
4. Critically appraise clinical research papers and structured abstracts.
5. Practice Evidence-Based Dentistry (EBD).

## テキスト

Introduction to Evidence-Based Dentistry

出 )Nagasue Shoten 著 )

## 参考書

Designing Clinical Research

出 )Lippincott Williams &amp; Wilkins 著 )Stephen B Hulley

Guide to Practice-Based Research and Scientific Writing

出 )Ishiyaku Publishers 著 )

## 成績評価方法・基準

| 評価項目                                | 割合  |
|-------------------------------------|-----|
| attendance                          | 30% |
| deliverables during your coursework | 70% |

## その他

2017年度

# Clinical Epidemiology (Clinical Epidemiology )

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 4 |
| 授業方法  | 講義・演習        | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Kakudate N.  |     |          |    |                       |     |   |
| 担当教員  | 角館 直樹        |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容   | 授業方法     | 担当教員     | 事前・事後学習<br>学習課題   |
|-------|--|----------|----------|---|
| 1,2   | Introduction<br>You will learn about the definition of clinical epidemiology and study designs.  | Lecture  | Kakudate | Definition of clinical epidemiology   |
| 3,4   | Research articles and Structured abstracts:<br>You will learn about the structure of research articles and abstracts on clinical epidemiology. | Lecture  | Kakudate | Structure of the research articles and abstracts                              |
| 5,6   | Literature search :<br>You will learn how to search the literature using PubMed.   | Practice | Kakudate | Literature search/PubMed  |
| 7,8   | Literature search :<br>You will learn how to search the literature using the Cochrane library and Minds.                                       | Practice | Kakudate | Literature search/Cochrane review・Minds                                       |
| 9,10  | Study design :<br>You will learn about the design of cross sectional study and case control study.   | Lecture  | Kakudate | Cross sectional study and case control study                                  |
| 11,12 | Critical Appraisal :<br>You will learn about critical appraisal of reports of cross sectional study.   | Practice | Kakudate | Critical appraisal of research articles of cross sectional study              |
| 13,14 | Study design :<br>You will learn about the design of cohort study.   | Lecture  | Kakudate | Cohort study  |
| 15,16 | Critical Appraisal :<br>You will learn about critical appraisal of reports of cohort study   | Practice | Kakudate | Critical appraisal of research articles of cohort study                       |
| 17,18 | Study design :<br>You will learn about the design of interventional study.   | Lecture  | Kakudate | Interventional Study  |
| 19,20 | Critical Appraisal :<br>You will learn about critical appraisal of reports of interventional study   | Practice | Kakudate | Critical appraisal of research articles of interventional study               |
| 21,22 | Study design :<br>You will learn about the design of systematic reviews and meta-analyses.   | Lecture  | Kakudate | Systematic reviews and meta-analyses  |
| 23,24 | Critical Appraisal :<br>You will learn how to critically appraise systematic reviews and meta-analyses.  | Practice | Kakudate | Critical appraisal of research papers of systematic reviews and meta-analysis |
| 25,26 | Study design :<br>You will learn about the design of diagnosis and screening.  | Practice | Kakudate | Study design of diagnosis and screening.                                      |



2017年度

# Clinical Epidemiology (Clinical Epidemiology )

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 4 |
| 授業方法  | 講義・演習        | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Kakudate N.  |     |          |    |                       |     |   |
| 担当教員  | 角館 直樹        |     |          |    |                       |     |   |

| 回     | 学習内容  | 授業方法     | 担当教員     | 事前・事後学習<br>学習課題  |
|-------|---|----------|----------|--|
| 27,28 | Critical Appraisal :<br>You will learn how to critically appraise diagnosis and screening.                      | Practice | Kakudate | Critical appraisal of research papers of diagnosis and screening |
| 29,30 | Clinical Guidelines:<br>You will learn about the role of clinical guidelines and about AGREE and GRADE systems. | Practice | Kakudate | AGREE and GRADE systems.   |

2017年度

# Clinical Epidemiology (Clinical Epidemiology )

|       |              |     |          |    |                      |     |   |
|-------|--------------|-----|----------|----|----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades | 期区分 | 通年       | 科目 | Compusory (Research) | 単位数 | 4 |
| 授業方法  | 講義・演習        | 時間数 | 60 hours | 曜日 |                      | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                      |     |   |
| 科目責任者 | Kakudate N.  |     |          |    |                      |     |   |
| 担当教員  | 角館 直樹        |     |          |    |                      |     |   |

## 授業の概要

【Language】English and Japanese

In this lecture, you will obtain specialized knowledge on clinical epidemiology and applied skills in the conduct of clinical epidemiological study. In addition, you will make a study design and statistical design protocol based on a research question. Finally you can develop the practical ability to create a study.

## 学生の到達目標

At the completion of this course, you will be able to:

1. Formulate a research question derived from your own dental practice.
2. Develop a conceptual framework
3. Develop an appropriate clinical epidemiological study design.
4. Develop an appropriate statistical design.
5. Create a study protocol.

## テキスト

出) (著)

## 参考書

Introduction to Evidence-Based Dentistry

出) Nagasue Shoten (著)

Designing Clinical Research

出) Lippincott Williams &amp; Wilkins (著) Stephen B Hulley

Guide to Practice-Based Research and Scientific Writing

出) Ishiyaku Publishers (著)

## 成績評価方法・基準

| 評価項目                                | 割合  |
|-------------------------------------|-----|
| attendance                          | 30% |
| deliverables during your coursework | 70% |

## その他

2017年度

# Clinical Epidemiology (Clinical Epidemiology )

|       |              |     |          |    |                      |     |   |
|-------|--------------|-----|----------|----|----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades | 期区分 | 通年       | 科目 | Compusory (Research) | 単位数 | 4 |
| 授業方法  | 講義・演習        | 時間数 | 60 hours | 曜日 |                      | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                      |     |   |
| 科目責任者 | Kakudate N.  |     |          |    |                      |     |   |
| 担当教員  | 角館 直樹        |     |          |    |                      |     |   |

## 授業計画

| 回     | 学習内容  | 授業方法                 | 担当教員     | 事前・事後学習<br>学習課題   |
|-------|---|----------------------|----------|---|
| 1,2   | Introduction to clinical research:<br>You will learn how to formulate an answerable question.   | Lecture              | Kakudate | PICO/Finer ' s<br>check   |
| 3,4   | Setting of outcome measures:<br>You will learn about indicators in measuring outcomes, measurement methods, and patient-reported outcomes.  | Lecture              | Kakudate | Outcome<br>indicators   |
| 5,6   | Hypothetical conceptual framework:<br>You will learn how to build a hypothetical conceptual framework.  | Lecture and Practice | Kakudate | Hypothetical<br>conceptual<br>framework   |
| 7,8   | Planning of clinical epidemiology study design:<br>You will devise an appropriate clinical epidemiology study design based on your own research question.<br>You will learn about research methods consistent with various types of design. | Lecture and Practice | Kakudate | Study design<br>of clinical<br>epidemiology   |
| 9,10  | Controlling bias:<br>You will learn how to control information, selection, and confounding bias.  | Lecture              | Kakudate | Controlling<br>bias   |
| 11,12 | Data measurement methods:<br>You will learn about the reliability and validity of data measurement methods, including those of calibration.   | Lecture and Practice | Kakudate | Reliability and<br>validity of data<br>measurement  |
| 13,14 | Statistical analysis part :<br>You will learn about types of data, distribution, descriptive statistics, odds ratio, risk ratio, and the difference between risk difference and hazard ratio.   | Lecture and Practice | Kakudate | Odds ratio,<br>Risk ratio, Risk<br>difference and<br>Hazard ratio   |
| 15,16 | Statistical analysis part :<br>You will learn about statistical hypothesis testing, P values and level of significance, confidence intervals, correlation, and correlation coefficient.   | Lecture and Practice | Kakudate | P value and<br>level of<br>significance,<br>confidence<br>intervals,<br>correlation,<br>and correlation<br>coefficient. |
| 17,18 | Statistical analysis part :<br>You will learn about statistical test methods for comparison between two groups and comparison among multi-groups, and errors in the test.   | Lecture and Practice | Kakudate | Statistical test<br>methods for<br>comparison<br>between two<br>groups and<br>comparison<br>among multi-<br>groups      |
| 19,20 | Statistical analysis part :<br>You will learn about multivariate analyses including logistic regression analysis and multiple regression analysis.  | Lecture and Practice | Kakudate | Logistic<br>regression<br>analysis and<br>multiple<br>regression<br>analysis  |
| 21,22 | Statistical analysis part :<br>You will learn about methods for survival analysis including Cox regression (proportional hazards model), Kaplan-Meier curves, and log-rank testing.   | Lecture and Practice | Kakudate | Survival<br>analysis  |
| 23,24 | Statistical analysis part :<br>You will learn how to estimate sample size.  | Lecture and Practice | Kakudate | Sample size<br>estimation   |
| 25,26 | Questionnaire survey:<br>You will learn how to produce questionnaires and question items to reduce information bias.  | Lecture and Practice | Kakudate | Questionnaire<br>development  |

2017年度

# Clinical Epidemiology (Clinical Epidemiology )

|       |              |     |          |    |                      |     |   |
|-------|--------------|-----|----------|----|----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades | 期区分 | 通年       | 科目 | Compusory (Research) | 単位数 | 4 |
| 授業方法  | 講義・演習        | 時間数 | 60 hours | 曜日 |                      | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                      |     |   |
| 科目責任者 | Kakudate N.  |     |          |    |                      |     |   |
| 担当教員  | 角館 直樹        |     |          |    |                      |     |   |

| 回     | 学習内容  | 授業方法    | 担当教員     | 事前・事後学習<br>学習課題                                     |
|-------|---|---------|----------|---|
| 27,28 | Research protocol:<br>You will learn about guidelines for research reports including the Consort statement and Strobe statement, and understand how to create efficient research protocols.                             | Lecture | Kakudate | How to make a research protocol                     |
| 29,30 | Ethical considerations in clinical epidemiology research:<br>You will learn about various ethical guidelines, document-based applications to Institutional Review Boards, and registration of clinical research trials. | Lecture | Kakudate | Research protocol for an Institutional Review Board |

2017年度

# Clinical Epidemiology (Clinical Epidemiology )

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 3 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 4 |
| 授業方法  | 講義・演習        | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Kakudate N.  |     |          |    |                       |     |   |
| 担当教員  | 角館 直樹        |     |          |    |                       |     |   |

## 授業の概要

【Language】 English and Japanese

In this course, you will study examples of various types of clinical epidemiology research in the field of dentistry. In addition, you will learn about international clinical epidemiological studies, and understand the significance and methodology of Practice-based Research.

## 学生の到達目標

At the completion of this course, you will:

1. understand the theory and examples of various types of clinical epidemiology research in the field of dentistry.
2. learn about international clinical epidemiology research.
3. understand Practice-based Research.
4. understand the Evidence-Practice Gap.
5. learn how to create a clinical epidemiology research paper.

## テキスト

出) (著)

## 参考書

Introduction to Evidence-Based Dentistry

出) Nagasue Shoten (著)

Designing Clinical Research

出) Lippincott Williams &amp; Wilkins (著) Stephen B Hulley

Guide to Practice-Based Research and Scientific Writing

出) Ishiyaku Publishers (著)

## 成績評価方法・基準

| 評価項目                                | 割合  |
|-------------------------------------|-----|
| attendance                          | 30% |
| deliverables during your coursework | 70% |

## その他

2017年度

# Clinical Epidemiology (Clinical Epidemiology )

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 3 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 4 |
| 授業方法  | 講義・演習        | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Kakudate N.  |     |          |    |                       |     |   |
| 担当教員  | 角館 直樹        |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容  | 授業方法                 | 担当教員     | 事前・事後学習<br>学習課題  |
|-------|---|----------------------|----------|--|
| 1,2   | Clinical epidemiology of dental caries:<br>You will learn about the clinical epidemiology of dental caries, including its causes, diagnosis, treatment, prevention, and prognosis.                            | Lecture and Practice | Kakudate | Clinical epidemiology of dental caries                 |
| 3,4   | Clinical epidemiology of periodontal disease:<br>You will learn about the clinical epidemiology of periodontal disease, including its causes, diagnosis, treatment, prevention, and prognosis.                | Lecture and Practice | Kakudate | Clinical epidemiology of periodontal disease           |
| 5,6   | Clinical epidemiology of temporomandibular disorders:<br>You will learn about the clinical epidemiology of temporomandibular disorders including its causes, diagnosis, treatment, prevention, and prognosis. | Lecture and Practice | Kakudate | Clinical epidemiology of temporomandibular disorders   |
| 7,8   | Clinical epidemiology of crown restoration:<br>You will learn about the clinical epidemiology of prognosis and survival period of dental restoration.   | Lecture and Practice | Kakudate | Clinical epidemiology of dental restoration            |
| 9,10  | Clinical epidemiology of dental health guidance:<br>You will learn about the clinical epidemiology of dental health instruction.  | Lecture and Practice | Kakudate | Clinical epidemiology about dental health instruction  |
| 11,12 | Patient-based outcomes research:<br>You will understand patient-reported outcomes such as patient satisfaction and QOL, and learn about case studies in the field of dentistry.                               | Lecture and Practice | Kakudate | Patient-reported outcome research                      |
| 13,14 | Clinical epidemiology about behavioral science:<br>You will understand a variety of behavioral science theories, and learn about case studies in the field of dentistry.                                      | Lecture and Practice | Kakudate | Health behavioral science theories                     |
| 15,16 | Clinical epidemiology of cost-effectiveness in dental treatment:<br>You will understand cost-effectiveness in dental treatment, and learn about case studies in the field of dentistry.                       | Lecture and Practice | Kakudate | Clinical epidemiology of cost-effectiveness            |
| 17,18 | Clinical epidemiology of the quality of health care:<br>You will understand the quality of health care, and learn about case studies in the field of dentistry.   | Lecture and Practice | Kakudate | Studies in the quality of health care                  |
| 19,20 | Practice-Based Research :<br>You will understand the history, meaning, and current status of Practice-based Research, and learn about research examples.  | Lecture and Practice | Kakudate | Practice-Based Research                                |
| 21,22 | Evidence-Practice Gap :<br>You will understand the Evidence-Practice Gap, and learn about research examples.  | Lecture and Practice | Kakudate | Evidence-Practice Gap                                  |
| 23,24 | International clinical epidemiology research:<br>You will understand trends in international clinical epidemiology research, and learn about research examples in the field of dentistry.                     | Lecture and Practice | Kakudate | Trends in international clinical epidemiology research |
| 25,26 | International comparative study on dental practice:<br>You will learn about the international comparison of dental practice patterns, and consider differences in dental health care system.                  | Lecture and Practice | Kakudate | International comparative study on dental practice     |

2017年度

# Clinical Epidemiology (Clinical Epidemiology )

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 3 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 4 |
| 授業方法  | 講義・演習        | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Kakudate N.  |     |          |    |                       |     |   |
| 担当教員  | 角館 直樹        |     |          |    |                       |     |   |

| 回     | 学習内容   | 授業方法                 | 担当教員     | 事前・事後学習<br>学習課題  |
|-------|--|----------------------|----------|--|
| 27,28 | Dental health care policy and clinical epidemiology:<br>You will learn about the relationship of dental health care policy and clinical epidemiology research. | Lecture and Practice | Kakudate | Dental health care policy and clinical epidemiology research |
| 29,30 | Creation of clinical epidemiology research papers:<br>You will learn how to write clinical epidemiology research papers and methods of statistical reporting.  | Lecture and Practice | Kakudate | Creation of clinical epidemiology research papers            |

2017年度

# Clinical Epidemiology Practice (Clinical Epidemiology Practice)

|       |              |     |          |    |                                  |     |   |
|-------|--------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習        | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Kakudate N.  |     |          |    |                                  |     |   |
| 担当教員  | 角館 直樹        |     |          |    |                                  |     |   |

## 授業の概要

You will participate in research progress meetings for presentation of the research content and achievements, and strengthen your understanding of research contents through discussion and Question & Answer. You will review your own research on the basis of the feedback received from the meeting participants, including the supervisor, and improve the quality of your research.

## 学生の到達目標

1. You understand and are able to explain research methods.
2. You can logically interpret and explain your own research results (data analysis).
3. You can create a slide explaining the progress and results of your research and can give an easy-to-understand presentation.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                                | 割合  |
|-------------------------------------|-----|
| attendance                          | 30% |
| deliverables during your coursework | 30% |
| presentation and Q&A                | 40% |

## その他

You will select the latest papers related to your research theme.  
The presenter will prepare materials for presentation in slides, and pre-distribute printed materials to participants.



2017年度

# Clinical Epidemiology Practice (Clinical Epidemiology Practice)

|       |              |     |          |    |                                  |     |   |
|-------|--------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習        | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Kakudate N.  |     |          |    |                                  |     |   |
| 担当教員  | 角舘 直樹        |     |          |    |                                  |     |   |

## 授業計画

| 回    | 学習内容   | 授業方法   | 担当教員     | 事前・事後学習<br>学習課題  |
|------|--|--|----------|--|
| 1-15 | You will summarize in slides your research progress and data analysis, and give a presentation. The presenter shall answer questions from the participants, and through the discussion you will better understand the research methods and contents. | Reporting and presentation of, and debate about research progress. | Kakudate | Reading of the literature and collection of related literature |

2017年度

# Journal Club in Clinical Epidemiology (Journal Club in Clinical Epidemiology)

|       |              |     |          |    |                                |     |   |
|-------|--------------|-----|----------|----|--------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory/Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習        | 時間数 | 30 hours | 曜日 |                                | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                |     |   |
| 科目責任者 | Kakudate N.  |     |          |    |                                |     |   |
| 担当教員  | 角館 直樹        |     |          |    |                                |     |   |

## 授業の概要

You will understand the latest developments in clinical epidemiology and your own research themes, and critique papers. PhD student shall make a presentation after preparing material from an overview of the paper, and your understanding will be reinforced through Question & Answer.

## 学生の到達目標

1. You can read and understand the English literature.
2. You can critically appraise clinical epidemiology papers.
3. You can make a presentation which explains a paper in an easily understood way.

## テキスト

出) \_\_\_\_\_ 著)

## 参考書

出) \_\_\_\_\_ 著)

## 成績評価方法・基準

| 評価項目                                | 割合  |
|-------------------------------------|-----|
| attendance                          | 30% |
| deliverables during your coursework | 30% |
| presentation and Q&A                | 40% |

## その他

You will select the latest papers related to your research theme.  
The presenter will prepare presentation materials as slides, and printed materials for pre-distribution to the participants.

2017年度

# Journal Club in Clinical Epidemiology (Journal Club in Clinical Epidemiology)

|       |              |     |          |    |                                |     |   |
|-------|--------------|-----|----------|----|--------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory/Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習        | 時間数 | 30 hours | 曜日 |                                | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                |     |   |
| 科目責任者 | Kakudate N.  |     |          |    |                                |     |   |
| 担当教員  | 角館 直樹        |     |          |    |                                |     |   |

## 授業計画

| 回    | 学習内容   | 授業方法  | 担当教員     | 事前・事後学習<br>学習課題   |
|------|--|---|----------|---|
| 1-15 | You can understand and explain the findings of and important trends in the latest research in the clinical epidemiology field. | Commentary, presentation, and discussion of the literature. | Kakudate | Review of the literature and collection of related papers |

2017年度

# Oral Health Science (Oral Health Science )

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades                              | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義  | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                                |     |          |    |                       |     |   |
| 科目責任者 | Akifusa S.                                |     |          |    |                       |     |   |
| 担当教員  | 日高 勝美、秋房 住郎、引地 尚子、中道 敦子、園木 一男、吉野 賢一、辻澤 利行 |     |          |    |                       |     |   |

## 授業の概要

【Language】Japanese

To obtain the ability for research and instruction on oral health sciences, students learn the recent oral health-related evidences and the research skills/analytical methods with lectures in omnibus form

## 学生の到達目標

You should achieve the basic and applied knowledge indicated below.

You can

1. explain practical problems with healthcare team and role of dental personnel on an integrated community care-system, based on knowledge on recent trend of health, medical, and long-term care in Japan.
2. explain the logical perspective and the research methods to resolve the problems of oral health-related diseases /disorder.
3. explain the basic / clinical methods concerning evidence-based medicine (EBM) on oral surgery and oral medicine
4. imagine the oral health related-professional value and ability based on clients background.
5. explain the methodology to provide relationship between oral status/diseases and general status.
6. explain for higher-order brain, neurophysiological, and non-invasive research methods on feeding behavior.
7. explain the logical perspective and the research methods to resolve the problems of nutritional-related health or disease.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                              | 割合   |
|-----------------------------------|------|
| evaluation of after-action report | 100% |

## その他

2017年度

# Oral Health Science (Oral Health Science )

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades                              | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義  | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                                |     |          |    |                       |     |   |
| 科目責任者 | Akifusa S.                                |     |          |    |                       |     |   |
| 担当教員  | 日高 勝美、秋房 住郎、引地 尚子、中道 敦子、園木 一男、吉野 賢一、辻澤 利行 |     |          |    |                       |     |   |

## 授業計画

| 回  | 学習内容   | 授業方法    | 担当教員      | 事前・事後学習<br>学習課題     |
|----|--|---------|-----------|---------------------|
| 1  | Promotion and problems of integrated community care-system (1) | Lecture | Hidaka    | after-action report |
| 2  | Promotion and problems of integrated community care-system (2) | Lecture | Hidaka    | after-action report |
| 3  | Oral health related-perspective (1)                            | Lecture | Akifusa   | after-action report |
| 4  | Oral health related-perspective (2)                            | Lecture | Akifusa   | after-action report |
| 5  | EBM on oral science (1)  | Lecture | Hikiji    | after-action report |
| 6  | EBM on oral science (2)  | Lecture | Hikiji    | after-action report |
| 7  | Perspective on higher education for dental hygienist (1)       | Lecture | Nakamichi | after-action report |
| 8  | Perspective on higher education for dental hygienist (2)       | Lecture | Nakamichi | after-action report |
| 9  | Methodology on relation with oral and general status (1)       | Lecture | Sonoki    | after-action report |
| 10 | Methodology on relation with oral and general status (2)       | Lecture | Sonoki    | after-action report |
| 11 | Perspective on higher-order brain (1)                          | Lecture | Yoshino   | after-action report |
| 12 | Perspective on higher-order brain (2)                          | Lecture | Yoshino   | after-action report |
| 13 | Dietetic perspective on health (1)                             | Lecture | Tsujisawa | after-action report |
| 14 | Dietetic perspective on health (2)                             | Lecture | Tsujisawa | after-action report |
| 15 | Summary  | Lecture | Akifusa   | after-action report |

2017年度

# Oral Health Science (Oral Health Science )

|       |   |     |          |    |                                  |     |   |
|-------|---|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades                              | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 4 |
| 授業方法  | 講義・演習                                     | 時間数 | 60 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                                |     |          |    |                                  |     |   |
| 科目責任者 | Hikiji H.                                 |     |          |    |                                  |     |   |
| 担当教員  | 日高 勝美、秋房 住郎、引地 尚子、中道 敦子、園木 一男、吉野 賢一、辻澤 利行 |     |          |    |                                  |     |   |

## 授業の概要

【Language】Japanese

To understand most recent trend of discipline on oral health sciences, discuss the related papers of international journal

## 学生の到達目標

You should achieve the basic and applied knowledge indicated below.

You can

1. explain the contents of papers in English.
2. explain the background of papers.
3. explain the methods described in papers in detail.
4. explain the results described in papers in detail.
5. explain critically the discussion described in papers.
6. perform presentation for the contents of the read papers.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                              | 割合   |
|-----------------------------------|------|
| evaluation of after-action report | 100% |

## その他

2017年度

# Oral Health Science (Oral Health Science )

|       |   |     |          |    |                                  |     |   |
|-------|---|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades                              | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 4 |
| 授業方法  | 講義・演習                                     | 時間数 | 60 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                                |     |          |    |                                  |     |   |
| 科目責任者 | Hikiji H.                                 |     |          |    |                                  |     |   |
| 担当教員  | 日高 勝美、秋房 住郎、引地 尚子、中道 敦子、園木 一男、吉野 賢一、辻澤 利行 |     |          |    |                                  |     |   |

## 授業計画

| 回 | 学習内容   | 授業方法     | 担当教員 | 事前・事後学習<br>学習課題                   |
|---|--|----------|------|-----------------------------------|
| 1 | understand and explain the contents of most recent trend of discipline on oral health sciences | Practice | All  | paper search, after-action report |

2017年度

# Oral Health Science (Oral Health Science )

|       |   |     |          |    |                                  |     |   |
|-------|---|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades                              | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 4 |
| 授業方法  | 講義・演習                                     | 時間数 | 60 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                                |     |          |    |                                  |     |   |
| 科目責任者 | Hikiji H.                                 |     |          |    |                                  |     |   |
| 担当教員  | 日高 勝美、秋房 住郎、引地 尚子、中道 敦子、園木 一男、吉野 賢一、辻澤 利行 |     |          |    |                                  |     |   |

## 授業の概要

【Language】Japanese

All teacher and students discuss on the outcome of study, to improve the quality of study, and to develop ability of presentation

## 学生の到達目標

You should achieve the basic and applied knowledge indicated below.

You can

1. explain logically the contents of your study.
2. explain the background of your study in detail.
3. answer questions on your study.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                              | 割合   |
|-----------------------------------|------|
| evaluation of after-action report | 100% |

## その他



2017年度

# Oral Health Science (Oral Health Science )

|       |   |     |          |    |                                  |     |   |
|-------|---|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades                              | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 4 |
| 授業方法  | 講義・演習                                     | 時間数 | 60 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                                |     |          |    |                                  |     |   |
| 科目責任者 | Hikiji H.                                 |     |          |    |                                  |     |   |
| 担当教員  | 日高 勝美、秋房 住郎、引地 尚子、中道 敦子、園木 一男、吉野 賢一、辻澤 利行 |     |          |    |                                  |     |   |

## 授業計画

| 回 | 学習内容   | 授業方法     | 担当教員 | 事前・事後学習<br>学習課題                         |
|---|--|----------|------|---|
| 1 | Presentation of your study followed with question and answer | Practice | All  | paper search,<br>after-action<br>report |

2017年度

# Training Program in Public Health and Social Security Policy (Training Program in Public Health and Social Security Policy)

|       |              |     |          |    |                                  |     |   |
|-------|--------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義           | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Fukuizumi T. |     |          |    |                                  |     |   |
| 担当教員  | 福泉 隆喜        |     |          |    |                                  |     |   |

## 授業の概要

【Language】 Japanese

You can learn about the importance of researching the problems of the dental field, among health issues of all people living in the region, by focusing on the relationship between epidemiological methods and social system. In particular, you can learn about the basic knowledge to study the role that play of the dental health care and dental health care workers among the social security system.

## 学生の到達目標

- 1 . You can explain about dignity of the patient, medical ethics and research ethics.
- 2 . You can explain the concept of health and disease.
- 3 . You can explain the basic idea of the dental practitioners laws and related regulations.
- 4 . You can explain the concept of prevention in public health and dental care.
- 5 . You can explain the main overview of health medical statistics.

## テキスト

出) 著)

## 参考書

Health in Japan : Recent Vital Statistics. Japan.

出)Health, Labour and Welfare 著) Statistics Association

Concise Text of Hygiene and Public Health. Japan. 2017.

出)Nankodo.Co. 著)Ichiro Tsuji

Visual Guide: Medical Care and Public Health 2016-2017. Japan. 2016.

出)Institute for Health Care 著)Medic Media Co. Information Sciences, Inc.

Dental Practice Management : For Dental Quality and Safety. Japan. 2011.

出)Japanese Society of Dental 著)Ishiyaku Pub,Inc Practice Administration

## 成績評価方法・基準

| 評価項目                  | 割合  |
|-----------------------|-----|
| percentage of reports | 50% |
| oral examination      | 50% |

You can study online by distance learning from any location.

## その他

2017年度

# Training Program in Public Health and Social Security Policy (Training Program in Public Health and Social Security Policy)

|       |              |     |          |    |                                  |     |   |
|-------|--------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義           | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Fukuizumi T. |     |          |    |                                  |     |   |
| 担当教員  | 福泉 隆喜        |     |          |    |                                  |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法    | 担当教員      | 事前・事後学習課題   |
|----|---|---------|-----------|---|
| 1  | Society and dentistry<br>You can learn about the concepts of health which become a foundation of public health, the relations between society and the environment, and the concepts of prevention.  | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 2  | Society and dentistry<br>You can learn about the patient's dignity, the ethics of medicine which support this and the various norms.  | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 3  | Society and dentistry<br>You can learn about the relations between dentistry and society, and the responsibilities of the dentist.  | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 4  | Medical insurance system<br>You can recognize about the whole picture of the social security system, and learn about the national health insurance system which supports the medical care among the social insurance.   | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 5  | Pension insurance system, Workers' compensation insurance system<br>You can learn about pension insurance system and workers' compensation insurance system which constitute the social insurance.  | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 6  | Nursing care insurance system<br>You can learn about the long-term care insurance system which is one of the social insurance.  | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 7  | Employment insurance, Social welfare system<br>You can learn about the employment insurance system which is one of the social insurance, and the social welfare and public assistance which are component of the social security.   | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 8  | Dental doctor and related regulations<br>You can recognize the responsibility of dentist and the overview of Dental Practitioners Law which defines the business, and learn about the current situation surrounding the dentist from the relevant statistics.                               | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 9  | Dental doctor and related regulations<br>You can recognize the overview of medical law that defines the healthcare delivery system in Japan and learn about the support of the selection for medical and the ensuring the safety of medical.  | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 10 | Dental doctor and related regulations<br>You can learn about the management of hospitals and clinics which defined in the Medical Care Act, and the ensuring of the health care provider system of medical care plans.  | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 11 | Dental doctor and related regulations<br>You can recognize about the overview of the Pharmaceuticals and Medical Devices Act, and learn about management of the pharmacy, examination of pharmaceutical products, and the relationship of medical equipment and health insurance treatment. | lecture | Fukuizumi | Reading an article, handout, reference book intensively |

2017年度

# Training Program in Public Health and Social Security Policy (Training Program in Public Health and Social Security Policy)

|       |              |     |          |    |                                  |     |   |
|-------|--------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義           | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Fukuizumi T. |     |          |    |                                  |     |   |
| 担当教員  | 福泉 隆喜        |     |          |    |                                  |     |   |

| 回  | 学習内容  | 授業方法    | 担当教員      | 事前・事後学習<br>学習課題   |
|----|---|---------|-----------|---|
| 12 | Dental doctor and related regulations<br>You can recognize about the advertising regulations and adverse reaction reports which are defined in the Pharmaceuticals and Medical Devices Act, and learn about the regulations such as poison and narcotic.  | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 13 | Society and demographics<br>You can recognize about the overview of Statistics Act and learn about the typical official statistics and the typical indicators, related to health care among the fundamental statistics and general statistics.  | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 14 | The actual condition of dental health administration in urban and rural prefectures<br>Following the trend of dental health care administration promoted by the country, you can learn about the concrete efforts of the dental health administration which is carried out in the prefectures.                  | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 15 | The actual condition of dental health administration in cities, towns and villages<br>Following the trend of dental health care administration promoted by the national and prefectural, you can learn about the concrete efforts of the dental health administration which is carried out in the municipality. | lecture | Fukuizumi | Reading an article, handout, reference book intensively |

2017年度

# Training Program in Public Health and Social Security Policy (Training Program in Public Health and Social Security Policy)

|       |              |     |          |    |                                  |     |   |
|-------|--------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義           | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Fukuizumi T. |     |          |    |                                  |     |   |
| 担当教員  | 福泉 隆喜        |     |          |    |                                  |     |   |

## 授業の概要

【Language】 Japanese

You can learn about the basic idea of epidemiology, the underlying law of regulations and the relations between the dental doctors and the health services in each field such as dental health in region, school dental health, health promotion, disease prevention, international health and mental health. In particular, you can learn about the basic knowledge to study the role of dental health care workers in various health businesses.

## 学生の到達目標

- 1 . You can explain about the basic idea of the medical occupations and related laws and regulations.
- 2 . You can explain about health, medical care, welfare and social institutions related to nursing care, community health care and social environment.
- 3 . You can explain about the relations between the environment and health.
- 4 . You can explain about the population level prevention and health management.
- 5 . You can explain about the medical care based on epidemiological and scientific basis, and application of health statistics.

## テキスト

出) 著)

## 参考書

Health in Japan : Recent Vital Statistics. Japan.

出)Health, Labour and Welfare 著) Statistics Association

Concise Text of Hygiene and Public Health. Japan. 2017.

出)Nankodo.Co. 著)Ichiro Tsuji

Visual Guide: Medical Care and Public Health 2016-2017. Japan. 2016.

出)Institute for Health Care 著)Medic Media Co. Information Sciences,Inc.

Manual of epidemiology. Japan. 2012.

出)Nanzando.Co. 著)Hiroshi Yanagawa

## 成績評価方法・基準

| 評価項目                  | 割合  |
|-----------------------|-----|
| percentage of reports | 50% |
| oral examination      | 50% |

You can study online by distance learning from any location.

## その他

2017年度

# Training Program in Public Health and Social Security Policy (Training Program in Public Health and Social Security Policy)

|       |              |     |          |    |                                  |     |   |
|-------|--------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義           | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Fukuizumi T. |     |          |    |                                  |     |   |
| 担当教員  | 福泉 隆喜        |     |          |    |                                  |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法    | 担当教員      | 事前・事後学習課題   |
|----|---|---------|-----------|---|
| 1  | Related laws and regulations and health care occupations<br>You can learn about the overview of Dental Hygienists Act and Health Nurses Midwives and Nurses Act, the relevant government ordinance, the system based on law and the situation of employment.  | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 2  | Related laws and regulations and health care occupations<br>You can learn about the dental technician method, pharmacist method, the overview of the Medical Practitioners Law, and the relevant government ordinance, the system based on the law, and the situation of employment.  | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 3  | Related laws and regulations and health care occupations<br>You can learn about the radiological technologists method, speech therapist method, physical therapists and occupational therapists method, a compendium of the law of relationship occupations of dietitian method, and the situation of employment.   | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 4  | Adult health<br>You can recognize about the change of the disease structure and the current situation of lifestyle-related diseases, and learn about the target value which defined as health promotion business of the municipality, specific medical examinations and specific health guidance, Healthy Japan 21 (second) and Dental and Oral Health Law. | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 5  | Community health, public health centers<br>You can recognize about the business of the health centers and municipal health centers which become a base of the public health of the region, and learn about the importance of regional diagnosis.  | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 6  | Epidemiology and dental care<br>You can learn about the basic idea of epidemiology which is the foundation of public health, and epidemiological approach, research procedures, and the applications of dental medicine.  | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 7  | Epidemiology and dental care<br>Give the topics of specific epidemiological studies in order to understand the detailed exposition of epidemiology, and you can learn about the study design and the level of evidence.   | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 8  | Epidemiology and dental care<br>You can recognize the concept of screening, and learn about the relationship of various epidemiological indicators and research design.   | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 9  | Maternal and child health<br>You can get the overview of maternal and child health which supports the healthy growth of children, and learn about maternal and child health policy in Japan.  | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 10 | Health Promotion<br>You can get the overview of health promotion law, and learn about current state of health promotion measures in the municipality.   | lecture | Fukuizumi | Reading an article, handout, reference book intensively |

2017年度

# Training Program in Public Health and Social Security Policy (Training Program in Public Health and Social Security Policy)

|       |              |     |          |    |                                  |     |   |
|-------|--------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義           | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Fukuizumi T. |     |          |    |                                  |     |   |
| 担当教員  | 福泉 隆喜        |     |          |    |                                  |     |   |

| 回  | 学習内容   | 授業方法    | 担当教員      | 事前・事後学習<br>学習課題   |
|----|--|---------|-----------|---|
| 11 | International Health<br>You can recognize about the overview of international health and the concept of the important disease prevention in public health, and learn about various infectious diseases prescribed in the Infectious Disease Law and Preventive Vaccination Law.        | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 12 | School Health<br>You can recognize about the concept of school health which is important for health management in the school age, and learn about variety of measures prescribed in the School Health and Safety Act.  | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 13 | Environment and Health<br>You can recognize about relationship of the various environmental factors and Basic Environment Law which affect the public health, and learn about the hygiene standards of water supply and sewerage systems.  | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 14 | Mental Health and Welfare<br>You can recognize about the overview of mental health and welfare, and learn about Mental Health Act and medical observation method.  | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 15 | Care of the elderly<br>You can recognize about the current state of aging and the Elderly, and learn about overview of the oral-related care service in long-term care insurance, the relationship between the long-term care insurance facilities and the elderly welfare facilities. | lecture | Fukuizumi | Reading an article, handout, reference book intensively |

2017年度

# Training Program in Public Health and Social Security Policy (Training Program in Public Health and Social Security Policy)

|       |              |     |          |    |                                  |     |   |
|-------|--------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義           | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Fukuizumi T. |     |          |    |                                  |     |   |
| 担当教員  | 福泉 隆喜        |     |          |    |                                  |     |   |

## 授業の概要

【Language】 Japanese

You can learn about the measures to responses to industrial dental health, labor management, medical safety management (including the safety management of pharmaceuticals and medical devices), medical information management, food hygiene, people with disabilities health and welfare and responding to medical malpractice.

In particular, you can learn about the basic knowledge to study the role of dental health care workers in the efforts that are required in the position and social security system on a variety of systems.

## 学生の到達目標

1. You can explain about the relations between environment and health.
2. You can explain about health, medical care, welfare and social institutions related to nursing care, the regional medical care and social environment.
3. You can explain the prevention and health management of the office level.
4. You can explain about the use and management methods of health care information.
5. You can explain about the dialogue capability, the attitude and mindset necessary to obtain the principal consent of the patient after conducting an appropriate description of the order to practice medicine in the patient-oriented.

## テキスト

出) 著)

## 参考書

Health in Japan : Recent Vital Statistics. Japan.

出)Health, Labour and Welfare 著) Statistics Association

Concise Text of Hygiene and Public Health. Japan. 2017.

出)Nankodo.Co. 著)Ichiro Tsuji

Visual Guide: Medical Care and Public Health 2016-2017. Japan. 2016.

出)Institute for Health Care 著)Medic Media Co. Information Sciences,Inc.

Manual of epidemiology. Japan. 2012.

出)Nanzando.Co. 著)Hiroshi Yanagawa

## 成績評価方法・基準

| 評価項目                  | 割合  |
|-----------------------|-----|
| percentage of reports | 50% |
| oral examination      | 50% |

You can study online by distance learning from any location.

## その他



2017年度

# Training Program in Public Health and Social Security Policy (Training Program in Public Health and Social Security Policy)

|       |              |     |          |    |                                  |     |   |
|-------|--------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義           | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Fukuizumi T. |     |          |    |                                  |     |   |
| 担当教員  | 福泉 隆喜        |     |          |    |                                  |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法    | 担当教員      | 事前・事後学習<br>学習課題   |
|----|---|---------|-----------|---|
| 1  | Occupational health<br>You can understand about the overview of the occupational health which is responsible for the health management of workers, and learn about worker protection measures stipulated in the Labor Standards Act and the Occupational Safety and Health Act.   | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 2  | Occupational health<br>You can understand about the overview of the Labor Contract Law which is one of the worker protection measures, and learn about the handing of fixed-term employment contract of dentist and the features of medical contract.   | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 3  | Medical information and its management<br>You can understand about the handling of medical records associated with dental care and learn about the provisions in Dental Practitioners Law, the medical law and the recuperation charge rules.   | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 4  | Medical information and its management<br>You can understand about the handling of personal information in the dental clinic and learn about the provisions in the Personal Information Protection Act and the guidelines for handling.   | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 5  | Pharmaceuticals (including biologics) and the safety management of medical equipment (medical Care law, etc.)<br>You can understand about the safety management of the pharmaceuticals and medical devices in dental clinic, and learn about the provisions in the Medical Care Act.  | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 6  | National Nutrition and Food Health (National Health and Nutrition Examination Survey, the Food Sanitation Law, etc.)<br>You can understand about the significance of the National Health and Nutrition Examination Survey, and learn about the overview of food hygiene involved in closely public health, and trend of food poisoning. | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 7  | Disability health and welfare<br>You can understand about the overview of health and welfare measures for people with disabilities and learn about the circumstance leading to the enactment of the Disability Comprehensive Support Law, and the Convention on the Rights of Persons with Disabilities, and normalization.             | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 8  | Dentistry viewed from the patient's point of view<br>You can understand about patient ' s dignity and medical ethics and learn about legal status related to responsibility of the dentist.   | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 9  | Conflict Management<br>You can understand about the cause of medical dispute in dental clinic and learn about Medical Mediation which is a method to solve this.  | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 10 | Health Promotion<br>You can understand about the alternative dispute resolution which is attracting attention as a solution of medical dispute and learn about trends in medical litigation.  | lecture | Fukuizumi | Reading an article, handout, reference book intensively |

2017年度

# Training Program in Public Health and Social Security Policy (Training Program in Public Health and Social Security Policy)

|       |              |     |          |    |                                  |     |   |
|-------|--------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義           | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Fukuizumi T. |     |          |    |                                  |     |   |
| 担当教員  | 福泉 隆喜        |     |          |    |                                  |     |   |

| 回  | 学習内容   | 授業方法    | 担当教員      | 事前・事後学習<br>学習課題   |
|----|--|---------|-----------|---|
| 11 | Recent Trends in dental health care administration<br>As a summary of health care theory in general, you can learn about recent developments in the dental health care administration. | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 12 | Study design<br>You can learn about whole picture of the level of evidence, the various study design and the outcome measures.   | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 13 | Study design<br>You can learn about the design outcome measures, advantages and disadvantages of cross-sectional study.  | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 14 | Study design<br>You can learn about the design outcome measures, advantages and disadvantages of the cohort study.   | lecture | Fukuizumi | Reading an article, handout, reference book intensively |
| 15 | Study design<br>You can learn about the design outcome measures, advantages and disadvantages of randomized controlled trials (RCT).   | lecture | Fukuizumi | Reading an article, handout, reference book intensively |

2017年度

# Training Program in Public Health and Social Security Policy (Training Program in Public Health and Social Security Policy)

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習        | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Fukuizumi T. |     |          |    |                       |     |   |
| 担当教員  | 福泉 隆喜        |     |          |    |                       |     |   |

## 授業の概要

【Language】 Japanese

Based on objective documentation, while to clarify the current status and changes in disease, risk and lifestyle, you can learn about the epidemiology technique which is essential in order to evaluate the results of individual health policy.

In particular, you can learn about the basic knowledge to study the stretching of the healthy life expectancy and the reduction of health disparities, and the prevention of the onset and severity of lifestyle-related diseases.

## 学生の到達目標

1. You can explain about the epidemiological studies and ethics.
2. You can explain about the basic method of epidemiology.
3. You can explain about the distraction of healthy life expectancy and reduction of health disparities.
4. You can explain the onset prevention and aggravation prevention of lifestyle-related diseases.
5. You can explain about the practice of policy epidemiology.

## テキスト

出) 著)

## 参考書

Health in Japan : Recent Vital Statistics. Japan.

出)Health, Labour and Welfare 著) Statistics Association

Concise Text of Hygiene and Public Health. Japan. 2017.

出)Nankodo.Co. 著)Ichiro Tsuji

Visual Guide: Medical Care and Public Health 2016-2017. Japan. 2016.

出)Institute for Health Care 著)Medic Media Co. Information Sciences,Inc.

Manual of epidemiology. Japan. 2012.

出)Nanzando.Co. 著)Hiroshi Yanagawa

## 成績評価方法・基準

| 評価項目                  | 割合  |
|-----------------------|-----|
| percentage of reports | 50% |
| artifacts of practice | 50% |

You can study online by distance learning from any location.

## その他

2017年度

# Training Program in Public Health and Social Security Policy (Training Program in Public Health and Social Security Policy)

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習        | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Fukuizumi T. |     |          |    |                       |     |   |
| 担当教員  | 福泉 隆喜        |     |          |    |                       |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法                | 担当教員      | 事前・事後学習<br>学習課題   |
|----|---|---------------------|-----------|---|
| 1  | Epidemiology of meaning and ethics<br>You can learn about the epidemiology's meaning and purpose, ethics of epidemiological research, and the validity of the intervention studies and subject selection.   | lecture<br>practice | Fukuizumi | Reading an article, handout, reference book intensively |
| 2  | Measurement of disease frequency<br>You can learn about prevalence, cumulative incidence, prevalence, mortality, fatality rate, relative frequency.   | lecture<br>practice | Fukuizumi | Reading an article, handout, reference book intensively |
| 3  | Measurement of exposure effect<br>You can learn about the rate of difference ratio, survival rate, and healthy life expectancy.   | lecture<br>practice | Fukuizumi | Reading an article, handout, reference book intensively |
| 4  | Epidemiological research methods<br>You do the review of the contents of the scientific papers using the CASP (CRITICAL APPRAISAL SKILLS PROGRAMME), and learn and to clarify the difference between observational studies.                       | lecture<br>practice | Fukuizumi | Reading an article, handout, reference book intensively |
| 5  | Sample survey<br>You can learn about complete enumeration and sample surveys, the population and the sample, randomization, the concept of sampling, method of determining the size of the specimen.  | lecture<br>practice | Fukuizumi | Reading an article, handout, reference book intensively |
| 6  | Error, bias and its control<br>You can learn about error classification, bias, exclusion of confounding factors, and the standardization of the rate.   | lecture<br>practice | Fukuizumi | Reading an article, handout, reference book intensively |
| 7  | The judgement of the cause-and-effect relationship<br>You can learn about criteria for causality, evaluation methods, risk factors and prevention factors.  | lecture<br>practice | Fukuizumi | Reading an article, handout, reference book intensively |
| 8  | Epidemiological factors<br>You can learn about host factors, environmental factors, and multi-factor etiology.  | lecture<br>practice | Fukuizumi | Reading an article, handout, reference book intensively |
| 9  | Screening<br>You can learn about the significance of Screening, evaluation method, implementation conditions, program evaluation, and typical screening program.  | lecture<br>practice | Fukuizumi | Reading an article, handout, reference book intensively |
| 10 | Epidemiology of infectious diseases<br>You can learn about three conditions of the infection onset, the index of spread of infection, resistance force of epidemic and host, pathogen and the route of infection, and the epidemic investigation. | lecture<br>practice | Fukuizumi | Reading an article, handout, reference book intensively |
| 11 | Etiology epidemiology<br>You can learn about etiology epidemiology, risk factors, and molecular epidemiology.   | lecture<br>practice | Fukuizumi | Reading an article, handout, reference book intensively |

2017年度

# Training Program in Public Health and Social Security Policy (Training Program in Public Health and Social Security Policy)

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習        | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Fukuizumi T. |     |          |    |                       |     |   |
| 担当教員  | 福泉 隆喜        |     |          |    |                       |     |   |

| 回  | 学習内容  | 授業方法                | 担当教員      | 事前・事後学習<br>学習課題  |
|----|---|---------------------|-----------|--|
| 12 | Policy epidemiology<br>You can learn about population approach, high-risk approach, and medical economic evaluation (outcome analysis).                                 | lecture<br>practice | Fukuizumi | Reading an article,<br>handout,<br>reference book                |
| 13 | Actual research plan<br>You can learn about selection of the survey items, information collection method, the creation of questionnaire, and the flow of data analysis. | lecture<br>practice | Fukuizumi | Reading an article,<br>handout,<br>reference book<br>intensively |
| 14 | Epidemiological analysis technique<br>You can learn about contingency tables, regression and correlation, actual assays, and multivariate analysis.                     | lecture<br>practice | Fukuizumi | Reading an article,<br>handout,<br>reference book<br>intensively |
| 15 | Creating a statistical chart<br>You can learn about the principle of charting, and the formats and features of the statistics chart.                                    | lecture<br>practice | Fukuizumi | Reading an article,<br>handout,<br>reference book<br>intensively |

2017年度

# Practice of Public Health and Social Security Policy (Practice of Public Health and Social Security Policy)

|       |              |     |          |    |                                     |     |   |
|-------|--------------|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory / Elective<br>(Research) | 単位数 | 2 |
| 授業方法  | 演習           | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                     |     |   |
| 科目責任者 | Fukuizumi T. |     |          |    |                                     |     |   |
| 担当教員  | 福泉 隆喜        |     |          |    |                                     |     |   |

## 授業の概要

【Language】 Japanese

About the medical service fee system which revised every two years, and the long-term care compensation plans which revised every three years, You can analyze the background leading up to each of the most recent changes and institutional reforms.

Also, from the statistical survey associated with each reward including Survey of Medical Care Activities in Public Health Insurance and Survey of Long-term Care Benefit Expenditures, you can understand the trends of the post-reform of the system and learn a method of utilizing Policy Research, and a research technique for performing a simulation.

## 学生の到達目標

1. You can explain the long-term care compensation system and the medical fee system.
2. You can explain the statistical survey associated with each reward including the social care intervention surveys and nursing care payment survey.
3. You can take advantage of the policy research and practice the simulation.

## テキスト

The list of Statistical Surveys conducted by Ministry of Health  
出) Labour and Welfare (著)

The Portal Site of Official Statistics of Japan(e-Stat)  
出) (著)

## 参考書

Health in Japan : Recent Vital Statistics. Japan.  
出) Health, Labour and Welfare (著)  
Statistics Association

The Trends of Insurance and Pension. Japan.  
出) Health, Labour and Welfare (著)  
Statistics Association

Health, Labour and Welfare Statistics Association  
出) Health, Labour and Welfare (著)  
Statistics Association

## 成績評価方法・基準

| 評価項目                     | 割合  |
|--------------------------|-----|
| percentage of attendance | 30% |
| results of simulation    | 25% |
| oral presentation        | 25% |
| discussion               | 20% |

You can earn 8 units for 4 years maximum.  
You can study online by distance learning from any location.

## その他

〔Text〕

- The list of Statistical Surveys conducted by Ministry of Health, Labour and Welfare  
<http://www.mhlw.go.jp/toukei/itiran/>
- The Portal Site of Official Statistics of Japan(e-Stat)  
<http://www.e-stat.go.jp/SG1/estat/eStatTopPortal.do>

2017年度

# Practice of Public Health and Social Security Policy (Practice of Public Health and Social Security Policy)

|       |              |     |          |    |                                     |     |   |
|-------|--------------|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory / Elective<br>(Research) | 単位数 | 2 |
| 授業方法  | 演習           | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                     |     |   |
| 科目責任者 | Fukuizumi T. |     |          |    |                                     |     |   |
| 担当教員  | 福泉 隆喜        |     |          |    |                                     |     |   |

## 授業計画

| 回    | 学習内容   | 授業方法  | 担当教員      | 事前・事後学習<br>学習課題   |
|------|--|---|-----------|---|
| 1-15 | Recognize the background of institutional reforms and the relationship of the statistical survey associated with each reward, You can take advantage of the policy research and practice the simulation.<br>Give your presentation about the results of the simulation and discuss about the latest trend. | Take advantage of the policy research and practice the simulation. Practice including Presentation and Discussion | Fukuizumi | Reading an article,handout ,reference book intensively and investigate issues on the related area |

2017年度

# Practice of Public Health and Social Security Policy (Practice of Public Health and Social Security Policy)

|       |              |     |          |    |                                     |     |   |
|-------|--------------|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory / Elective<br>(Research) | 単位数 | 2 |
| 授業方法  | 演習           | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                     |     |   |
| 科目責任者 | Fukuizumi T. |     |          |    |                                     |     |   |
| 担当教員  | 福泉 隆喜        |     |          |    |                                     |     |   |

## 授業の概要

【Language】 Japanese

Among the Health, Labor and Welfare statistics, for each area of health and sanitation sector (Survey of Medical Institutions, Hospital Reports, Patient Survey, Patient's Behavior Survey, National Health and Nutrition Survey, Report on Public Health Administration and Services, Estimates of National Medical Care Expenditure, Survey of Physicians, Dentists and Pharmacists, Survey of Dental Diseases, Survey on No-Dentist Districts), population and household sector (Vital Statistics, Life tables, Comprehensive Survey of Living Conditions), social welfare sector (Report on Social Welfare Administration and Services, National Survey on Public Assistance Recipients), the sector of health and welfare for elderly (Survey of Institutions and Establishments for Long-term Care, Report on Long-term care insurance business situation), social security sector (Survey on the Redistribution of Income), you can understand the latest trends of the post-reform of the system and learn a method of

## 学生の到達目標

1. You can explain the features of Health, Labour and Welfare statistics, etc.
2. You can explain the overview of each area of Health, Labour and Welfare statistics.
3. You can take advantage of policy research of each statistic and practice the simulation.

## テキスト

The list of Statistical Surveys conducted by Ministry of Health  
出) Labour and Welfare (著)

The Portal Site of Official Statistics of Japan (e-Stat)  
出) (著)

## 参考書

Health in Japan : Recent Vital Statistics. Japan.  
出) Health, Labour and Welfare (著)  
Statistics Association

Health, Labour and Welfare Statistics Association  
出) The Trends of Insurance and (著)  
Pension. Japan.

Health, Labour and Welfare Statistics Association  
出) Health, Labour and Welfare (著)  
Statistics Association

## 成績評価方法・基準

| 評価項目                      | 割合  |
|---------------------------|-----|
| percentage of attendance  | 30% |
| the results of simulation | 25% |
| oral presentation         | 25% |
| discussion                | 20% |

You can earn 8 units for 4 years maximum.  
You can study online by distance learning from any location.



2017年度

# Practice of Public Health and Social Security Policy (Practice of Public Health and Social Security Policy)

|       |              |     |          |    |                                     |     |   |
|-------|--------------|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory / Elective<br>(Research) | 単位数 | 2 |
| 授業方法  | 演習           | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                     |     |   |
| 科目責任者 | Fukuizumi T. |     |          |    |                                     |     |   |
| 担当教員  | 福泉 隆喜        |     |          |    |                                     |     |   |

## その他

〔Text〕

- The list of Statistical Surveys conducted by Ministry of Health, Labour and Welfare  
<http://www.mhlw.go.jp/toukei/itiran/>
- The Portal Site of Official Statistics of Japan(e-Stat)  
<http://www.e-stat.go.jp/SG1/estat/eStatTopPortal.do>

2017年度

# Practice of Public Health and Social Security Policy (Practice of Public Health and Social Security Policy)

|       |              |     |          |    |                                     |     |   |
|-------|--------------|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory / Elective<br>(Research) | 単位数 | 2 |
| 授業方法  | 演習           | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                     |     |   |
| 科目責任者 | Fukuizumi T. |     |          |    |                                     |     |   |
| 担当教員  | 福泉 隆喜        |     |          |    |                                     |     |   |

## 授業計画

| 回    | 学習内容  | 授業方法  | 担当教員      | 事前・事後学習<br>学習課題  |
|------|---|---|-----------|--|
| 1-15 | Recognize the trends of results in each area of Health, Labour and Welfare statistics, you can take advantage of the policy research and practice the simulation.<br>Give your presentation about the results of the simulation and discuss about the latest trend. | Take advantage of the policy research of Health, Labour and Welfare statistics and practice the simulation.<br>Practice including Presentation and Discussion | Fukuizumi | Reading an article, handout, reference book intensively and investigate issues on the related area |

2017年度

# Colloquium of Public Health and Social Security Policy (Colloquium of Public Health and Social Security Policy)

|       |              |     |          |    |                                     |     |   |
|-------|--------------|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory / Elective<br>(Research) | 単位数 | 2 |
| 授業方法  | 演習           | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                     |     |   |
| 科目責任者 | Fukuizumi T  |     |          |    |                                     |     |   |
| 担当教員  | 福泉 隆喜        |     |          |    |                                     |     |   |

## 授業の概要

You examine carefully several article related public health and social security policy in order to recognize latest trend of the study. Moreover, you give your own presentation about state of progress and discuss the development of your study.

## 学生の到達目標

1. You can learn the way of critical thinking throughout examining carefully several article related public health and social security policy.
2. You can recognize the background and methods of your own study.
3. You can explain your own research exactly.

## テキスト

Choose an article that you would like to introduce and discuss with the members.

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                         | 割合  |
|------------------------------|-----|
| attendance                   | 30% |
| comprehension of the article | 25% |
| oral presentation            | 25% |
| discussion                   | 20% |

You can earn 8 units for 4 years maximum.  
You can study online by distance learning from any location.

## その他

We accept your visit at any time at our office in the 3rd floor of main building.

2017年度

# Colloquium of Public Health and Social Security Policy (Colloquium of Public Health and Social Security Policy)

|       |              |     |          |    |                                     |     |   |
|-------|--------------|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年       | 科目 | Compulsory / Elective<br>(Research) | 単位数 | 2 |
| 授業方法  | 演習           | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                     |     |   |
| 科目責任者 | Fukuizumi T  |     |          |    |                                     |     |   |
| 担当教員  | 福泉 隆喜        |     |          |    |                                     |     |   |

## 授業計画

| 回    | 学習内容  | 授業方法  | 担当教員      | 事前・事後学習<br>学習課題  |
|------|---|---|-----------|--|
| 1-15 | Recognize background, methods and the latest trend of the study.<br>Give your presentation about state of progress and discuss to embody and to develop your study. | Practice including<br>Presentation and Discussion | Fukuizumi | Reading an article intensively and investigate issues on the related area to your study. |

2017年度

# Primary Dental Care (Clinical Basic Course) (Primary Dental Care (Clinical Basic Course))

|       |                                   |     |     |    |                       |     |   |
|-------|-----------------------------------|-----|-----|----|-----------------------|-----|---|
| 開講年次  | 1 grade                           | 期区分 | 通年  | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習                                | 時間数 | 120 | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                        |     |     |    |                       |     |   |
| 科目責任者 | Awano S.                          |     |     |    |                       |     |   |
| 担当教員  | 栗野 秀慈、村岡 宏祐<br>Awano S, Muraoka K |     |     |    |                       |     |   |

## 授業の概要

This course is designed to practice primary dental care based on holistic dentistry in the clinical work

## 学生の到達目標

You should achieve the following competencies;

- practice a medical interview to patients based on patient-centered dentistry
- perform prevention and control of medical accidents and infection
- create a comprehensive treatment plan according to EBM
- practice prevention, treatment and management of oral and dental diseases according to EBM
- practice a medical management which needs to perform social roles as a dentist

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目  | 割合   |
|---|------|
| Evaluation of the clinical performance and report | 100% |

## その他

2017年度

# Primary Dental Care (Clinical Basic Course) (Primary Dental Care (Clinical Basic Course))

|       |                    |     |     |    |                       |     |   |
|-------|--------------------|-----|-----|----|-----------------------|-----|---|
| 開講年次  | 1 grade            | 期区分 | 通年  | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習                 | 時間数 | 120 | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻         |     |     |    |                       |     |   |
| 科目責任者 | Awano S.           |     |     |    |                       |     |   |
| 担当教員  | 栗野 秀慈、村岡 宏祐        |     |     |    |                       |     |   |
|       | Awano S, Muraoka K |     |     |    |                       |     |   |

## 授業計画

| 回    | 学習内容   | 授業方法   | 担当教員                 | 事前・事後学習<br>学習課題  |
|------|--|--|----------------------|--|
| 1-60 | The contents of this course are as follows;<br><ul style="list-style-type: none"> <li>• understand speciality of primary dental care</li> <li>• master knowledges and skills in searching for and applying evidence</li> <li>• practice prevention and control of medical accidents and infection</li> <li>• practice medical interview and examinatio</li> <li>• diagnose oral and dental diseases</li> <li>• create a comprehensive treatment plan according to EBM</li> <li>• practice of primary dental care according to EBM</li> </ul> | lecture<br>practice<br>seminar<br>presentation<br>discussion | Awano S<br>Muraoka K | You should read the reference related to this course and submit the report after each class. |

2017年度

# Primary Dental Care (Clinical Advance Course)

## (Primary Dental Care (Clinical Advance Course))

|       |                           |     |     |    |                       |     |   |
|-------|---------------------------|-----|-----|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 4 grades              | 期区分 | 通年  | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習                        | 時間数 | 120 | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                |     |     |    |                       |     |   |
| 科目責任者 | Awano S.                  |     |     |    |                       |     |   |
| 担当教員  | 栗野 秀慈、村岡 宏祐、邵 仁浩          |     |     |    |                       |     |   |
|       | Awano S, Muraoka K, Soh I |     |     |    |                       |     |   |

### 授業の概要

This course is designed to improve various special clinical abilities which are needed for primary dental care related to improvement in QOL of patients

### 学生の到達目標

You should be achieve the following competencies;

- practice prevention and control of medical accidents and infection in every clinical fields
- create a comprehensive treatment plan according to the difference in the life-stage of each patient
- practice prevention, treatment and management of oral and dental diseases based on the life-stage of patients
- practice patient-centered team care medicine with other health care professionals who are experts in different specialties
- understand Japanese system of community-based comprehensive health care
- participate in the community-based comprehensive health care

### テキスト

出)

著)

### 参考書

出)

著)

### 成績評価方法・基準

| 評価項目  | 割合   |
|---|------|
| Evaluation of clinical performance and report | 100% |

### その他

2017年度

# Primary Dental Care (Clinical Advance Course)

## (Primary Dental Care (Clinical Advance Course))

|       |                           |     |     |    |                       |     |   |
|-------|---------------------------|-----|-----|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 4 grades              | 期区分 | 通年  | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習                        | 時間数 | 120 | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                |     |     |    |                       |     |   |
| 科目責任者 | Awano S.                  |     |     |    |                       |     |   |
| 担当教員  | 栗野 秀慈、村岡 宏祐、邵 仁浩          |     |     |    |                       |     |   |
|       | Awano S, Muraoka K, Soh I |     |     |    |                       |     |   |

### 授業計画

| 回    | 学習内容  | 授業方法   | 担当教員                          | 事前・事後学習<br>学習課題  |
|------|---|--|-------------------------------|--|
| 1-60 | The contents of this course is are as follows;<br>・ practice primary dental care based on life-stage of patients<br>・ practice the risk assessment of dental caries and periodontal diseases of patients<br>・ practice basic periodontal surgery<br>・ practice treatment of patients with xerostomia<br>・ practice primary dental care for elderly patients with some systemic disease in the fields of the community-based health care | lecture<br>practice<br>seminar<br>presentation<br>discussion | Awano S<br>Muraoka K<br>Soh I | You should prepare for each practice and summarize the content of the case after practice. |



2017年度

# Primary Dental Care (Clinical Conference) (Primary Dental Care (Clinical Conference))

|       |                    |     |    |    |                                  |     |   |
|-------|--------------------|-----|----|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades       | 期区分 | 通年 | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習                 | 時間数 | 30 | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻         |     |    |    |                                  |     |   |
| 科目責任者 | Awano S.           |     |    |    |                                  |     |   |
| 担当教員  | 栗野 秀慈、村岡 宏祐        |     |    |    |                                  |     |   |
|       | Awano S, Muraoka K |     |    |    |                                  |     |   |

## 授業の概要

This course is designed to improve the ability which solve various clinical problems to need the practice for primary dental care via case studies.

## 学生の到達目標

You should be achieve the following competencies;

- make a list of the clinical problem based on patient information
- create a comprehensive treatment plan according to the latest EBM
- collect information of the latest dental treatment from the international journals of various special fields
- prepare the material for a case presentation and make a presentaion

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                       | 割合   |
|----------------------------|------|
| Evaluation of presentation | 100% |

## その他

2017年度

# Primary Dental Care (Clinical Conference) (Primary Dental Care (Clinical Conference))

|       |                    |     |    |    |                                  |     |   |
|-------|--------------------|-----|----|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades       | 期区分 | 通年 | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習                 | 時間数 | 30 | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻         |     |    |    |                                  |     |   |
| 科目責任者 | Awano S.           |     |    |    |                                  |     |   |
| 担当教員  | 栗野 秀慈、村岡 宏祐        |     |    |    |                                  |     |   |
|       | Awano S, Muraoka K |     |    |    |                                  |     |   |

## 授業計画

| 回    | 学習内容   | 授業方法    | 担当教員                    | 事前・事後学習<br>学習課題   |
|------|--|---------|-------------------------|---|
| 1-15 | The contents of this course is are as follows;<br>・ learn the latest clinical information by making a case presentation based on primary dental care | Seminar | Awano S.,<br>Muraoka K. | You should prepare the material for a case presentation |

2017年度

# Educational Research of Comprehensive Clinical Dentistry (Educational Research of Comprehensive Clinical Dentistry )

|       |                    |     |    |    |                       |     |   |
|-------|--------------------|-----|----|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades       | 期区分 | 通年 | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習              | 時間数 | 30 | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻         |     |    |    |                       |     |   |
| 科目責任者 | Awano S.           |     |    |    |                       |     |   |
| 担当教員  | 栗野 秀慈、村岡 宏祐        |     |    |    |                       |     |   |
|       | Awano S, Muraoka K |     |    |    |                       |     |   |

## 授業の概要

This course is designed to improve the comprehensive research ability which needs as a postgraduate student by learning various researches linked to development of dentistry.

## 学生の到達目標

You should be achieve the following competencies;

- find the paper which you need using PubMed
- review the English paper and explain the content
- create the research plan
- master the statistical analysis method related to your research
- make a questionnaire for the survey

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                        | 割合  |
|-----------------------------|-----|
| Evaluation of presentationa | 40% |
| Evaluation of report        | 40% |
| Evaluation of questionnaire | 20% |

## その他

2017年度

# Educational Research of Comprehensive Clinical Dentistry (Educational Research of Comprehensive Clinical Dentistry )

|       |                    |     |    |    |                       |     |   |
|-------|--------------------|-----|----|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades       | 期区分 | 通年 | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習              | 時間数 | 30 | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻         |     |    |    |                       |     |   |
| 科目責任者 | Awano S.           |     |    |    |                       |     |   |
| 担当教員  | 栗野 秀慈、村岡 宏祐        |     |    |    |                       |     |   |
|       | Awano S, Muraoka K |     |    |    |                       |     |   |

## 授業計画

| 回    | 学習内容   | 授業方法   | 担当教員                    | 事前・事後学習<br>学習課題  |
|------|--|--|-------------------------|--|
| 1-15 | The contents of this course is are as follows;<br>• review the research paper related to the latest dentistry<br>• practice the statistical analysis method using the statistical analysis soft<br>• create the research plan according to the research theme<br>• make a questionnaire for the survey using in various fields | lecture<br>practice<br>seminar<br>presentation<br>discussion | Awano S.,<br>Muraoka K. | You should read the reference related to this course and prepare the material. |

2017年度

# Educational Research of Comprehensive Clinical Dentistry (Educational Research of Comprehensive Clinical Dentistry )

|       |                    |     |    |    |                       |     |   |
|-------|--------------------|-----|----|----|-----------------------|-----|---|
| 開講年次  | 3 ~ 4 grades       | 期区分 | 通年 | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習              | 時間数 | 30 | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻         |     |    |    |                       |     |   |
| 科目責任者 | Awano S.           |     |    |    |                       |     |   |
| 担当教員  | 栗野 秀慈、村岡 宏祐        |     |    |    |                       |     |   |
|       | Awano S, Muraoka K |     |    |    |                       |     |   |

## 授業の概要

This course is designed to train the ability of comprehensive management for research through the research work to complete the research subjects.

## 学生の到達目標

You should be achieve the following competencies;

- review the reference paper related to your research theme
- summarize the problems and subjects in your research
- analyze the research data for the conference presentation and writing the research paper
- make the presentation material for the conference presentation
- write the research paper to publish to the international academic journals

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                       | 割合   |
|----------------------------|------|
| Evaluation of presentation | 100% |

## その他

2017年度

# Educational Research of Comprehensive Clinical Dentistry (Educational Research of Comprehensive Clinical Dentistry )

|       |                    |     |    |    |                       |     |   |
|-------|--------------------|-----|----|----|-----------------------|-----|---|
| 開講年次  | 3 ~ 4 grades       | 期区分 | 通年 | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習              | 時間数 | 30 | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻         |     |    |    |                       |     |   |
| 科目責任者 | Awano S.           |     |    |    |                       |     |   |
| 担当教員  | 栗野 秀慈、村岡 宏祐        |     |    |    |                       |     |   |
|       | Awano S, Muraoka K |     |    |    |                       |     |   |

## 授業計画

| 回    | 学習内容  | 授業方法         | 担当教員                    | 事前・事後学習<br>学習課題                                    |
|------|---|--------------|-------------------------|--|
| 1-15 | The contents of this course is are as follows;<br>・ present the review of reference papers for your research<br>・ present the results and process in your research work | Presentation | Awano S.,<br>Muraoka K. | You should prepare the material for a presentation |

2017年度

# Comprehensive dentistry (Basic course) (Comprehensive dentistry (Basic course))

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Konoo T.   |     |           |    |                       |     |   |
| 担当教員  | 木尾 哲朗、永松 浩、鬼塚 千絵<br>Clinical training instructor : Konoo,Ngamatsu,Onizuka,Sogabe<br>Certified dentist of the Japanese Society of Dental Practice Administration : Konoo,Onizuka<br>Certified dentist and instructor of Japanese Orthodontic Society : Konoo<br>Accredited Specialist of Japanese Society of Oral and Maxillofacial Surgeons:Sogabe |     |           |    |                       |     |   |

## 授業の概要

You can practice the comprehensive dental treatment with the cognitive, affective and psychomotor domain.

## 学生の到達目標

- 1 . Knowledge and competence for the comprehensive dentistry
- 2 . Knowledge and competence for the primary care and treatment
- 3 . Making the general comprehensive treatment plan
- 4 . Practice of the team treatment

## テキスト

Essential handbook for dental resident, Real medical interview matched with the patients ' needs  
出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                     | 割合   |
|--------------------------|------|
| The minimum requirements | 100% |

The minimum requirements are the reports (5 cases), case presentation (2 cases), initial treatment ( 5 cases) and conservative treatment (5 cases).

## その他

2017年度

# Comprehensive dentistry (Basic course)

## (Comprehensive dentistry (Basic course))

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Konoo T.   |     |           |    |                       |     |   |
| 担当教員  | 木尾 哲朗、永松 浩、鬼塚 千絵<br>Clinical training instructor : Konoo,Ngamatsu,Onizuka,Sogabe<br>Certified dentist of the Japanese Society of Dental Practice Administration : Konoo,Onizuka<br>Certified dentist and instructor of Japanese Orthodontic Society : Konoo<br>Accredited Specialist of Japanese Society of Oral and Maxillofacial Surgeons:Sogabe |     |           |    |                       |     |   |

### 授業計画

| 回     | 学習内容  | 授業方法              | 担当教員   | 事前・事後学習<br>学習課題 |
|-------|---|-------------------|--|-----------------|
| 1     | Guidance                                    | Lecture           | Konoo  | -               |
| 2-3   | Impression taking                           | Lecture, Practice | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |
| 4-8   | Impression taking                           | Practice          | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |
| 9-14  | Study model making                          | Practice          | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |
| 15-22 | Information gathering (pictures etc.)       | Practice          | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |
| 23-24 | Referral patient from other clinical office | Lecture, Practice | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |
| 25-29 | Medical interview 1                         | Practice          | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |
| 30-34 | Medical interview 2                         | Practice          | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |
| 35-37 | Clinical system and treatment posture       | Practice          | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |
| 38-41 | Endodontic treatment                        | Practice          | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |



2017年度

# Comprehensive dentistry (Basic course)

## (Comprehensive dentistry (Basic course))

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Konoo T.   |     |           |    |                       |     |   |
| 担当教員  | 木尾 哲朗、永松 浩、鬼塚 千絵<br>Clinical training instructor : Konoo,Ngamatsu,Onizuka,Sogabe<br>Certified dentist of the Japanese Society of Dental Practice Administration : Konoo,Onizuka<br>Certified dentist and instructor of Japanese Orthodontic Society : Konoo<br>Accredited Specialist of Japanese Society of Oral and Maxillofacial Surgeons:Sogabe |     |           |    |                       |     |   |

| 回     | 学習内容                           | 授業方法     | 担当教員   | 事前・事後学習<br>学習課題 |
|-------|--------------------------------|----------|--|-----------------|
| 42-45 | Periodontal initial treatment  | Practice | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |
| 46-49 | Treatment of the teeth disease | Practice | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |
| 50-54 | Limited orthodontic treatment  | Practice | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |
| 55-57 | Presentation resume making     | Practice | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |
| 58-60 | Oral Presentation              | Practice | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |

2017年度

# Comprehensive dentistry (advanced course) (Comprehensive dentistry (advanced course))

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 4 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Konoo T.   |     |           |    |                       |     |   |
| 担当教員  | 木尾 哲朗、永松 浩、鬼塚 千絵<br>Clinical training instructor : Konoo,Nagamatsu,Onizuka<br>Certified dentist of the Japanese Society of Dental Practice Administration : Konoo,Onizuka<br>Certified dentist and instructor of Japanese Orthodontic Society : Konoo<br>Accredited Specialist of Japanese Society of Oral and Maxillofacial Surgeons:Sogabe |     |           |    |                       |     |   |

## 授業の概要

You can practice the comprehensive dental treatment with the competences of the cognitive, affective and Psychomotor domain.

## 学生の到達目標

- 1 . Knowledge and competence for the comprehensive dentistry
- 2 . Practice and competence for the primary care and treatment
- 3 . Practice the general comprehensive treatment plan

## テキスト

出) 著)

## 参考書

Essential handbook for dental resident, Real medical interview matched with the patients ' needs

出) 著)

## 成績評価方法・基準

| 評価項目                     | 割合   |
|--------------------------|------|
| The minimum requirements | 100% |

The minimum requirements are the reports (5 cases), case presentation (2 cases), initial treatment (5 cases) and conservative treatment (5 cases).

## その他

2017年度

# Comprehensive dentistry (advanced course) (Comprehensive dentistry (advanced course))

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 4 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Konoo T.   |     |           |    |                       |     |   |
| 担当教員  | 木尾 哲朗、永松 浩、鬼塚 千絵<br>Clinical training instructor : Konoo,Nagamatsu,Onizuka<br>Certified dentist of the Japanese Society of Dental Practice Administration : Konoo,Onizuka<br>Certified dentist and instructor of Japanese Orthodontic Society : Konoo<br>Accredited Specialist of Japanese Society of Oral and Maxillofacial Surgeons:Sogabe |     |           |    |                       |     |   |

## 授業計画

| 回       | 学習内容   | 授業方法     | 担当教員   | 事前・事後学習<br>学習課題 |
|---------|--|----------|--|-----------------|
| 1-4     | Guidance, Medical interview                          | Practice | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |
| 5-8     | Medical interview                                    | Practice | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |
| 9-12    | Periodontal treatment                                | Practice | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |
| 13-17   | Endodontic treatment                                 | Practice | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |
| 18-21   | Dental caries treatment                              | Practice | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |
| 22-26   | Dental crown treatment                               | Practice | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |
| 27-31   | Rigid prosthetic treatment for the missing teeth     | Practice | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |
| 32 ~ 36 | Removable prosthetic treatment for the missing teeth | Practice | Konoo<br>Nagamatsu<br>u<br>Onizuka           | -               |
| 37 ~ 40 | Orthodontic treatment                                | Practice | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |
| 41 ~ 44 | Team dental treatment                                | Practice | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |

2017年度

# Comprehensive dentistry (advanced course)

## (Comprehensive dentistry (advanced course))

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 4 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Konoo T.   |     |           |    |                       |     |   |
| 担当教員  | 木尾 哲朗、永松 浩、鬼塚 千絵<br>Clinical training instructor : Konoo,Nagamatsu,Onizuka<br>Certified dentist of the Japanese Society of Dental Practice Administration : Konoo,Onizuka<br>Certified dentist and instructor of Japanese Orthodontic Society : Konoo<br>Accredited Specialist of Japanese Society of Oral and Maxillofacial Surgeons:Sogabe |     |           |    |                       |     |   |

| 回       | 学習内容                                 | 授業方法     | 担当教員   | 事前・事後学習<br>学習課題 |
|---------|--------------------------------------|----------|--|-----------------|
| 45 ~ 46 | Application of the explanatory model | Practice | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |
| 47 ~ 48 | Denture Guidance                     | Practice | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |
| 49 ~ 50 | Infection control                    | Practice | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |
| 51 ~ 52 | Medical safety management            | Practice | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |
| 53 ~ 57 | Comprehensive dentistry              | Practice | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |
| 58 ~ 60 | Oral presentation                    | Practice | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | -               |

2017年度

# Research of the dental education (Research of the dental education )

|       |                  |     |          |    |                       |     |   |
|-------|------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades     | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習            | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻       |     |          |    |                       |     |   |
| 科目責任者 | Konoo T.         |     |          |    |                       |     |   |
| 担当教員  | 木尾 哲朗、永松 浩、鬼塚 千絵 |     |          |    |                       |     |   |

## 授業の概要

For the practice of the holistic treatment, you can understand and practice the communication skills and dental education methods based on the cognitive, affective and psychomotor domains.

## 学生の到達目標

1. Understanding the communication methodology
2. Understanding the dental educational methodology
3. To be competent in communication
4. To be competent in dental educational methodology
5. Application of educational methodology
6. Professionalism

## テキスト

The medical communication Research, The questionnaire methods The related articles.  
出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目              | 割合  |
|-------------------|-----|
| portfolios        | 30% |
| oral examinations | 50% |
| paper examination | 20% |

## その他

2017年度

# Research of the dental education (Research of the dental education )

|       |                  |     |          |    |                       |     |   |
|-------|------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades     | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習            | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻       |     |          |    |                       |     |   |
| 科目責任者 | Konoo T.         |     |          |    |                       |     |   |
| 担当教員  | 木尾 哲朗、永松 浩、鬼塚 千絵 |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容  | 授業方法              | 担当教員                       | 事前・事後学習<br>学習課題                                    |
|-------|---|-------------------|----------------------------|--|
| 1     | orientation   | Lecture           | Konoo                      | Communication skills, Educational technique        |
| 2     | Communication skills 1 (Active listening, empathy and Cross-cultural communication) | Lecture           | Konoo, Nagamatsu,          | Communication skills, Cross-cultural communication |
| 3     | Communication research methods  | Lecture           | Konoo, Onizuka             | Ethnomethodology, Taxonomy                         |
| 4     | Communication skills 2  | Practice          | Konoo, Nagamatsu, Onizuka, | Communication skills, Competences, Dialect         |
| 5-7   | Interaction analysis (quantitative)   | Lecture, Practice | Konoo, Nagamatsu, Onizuka, | Scripts, RIAS                                      |
| 8-9   | Interaction analysis (qualitative)  | Lecture, Practice | Konoo, Nagamatsu, Onizuka, | Textmining Competences                             |
| 10    | Global standard of the dental education   | Lecture           | Konoo                      | Outcomes   |
| 11    | Problem Based Learning  | Lecture           | Konoo                      | Outcomes PBL                                       |
| 12-13 | Medical Interview   | Lecture           | Konoo, Nagamatsu, Onizuka, | Psychosocial factors                               |
| 14-15 | Model simulation 1 (guidance, automatic trace pursuit and preparation pressure)     | Lecture, Practice | Konoo, Nagamatsu, Onizuka, | simulation   |

2017年度

# Research of the dental education (Research of the dental education )

|       |                  |     |          |    |                       |     |   |
|-------|------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 4 grades     | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習            | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻       |     |          |    |                       |     |   |
| 科目責任者 | Konoo T.         |     |          |    |                       |     |   |
| 担当教員  | 木尾 哲朗、永松 浩、鬼塚 千絵 |     |          |    |                       |     |   |

## 授業の概要

For the practice of the holistic treatment, you can understand and practice the communication skills and dental education methods based on the cognitive, affective and psychomotor domains.

## 学生の到達目標

1. Understanding the communication methodology
2. Understanding the dental educational methodology
3. To be competent in communication
4. Application of educational methodology
5. Professionalism

## テキスト

The medical communication Research, The questionnaire methods, The related articles.  
出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目              | 割合  |
|-------------------|-----|
| portfolios        | 30% |
| oral examinations | 50% |
| paper examination | 20% |

## その他

2017年度

# Research of the dental education (Research of the dental education )

|       |                  |     |          |    |                       |     |   |
|-------|------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 4 grades     | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習            | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻       |     |          |    |                       |     |   |
| 科目責任者 | Konoo T.         |     |          |    |                       |     |   |
| 担当教員  | 木尾 哲朗、永松 浩、鬼塚 千絵 |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容   | 授業方法              | 担当教員                             | 事前・事後学習<br>学習課題                     |
|-------|--|-------------------|----------------------------------|-------------------------------------|
| 1-5   | Model simulation 2<br>(Cavity, preparation and root canal measuring) | Lecture, Practice | Konoo,<br>Nagamatsu,<br>Onizuka, | simulator                           |
| 6-7   | Microteaching  | Lecture, Practice | Konoo,<br>Nagamatsu,<br>Onizuka, | Characteristic                      |
| 8-9   | Medical Behavior   | Lecture           | Konoo,<br>Onizuka                | Behavior<br>education               |
| 10-11 | Medical Ethics   | Lecture           | Konoo,<br>Nagamatsu              | Professionalis<br>m                 |
| 12-13 | KJ method  | Lecture, Practice | Konoo,<br>Nagamatsu,<br>Onizuka, | Characteristic                      |
| 14-15 | Facilitation skills  | Lecture, Practice | Konoo,<br>Nagamatsu,<br>Onizuka, | Behavior<br>changes<br>Facilitation |



2017年度

# Research of the dental education (Research of the dental education )

|       |                  |     |          |    |                       |     |   |
|-------|------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 3 ~ 4 grades     | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習            | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻       |     |          |    |                       |     |   |
| 科目責任者 | Konoo T.         |     |          |    |                       |     |   |
| 担当教員  | 木尾 哲朗、永松 浩、鬼塚 千絵 |     |          |    |                       |     |   |

## 授業の概要

For the practice of the holistic treatment, you can understand and practice the communication skills and dental education methods based on the cognitive, affective and psychomotor domains.

## 学生の到達目標

1. Understanding the communication methodology
2. Understanding the dental educational methodology
3. To be competent in communication
4. Application of educational methodology
5. Professionalism

## テキスト

The medical communication Research, The questionnaire methods The related articles.  
出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目              | 割合  |
|-------------------|-----|
| portfolios        | 30% |
| oral examinations | 50% |
| paper examination | 20% |

## その他

2017年度

# Research of the dental education (Research of the dental education )

|       |                  |     |          |    |                       |     |   |
|-------|------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 3 ~ 4 grades     | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習            | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻       |     |          |    |                       |     |   |
| 科目責任者 | Konoo T.         |     |          |    |                       |     |   |
| 担当教員  | 木尾 哲朗、永松 浩、鬼塚 千絵 |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容                              | 授業方法              | 担当教員                             | 事前・事後学習<br>学習課題                                 |
|-------|-----------------------------------|-------------------|----------------------------------|---|
| 1-2   | Coaching                          | Lecture, Practice | Konoo,<br>Nagamatsu,<br>Onizuka, | Assertion                                       |
| 3-4   | Paper questionnaire               | Lecture, Practice | Konoo,<br>Nagamatsu,<br>Onizuka, | Characteristic<br>of<br>Questionnaire<br>method |
| 5-7   | dental psychosomatic disease      | Lecture           | Konoo                            | dental<br>psychosomatic<br>disease<br>Behavior  |
| 8     | patient psychology                | Lecture           | Konoo                            | Cognitive<br>psychology                         |
| 9     | correspondence to a complainer    | Lecture, Practice | Konoo,<br>Nagamatsu,<br>Onizuka, | Complainer,<br>Cognitive<br>psychology          |
| 10-11 | Simulated (Standardized )patient  | Lecture           | Konoo                            | SP<br>Facilitation                              |
| 12-14 | Safety medical environment design | Lecture           | Onizuka                          | Risk<br>management,<br>Incident                 |
| 15    | Professionalism                   | Lecture           | Konoo                            | competence                                      |

2017年度

# Education and research of the general dentistry (Education and research of the general dentistry )

|       |                  |     |          |    |                                     |     |   |
|-------|------------------|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades     | 期区分 | 通年       | 科目 | Compulsory / Elective<br>(Research) | 単位数 | 2 |
| 授業方法  | 演習               | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻       |     |          |    |                                     |     |   |
| 科目責任者 | Konoo T.         |     |          |    |                                     |     |   |
| 担当教員  | 木尾 哲朗、永松 浩、鬼塚 千絵 |     |          |    |                                     |     |   |

## 授業の概要

Abstract the research paper to understand the worldwide research trend of the general dentistry.  
Report, discuss and present the own research.

## 学生の到達目標

1. Explanation the article of the specialty domain. (cognitive domain)
2. Understanding, evaluation and discussion about the study of other fields. (cognitive and affective domain)
3. Competence to understand research paper written in English mainly. (psychomotor domain)
4. Competence for the research discussion. (psychomotor domain)
5. Presentation the own research. (psychomotor domain)

## テキスト

An important related research article and appropriate reference book  
出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                                    | 割合   |
|---|------|
| portfolios, oral and paper examination. | 100% |

## その他

2017年度

# Education and research of the general dentistry (Education and research of the general dentistry )

|       |                  |     |          |    |                                     |     |   |
|-------|------------------|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades     | 期区分 | 通年       | 科目 | Compulsory / Elective<br>(Research) | 単位数 | 2 |
| 授業方法  | 演習               | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻       |     |          |    |                                     |     |   |
| 科目責任者 | Konoo T.         |     |          |    |                                     |     |   |
| 担当教員  | 木尾 哲朗、永松 浩、鬼塚 千絵 |     |          |    |                                     |     |   |

## 授業計画

| 回    | 学習内容   | 授業方法                                | 担当教員                                    | 事前・事後学習<br>学習課題                                   |
|------|--|-------------------------------------|---|---|
| 1-15 | Understanding the educational research paper | Abstract , report and<br>discussion | Konoo<br>Nagamatsu<br>Onizuka<br>Sogabe | Investigation<br>the associated<br>research paper |

2017年度

# Education and research of the general dentistry (Education and research of the general dentistry )

|       |   |     |          |    |                                     |     |   |
|-------|---|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 2 ~ 4 grades  | 期区分 | 通年       | 科目 | Compulsory / Elective<br>(Research) | 単位数 | 2 |
| 授業方法  | 演習  | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                     |     |   |
| 科目責任者 | Konoo T.  |     |          |    |                                     |     |   |
| 担当教員  | 木尾 哲朗、永松 浩、鬼塚 千絵<br>Konoo T. ,Nagamatsu H. ,Onizuka C. ,Sogabe K. |     |          |    |                                     |     |   |

## 授業の概要

Abstract the research paper to understand the worldwide research trend of the general dentistry.  
Report, discuss and present the own research.

## 学生の到達目標

1. Explanation the article of the specialty domain. (cognitive domain)
2. Understanding, evaluation and discussion about the study of other fields. (cognitive and affective domain)
3. Competence to understand research paper written in English mainly. (psychomotor domain)
4. Competence for the research discussion. (psychomotor domain)
5. Presentation the own research. (psychomotor domain)
6. Write the research report and abstract. (psychomotor domain)
7. Planning and conducting the seminar. (psychomotor domain)

## テキスト

An important related research article and appropriate reference book  
出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                                   | 割合   |
|--|------|
| portfolios, oral and paper examination | 100% |

## その他

2017年度

# Education and research of the general dentistry (Education and research of the general dentistry )

|       |   |     |          |    |                                     |     |   |
|-------|---|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 2 ~ 4 grades                                  | 期区分 | 通年       | 科目 | Compulsory / Elective<br>(Research) | 単位数 | 2 |
| 授業方法  | 演習  | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                                    |     |          |    |                                     |     |   |
| 科目責任者 | Konoo T.                                      |     |          |    |                                     |     |   |
| 担当教員  | 木尾 哲朗、永松 浩、鬼塚 千絵                              |     |          |    |                                     |     |   |
|       | Konoo T. ,Nagamatsu H. ,Onizuka C. ,Sogabe K. |     |          |    |                                     |     |   |

## 授業計画

| 回    | 学習内容   | 授業方法                                | 担当教員   | 事前・事後学習<br>学習課題                                   |
|------|--|-------------------------------------|--|---|
| 1-15 | Understanding the educational research paper | Abstract , report and<br>discussion | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | Investigation<br>the associated<br>research paper |

2017年度

# Education and research of the general dentistry (Education and research of the general dentistry )

|       |   |     |          |    |                                     |     |   |
|-------|---|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 3 ~ 4 grades  | 期区分 | 通年       | 科目 | Compulsory / Elective<br>(Research) | 単位数 | 2 |
| 授業方法  | 演習  | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                     |     |   |
| 科目責任者 | Konoo T.  |     |          |    |                                     |     |   |
| 担当教員  | 木尾 哲朗、永松 浩、鬼塚 千絵<br>Konoo T. ,Nagamatsu H. ,Onizuka C. ,Sogabe K. |     |          |    |                                     |     |   |

## 授業の概要

Abstract the research paper to understand the worldwide research trend of the general dentistry.  
Report, discuss and present the own research.

## 学生の到達目標

1. Explanation the article of the specialty domain. (cognitive domain)
2. Understanding, evaluation and discussion about the study of other fields. (cognitive and affective domain)
3. Competence to understand research paper written in English mainly. (psychomotor domain)
4. Competence for the research discussion. (psychomotor domain)
5. Presentation the own research. (psychomotor domain)
6. Write the research report and abstract. (psychomotor domain)
7. Planning and conducting the seminar. (psychomotor domain)
8. Competence to make the research paper. (psychomotor domain)
9. Instruction the seminar contents. (affective and psychomotor domain)

## テキスト

An important related research article and appropriate reference book  
出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                                   | 割合   |
|--|------|
| portfolios, oral and paper examination | 100% |

## その他

2017年度

# Education and research of the general dentistry (Education and research of the general dentistry )

|       |   |     |          |    |                                     |     |   |
|-------|---|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 3 ~ 4 grades                                  | 期区分 | 通年       | 科目 | Compulsory / Elective<br>(Research) | 単位数 | 2 |
| 授業方法  | 演習  | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                                    |     |          |    |                                     |     |   |
| 科目責任者 | Konoo T.                                      |     |          |    |                                     |     |   |
| 担当教員  | 木尾 哲朗、永松 浩、鬼塚 千絵                              |     |          |    |                                     |     |   |
|       | Konoo T. ,Nagamatsu H. ,Onizuka C. ,Sogabe K. |     |          |    |                                     |     |   |

## 授業計画

| 回    | 学習内容   | 授業方法                                | 担当教員   | 事前・事後学習<br>学習課題                                   |
|------|--|-------------------------------------|--|---|
| 1-15 | Understanding the educational research paper | Abstract , report and<br>discussion | Konoo<br>Nagamatsu<br>u<br>Onizuka<br>Sogabe | Investigation<br>the associated<br>research paper |



2017年度

# Endodontics and Restorative Dentistry (Clinical Basic Course) (Endodontics and Restorative Dentistry (Clinical Basic Course))

|       |   |     |          |    |                                  |     |   |
|-------|---|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 2 grades  | 期区分 | 通年       | 科目 | Compulsory / Elective (Clinical) | 単位数 | 2 |
| 授業方法  | 実習  | 時間数 | 60 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                  |     |   |
| 科目責任者 | Kitamura C.   |     |          |    |                                  |     |   |
| 担当教員  | 北村 知昭、諸富 孝彦、鷲尾 絢子、吉居 慎二、宮下 桂子<br>Accredited Specialist : Kitamura, Morotomi, Washio, Yoshii<br>upervisor of Conservative Dentistry : Kitamura, Morotomi<br>Accredited Supervisor of Endodontics : Kitamura<br>Accredited Supervisor of Orofacial Pain : Kitamura<br>Miyashita |     |          |    |                                  |     |   |

## 授業の概要

In the present, the elderly person has many teeth, and the importance of the tooth is recognized. High-precision skills to carry out dental treatment of a tooth is demanded. In this course, you will practice basic skills about Restorative Dentistry, Endodontics, Aesthetic Dentistry and Prosthodontics. Under the management by Supervisors, you will carry out simulation training and clinical practice, and acquire fundamental knowledge as well as skills for a specialist in the area of Conservative Dentistry.

## 学生の到達目標

To acquire fundamental knowledge and skills for tooth therapeutics, you will practice basic skills about Restorative Dentistry, Endodontics, Aesthetic Dentistry and Prosthodontics.

You should achieve following assignments;

- Construction of good relationship with patients and stuffs
- Pass to grade tests (1) and (2)
- Collection of clinical cases
- Acquisition of skills for Endodontics, Pulp Preservation, Pre-treatment before Endodontics
- Acquisition of skills for tooth preparation
- Acquisition of basic skills for dissection and suturing of gingiva

## テキスト

Related textbooks

出) 著)

Training textbook made by the division

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                             | 割合   |
|----------------------------------|------|
| the average of Tests (1) and (2) | 100% |

## その他

2017年度

# Endodontics and Restorative Dentistry (Clinical Basic Course) (Endodontics and Restorative Dentistry (Clinical Basic Course))

|       |   |     |          |    |                                  |     |   |
|-------|---|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 2 grades  | 期区分 | 通年       | 科目 | Compulsory / Elective (Clinical) | 単位数 | 2 |
| 授業方法  | 実習  | 時間数 | 60 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                  |     |   |
| 科目責任者 | Kitamura C.   |     |          |    |                                  |     |   |
| 担当教員  | 北村 知昭、諸富 孝彦、鷺尾 絢子、吉居 慎二、宮下 桂子<br>Accredited Specialist : Kitamura, Morotomi, Washio, Yoshii<br>upervisor of Conservative Dentistry : Kitamura, Morotomi<br>Accredited Supervisor of Endodontics : Kitamura<br>Accredited Supervisor of Orofacial Pain : Kitamura<br>Miyashita |     |          |    |                                  |     |   |

## 授業計画

| 回     | 学習内容   | 授業方法     | 担当教員  | 事前・事後学習<br>学習課題                   |
|-------|--|----------|---|-----------------------------------|
| 1-3   | Basic of Endodontics I<br>You will master basic endodontics skills in simulator to clear Test (1).                     | Practice | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Teeth<br>character<br>Positioning |
| 4-6   | Basic of Restorative Dentistry I<br>You will master basic restorative dentistry skills in simulator to clear Test (1). | Practice | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Teeth<br>character<br>Positioning |
| 7-9   | Basic of Tooth Preparation I<br>You will master basic prosthodontics skills in simulator to clear Test (1).            | Practice | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Teeth<br>character<br>Positioning |
| 10-12 | Test (1)<br>You will take exams of basic skills in simulator.  | Practice | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Review above<br>Practices         |
| 13-15 | Basic of Endodontics II<br>You will master basic endodontics skills in clinic to clear Test (2).                       | Practice | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Review above<br>Practices         |
| 16-18 | Basic of Restorative Dentistry II<br>You will master basic restorative dentistry skills in clinic to clear Test (2).   | Practice | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Review above<br>Practices         |
| 19-21 | Basic of Tooth Preparation II<br>You will master basic prosthodontic skills in clinic to clear Test (2).               | Practice | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Review above<br>Practices         |
| 22-24 | Basic of Periodontal treatment<br>You will master basic prosthodontics skills in clinic to clear Test (2).             | Practice | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Review above<br>Practices         |
| 25-27 | Test (2)<br>You will take exams of basic skills in clinical cases.   | Practice | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Review above<br>Practices         |

2017年度

# Endodontics and Restorative Dentistry (Clinical Basic Course) (Endodontics and Restorative Dentistry (Clinical Basic Course))

|       |  |     |          |    |                                  |     |   |
|-------|--|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 2 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (Clinical) | 単位数 | 2 |
| 授業方法  | 実習   | 時間数 | 60 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Kitamura C.  |     |          |    |                                  |     |   |
| 担当教員  | 北村 知昭、諸富 孝彦、鷺尾 絢子、吉居 慎二、宮下 桂子<br>Accredited Specialist : Kitamura,Morotomi,Washio,Yoshii<br>upervisor of Conservative Dentistry : Kitamura,Morotomi<br>Accredited Supervisor of Endodontics : Kitamura<br>Accredited Supervisor of Orofacial Pain : Kitamura Miyashita |     |          |    |                                  |     |   |

| 回     | 学習内容   | 授業方法     | 担当教員  | 事前・事後学習<br>学習課題           |
|-------|--|----------|---|---------------------------|
| 28-30 | Basic of Dissection and Suturing<br>You will master basic dissection and suturing skills in simulator. | Practice | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Review above<br>Practices |

2017年度

# Endodontics and Restorative Dentistry (Clinical Advance Course S) (Endodontics and Restorative Dentistry (Clinical Advance Course S))

|       |  |     |          |    |                       |     |   |
|-------|--|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 4 grades   | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 2 |
| 授業方法  | 実習   | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Kitamura C.  |     |          |    |                       |     |   |
| 担当教員  | 北村 知昭、諸富 孝彦、鷲尾 絢子、吉居 慎二、宮下 桂子<br>Accredited Specialist : Kitamura, Morotomi, Yoshii<br>Supervisor of Conservative Dentistry : Kitamura, Morotomi<br>Accredited Supervisor of Endodontics : Kitamura<br>Accredited Supervisor of Orofacial Pain : Kitamura<br>Miyashita |     |          |    |                       |     |   |

## 授業の概要

In this course, you will collect cases to be a specialist in the area of Conservative Dentistry, and practice basic skills about Restorative Dentistry, Endodontics, Aesthetic Dentistry and Prosthodontics. Also, you will carry out training of microscope-enhanced dentistry to pass to grade test (3).

## 学生の到達目標

To acquire full knowledge and high-precision skills for tooth therapeutics and be a specialist in the area of Conservative Dentistry, you will practice special skills about Restorative Dentistry, Endodontics, Aesthetic Dentistry and Prosthodontics.

You should achieve following assignments;

- Pass to grade test (3)
- Acquisition of special skills for Microscope-Enhanced Dentistry
- Full planning of dental treatment

## テキスト

Related textbooks

出) 著)

Training textbook made by the division

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目     | 割合   |
|----------|------|
| Test (3) | 100% |

## その他

2017年度

# Endodontics and Restorative Dentistry (Clinical Advance Course S) (Endodontics and Restorative Dentistry (Clinical Advance Course S))

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 4 grades  | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 2 |
| 授業方法  | 実習  | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                       |     |   |
| 科目責任者 | Kitamura C.   |     |          |    |                       |     |   |
| 担当教員  | 北村 知昭、諸富 孝彦、鷺尾 絢子、吉居 慎二、宮下 桂子<br>Accredited Specialist : Kitamura,Morotomi,Yoshii<br>Supervisor of Conservative Dentistry : Kitamura,Morotomi<br>Accredited Supervisor of Endodontics : Kitamura<br>Accredited Supervisor of Orofacial Pain : Kitamura<br>Miyashita |     |          |    |                       |     |   |

## 授業計画

| 回       | 学習内容   | 授業方法     | 担当教員  | 事前・事後学習<br>学習課題                   |
|---------|--|----------|---|-----------------------------------|
| 1 ~ 5   | Micro-Endodontics<br>You will master micro-endodontics skills in simulator to clear Test (3).  | Practice | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Teeth<br>character<br>Positioning |
| 6 ~ 10  | Aesthetic Dentistry under Microscope<br>You will master aesthetic dentistry skills under microscope in simulator to clear Test (3).  | Practice | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Teeth<br>character<br>Positioning |
| 11 ~ 15 | Tooth Preparation under Microscope<br>You will master prosthodontics skills in simulator to clear Test (3).                          | Practice | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Teeth<br>character<br>Positioning |
| 16 ~ 20 | Removal of Post under Microscope<br>You will master removal of post under microscope in simulator to clear Test (3).                 | Practice | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Teeth<br>character<br>Positioning |
| 21 ~ 25 | Dissection and Suturing under Microscope<br>You will master dissection and suturing under microscope in simulator to clear Test (3). | Practice | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Teeth<br>character<br>Positioning |
| 26 ~ 30 | Test (3)<br>You will take exams of basic microscope skills in simulator.   | Practice | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Review above<br>Practices         |

2017年度

# Endodontics and Restorative Dentistry (Clinical Advance Course H) (Endodontics and Restorative Dentistry (Clinical Advance Course H))

|       |   |     |           |    |                       |     |   |
|-------|---|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 4 grades  | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習  | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |           |    |                       |     |   |
| 科目責任者 | Kitamura C.   |     |           |    |                       |     |   |
| 担当教員  | 北村 知昭、諸富 孝彦、鷲尾 絢子、吉居 慎二、宮下 桂子<br>Accredited Specialist : Kitamura, Morotomi, Washio, Yoshii<br>Supervisor of Conservative Dentistry : Kitamura, Morotomi<br>Accredited Supervisor of Endodontics : Kitamura<br>Accredited Supervisor of Orofacial Pain : Kitamura Miyashita |     |           |    |                       |     |   |

## 授業の概要

In this course, you will collect cases to be a specialist in the area of Conservative Dentistry, and acquire special skills of microscope-enhanced dentistry to pass to grade test (4). Also, you will acquire skills for presentation and clinical reasoning through clinical seminar.

## 学生の到達目標

To acquire full knowledge and high-precision skills for tooth therapeutics and be a specialist of Conservative Dentistry, you will practice special skills about Microscope Enhanced Dentistry. Also, you will acquire skills for presentation and clinical reasoning.

You should achieve following assignments;

- Pass to grade test (4)
- Acquisition of special skills for Microscope-Enhanced Dentistry
- Full planning of dental treatment
- Case Presentation

## テキスト

Related textbooks

出) 著)

Training textbook made by the division

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目     | 割合   |
|----------|------|
| Test (4) | 100% |

## その他

2017年度

# Endodontics and Restorative Dentistry (Clinical Advance Course H) (Endodontics and Restorative Dentistry (Clinical Advance Course H))

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 4 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Kitamura C.  |     |           |    |                       |     |   |
| 担当教員  | 北村 知昭、諸富 孝彦、鷺尾 絢子、吉居 慎二、宮下 桂子<br>Accredited Specialist : Kitamura, Morotomi, Washio, Yoshii<br>Supervisor of Conservative Dentistry : Kitamura, Morotomi<br>Accredited Supervisor of Endodontics : Kitamura<br>Accredited Supervisor of Orofacial Pain : Kitamura<br>Miyashita |     |           |    |                       |     |   |

## 授業計画

| 回       | 学習内容   | 授業方法     | 担当教員  | 事前・事後学習<br>学習課題                   |
|---------|--|----------|---|-----------------------------------|
| 1 ~ 8   | Micro-Endodontics<br>You will master micro-endodontics skills in clinic to clear Test (4).   | Practice | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Teeth<br>character<br>Positioning |
| 9 ~ 16  | Aesthetic Dentistry under Microscope<br>You will master aesthetic dentistry skills under microscope in clinic to clear Test (4).       | Practice | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Teeth<br>character<br>Positioning |
| 17 ~ 24 | Micro-Endodontic Surgery<br>You will master micro-endodontic surgery skills in clinic to clear Test (4).                               | Practice | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Teeth<br>character<br>Positioning |
| 25 ~ 32 | Test (4)<br>You will take exams of microscope skills in clinical cases.  | Practice | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Review above<br>Practices         |
| 33 ~ 40 | Planning in clinics<br>You will plan to treat in clinic to obtain accredited specialist.   | Practice | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Teeth<br>character<br>Positioning |
| 41 ~ 48 | Clinics<br>You will carry out clinical cases to obtain accredited specialist.  | Practice | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Review above<br>Practices         |
| 49 ~ 56 | Case Presentation and Lectures<br>You will carry out clinical case presentations, and attend lectures to obtain accredited specialist. | Practice | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Review above<br>Practices         |
| 57 ~ 60 | Preparation of Cases for Accredited Specialists<br>You will prepare clinical case presentations to obtain accredited specialist.       | Practice | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Review above<br>Practices         |

2017年度

# Endodontics and Restorative Dentistry (Research Seminar) (Endodontics and Restorative Dentistry (Research Seminar))

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 4 grades                                  | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 2 |
| 授業方法  | 講義・演習   | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                                    |     |          |    |                       |     |   |
| 科目責任者 | Kitamura C.                                   |     |          |    |                       |     |   |
| 担当教員  | 北村 知昭、諸富 孝彦、鷲尾 絢子、吉居 慎二、宮下 桂子                 |     |          |    |                       |     |   |
|       | Kitamura, Morotomi, Washio, Yoshii, Miyashita |     |          |    |                       |     |   |

## 授業の概要

In this course, you will read and present papers related your research to acquire logical thinking as well as international point of view. Also, you will present results of your research to discuss.

## 学生の到達目標

To acquire full knowledge and skills for research and presentation, you will read and present international papers related your research to acquire logical thinking as well as international point of view.

You should achieve following assignments;

- Collect international papers related to your research
- Read and present papers
- Acquire presentation skills
- Case Presentation

## テキスト

Related textbooks

出) 著)

Training textbook made by the division

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目         | 割合   |
|--------------|------|
| Presentation | 100% |

## その他



2017年度

# Endodontics and Restorative Dentistry (Research Seminar) (Endodontics and Restorative Dentistry (Research Seminar))

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 4 grades                                  | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 2 |
| 授業方法  | 講義・演習   | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                                    |     |          |    |                       |     |   |
| 科目責任者 | Kitamura C.                                   |     |          |    |                       |     |   |
| 担当教員  | 北村 知昭、諸富 孝彦、鷲尾 絢子、吉居 慎二、宮下 桂子                 |     |          |    |                       |     |   |
|       | Kitamura, Morotomi, Washio, Yoshii, Miyashita |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容  | 授業方法                                  | 担当教員  | 事前・事後学習<br>学習課題                 |
|-------|---|---------------------------------------|---|---------------------------------|
| 1-5   | Reading and presentation of research paper<br>You will master reading and presentation of related international research paper. | Introduction and Discussion of Papers | Kitamura, Morotomi, Washio, Yoshii, Miyashita | Reading papers                  |
| 6-10  | Presentation of research<br>You will show and explain your research.  | Discussion of Research                | Kitamura, Morotomi, Washio, Yoshii, Miyashita | Preparation of research results |
| 11-15 | Introduction of international papers by supervisors<br>You will learn and attend lectures by specialists.                       | Introduction and Discussion of Papers | Kitamura, Morotomi, Washio, Yoshii, Miyashita | Reading papers                  |

2017年度

# Endodontics and Restorative Dentistry (Research Practice) (Endodontics and Restorative Dentistry (Research Practice))

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 4 grades                                  | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 2 |
| 授業方法  | 講義・演習   | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                                    |     |          |    |                       |     |   |
| 科目責任者 | Kitamura C.                                   |     |          |    |                       |     |   |
| 担当教員  | 北村 知昭、諸富 孝彦、鷲尾 絢子、吉居 慎二、宮下 桂子                 |     |          |    |                       |     |   |
|       | Kitamura, Morotomi, Washio, Yoshii, Miyashita |     |          |    |                       |     |   |

## 授業の概要

In this course, you will acquire skills related to research for PhD.

## 学生の到達目標

To be a international researcher, dentist, and educator, you will acquire abilities to carry out experiments and prepare papers for PhD.

You should achieve following assignments;

- Acquisition of knowledge and skills to carry out research
- Preparation of results from experiments
- Presentation in scientific meeting
- Prepare scientific papers

## テキスト

Related textbooks

出)

著)

## 参考書

出)

著)

## 成績評価方法・基準

| 評価項目      | 割合   |
|-----------|------|
| Practices | 100% |

## その他

2017年度

# Endodontics and Restorative Dentistry (Research Practice) (Endodontics and Restorative Dentistry (Research Practice))

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 4 grades                                  | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 2 |
| 授業方法  | 講義・演習   | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                                    |     |          |    |                       |     |   |
| 科目責任者 | Kitamura C.                                   |     |          |    |                       |     |   |
| 担当教員  | 北村 知昭、諸富 孝彦、鷲尾 絢子、吉居 慎二、宮下 桂子                 |     |          |    |                       |     |   |
|       | Kitamura, Morotomi, Washio, Yoshii, Miyashita |     |          |    |                       |     |   |

## 授業計画

| 回       | 学習内容   | 授業方法                   | 担当教員  | 事前・事後学習<br>学習課題   |
|---------|--|------------------------|---|-------------------|
| 1       | Orientation<br>You will discuss and decide your research theme with supervisors.                               | Lecture                | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Reading<br>papers |
| 2,3     | Research with Cells<br>You will master research skills with cells.   | Discussion of Research | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Reading<br>papers |
| 4,5     | Research with animals<br>You will master research skills with animals.   | Practice               | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Reading<br>papers |
| 6,7     | Research of Materials<br>You will master research skills about dental materials.                               | Practice               | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Reading<br>papers |
| 8,9     | Research of Devises<br>You will master research skills about medical and dental devices.                       | Practice               | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Reading<br>papers |
| 10,11   | Clinical Research<br>You will master clinical research skills.   | Practice               | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Reading<br>papers |
| 12 ~ 15 | Preparation of Presentation and Papers<br>You will master preparation of presentation and paper to obtain PhD. | Practice               | Kitamura,<br>Morotomi,<br>Washio,<br>Yoshii,<br>Miyashita | Reading<br>papers |

2017年度

# Periodontology (Clinical Basic Course)

## (Periodontology (Clinical Basic Course))

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Nakashima K.   |     |           |    |                       |     |   |
| 担当教員  | 中島 啓介、臼井 通彦、中村 太志、守下 昌輝、花谷 智哉<br>JSP Instructor : Nakashima K.<br>JSCD Supervisor : Nakashima K.<br>JSP Board Certified Periodontist : Usui M.<br>JSCD Accredited Specialists : Usui M.<br>JSP Periodontist : Nakamura T. , Morishita M. , Hanatani T. |     |           |    |                       |     |   |

### 授業の概要

【Language】 English and Japanese

Periodontitis have received a lot of attention as an oral disease associated with systemic disease in recent years. This course deals with effective diagnosis and treatment procedure of periodontitis based on EBM. You will be able to read a number of published articles related to periodontitis all over the world and acquire diagnostic ability and clinical problem resolution skill as a periodontist.

### 学生の到達目標

By the end of the course, students should be able to do the following;

1. Practice a medical interview to patients of periodontitis (1),
2. Describe and explain periodontal tissue examination (2 ~ 7, 20),
3. Design a treatment plan based on periodontal tissue examination (8),
4. Practice an effective patient education (9 ~ 14),
5. Practice ultrasonic scaling and scaling and root planing (15 ~ 19),
6. Recognize basic techniques of periodontal surgery and explain wound healing after surgery (21 ~ 23),
7. Recognize periodontal regenerative therapy and explain prognosis after regenerative surgery (24, 25),
8. Describe and explain prosthetics, orthodontics and implant in periodontal therapy (26 ~ 28),
9. Explain significance and procedure of SPT (29),
10. Report a case of periodontitis and explain treatment plan and outcome of periodontal therapy (30),

### テキスト

Journal of Periodontology

出) 著)

Journal of Clinical Periodontology

出) 著)

### 参考書

出) 著)

### 成績評価方法・基準

| 評価項目                                    | 割合   |
|---|------|
| oral examination in clinical conference | 100% |

### その他

Texts will be delivered in every class.

2017年度

# Periodontology (Clinical Basic Course)

## (Periodontology (Clinical Basic Course))

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Nakashima K.   |     |           |    |                       |     |   |
| 担当教員  | 中島 啓介、臼井 通彦、中村 太志、守下 昌輝、花谷 智哉<br>JSP Instructor : Nakashima K.<br>JSCD Supervisor : Nakashima K.<br>JSP Board Certified Periodontist : Usui M.<br>JSCD Accredited Specialists : Usui M.<br>JSP Periodontist : Nakamura T. , Morishita M. , Hanatani T. |     |           |    |                       |     |   |

### 授業計画

| 回  | 学習内容   | 授業方法     | 担当教員      | 事前・事後学習<br>学習課題 |
|----|--|----------|-----------|-----------------|
| 1  | Medical interview to patient of periodontitis  | Practice | Nakashima | Review          |
| 2  | Periodontal Tissue Examination (Intraoral photograph 1)  | Practice | Nakashima | Review          |
| 3  | Periodontal Tissue Examination (Intraoral photograph 2)  | Practice | Nakashima | Review          |
| 4  | Periodontal Tissue Examination (Probing)   | Practice | Nakashima | Review          |
| 5  | Periodontal Tissue Examination (Radiologic image reading)  | Practice | Nakashima | Review          |
| 6  | Periodontal Tissue Examination (Measurement and analysis of occlusal force)  | Practice | Nakashima | Review          |
| 7  | Periodontal Tissue Examination (Tooth mobility measurement)  | Practice | Hanatani  | Review          |
| 8  | Design of treatment plan   | Practice | Hanatani  | Review          |
| 9  | Effective Patient Education 1  | Practice | Hanatani  | Review          |
| 10 | Effective Patient Education 2  | Practice | Hanatani  | Review          |
| 11 | Effective Patient Education 3  | Practice | Hanatani  | Review          |
| 12 | Effective Patient Education 4  | Practice | Hanatani  | Review          |
| 13 | Effective Patient Education 5  | Practice | Nakamura  | Review          |
| 14 | Effective Patient Education 6  | Practice | Nakamura  | Review          |
| 15 | Ultrasonic Scaling (supragingiva)  | Practice | Nakamura  | Review          |
| 16 | Ultrasonic Scaling (subgingiva and furcation)  | Practice | Nakamura  | Review          |
| 17 | Scaling and Root Planing 1 (operator position)   | Practice | Nakamura  | Review          |
| 18 | Scaling and Root Planing 2 (sharpening scaler)   | Practice | Nakamura  | Review          |
| 19 | Scaling and Root Planing 3 (nonsurgical periodontal therapy)   | Practice | Morishita | Review          |
| 20 | Design of treatment plan based on reevaluation and response to periodontal therapy   | Practice | Morishita | Review          |
| 21 | Periodontal Surgery 1 (basic techniques in periodontal surgery; periodontal flap (full and partial thickness) and method for suturing) | Practice | Morishita | Review          |
| 22 | Periodontal Surgery 2 (Flap operation)   | Practice | Morishita | Review          |
| 23 | Periodontal Surgery 3 (connective tissue graft)  | Practice | Morishita | Review          |
| 24 | Periodontal Regenerative Therapy 1 (GTR method)  | Practice | Morishita | Review          |
| 25 | Periodontal Regenerative Therapy 2 (Emdogain)  | Practice | Usui      | Review          |
| 26 | Periodontal Prosthetics  | Practice | Usui      | Review          |
| 27 | Implants in Periodontal Therapy  | Practice | Usui      | Review          |

2017年度

# Periodontology ( Clinical Basic Course )

## (Periodontology ( Clinical Basic Course ) )

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Nakashima K.   |     |           |    |                       |     |   |
| 担当教員  | 中島 啓介、臼井 通彦、中村 太志、守下 昌輝、花谷 智哉<br>JSP Instructor : Nakashima K.<br>JSCD Supervisor : Nakashima K.<br>JSP Board Certified Periodontist : Usui M.<br>JSCD Accredited Specialists : Usui M.<br>JSP Periodontist : Nakamura T. , Morishita M. , Hanatani T. |     |           |    |                       |     |   |

| 回  | 学習内容  | 授業方法     | 担当教員 | 事前・事後学習<br>学習課題 |
|----|---|----------|------|-----------------|
| 28 | Orthodontics in Periodontal Therapy                           | Practice | Usui | Review          |
| 29 | Practical Significance of Supportive Periodontal Theray (SPT) | Practice | Usui | Review          |
| 30 | Clinical Conference   | Practice | Usui | Review          |

2017年度

# Periodontology (Periodontology )

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades  | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 演習  | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                       |     |   |
| 科目責任者 | Nakashima K.  |     |          |    |                       |     |   |
|       | 中島 啓介、臼井 通彦、中村 太志、守下 昌輝、花谷 智哉   |     |          |    |                       |     |   |
| 担当教員  | JSP Instructor : Nakashima K.<br>JSCD Supervisor : Nakashima K.<br>JSP Board Certified Periodontist : Usui M. , Muraoka K.<br>JSCD Accredited Specialists : Usui M. , Muraoka K.<br>JSP Periodontist : Nakamura T. , Morishita M. , Hanatani T. |     |          |    |                       |     |   |

## 授業の概要

【Language】 English and Japanese

Research of periodontology is constantly advancing field in dentistry. It is important to recognize the latest data of the field before you start research. This course introduces a variety of tools to understand paper in English and also deals with clinical statistics, meta-analysis and sentence writing for scientific paper and presentation.

## 学生の到達目標

By the end of the course, students should be able to do the following;

1. Understand content of paper in English using online dictionary
2. Create database searching references by PubMed
3. Perform basic analysis of clinical data by statistical procedure
4. Understand procedure of meta-analysis
5. Make simple and logical sentences for scientific papers

## テキスト

出) (著)

## 参考書

出) (著)

## 成績評価方法・基準

| 評価項目             | 割合  |
|------------------|-----|
| attendance       | 60% |
| oral examination | 40% |

## その他

Text;  
Life science dictionary project ( <http://lsd.pharm.kyoto-u.ac.jp/ja/index.html> )  
JMP ( statistical software )、EndNote ( literature retrieval software )  
Cochrane Reviews、Journal of Periodontology、Journal of Clinical Periodontology

2017年度

# Periodontology (Periodontology )

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades  | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 演習  | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                       |     |   |
| 科目責任者 | Nakashima K.  |     |          |    |                       |     |   |
|       | 中島 啓介、臼井 通彦、中村 太志、守下 昌輝、花谷 智哉   |     |          |    |                       |     |   |
| 担当教員  | JSP Instructor : Nakashima K.<br>JSCD Supervisor : Nakashima K.<br>JSP Board Certified Periodontist : Usui M. , Muraoka K.<br>JSCD Accredited Specialists : Usui M. , Muraoka K.<br>JSP Periodontist : Nakamura T. , Morishita M. , Hanatani T. |     |          |    |                       |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法     | 担当教員      | 事前・事後学習<br>学習課題 |
|----|---|----------|-----------|-----------------|
| 1  | Search on Online Dictionary                               | practice | Nakashima | review          |
| 2  | Search on PubMed  | practice | Nakashima | review          |
| 3  | Preparation of Literature Database                        | practice | Nakashima | review          |
| 4  | Clinical Statistics (Control of data)                     | practice | Hanatani  | review          |
| 5  | Clinical Statistics (normal distribution of data )        | practice | Hanatani  | review          |
| 6  | Clinical Statistics (mean and comparison between groups ) | practice | Hanatani  | review          |
| 7  | Clinical Statistics (analysis of variance)                | practice | Nakamura  | review          |
| 8  | Clinical Statistics (simple linear regression analysis)   | practice | Nakamura  | review          |
| 9  | Clinical Statistics (multiple linear regression analysis) | practice | Nakamura  | review          |
| 10 | Analysis of Clinical Data 1                               | practice | Morishita | review          |
| 11 | Analysis of Clinical Data 2                               | practice | Morishita | review          |
| 12 | Basis of meta-analysis                                    | practice | Morishita | review          |
| 13 | Application of meta-analysis                              | practice | Usui      | review          |
| 14 | Preparation of a paper in Japanese                        | practice | Usui      | review          |
| 15 | Preparation of a paper in English                         | practice | Usui      | review          |



2017年度

# Periodontology (Clinical Conference)

## (Periodontology (Clinical Conference))

|       |  |     |          |    |                                  |     |   |
|-------|--|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習   | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Nakashima K.   |     |          |    |                                  |     |   |
| 担当教員  | 中島 啓介、臼井 通彦、中村 太志、守下 昌輝、花谷 智哉<br>JSP Instructor : Nakashima K.<br>JSCD Supervisor : Nakashima K.<br>JSP Board Certified Periodontist : Usui M.<br>JSCD Accredited Specialists : Usui M.<br>JSP Periodontist : Nakamura T. , Morishita M. , Hanatani T. |     |          |    |                                  |     |   |

### 授業の概要

【Language】 English and Japanese

You will read a number of the latest articles associated with periodontitis and learn methods for solving problems based on clinical cases.

### 学生の到達目標

By the end of the course, students should be able to do the following;

1. Respond to acute and chronic periodontitis
2. Develop the knowledge of surgical and nonsurgical periodontal therapy
3. Recognize the concept of refractory chronic periodontitis
4. Learn dental treatment based on psychosomatic dentistry and respond to the patients
5. Develop the knowledge of periodontal regenerative therapy

### テキスト

Journal of Periodontology

出) 著)

Journal of Clinical Periodontology

出) 著)

Journal of Periodontal Research

出) 著)

### 参考書

出) 著)

### 成績評価方法・基準

| 評価項目   | 割合   |
|--|------|
| oral examination in seminar, clinical conference | 100% |

### その他

2017年度

# Periodontology (Clinical Conference)

## (Periodontology (Clinical Conference))

|       |  |     |          |    |                                  |     |   |
|-------|--|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習   | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Nakashima K.   |     |          |    |                                  |     |   |
| 担当教員  | 中島 啓介、臼井 通彦、中村 太志、守下 昌輝、花谷 智哉<br>JSP Instructor : Nakashima K.<br>JSCD Supervisor : Nakashima K.<br>JSP Board Certified Periodontist : Usui M.<br>JSCD Accredited Specialists : Usui M.<br>JSP Periodontist : Nakamura T. , Morishita M. , Hanatani T. |     |          |    |                                  |     |   |

### 授業計画

| 回      | 学習内容  | 授業方法                            | 担当教員  | 事前・事後学習<br>学習課題 |
|--------|---|---------------------------------|---|-----------------|
| 1 ~ 15 | Seminar・Clinical conferences<br>You will consider future development of periodontal research and treatment from the latest articles and examine application of them to clinical case. | Seminar and clinical conference | Nakashima<br>a<br>Usui<br>Nakamura<br>Morishita<br>Hanatani | Review          |

2017年度

# Periodontology (Advanced Periodontal Surgery)

## (Periodontology (Advanced Periodontal Surgery))

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 4 grades  | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 2 |
| 授業方法  | 講義・実習   | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                       |     |   |
| 科目責任者 | Nakashima K.  |     |          |    |                       |     |   |
|       | 中島 啓介、臼井 通彦、中村 太志、守下 昌輝、花谷 智哉   |     |          |    |                       |     |   |
| 担当教員  | JSP Instructor : Nakashima K.<br>JSCD Supervisor : Nakashima K.<br>JSP Board Certified Periodontist : Usui M.<br>JSCD Accredited Specialists : Usui M.<br>JSP Periodontist : Nakamura T. , Morishita M. , Hanatani T. |     |          |    |                       |     |   |

### 授業の概要

【Language】English and Japanese

Periodontists need technological capacity and knowledge of periodontal surgery. This course deal with the basic concept and knowledge of periodontal surgery. It also enhances the development of student ' s skill of periodontal surgery on practicing phantom and porcine jawbone and assistance of supervisory doctor.

### 学生の到達目標

By the end of the course, students should be able to do the following;

1. Describe and explain a basic concept of periodontal surgery
2. Select appropriate operative procedure according to cases
3. Handle and select necessary surgical instruments on periodontal surgery
4. Practice periodontal surgery under the guidance of supervisory doctor

### テキスト

出) 著)

### 参考書

出) 著)

### 成績評価方法・基準

| 評価項目             | 割合  |
|------------------|-----|
| attendance       | 60% |
| oral examination | 40% |

### その他

Texts will be delivered in every class.

2017年度

# Periodontology (Advanced Periodontal Surgery)

## (Periodontology (Advanced Periodontal Surgery))

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 4 grades  | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 2 |
| 授業方法  | 講義・実習   | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                       |     |   |
| 科目責任者 | Nakashima K.  |     |          |    |                       |     |   |
|       | 中島 啓介、臼井 通彦、中村 太志、守下 昌輝、花谷 智哉   |     |          |    |                       |     |   |
| 担当教員  | JSP Instructor : Nakashima K.<br>JSCD Supervisor : Nakashima K.<br>JSP Board Certified Periodontist : Usui M.<br>JSCD Accredited Specialists : Usui M.<br>JSP Periodontist : Nakamura T. , Morishita M. , Hanatani T. |     |          |    |                       |     |   |

### 授業計画

| 回  | 学習内容  | 授業方法     | 担当教員      | 事前・事後学習<br>学習課題 |
|----|---|----------|-----------|-----------------|
| 1  | Flap operation using mucoperiosteal flap  | lecture  | Nakashima | Review          |
| 2  | Flap operation using mucosal flap   | lecture  | Nakashima | Review          |
| 3  | Flap operation<br>You will practice flap operation using phantom and porcine jawbone.                           | practice | Nakashima | Review          |
| 4  | Frenectomy  | lecture  | Hanatani  | Review          |
| 5  | Vestibuloplasty   | lecture  | Hanatani  | Review          |
| 6  | Periodontal plastic surgery (pedicle gingival graft)  | lecture  | Hanatani  | Review          |
| 7  | Periodontal plastic surgery (free gingival graft)   | lecture  | Nakamura  | Review          |
| 8  | Periodontal plastic surgery (connective tissue graft)   | lecture  | Nakamura  | Review          |
| 9  | Periodontal plastic surgery<br>You will practice periodontal plastic surgery using phantom and porcine jawbone. | practice | Nakamura  | Review          |
| 10 | GTR method  | lecture  | Morishita | Review          |
| 11 | GTR method<br>You will practice GTR method using phantom and porcine jawbone.                                   | practice | Morishita | Review          |
| 12 | Emdogein  | lecture  | Morishita | Review          |
| 13 | Autogenous bone graft   | lecture  | Usui      | Review          |
| 14 | Assistance of periodontal plastic surgery<br>You will assist periodontal plastic surgery in clinic.             | practice | Usui      | Review          |
| 15 | Assistance of periodontal regenerative surgery<br>You will assist periodontal regenerative surgery in clinic.   | practice | Usui      | Review          |

2017年度

# Removable Prosthesis (Basic Course) (Removable Prosthesis (Basic Course))

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Arita M.   |     |           |    |                       |     |   |
| 担当教員  | 有田 正博、中村 恵子<br>Accredited Specialist : Arita M.<br>Supervisor of Prosthetic Dentistry : Arita M. |     |           |    |                       |     |   |

## 授業の概要

【Language】 English and Japanese

For the patient who hopes for removable prosthetic treatment, you will learn clinical procedures and acquire the clinical maneuver. In addition, you will learn dental laboratory techniques associated with this clinical maneuver in parallel. Supervisor will evaluate whether or not you can fabricate an appropriate removable prosthesis by a clinical maneuver of oneself.

## 学生の到達目標

- You can treat a removable prosthetic treatment for the partial edentulous patient.
- You can treat a removable prosthetic treatment for the edentulous patient.
- You can adjust of removable prosthesis.
- You can repair of removable prosthesis.

## テキスト

出) (著)

## 参考書

Complete denture technique  
出) Ishiyaku Pub. Inc. (著)

Partial denture technique  
出) Ishiyaku Pub. Inc. (著)

Prosthetic treatment for edentulous patients  
出) Ishiyaku Pub. Inc. (著)

## 成績評価方法・基準

| 評価項目   | 割合  |
|--|-----|
| Case presentation: Partial (1), Complete (1) | 30% |
| Case report: Partial (1), Complete (1)       | 20% |
| Denture repair or adjustment (5)             | 25% |
| Final test                                   | 25% |

## その他

2017年度

# Removable Prosthesis (Basic Course) (Removable Prosthesis (Basic Course))

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Arita M.   |     |           |    |                       |     |   |
| 担当教員  | 有田 正博、中村 恵子<br>Accredited Specialist : Arita M.<br>Supervisor of Prosthetic Dentistry : Arita M. |     |           |    |                       |     |   |

## 授業計画

| 回     | 学習内容  | 授業方法     | 担当教員          | 事前・事後学習<br>学習課題                         |
|-------|---|----------|---------------|---|
| 1,2   | Preliminary impression<br>Making of study cast  | Practice | Arita M       | Preliminary<br>impression<br>Study cast |
| 3,4   | Making of individual tray   | Practice | Arita M       | Individual tray                         |
| 5,6   | Border molding<br>Precise impression  | Practice | Arita M       | Border molding<br>Precise<br>impression |
| 7,8   | Making of working cast<br>Making of occlusal plate  | Practice | Arita M       | Working cast                            |
| 9,10  | Face-bow transfer<br>Bite taking<br>Mount of working cast to the articulator                    | Practice | Arita M       | Face-bow<br>transfer<br>Bite taking     |
| 11,12 | Gothic arch tracing<br>Remount of lower working cast  | Practice | Arita M       | Gothic arch<br>tracing                  |
| 13,14 | Adjustment of semi-adjustable articulator   | Practice | Arita M       | Adjustable<br>articulator               |
| 15,16 | Check-bite technique  | Practice | Arita M       | Check-bite                              |
| 17,18 | Occlusal adjustment   | Practice | Arita M       | Occlusal<br>adjustment                  |
| 19,20 | Test 1, Discussion  | Test     | Arita M       |   |
| 21,22 | Denture adjustment 1<br>Direct reline method  | Practice | Arita M       | Tissue<br>conditioning                  |
| 23,24 | Denture adjustment 2<br>Indirect reline method  | Practice | Arita M       | Reline                                  |
| 25,26 | Denture adjustment 3<br>Occlusal adjustment<br>Full balanced occlusion<br>Lingualized occlusion | Practice | Arita M       | Occlusal<br>adjustment                  |
| 27,28 | Denture repair 1<br>Repair of base plate, artificial teeth, and clasp                           | Practice | Arita M       | Denture repair                          |
| 29,30 | Test 2, Discussion  | Test     | Arita M       |   |
| 31,32 | Removable partial denture (case)<br>Preliminary impression<br>Study cast                        | Practice | Arita M       | Preliminary<br>impression<br>Study cast |
| 33,34 | Removable partial denture (case)<br>Design, individual tray                                     | Practice | Arita M       | Individual tray                         |
| 35,36 | Removable partial denture (case)<br>Rest seat, border molding,<br>Precise impression            | Practice | Arita M       | Border molding<br>Precise<br>impression |
| 37,38 | Removable partial denture (case)<br>Working cast<br>Occlusal plate                              | Practice | Nakamura<br>K | Working cast                            |

2017年度

# Removable Prosthesis (Basic Course) (Removable Prosthesis (Basic Course))

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Arita M.   |     |           |    |                       |     |   |
| 担当教員  | 有田 正博、中村 恵子<br>Accredited Specialist : Arita M.<br>Supervisor of Prosthetic Dentistry : Arita M. |     |           |    |                       |     |   |

| 回     | 学習内容  | 授業方法     | 担当教員    | 事前・事後学習<br>学習課題                         |
|-------|---|----------|---------|---|
| 39,40 | Removable partial denture (case)<br>Bite taking<br>Mount of working cast to the articulator | Practice | Arita M | Bite taking                             |
| 41,42 | Removable partial denture (case)<br>Try-in  | Practice | Arita M | Try-in                                  |
| 43,44 | Removable partial denture (case)<br>Set, adjustment<br>patient education                    | Practice | Arita M | Set<br>Patient<br>education             |
| 45,46 | Complete denture (case)<br>Preliminary impression<br>Study cast                             | Practice | Arita M | Preliminary<br>impression<br>Study cast |
| 47,48 | Complete denture (case)<br>Individual tray  | Practice | Arita M | Individual tray                         |
| 49,50 | Complete denture (case)<br>Border molding,<br>Precise impression                            | Practice | Arita M | Border molding<br>Precise<br>impression |
| 51,52 | Complete denture (case)<br>Working cast<br>Occlusal plate                                   | Practice | Arita M | Working cast                            |
| 53,54 | Complete denture (case)<br>Bite taking<br>Mount of working cast to the articulator          | Practice | Arita M | Bite taking                             |
| 55,56 | Complete denture (case)<br>Try-in   | Practice | Arita M | Try-in                                  |
| 57,58 | Complete denture (case)<br>Set, adjustment<br>patient education                             | Practice | Arita M | Set<br>Patient<br>education             |
| 59,60 | Test 3, Discussion<br>Case presentation   | Test     | Arita M |   |

2017年度

# Removable Prosthesis (Advanced Course ) (Removable Prosthesis (Advanced Course ))

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades  | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 2 |
| 授業方法  | 実習  | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                       |     |   |
| 科目責任者 | Masumi S.   |     |          |    |                       |     |   |
| 担当教員  | 鱒見 進一、榎原 絵理<br>Masumi S. **, ***, ****, Makihara E. **, ***, ****<br>Accredited Specialist*, Supervisor** of Prosthetic Dentistry, Accredited Specialist of Maxillofacial Prosthesis***,<br>Accredited Specialist of Dental Magnetic Attachmen **** |     |          |    |                       |     |   |

## 授業の概要

【Language】 English and Japanese  
You will learn a basic technique for the higher special technical acquisition

## 学生の到達目標

- ・ You can treat a removable prosthetic treatment with flange technique.
- ・ You can treat a removable prosthetic treatment with dental magnetic attachment.

## テキスト

出) 著)

## 参考書

Complete denture Q&A  
出) Nagasue Pub. Inc. 著)

Dental magnetic attachment Q&A  
出) Ishiyaku Pub. Inc. 著)

## 成績評価方法・基準

| 評価項目                          | 割合  |
|-------------------------------|-----|
| Case presentation: Flange(1)  | 30% |
| Case presentation: Magnet (1) | 30% |
| Case report: Flange(1)        | 10% |
| Case report: Magnet (1)       | 10% |
| Final test                    | 20% |

## その他



2017年度

# Removable Prosthesis (Advanced Course ) (Removable Prosthesis (Advanced Course ))

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades  | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 2 |
| 授業方法  | 実習  | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                       |     |   |
| 科目責任者 | Masumi S.   |     |          |    |                       |     |   |
| 担当教員  | 鱒見 進一、槇原 絵理<br>Masumi S.*,**,***,****, Makihara E.*,**,****<br>Accredited Specialist*, Supervisor** of Prosthetic Dentistry, Accredited Specialist of Maxillofacial Prosthesis***,<br>Accredited Specialist of Dental Magnetic Attachmen **** |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容  | 授業方法     | 担当教員          | 事前・事後学習<br>学習課題                         |
|-------|---|----------|---------------|---|
| 1,1   | Flange technique (case)<br>Preliminary impression<br>Study cast           | Practice | Masumi S      | Preliminary<br>impression<br>Study cast |
| 3,4   | Flange technique (case)<br>Precise impression<br>Working cast             | Practice | Masumi S      | Precise<br>impression                   |
| 5,6   | Flange technique (case)<br>Face-bow transfer<br>Bite taking               | Practice | Masumi S      | Bite taking                             |
| 7,8   | Flange technique (case)<br>Denture space taking                           | Practice | Masumi S      | Denture space                           |
| 9,10  | Flange technique (case)<br>Try-in<br>Flange technique for gingival region | Practice | Masumi S      | Try-in                                  |
| 11,12 | Flange technique (case)<br>Set, adjustment                                | Practice | Masumi S      | Check-bite                              |
| 13,14 | Test 1<br>Case presentation   | test     | Masumi S      |   |
| 15,16 | Magnet denture (case)<br>Design   | Practice | Makihara<br>E | Design                                  |
| 17,18 | Magnet denture (case)<br>Tooth preparation, impression                    | Practice | Makihara<br>E | Tooth<br>preparation                    |
| 19,20 | Magnet denture (case)<br>Fix the Keeper<br>Precise impression             | Practice | Makihara<br>E | Precise<br>impression                   |
| 21,22 | Magnet denture (case)<br>Bite taking                                      | Practice | Makihara<br>E | Bite taking                             |
| 23,24 | Magnet denture (case)<br>Try-in   | Practice | Makihara<br>E | Try-in                                  |
| 25,26 | Magnet denture (case)<br>Fix the magnetic assembly                        | Practice | Makihara<br>E | Magnetic<br>assembly                    |
| 27,28 | Test 2<br>Case presentation   | test     | Makihara<br>E |   |
| 29,30 | Conclusion, final test  | test     | Makihara<br>E |   |

2017年度

# Removable Prosthesis (Advanced Course ) (Removable Prosthesis (Advanced Course ))

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades  | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 2 |
| 授業方法  | 実習  | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                       |     |   |
| 科目責任者 | Masumi S.   |     |          |    |                       |     |   |
| 担当教員  | 鱒見 進一、楨原 絵理<br>Masumi S. *, **, ***, ****, Makihara E. *, ***,<br>Accredited Specialist*, Supervisor** of Prosthetic Dentistry, Accredited Specialist***, Supervisor**** of TMD |     |          |    |                       |     |   |

## 授業の概要

【Language】 English and Japanese  
You will learn several mouthpieces.

## 学生の到達目標

- ・ You can treat of TMD with occlusal splint.
- ・ You can treat of Obstructive sleep apnea with oral appliance.
- ・ You can treat for sports athlete with mouth guard.

## テキスト

出) 著)

## 参考書

- Occlusal splint therapy  
出) Hyoron Pub. Inc. 著)
- Dental treatment of OSAS  
出) Suna Book. 著)
- Manual of mouthguard  
出) Quintessence Pub. Inc. 著)

## 成績評価方法・基準

| 評価項目                                   | 割合  |
|--|-----|
| Lecture report: OA (1), OS (1), MG (1) | 30% |
| Case report: OA (1), OS (1), MG (1)    | 30% |
| Final test                             | 40% |

## その他

2017年度

# Removable Prosthesis (Advanced Course ) (Removable Prosthesis (Advanced Course ))

|       |  |     |          |    |                       |     |   |
|-------|--|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 2 |
| 授業方法  | 実習   | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Masumi S.  |     |          |    |                       |     |   |
| 担当教員  | 鱒見 進一、楨原 絵理<br>Masumi S. **, ***, ****, Makihara E. *, ***,<br>Accredited Specialist*, Supervisor** of Prosthetic Dentistry, Accredited Specialist***, Supervisor**** of TMD |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容   | 授業方法     | 担当教員       | 事前・事後学習<br>学習課題                   |
|-------|--|----------|------------|-----------------------------------|
| 1,2   | Oral appliance (case)<br>Examination<br>Decision of case       | Practice | Makihara E | Oral appliance                    |
| 3,4   | Oral appliance (case)<br>Precise impression<br>Bite taking     | Practice | Makihara E | Precise impression<br>Bite taking |
| 5,6   | Oral appliance (case)<br>Fabrication of OA                     | Practice | Makihara E | Fabrication of OA                 |
| 7,8   | Test 1<br>Case presentation                                    | Test     | Makihara E |                                   |
| 9,10  | TMD (case)<br>Examination<br>Decision of case                  | Practice | Makihara E | TMD                               |
| 11,12 | TMD (case)<br>Diagnose   | Practice | Makihara E | Diagnosis                         |
| 13,14 | TMD (case)<br>Precise impression<br>Bite taking                | Test     | Makihara E | Precise impression<br>Bite taking |
| 15,16 | TMD (case)<br>Fabrication of occlusal splint                   | Practice | Makihara E | Fabrication                       |
| 17,18 | TMD (case)<br>Set, adjustment                                  | Practice | Makihara E | Adjustment                        |
| 19,20 | Test 2<br>Case presentation                                    | Test     | Makihara E |                                   |
| 21,22 | Sports mouth guard (case)<br>Examination<br>Decision of case   | Practice | Masumi S   | Sports mouth guard                |
| 23,24 | Sports mouth guard (case)<br>Precise impression<br>Bite taking | Practice | Masumi S   | Precise impression<br>Bite taking |
| 25,26 | Sports mouth guard (case)<br>Set, adjustment                   | Practice | Masumi S   | Adjustment                        |
| 27,28 | Test3<br>Case presentation                                     | Test     | Masumi S   |                                   |
| 29,30 | Conclusion, final test   | Test     | Masumi S   |                                   |

2017年度

# Removable Prosthodontics ( Clinical Research Design ) (Removable Prosthodontics ( Clinical Research Design ) )

|       |                         |     |          |    |                       |     |   |
|-------|-------------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades            | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 4 |
| 授業方法  | 講義                      | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻              |     |          |    |                       |     |   |
| 科目責任者 | Masumi S.               |     |          |    |                       |     |   |
| 担当教員  | 鱒見 進一、槇原 絵理             |     |          |    |                       |     |   |
|       | Masumi S. , Makihara E. |     |          |    |                       |     |   |

## 授業の概要

【Language】 English and Japanese

You will learn about clinical research design.

## 学生の到達目標

・ You can write of design of clinical research

## テキスト

Designing clinical research

出 )Lippincott Williams &amp; Wilkins 著 )

## 参考書

出 )

著 )

## 成績評価方法・基準

| 評価項目                    | 割合   |
|-------------------------|------|
| Evaluate by final test. | 100% |

## その他

2017年度

# Removable Prosthodontics (Clinical Research Design) (Removable Prosthodontics (Clinical Research Design))

|       |                         |     |          |    |                       |     |   |
|-------|-------------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades            | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 4 |
| 授業方法  | 講義                      | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻              |     |          |    |                       |     |   |
| 科目責任者 | Masumi S.               |     |          |    |                       |     |   |
| 担当教員  | 鱒見 進一、槇原 絵理             |     |          |    |                       |     |   |
|       | Masumi S. , Makihara E. |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容                             | 授業方法    | 担当教員       | 事前・事後学習<br>学習課題       |
|-------|----------------------------------|---------|------------|-----------------------|
| 1,2   | Orientation                      | Lecture | Makihara E | Research question     |
| 3,4   | Conceiving the research question | Lecture | Makihara E | Study sample          |
| 5,6   | Choosing the study sample        | Lecture | Makihara E | Measurements          |
| 7,8   | Planning the measurements        | Lecture | Makihara E | Questionnaire         |
| 9,10  | Designing questionnaire          | Lecture | Makihara E | Cohort study          |
| 11,12 | Cohort study                     | Lecture | Makihara E | Cross-sectional study |
| 13,14 | Cross-sectional study            | Lecture | Makihara E | Case-control study    |
| 15,16 | Case-control study               | Lecture | Makihara E | Clinical examination  |
| 17,18 | Clinical examination             | Lecture | Masumi S   | Experimental research |
| 19,20 | Experimental research            | Lecture | Masumi S   | Sample size           |
| 21,22 | Estimating sample size           | Lecture | Masumi S   | Ethical issues        |
| 23,24 | Ethical issues                   | Lecture | Masumi S   | Data analysis         |
| 25,26 | Data analysis                    | Lecture | Masumi S   | Research protocol     |
| 27,28 | Research protocol                | Lecture | Masumi S   | Research question     |
| 29,30 | Conclusion, final test           | Test    | Masumi S   |                       |

2017年度

# Removable Prosthodontics ( Medical Engineering Devices ) (Removable Prosthodontics ( Medical Engineering Devices ) )

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習        | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Arita M.     |     |          |    |                       |     |   |
| 担当教員  | 有田 正博        |     |          |    |                       |     |   |

## 授業の概要

【Language】 English and Japanese  
You will learn about clinical research design.

## 学生の到達目標

・ You will learn how to use of ME devices.

## テキスト

Slide making by division  
出)

著)

## 参考書

出)

著)

## 成績評価方法・基準

| 評価項目                          | 割合  |
|-------------------------------|-----|
| Lecture report: 5 points x 13 | 65% |
| Final test                    | 35% |

## その他

2017年度

# Removable Prosthodontics ( Medical Engineering Devices ) (Removable Prosthodontics ( Medical Engineering Devices ) )

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習        | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Arita M.     |     |          |    |                       |     |   |
| 担当教員  | 有田 正博        |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容                          | 授業方法    | 担当教員    | 事前・事後学習<br>学習課題     |
|-------|-------------------------------|---------|---------|---------------------|
| 1,2   | Orientation                   | Lecture | Arita M |                     |
| 3,4   | Measurement of occlusal force | Lecture | Arita M | Occlusal force      |
| 5,6   | Occluzer                      | Lecture | Arita M | Occluzer            |
| 7,8   | Dental prescale               | Lecture | Arita M | Dental prescale     |
| 9,10  | Measurement of jaw movements  | Lecture | Arita M | Jaw movements       |
| 11,12 | MKG                           | Lecture | Arita M | MKG                 |
| 13,14 | Trimet                        | Lecture | Arita M | Trimet              |
| 15,16 | Myo-monitor                   | Lecture | Arita M | Myo-monitor         |
| 17,18 | Gothic display                | Lecture | Arita M | Gothic display      |
| 19,20 | Diagnosis of SAS              | Lecture | Arita M | Diagnosis of SAS    |
| 21,22 | Polysomnography               | Lecture | Arita M | Polysomnography     |
| 23,24 | Spirometer                    | Lecture | Arita M | Spirometer          |
| 25,26 | Laser for dentistry           | Lecture | Arita M | Laser for dentistry |
| 27,28 | CO2 Laser                     | Lecture | Arita M | CO2 Laser           |
| 29,30 | Conclusion, final test        | Test    | Arita M |                     |

2017年度

# Prosthodontics Implant supported Prosthesis (Prosthodontics Implant supported Prosthesis)

|       |   |     |           |    |                       |     |   |
|-------|---|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades  | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 講義・実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |           |    |                       |     |   |
| 科目責任者 | Hosokawa R.   |     |           |    |                       |     |   |
| 担当教員  | 細川 隆司、正木 千尋、小城 辰郎、近藤 祐介、柄 慎太郎<br>Accredited Specialist of Prosthodontics Dentistry : Hosokawa, Masaki, Kojo, Kondo, Tsuka,<br>Supervisor of Prosthodontics Dentistry : Hosokawa,<br>Accredited Specialist of Implant Dentistry : Hosokawa, Masaki,<br>Supervisor of Implant Dentistry : Hosokawa, |     |           |    |                       |     |   |

## 授業の概要

【Language】 English and Japanese

In this course, you will learn basic theories such as anatomy, diagnostic imaging, and the use of simulation software to pursue implant treatment safely and reliably. You will also need to learn broad clinical knowledge to make total treatment plans. You will be able to train yourselves on phantom or pig bone to place implant, to make incisions, to suture, to take impressions, and other procedures to acquire basic skills needed for implant treatment.

## 学生の到達目標

When you successfully complete this course, you will be able to explain:

- (1) history of dental implant,
- (2) anatomy needed for implant treatment,
- (3) the importance of diagnostic wax-up and stent and actually fabricate them,
- (4) healing process of dental implant,
- (5) basic theory of simulation software,
- (6) prosthodontics procedure for implant treatment,
- (7) importance of maintenance for implant treatment.

## テキスト

Fundamental Concepts and Techniques of Oral Implants (2nd ed.)

出) ISHIYAKU PUBLISHERS, INC. 著)

Implant Positioning (Practice in Prosthodontics Extra Issue)

出) ISHIYAKU PUBLISHERS, INC. 著)

## 参考書

出)

著)

## 成績評価方法・基準

| 評価項目 | 割合  |
|------|-----|
| *1   | 60% |
| *2   | 40% |

\*1 Responses upon consultation with instructors during the practice

\*2 Contents and attitudes at the case conferences

## その他



2017年度

# Prosthodontics Implant supported Prosthesis (Prosthodontics Implant supported Prosthesis)

|       |   |     |           |    |                       |     |   |
|-------|---|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades  | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 講義・実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |           |    |                       |     |   |
| 科目責任者 | Hosokawa R.   |     |           |    |                       |     |   |
| 担当教員  | 細川 隆司、正木 千尋、小城 辰郎、近藤 祐介、柄 慎太郎<br>Accredited Specialist of Prosthodontics Dentistry : Hosokawa, Masaki, Kojo, Kondo, Tsuka,<br>Supervisor of Prosthodontics Dentistry : Hosokawa,<br>Accredited Specialist of Implant Dentistry : Hosokawa, Masaki,<br>Supervisor of Implant Dentistry : Hosokawa, |     |           |    |                       |     |   |

## 授業計画

| 回     | 学習内容   | 授業方法                 | 担当教員                                 | 事前・事後学習<br>学習課題    |
|-------|--|----------------------|--------------------------------------|--------------------|
| 1-4   | Orientation<br>“ What is implant supported prosthesis? ”<br>You will learn about the significance of implant treatment in dental medicine.   | Lecture              | Hosokawa<br>Masaki<br>Kondo<br>Tsuka | Review<br>handouts |
| 5-12  | History of dental implant, clinical evidence, major implant system<br>You will learn about fundamental concept of implant treatment based on implant history.  | Lecture              | Hosokawa<br>Masaki<br>Kojo           | Review<br>handouts |
| 13-20 | Anatomy important for implant treatment<br>Pathology of dental implant<br>You will learn about anatomy and pathology crucial for implant treatment.  | Lecture              | Hosokawa<br>Masaki<br>Kondo<br>Tsuka | Review<br>handouts |
| 21-28 | Preoperative diagnosis and treatment planning<br>Case practice using Simplant (implant simulating software)<br>You will practice using simulation software an actual cases and practice making a treatment plan. | Lecture and practice | Hosokawa<br>Masaki<br>Kondo<br>Tsuka | Review<br>handouts |
| 29-36 | Diagnostic wax-up and stent fabrication<br>You will prepare wax-up and fabricate diagnostic stent on ongoing patient.  | Lecture and practice | Hosokawa<br>Masaki<br>Kondo<br>Tsuka | Review<br>handouts |
| 37-44 | Implant placement surgical procedure<br>You will learn about the total image of implant placement surgery by watching recorded tapes.  | Lecture and practice | Hosokawa<br>Masaki<br>Kondo<br>Tsuka | Review<br>handouts |
| 45-52 | Impression procedure and prosthodontics procedure<br>You will learn about implant prosthesis of different implant system using case materials.   | Lecture and practice | Hosokawa<br>Masaki<br>Kondo<br>Tsuka | Review<br>handouts |
| 53-60 | Prosthesis by CAD/CAM, occlusal control and postoperative management<br>You will learn about CAD/CAM prosthesis from actual cases.   | Lecture and practice | Hosokawa<br>Masaki<br>Kondo<br>Tsuka | Review<br>handouts |

2017年度

# Prosthodontics Implant supported Prosthesis (Prosthodontics Implant supported Prosthesis)

|       |   |     |           |    |                       |     |   |
|-------|---|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades  | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 講義・実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |           |    |                       |     |   |
| 科目責任者 | Hosokawa R.   |     |           |    |                       |     |   |
| 担当教員  | 細川 隆司、正木 千尋、小城 辰郎、近藤 祐介、柄 慎太郎<br>Accredited Specialist of Prosthodontics Dentistry : Hosokawa, Masaki, Kojo, Kondo, Tsuka,<br>Supervisor of Prosthodontics Dentistry : Hosokawa,<br>Accredited Specialist of Implant Dentistry : Hosokawa, Masaki,<br>Supervisor of Implant Dentistry : Hosokawa, |     |           |    |                       |     |   |

## 授業の概要

【Language】 English and Japanese

In this course, after acquiring basic knowledge necessary, such as anatomy, diagnostic imaging and CT simulation, to make implant treatment plan, you will practice implant treatment on a patient. You will learn about advanced procedures such as bone grafts, sinus elevation, immediate loading, and immediate implant placement in the post-extraction site. You are expected to learn broad knowledge and acquire high skills of implant dentistry through case conferences and various lectures.

## 学生の到達目標

When you successfully complete this course, you will be able to:

- (1) explain advantages and disadvantages of implant treatment in comparison with other prosthodontics treatments.
- (2.)plan implant treatment by understanding basic principles of CT simulating software.
- (3) conduct implant placement surgery safely and reliably by undergoing necessary preoperative examinations.
- (4) practice supplemental operating methods such as bone graft, immediate loading and immediate implant placement in the post-extraction site by appropriately judging their necessity.
- (5) apply provisional prosthesis with knowledge of its significance and purpose.
- (6) fabricate adequate implant prosthesis.
- (7) perform implant maintenance with knowledge of its importance.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目 | 割合  |
|------|-----|
| *1   | 60% |
| *2   | 40% |

\*1 Responses upon consultation with instructors during the practice

\*2 Contents and attitudes at the case conferences

## その他

Latest Clinical Guide for Japanese Patient-oriented “ All-on-4 ” Treatment-Keys to Success in Immediate Loaded-Implant Treatment for Totally Edentulous Cases, ISHIYAKU PUBLISHERS, INC.

Implant Positioning (Practice in Prosthodontics Extra Issue), ISHIYAKU PUBLISHERS, INC.

2017年度

# Prosthodontics Implant supported Prosthesis (Prosthodontics Implant supported Prosthesis)

|       |   |     |           |    |                       |     |   |
|-------|---|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades  | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 講義・実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |           |    |                       |     |   |
| 科目責任者 | Hosokawa R.   |     |           |    |                       |     |   |
| 担当教員  | 細川 隆司、正木 千尋、小城 辰郎、近藤 祐介、柄 慎太郎<br>Accredited Specialist of Prosthodontics Dentistry : Hosokawa, Masaki, Kojo, Kondo, Tsuka,<br>Supervisor of Prosthodontics Dentistry : Hosokawa,<br>Accredited Specialist of Implant Dentistry : Hosokawa, Masaki,<br>Supervisor of Implant Dentistry : Hosokawa, |     |           |    |                       |     |   |

## 授業計画

| 回     | 学習内容   | 授業方法                 | 担当教員                                 | 事前・事後学習<br>学習課題    |
|-------|--|----------------------|--------------------------------------|--------------------|
| 1-4   | Informed consent<br>You will learn about the informed consent necessary for dental implant treatment.  | Lecture and practice | Hosokawa<br>Masaki<br>Kojo           | Review<br>handouts |
| 5-11  | Diagnostic wax-up and diagnostic stent<br>You will learn how to prepare diagnostic cast, diagnostic wax-up and to fabricate diagnostic stent.  | Lecture and practice | Hosokawa<br>Masaki<br>Kondo<br>Tsuka | Review<br>handouts |
| 12-18 | Treatment planning using simulating software on CT images<br>You will learn how to use implant simulation software by working on difficult prosthodontics cases.                     | Lecture and practice | Hosokawa<br>Masaki<br>Kondo<br>Tsuka | Review<br>handouts |
| 19-25 | Hands-on training to place implant with the instructor<br>You will learn about the surgical procedure for implant placement.   | Lecture and practice | Hosokawa<br>Masaki<br>Kondo<br>Tsuka | Review<br>handouts |
| 26-32 | Bone graft, immediate loading and immediate implant placement in the post-extraction site<br>You will learn about the supplemental operating methods for implant surgical procedure. | Lecture and practice | Hosokawa<br>Masaki<br>Kondo<br>Tsuka | Review<br>handouts |
| 33-39 | Case report on the outcome of experienced implant treatment cases<br>You will be required to make a case presentation and get feedbacks and evaluation from multiple instructors.    | Lecture and practice | Hosokawa<br>Masaki<br>Kondo<br>Tsuka | Review<br>handouts |
| 40-46 | Fabrication of provisional prosthesis with adequate occlusion<br>You will learn about the timing and the technique to fabricate provisional prosthesis.                              | Lecture and practice | Hosokawa<br>Masaki<br>Kondo<br>Tsuka | Review<br>handouts |
| 47-53 | Impression taking and implant denture fabrication<br>You will learn about the fabrication of implant-supported dentures.   | Lecture and practice | Hosokawa<br>Masaki<br>Kondo<br>Tsuka | Review<br>handouts |
| 54-60 | Postoperative management of dental implant treatment<br>You will learn about postoperative management of dental implant treatment by studying actual cases.                          | Lecture and practice | Hosokawa<br>Masaki<br>Kondo<br>Tsuka | Review<br>handouts |

2017年度

# Oral Reconstruction and Rehabilitation (Oral Reconstruction and Rehabilitation )

|       |                               |     |          |    |                       |     |   |
|-------|-------------------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades                  | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習                         | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                    |     |          |    |                       |     |   |
| 科目責任者 | Hosokawa R.                   |     |          |    |                       |     |   |
| 担当教員  | 細川 隆司、正木 千尋、小城 辰郎、近藤 祐介、柄 慎太郎 |     |          |    |                       |     |   |

## 授業の概要

【Language】 English and Japanese

In this course, you should aim to master the art of capturing dental clinics in a scientific point of view by learning about translational research which act as intermediary between dental clinics and basic science. Some of the examples of such researches are as follows; investigating on ways to gain early osseointegration, factors controlling bone remodeling, risk factors concerning implant treatment by analyzing gene expression of oral mucosa, application of ultrasonic or very high frequency wave devices to speed up osseointegration, ways to recover functions of dysfunctional salivary glands and influence of the recovery of salivary glands on oral rehabilitation.

## 学生の到達目標

When you successfully complete this course, you will learn and acquire:

- (1) basic principles of implant treatment and be able to actually perform it.
- (2) knowledge and skills to analyze gene expression of human mucosa samples
- (3) basic knowledge and experimental skills to see the effects of ultrasounds on gene expression of oral mucosa cells.
- (4) basic knowledge and experimental skills on in vivo and in vitro xerostomia models using mouse salivary glands.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                        | 割合  |
|-----------------------------|-----|
| Attainment on the subject   | 70% |
| Attainment on the technique | 30% |

Each is required to make presentations on lectures and exercises adequately and will be evaluated upon an attainment on each subject. Attainment on the technique will also be evaluated and their distribution would be 70:30.

## その他

Latest articles on the topic should be handed out before each lecture and exercise. Taking a lecture on animal experiments in advance is desirable.

2017年度

# Oral Reconstruction and Rehabilitation (Oral Reconstruction and Rehabilitation )

|       |                               |     |          |    |                       |     |   |
|-------|-------------------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades                  | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習                         | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                    |     |          |    |                       |     |   |
| 科目責任者 | Hosokawa R.                   |     |          |    |                       |     |   |
| 担当教員  | 細川 隆司、正木 千尋、小城 辰郎、近藤 祐介、柄 慎太郎 |     |          |    |                       |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法                 | 担当教員                         | 事前・事後学習<br>学習課題 |
|----|---|----------------------|------------------------------|-----------------|
| 1  | Orientation<br>(What is the significance of practicing basic research in clinical course?)  | Lecture and exercise | Hosokawa Masaki              | Review handouts |
| 2  | Literature reading 1<br>(How to read scientific literature? How should scientific presentation be like?)  | Lecture and exercise | Hosokawa Kojo<br>Kondo Tsuka | Review handouts |
| 3  | Literature reading 2<br>(How to search for referential materials? What makes your research valuable? )  | Lecture and exercise | Hosokawa Masaki              | Review handouts |
| 4  | How you should use the laboratory 1<br>(Basics in handling laboratory equipment)  | Exercise             | Hosokawa Masaki<br>Kondo     | Review handouts |
| 5  | How you should use the laboratory 2<br>(Basics in handling and preparing experimental reagents)   | Exercise             | Hosokawa Masaki<br>Kondo     | Review handouts |
| 6  | Gene extraction and analysis from oral mucosa samples 1<br>(Sampling and treatments)  | Lecture and exercise | Hosokawa Masaki<br>Kondo     | Review handouts |
| 7  | Gene extraction and analysis from oral mucosa samples 2<br>(Analysis of genetic polymorphism)   | Lecture and exercise | Hosokawa Masaki<br>Tsuka     | Review handouts |
| 8  | Investigation on the effect of ultrasonic waves on gene expression of oral mucosa cells   | Lecture and exercise | Hosokawa Masaki<br>Tsuka     | Review handouts |
| 9  | Investigation on the effect of sialagogue on water secretion using mouse submandibular gland 1<br>(Learning the basics on epithelial membrane transport)  | Lecture and exercise | Kondo Tsuka                  | Review handouts |
| 10 | Investigation on the effect of sialagogue on water secretion using mouse submandibular gland 2<br>(Basic principle and methods for perfusion experiments) | Exercise             | Kondo Tsuka                  | Review handouts |

2017年度

# Oral Reconstruction and Rehabilitation (Oral Reconstruction and Rehabilitation )

|       |                               |     |          |    |                       |     |   |
|-------|-------------------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades                  | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習                         | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                    |     |          |    |                       |     |   |
| 科目責任者 | Hosokawa R.                   |     |          |    |                       |     |   |
| 担当教員  | 細川 隆司、正木 千尋、小城 辰郎、近藤 祐介、柄 慎太郎 |     |          |    |                       |     |   |

## 授業の概要

【Language】English and Japanese

This course is an advanced course for the “ Oral Reconstruction and Rehabilitation ” . In this course, you should aim to learn basic research methods based on theory by studying background of the research, planning experiments, getting data, analyzing data and discussing data with the colleges and instructors.

## 学生の到達目標

When you successfully complete this course, you will learn and acquire:

- (1) skills to analyze gene expression of human mucosa samples and put into practice to gain data.
- (2) basic knowledge and experimental skills to see the effects of ultrasounds on gene expression of oral mucosa cells and gain data from the experiment.
- (3) methods for perfusion experiments using mouse submandibular glands and gain data on dynamics of water secretion.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                        | 割合  |
|-----------------------------|-----|
| Attainment on the subject   | 70% |
| Attainment on the technique | 30% |

Each is required to make presentations on lectures and exercises adequately and will be evaluated upon an attainment on each subject. Attainment on the technique will also be evaluated and their distribution would be 70:30.

## その他

Latest articles on the topic should be handed out before each lecture and exercise. Taking a lecture on animal experiments in advance is desirable.

2017年度

# Oral Reconstruction and Rehabilitation (Oral Reconstruction and Rehabilitation )

|       |                               |     |          |    |                       |     |   |
|-------|-------------------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades                  | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習                         | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                    |     |          |    |                       |     |   |
| 科目責任者 | Hosokawa R.                   |     |          |    |                       |     |   |
| 担当教員  | 細川 隆司、正木 千尋、小城 辰郎、近藤 祐介、柄 慎太郎 |     |          |    |                       |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法                 | 担当教員                                | 事前・事後学習<br>学習課題    |
|----|---|----------------------|-------------------------------------|--------------------|
| 1  | Orientation<br>(Preparations for the experiment such as learning how to handle special experimental equipment and making reagents)  | Lecture and exercise | Hosokawa<br>Masaki<br>Kondo         | Review<br>handouts |
| 2  | Gene extraction and analysis from oral mucosa samples 1<br>(Literature reading, learning basic skills, and planning experiments)  | Lecture and exercise | Hosokawa<br>Masaki<br>Kojo<br>Tsuka | Review<br>handouts |
| 3  | Gene extraction and analysis from oral mucosa samples 2<br>(Sample taking from oral mucosa and pretreatments)   | Exercise             | Hosokawa<br>Masaki<br>Kondo         | Review<br>handouts |
| 4  | Gene extraction and analysis from oral mucosa samples 3<br>(Learning methods on PCR and electrophoresis)  | Exercise             | Hosokawa<br>Masaki<br>Tsuka         | Review<br>handouts |
| 5  | Investigation on the effect of ultrasonic waves on oral mucosa 1<br>(Literature reading and learning basic skills)  | Lecture and exercise | Hosokawa<br>Masaki<br>Kondo         | Review<br>handouts |
| 6  | Investigation on the effect of ultrasonic waves on oral mucosa 2<br>(Learning how to set exposure conditions and how to analyze data)                                     | Exercise             | Hosokawa<br>Masaki                  | Review<br>handouts |
| 7  | Investigation on the effect of ultrasonic waves on oral mucosa 3<br>(Learning methods on PCR, western blotting and others)  | Exercise             | Hosokawa<br>Masaki<br>Kondo         | Review<br>handouts |
| 8  | Investigation on epithelial membrane transport of water using mouse submandibular gland 1 (Learning principles of aqua transport and getting basic skills)                | Lecture and exercise | Kondo<br>Tsuka                      | Review<br>handouts |
| 9  | Investigation on epithelial membrane transport of water using mouse submandibular gland 2 (Learning how to handle experimental mice and how to operate under stereoscope) | Exercise             | Kondo<br>Tsuka                      | Review<br>handouts |
| 10 | Investigation on epithelial membrane transport of water using mouse submandibular gland 3 (Perfusion experiments and data analysis)                                       | Exercise             | Kondo<br>Tsuka                      | Review<br>handouts |

2017年度

# Oral Reconstruction and Rehabilitation (Oral Reconstruction and Rehabilitation )

|       |                               |     |          |    |                       |     |   |
|-------|-------------------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades                  | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習                         | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                    |     |          |    |                       |     |   |
| 科目責任者 | Hosokawa R.                   |     |          |    |                       |     |   |
| 担当教員  | 細川 隆司、正木 千尋、小城 辰郎、近藤 祐介、柄 慎太郎 |     |          |    |                       |     |   |

## 授業の概要

【Language】 English and Japanese

In this course, you will select one research subject from ongoing research projects in the division. You should inquire into scientific background of the subject and draw up plans for the experiment. Then you should carry out preliminary experiments, give reconsideration to the plan and carry out experiments to get results. Once you got the results, inquire into those with criticism and build bases for the thesis.

Few examples for our division research projects are as follows.

- (1) Clinical research to investigate risk factors on immediate loaded oral implant treatment.
- (2) Clinical and basic research to investigate clinical diagnostic indicator for the loss of osseointegration.
- (3) Investigation on the effects of Low Intensity Pulsed Ultrasound and Ultrashort-wave devices in acquiring osseointegration.
- (4) Clinical and basic research to investigate the effect of xerostomia on oral health.

## 学生の到達目標

You should learn scientific background of the subject, inquire into the subject closely, and become a practitioner who can practice medicine based on evidence.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                        | 割合  |
|-----------------------------|-----|
| Attainment on the subject   | 70% |
| Attainment on the technique | 30% |

Each is required to make presentations on lectures and exercises adequately and will be evaluated upon an attainment on each subject. Attainment on the technique will also be evaluated and their distribution would be 70:30.

## その他

Latest articles on the topic should be handed out before each lecture and exercise. Taking a lecture on animal experiments in advance is desirable.



2017年度

# Oral Reconstruction and Rehabilitation (Oral Reconstruction and Rehabilitation )

|       |                               |     |          |    |                       |     |   |
|-------|-------------------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades                  | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習                         | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                    |     |          |    |                       |     |   |
| 科目責任者 | Hosokawa R.                   |     |          |    |                       |     |   |
| 担当教員  | 細川 隆司、正木 千尋、小城 辰郎、近藤 祐介、柄 慎太郎 |     |          |    |                       |     |   |

## 授業計画

| 回    | 学習内容  | 授業方法                 | 担当教員   | 事前・事後学習<br>学習課題    |
|------|---|----------------------|--|--------------------|
| 1    | Orientation<br>(Have discussion with the instructors on the theme of each research) | Lecture and exercise | Hosokawa<br>Masaki<br>Kojo<br>Kondo<br>Tsuka | Review<br>handouts |
| 2-15 | Each instructor will be assigned to lead and carry out each research.               | Lecture and exercise | Hosokawa<br>Masaki<br>Kojo<br>Kondo<br>Tsuka | Review<br>handouts |

2017年度

# Advanced Oral Reconstruction and Rehabilitation (Advanced Oral Reconstruction and Rehabilitation)

|       |                               |     |          |    |                                    |     |   |
|-------|-------------------------------|-----|----------|----|------------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades                  | 期区分 | 通年       | 科目 | Compusory / Elective<br>(Research) | 単位数 | 2 |
| 授業方法  | 演習                            | 時間数 | 30 hours | 曜日 |                                    | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                    |     |          |    |                                    |     |   |
| 科目責任者 | Hosokawa R.                   |     |          |    |                                    |     |   |
| 担当教員  | 細川 隆司、正木 千尋、小城 辰郎、近藤 祐介、柄 慎太郎 |     |          |    |                                    |     |   |

## 授業の概要

【Language】English and Japanese

This course will be in a seminar style using literature review, which include assigned readings and classroom discussions. Newly published research articles on implantology, prosthetic dentistry, bone biology, salivary research, periodontal research should be reviewed.

## 学生の到達目標

To acquire higher knowledge in the field, you should come to understand how to read an outline and scientific backgrounds of a scientific research paper, how to prepare handouts, which efficiently explain the topic, and how to use presentation software and make effective presentation slides.

## テキスト

出) \_\_\_\_\_ 著) \_\_\_\_\_

## 参考書

出) \_\_\_\_\_ 著) \_\_\_\_\_

## 成績評価方法・基準

| 評価項目                         | 割合  |
|------------------------------|-----|
| Contents of the presentation | 60% |
| *1                           | 40% |

Attendance, participation and comprehension in the discussion

## その他

Latest articles on the topic should be handed out before each seminar.

2017年度

# Advanced Oral Reconstruction and Rehabilitation (Advanced Oral Reconstruction and Rehabilitation)

|       |                               |     |          |    |                                    |     |   |
|-------|-------------------------------|-----|----------|----|------------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades                  | 期区分 | 通年       | 科目 | Compusory / Elective<br>(Research) | 単位数 | 2 |
| 授業方法  | 演習                            | 時間数 | 30 hours | 曜日 |                                    | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                    |     |          |    |                                    |     |   |
| 科目責任者 | Hosokawa R.                   |     |          |    |                                    |     |   |
| 担当教員  | 細川 隆司、正木 千尋、小城 辰郎、近藤 祐介、柄 慎太郎 |     |          |    |                                    |     |   |

## 授業計画

| 回    | 学習内容   | 授業方法     | 担当教員   | 事前・事後学習<br>学習課題    |
|------|--|----------|--|--------------------|
| 1    | Orientation  | Exercise | Hosokawa<br>Masaki<br>Kojo<br>Kondo<br>Tsuka | Review<br>handouts |
| 2-15 | Each allocated should review a paper of ones selection. You should prepare handouts and make a presentation. | Exercise | Hosokawa<br>Masaki<br>Kojo<br>Kondo<br>Tsuka | Review<br>handouts |

2017年度

# Basic Studies in Community Oral Health (Basic Studies in Community Oral Health)

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Ansai T.   |     |           |    |                       |     |   |
| 担当教員  | 安細 敏弘、岩崎 正則、邵 仁浩、角田 聡子   |     |           |    |                       |     |   |
|       | Certified Dentists of the Japanese Society for Oral Health : Ansai, Iwasaki, |     |           |    |                       |     |   |

## 授業の概要

【Language】 Japanese and English

You can learn the knowledge and practical skills of community oral health standard based health-oriented concept and minimum intervention concept. You can understand biofilm-related diseases such as dental caries and periodontal disease and treatment and prevention as well as clinical skills based health behavior.

## 学生の到達目標

You should achieve following assignments:

- (1) Acquisition of the fundamental knowledge and skills for standard precaution
- (2) Acquisition of communication skills
- (3) Acquisition of risk assessment by saliva- or bacterial tests
- (4) Acquisition of oral health instruction skills based on health-psychology
- (5) Acquisition of re-calcification strategy
- (6) Acquisition of community-based health practice along their life stage

## テキスト

出) (著)

## 参考書

Handbook of Practical Preventive Dentistry 2004  
出) Ishiyaku Publishers (著)

Preventive Periodontology 2007  
出) Ishiyaku Publishers (著)

## 成績評価方法・基準

| 評価項目               | 割合  |
|--------------------|-----|
| report             | 50% |
| oral presentations | 30% |
| discussion         | 20% |

## その他

2017年度

# Basic Studies in Community Oral Health (Basic Studies in Community Oral Health)

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Ansai T.   |     |           |    |                       |     |   |
| 担当教員  | 安細 敏弘、岩崎 正則、邵 仁浩、角田 聡子   |     |           |    |                       |     |   |
|       | Certified Dentists of the Japanese Society for Oral Health : Ansai, Iwasaki, |     |           |    |                       |     |   |

## 授業計画

| 回     | 学習内容   | 授業方法                 | 担当教員    | 事前・事後学習<br>学習課題                   |
|-------|--|----------------------|---------|-----------------------------------|
| 1-2   | Standard precaution<br>You will learn basic knowledge and skills of standard precaution.   | Lecture and Practice | Ansai   | Pre- and post-reading of textbook |
| 3-4   | Disinfectant and classification of Spaulding<br>You will learn basic knowledge kinds of disinfectant and classification of Spaulding.                    | Lecture and Practice | Ansai   | Pre- and post-reading of textbook |
| 5-6   | Basic strategy of prevention of infection<br>You will learn basic strategy of prevention of infection.   | Lecture and Practice | Ansai   | Pre- and post-reading of textbook |
| 7-10  | Medical communication<br>You will learn basic knowledge and skills of medical communication.   | Lecture and Practice | Kakuta  | Pre- and post-reading of textbook |
| 11-15 | WHO Oral Survey method and method of calibration<br>You will learn the WHO Oral Survey method and method of calibration.                                 | Lecture and Practice | Iwasaki | Pre- and post-reading of textbook |
| 16-20 | Diagnosis of dental caries and various device of dental caries<br>You will learn up-to-date diagnosis of dental caries and its devices.                  | Lecture and Practice | Kakuta  | Pre- and post-reading of textbook |
| 21-24 | Risk assessment by saliva- and bacterial based test<br>You will learn basic knowledge of risk assessment of dental caries and periodontal disease, etc.. | Lecture and Practice | Soh     | Pre- and post-reading of textbook |
| 25-29 | Non-smoking health guidance based on behavioral science<br>You will learn health guidance strategy of preventing smoking.                                | Lecture and Practice | Ansai   | Pre- and post-reading of textbook |
| 30-34 | Psychosocial tools and QOL assessment in clinical epidemiology<br>You will learn basic knowledge of psychosocial tools and QOL assessment.               | Lecture and Practice | Iwasaki | Pre- and post-reading of textbook |
| 35-38 | Basic fluoride application I (water fluoridation)<br>You will learn basic fluoride application such as water fluoridation.                               | Lecture and Practice | Iwasaki | Pre- and post-reading of textbook |
| 39-41 | Basic fluoride application II (topical fluoridation)<br>You will learn basic fluoride application such as topical fluoridation.                          | Lecture and Practice | Iwasaki | Pre- and post-reading of textbook |
| 42-45 | Theory and clinical practice of oral biofilm<br>You will learn basic theory and clinical practice regarding oral biofilm.                                | Lecture and Practice | Kakuta  | Pre- and post-reading of textbook |
| 46-50 | Theory and clinical practice of re-mineralization technique<br>You will learn basic theory and clinical practice regarding re-mineralization of teeth.   | Lecture and Practice | Ansai   | Pre- and post-reading of textbook |
| 51-55 | Health/social support according to their life stage I<br>You will learn basic strategy of health/social support in school and work place.                | Lecture and Practice | Soh     | Pre- and post-reading of textbook |
| 56-60 | Health/social support according to their life stage II<br>You will learn basic strategy of health/social support of the elderly.                         | Lecture and Practice | Soh     | Pre- and post-reading of textbook |

2017年度

# Advanced Studies in Community Oral Health (Advanced Studies in Community Oral Health)

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Ansai T.   |     |           |    |                       |     |   |
| 担当教員  | 安細 敏弘、岩崎 正則、邵 仁浩、角田 聡子<br>Certified Dentists of the Japanese Society for Oral Health : Ansai, Iwasaki, |     |           |    |                       |     |   |

## 授業の概要

【Language】Japanese

You can understand community system to support health strategy for community-dwelling population in the medical care, nursing care, and health care. Also, you can learn the knowledge and clinical skills based health behavior and health-oriented guidance.

## 学生の到達目標

You should achieve following assignments:

- (1) Acquisition of the fundamental knowledge regarding the system and roles of medical care, nursing care, and health care in community
- (2) Acquisition of the role of system of comprehensive care for elderly
- (3) Acquisition of health instruction and clinical skills based on behavioral psychology
- (4) Acquisition of health oriented program construction according to their life stage
- (5) Acquisition of clinical skills to promote oral health and medical support at emergency

## テキスト

出) 著)

## 参考書

Community-based medicine 2009

出) Igakushoin 著)

Behavioral Medicine?A Guide for Clinical Practice, 3rd Ed. 2010

出) Medical Sci. Int 著)

## 成績評価方法・基準

| 評価項目               | 割合  |
|--------------------|-----|
| report             | 50% |
| oral presentations | 30% |
| discussion         | 20% |

## その他

2017年度

# Advanced Studies in Community Oral Health (Advanced Studies in Community Oral Health)

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Ansai T.   |     |           |    |                       |     |   |
| 担当教員  | 安細 敏弘、岩崎 正則、邵 仁浩、角田 聡子   |     |           |    |                       |     |   |
|       | Certified Dentists of the Japanese Society for Oral Health : Ansai, Iwasaki, |     |           |    |                       |     |   |

## 授業計画

| 回     | 学習内容  | 授業方法                 | 担当教員    | 事前・事後学習<br>学習課題                   |
|-------|---|----------------------|---------|-----------------------------------|
| 1-4   | Outline of Community based oral health strategy I<br>You will learn the knowledge regarding current status and roles of medical care, nursing care, and health care.  | Lecture and Practice | Ansai   | Pre- and post-reading of textbook |
| 5-10  | Outline of Community based oral health strategy II<br>You will learn the knowledge regarding the primary care as basic concept of medical care, nursing care, and health care.                                    | Lecture and Practice | Ansai   | Pre- and post-reading of textbook |
| 11-14 | Outline of Community based oral health system I<br>You will learn the knowledge regarding the system and roles of human resources, medical institutions, and local government.                                    | Lecture and Practice | Iwasaki | Pre- and post-reading of textbook |
| 15-20 | Outline of Community based oral health system II<br>You will learn the knowledge regarding the system and roles of nursing care, health and welfare.  | Lecture and Practice | Iwasaki | Pre- and post-reading of textbook |
| 21-25 | Outline of Community based oral health system III<br>You will learn the knowledge regarding the system and roles of community comprehensive care.   | Lecture and Practice | Iwasaki | Pre- and post-reading of textbook |
| 26-30 | Outline of Community based oral health system IV<br>You will learn the knowledge regarding the health guidance strategy and health support based on health promotion.   | Lecture and Practice | Iwasaki | Pre- and post-reading of textbook |
| 31-35 | Outline of practical health guidance strategy I<br>You will learn the knowledge regarding the concept and skills of health-communication.   | Lecture and Practice | Soh     | Pre- and post-reading of textbook |
| 36-40 | Outline of practical health guidance strategy II<br>You will learn the knowledge regarding basic concept of health behavioral psychology and behavioral science.  | Lecture and Practice | Ansai   | Pre- and post-reading of textbook |
| 41-45 | Details of practical health guidance strategy I<br>You will learn the knowledge regarding the dietary education, eating behavior, and health support.   | Lecture and Practice | Ansai   | Pre- and post-reading of textbook |
| 46-49 | Details of practical health guidance strategy II<br>You will learn the knowledge regarding the non-smoking guidance program and health support.   | Lecture and Practice | Kakuta  | Pre- and post-reading of textbook |
| 50-52 | Health support / health guidance according to their life stage I<br>You will learn the knowledge regarding health support/ guidance in maternal and child care stage.   | Lecture and Practice | Soh     | Pre- and post-reading of textbook |
| 53-54 | Health support / health guidance according to their life stage II<br>You will learn the knowledge regarding health support/ guidance in school / puberty stage.   | Lecture and Practice | Soh     | Pre- and post-reading of textbook |
| 55-56 | Health support / health guidance according to their life stage III<br>You will learn the knowledge regarding health support/ guidance in adults stage including health guidance in adults and occupational field. | Lecture and Practice | Kakuta  | Pre- and post-reading of textbook |
| 57-58 | Health support / health guidance according to their life stage IV<br>You will learn the knowledge regarding health support /guidance in elderly/care stage.   | Lecture and Practice | Ansai   | Pre- and post-reading of textbook |
| 59-60 | Oral health support at emergency<br>You will learn the knowledge regarding the practical skills of oral health support program at emergency   | Lecture and Practice | Ansai   | Pre- and post-reading of textbook |

2017年度

# Practice in Community Oral Health (Practice in Community Oral Health )

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習        | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Iwasaki M.   |     |          |    |                       |     |   |
| 担当教員  | 岩崎 正則、邵 仁浩   |     |          |    |                       |     |   |

## 授業の概要

【Language】 Japanese

This course deals with epidemiological and basic statistical knowledge to conduct oral health research. The aim of this course is to help students acquire an understanding of principles and methodologies of epidemiology by lectures, and an understanding of biostatistical concepts by analyzing data, using the statistical software.

## 学生の到達目標

By the end of the course, students should be able to do following;

- (1) Describe and explain the roles and relationships between epidemiology and biostatistics in the prevention of disease and the improvement of health.
- (2) Describe and explain methodologies of descriptive epidemiology for identifying problems and establishing hypotheses.
- (3) Describe and explain methodologies of analytical epidemiology for clarifying risk and protector factors of diseases.
- (4) Describe and explain the concept of confounding.
- (5) Conduct statistical analyses using the statistical software SPSS.

## テキスト

出) 著)

## 参考書

Designing Clinical Research, 4th Edition 2013

出) A Guide for Clinicians &amp; Laboratory 著) Stephen B Hulley

Medical Epidemiology, 4th Edition 2004

出) LANGE Basic Science 著)

## 成績評価方法・基準

| 評価項目          | 割合  |
|---------------|-----|
| reports       | 40% |
| presentations | 15% |
| preparations  | 45% |

Post-lecture reports: 5 points\*8, presentations: 15 points\*1, preparations: 3 points\*15. Total 100 points.

## その他



2017年度

# Practice in Community Oral Health (Practice in Community Oral Health )

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習        | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Iwasaki M.   |     |          |    |                       |     |   |
| 担当教員  | 岩崎 正則、邵 仁浩   |     |          |    |                       |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法     | 担当教員      | 事前・事後学習<br>学習課題   |
|----|---|----------|-----------|---|
| 1  | Epidemiological theory 1 - Disease frequency<br>You will learn disease frequency based on epidemiological indicators.   | Lecture  | Soh I     | Learning material will be distributed in advance.                                       |
| 2  | Epidemiological theory 2 - Designing research<br>You will learn principles and methodologies of descriptive and analytical epidemiology and intervention study.           | Lecture  | Iwasaki M | Learning material will be distributed in advance.                                       |
| 3  | Epidemiological theory 3 - Bias and confounding<br>You will learn controlling methods of bias and confounding based on designing research.                                | Lecture  | Iwasaki M | Learning material will be distributed in advance.                                       |
| 4  | Epidemiological theory 4 - Causality<br>You will learn causality based on designing research.   | Lecture  | Soh I     | Learning material will be distributed in advance.                                       |
| 5  | Epidemiological theory 5 - Formulating the research hypothesis<br>You will learn formulating the research hypothesis based on literature research.                        | Lecture  | Soh I     | Learning material will be distributed in advance.                                       |
| 6  | Health care service evaluation in oral health care policy<br>You will learn health care service evaluation methods in oral health care policy based on concrete examples. | Lecture  | Soh I     | Learning material will be distributed in advance.                                       |
| 7  | Oral health care data analysis 1 - summary statistics<br>You will learn summary statistics, using the statistical software SPSS.  | Lecture  | Soh I     | Learning material will be distributed in advance.<br>Submit a report after the lecture. |
| 8  | Oral health care data analysis 2 - Univariate analysis<br>You will learn Univariate analysis, using the statistical software SPSS.  | Practice | Soh I     | Learning material will be distributed in advance.<br>Submit a report after the lecture. |
| 9  | Oral health care data analysis 3 - Multivariate analysis<br>You will learn multivariate analysis, using the statistical software SPSS.                                    | Practice | Soh I     | Learning material will be distributed in advance.<br>Submit a report after the lecture. |
| 10 | Oral health care data analysis 4 - Control of confounding<br>You will learn control of confounding and interaction, using the statistical software SPSS.                  | Practice | Soh I     | Learning material will be distributed in advance.<br>Submit a report after the lecture. |
| 11 | Oral health care data analysis 5 - Relative risk<br>You will learn relative risk and odds ratio, using the statistical software SPSS.                                     | Practice | Soh I     | Learning material will be distributed in advance.<br>Submit a report after the lecture. |

2017年度

# Practice in Community Oral Health (Practice in Community Oral Health )

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習        | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Iwasaki M.   |     |          |    |                       |     |   |
| 担当教員  | 岩崎 正則、邵 仁浩   |     |          |    |                       |     |   |

| 回  | 学習内容   | 授業方法     | 担当教員      | 事前・事後学習<br>学習課題   |
|----|--|----------|-----------|---|
| 12 | Oral health care data analysis 6 - Multiple logistic regression analysis<br>You will learn multiple logistic regression analysis, using the statistical software SPSS. | Practice | Soh I     | Learning material will be distributed in advance.<br>Submit a report after the lecture. |
| 13 | Oral health care data analysis 7 - Cox ' s proportional hazard model<br>You will learn Cox ' s proportional hazard model, using the statistical software SPSS.         | Practice | Soh I     | Learning material will be distributed in advance.<br>Submit a report after the lecture. |
| 14 | Oral health care data analysis 8 - More complicated models<br>You will learn multilevel model and propensity score, presenting concrete examples.                      | Lecture  | Iwasaki M | Learning material will be distributed in advance.                                       |
| 15 | Research hypothesis presentation<br>Give a presentation of formulating the research hypothesis of your interesting theme.  | Practice | Soh I     | Submit a report after the lecture.  |

2017年度

# Practice in Community Oral Health (Practice in Community Oral Health )

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習        | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Iwasaki M.   |     |          |    |                       |     |   |
| 担当教員  | 岩崎 正則、安細 敏弘  |     |          |    |                       |     |   |

## 授業の概要

【Language】 Japanese

High-level scientific report is demanded. This course is designed for students who have basic statistical and epidemiological knowledge to conduct oral health research. The aim of this course is (1) to learn practical reporting skill for research preparation and scientific paper writing based on information provided by statistical analysis, and (2) to archive the practical skills for scientific presentation and writing the papers.

## 学生の到達目標

You should achieve following assignments;

- (1) Acquisition of effective data reporting methods in health science.
- (2) Acquisition of basic and advanced reporting methods for values and descriptive statistics.
- (3) Acquisition of effective way for presenting data using tables and figures.
- (4) Acquisition of effective presentation skills for research results in health science.

## テキスト

How to Write, Publish, &amp; Present in the Health Sciences: A Guide for Clinicians &amp; Laboratory 2009

出) Amer College of Physicians 著)

Presentation Zen: Simple Ideas on Presentation Design and Delivery (2nd Ed.) 2011.

出) 著) Garr Reynolds

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目          | 割合  |
|---------------|-----|
| reports       | 40% |
| presentations | 40% |
| debates       | 20% |

## その他

2017年度

# Practice in Community Oral Health (Practice in Community Oral Health )

|       |              |     |          |    |                       |     |   |
|-------|--------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習        | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Iwasaki M.   |     |          |    |                       |     |   |
| 担当教員  | 岩崎 正則、安細 敏弘  |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容   | 授業方法     | 担当教員      | 事前・事後学習<br>学習課題  |
|-------|--|----------|-----------|--|
| 1     | Research design and guidelines for reporting research<br>You will learn major guidelines about research design for biomedical research.        | Lecture  | Iwasaki M | Learning material will be distributed in advance.                                    |
| 2     | Summarizing data 1<br>You will learn basic reporting methods for values and descriptive statistics.  | Lecture  | Ansai T   | Learning material will be distributed in advance.                                    |
| 3     | Summarizing data 2<br>You will learn advanced reporting methods for values and descriptive statistics.   | Lecture  | Ansai T   | Learning material will be distributed in advance.                                    |
| 4     | Presenting data and statistics using tables and figures 1<br>You will learn reporting methods for values and groups using tables and figures.  | Lecture  | Iwasaki M | Learning material will be distributed in advance.                                    |
| 5     | Presenting data and statistics using tables and figures 2<br>You will learn reporting methods for comparison.                                  | Lecture  | Iwasaki M | Learning material will be distributed in advance.                                    |
| 6,7   | Presentation methods in health science 1<br>You will learn effective way for poster presentation.  | Lecture  | Iwasaki M | Learning material will be distributed in advance.                                    |
| 8,9   | Presentation methods in health science 2<br>You will learn effective way for oral presentation.  | Lecture  | Iwasaki M | Learning material will be distributed in advance. Submit a report after the lecture. |
| 10,11 | Practice effective reports and presentation 1.<br>Revise your data or existing data.   | Practice | Iwasaki M | Learning material will be distributed in advance.                                    |
| 12,13 | Practice effective reports and presentation 2.<br>Give a presentation of revised data.   | Practice | Iwasaki M | Learning material will be distributed in advance.                                    |
| 13,14 | Practice effective reports and presentation 3.<br>Debate on the presentation.  | Practice | Iwasaki M | Learning material will be distributed in advance. Submit a report after the lecture. |
| 15    | Summary<br>Feedback for the presentation and debates.<br>Introduce outstanding poster and oral presentations for reference of future research. | Lecture  | Iwasaki M | Learning material will be distributed in advance.                                    |

2017年度

# Current Topics in Community Oral Health (Current Topics in Community Oral Health )

|       |  |     |          |    |                                  |     |   |
|-------|--|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習   | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Ansai T.   |     |          |    |                                  |     |   |
| 担当教員  | 安細 敏弘、岩崎 正則、角田 聡子  |     |          |    |                                  |     |   |
|       | Certified Dentists of the Japanese Society for Oral Health : Ansai, Iwasaki, |     |          |    |                                  |     |   |

## 授業の概要

【Language】 Japanese and English

You can learn and study how to read any up-to-date scientific articles, write articles and make presentation regarding any outcomes to understand the knowledge and scientific significance in preventive/ oral health, public health, clinical nutrition and epidemiological research

## 学生の到達目標

To understand the contents of scientific articles, and acquire the skills for exploring any scientific evidence, and learn how to make presentation and write articles of any outcomes.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目               | 割合  |
|--------------------|-----|
| report             | 50% |
| oral presentations | 30% |
| discussion         | 20% |

## その他

2017年度

# Current Topics in Community Oral Health (Current Topics in Community Oral Health )

|       |  |     |          |    |                                  |     |   |
|-------|--|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習   | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Ansai T.   |     |          |    |                                  |     |   |
| 担当教員  | 安細 敏弘、岩崎 正則、角田 聡子  |     |          |    |                                  |     |   |
|       | Certified Dentists of the Japanese Society for Oral Health : Ansai, Iwasaki, |     |          |    |                                  |     |   |

## 授業計画

| 回    | 学習内容  | 授業方法                                    | 担当教員                        | 事前・事後学習<br>学習課題   |
|------|---|---|-----------------------------|---|
| 1-15 | To understand the background, contents, and perspective of article interested in every time | Introduction of evidence and discussion | Ansai, Iwasaki, Soh, Kakuta | Preparing any needed handouts and slides for participants |

2017年度

# Internal Medicine for Dentistry (Internal Medicine for Dentistry)

|       |              |     |          |    |                                  |     |   |
|-------|--------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 2 grades | 期区分 | 後期       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習        | 時間数 | 30 hours | 曜日 | 金曜日                              | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | I. Nakamichi |     |          |    |                                  |     |   |
| 担当教員  | 中道 郁夫        |     |          |    |                                  |     |   |

## 授業の概要

【Language】 English and Japanese

It is important to understand the dental implications of medical problems, for improving dental practice. In this course, we discuss about systemic diseases through the case presentation. After learning diagnostic methods and therapies of common diseases, you learn the pathophysiology for finding a new focus in clinical dentistry. Pathophysiological consideration, including cell biology and immunology, may enhance your doctoral thesis.

## 学生の到達目標

1. Understand etiology, diagnosis and therapy of common systemic disease.
2. Understand systemic disease's physiology that affects the dental practice.
3. Prevent systemic disease's exacerbation that is due to dental practice.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目              | 割合  |
|-------------------|-----|
| Learning attitude | 50% |
| Oral examination  | 50% |

## その他

2017年度

# Internal Medicine for Dentistry (Internal Medicine for Dentistry)

|       |              |     |          |    |                                  |     |   |
|-------|--------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 2 grades | 期区分 | 後期       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習        | 時間数 | 30 hours | 曜日 | 金曜日                              | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | I. Nakamichi |     |          |    |                                  |     |   |
| 担当教員  | 中道 郁夫        |     |          |    |                                  |     |   |

## 授業計画

| 回     | 学習内容                          | 授業方法       | 担当教員      | 事前・事後学習<br>学習課題 |
|-------|-------------------------------|------------|-----------|-----------------|
| 1-3   | Circulation and Blood         | Discussion | Nakamichi | Reading books   |
| 4-6   | Respiration and Digestion     | Discussion | Nakamichi | Reading books   |
| 7-9   | Metabolism and Renal function | Discussion | Nakamichi | Reading books   |
| 10-12 | Neurology and Mental disorder | Discussion | Nakamichi | Reading books   |
| 13-15 | Immunology and Oncology       | Discussion | Nakamichi | Reading books   |



2017年度

# Diagnosis and Treatment of Hypertension (Diagnosis and Treatment of Hypertension)

|       |              |     |          |    |                                  |     |   |
|-------|--------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades | 期区分 | 前期       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習        | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Fukuhara M.  |     |          |    |                                  |     |   |
| 担当教員  | 福原 正代        |     |          |    |                                  |     |   |

## 授業の概要

【Language】 Japanese

Hypertension is one of the most common diseases in Japan. Many dental patients have hypertension. In this course "Diagnosis and Treatment of Hypertension", you learn the evaluation of hypertension and target organ damage. Furthermore, you learn the treatment of hypertension. The course is especially recommended to graduate students, who specialize oral surgery and dental care in the elderly.

## 学生の到達目標

You should achieve following assignments;

- To understand the epidemiology of hypertension.
- To understand the mechanism of blood pressure regulation.
- To understand the evaluation of target organ damage due to hypertension.
- To understand target organ damage of hypertension (stroke, ischemic heart disease, chronic kidney disease).
- To understand the types and characteristics of antihypertensive drugs.
- To understand the characteristics and treatment of hypertension in the elderly.
- To understand the treatment of hypertension in the patients with diabetes or metabolic syndrome.

## テキスト

The Japanese Society of Hypertension Guidelines for the Management of Hypertension 2014  
出) JSH 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目         | 割合  |
|--------------|-----|
| attendance   | 30% |
| attitude     | 20% |
| presentation | 50% |

## その他

2017年度

# Diagnosis and Treatment of Hypertension (Diagnosis and Treatment of Hypertension)

|       |              |     |          |    |                                  |     |   |
|-------|--------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades | 期区分 | 前期       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習        | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Fukuhara M.  |     |          |    |                                  |     |   |
| 担当教員  | 福原 正代        |     |          |    |                                  |     |   |

## 授業計画

| 回  | 学習内容   | 授業方法                | 担当教員     | 事前・事後学習<br>学習課題 |
|----|--|---------------------|----------|-----------------|
| 1  | Introduction and epidemiology of hypertension  | Lecture             | Fukuhara | Text            |
| 2  | Mechanism of blood pressure regulation:<br>Neural and humoral regulation of blood pressure | Lecture             | Fukuhara | Text            |
| 3  | Measurement and clinical evaluation of blood pressure                                      | Lecture             | Fukuhara | Text            |
| 4  | Clinical evaluation of target organ damage I   | Practice            | Fukuhara | Text            |
| 5  | Clinical evaluation of target organ damage II:<br>Electrocardiogram and echocardiogram     | Practice            | Fukuhara | Text            |
| 6  | Hypertension and target organ damage   | Lecture             | Fukuhara | Text            |
| 7  | Principles of treatment for hypertension   | Lecture             | Fukuhara | Text            |
| 8  | Principles of treatment for hypertension:<br>Lifestyle modifications                       | Lecture             | Fukuhara | Text            |
| 9  | Principles of treatment for hypertension:<br>Treatment with antihypertensive drugs         | Lecture             | Fukuhara | Text            |
| 10 | Hypertension complicated by other diseases   | Lecture             | Fukuhara | Text            |
| 11 | Hypertension in the elderly  | Lecture             | Fukuhara | Text            |
| 12 | Secondary hypertension   | Lecture             | Fukuhara | Text            |
| 13 | Case conference I  | Lecture, Discussion | Fukuhara | Text            |
| 14 | Case conference II   | Lecture, Discussion | Fukuhara | Text            |
| 15 | Case conference III  | Lecture, Discussion | Fukuhara | Text            |

2017年度

# Introduction of Internal Medicine (Introduction of Internal Medicine)

|       |              |     |          |    |                                  |     |   |
|-------|--------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades | 期区分 | 前期       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義           | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Fukuhara M.  |     |          |    |                                  |     |   |
| 担当教員  | 福原 正代        |     |          |    |                                  |     |   |

## 授業の概要

【Language】 Japanese

In this course "Introduction of Internal Medicine", you read the book "Introduction of Internal Medicine for the Dentistry, 3rd edition" and acquire fundamental knowledge of the internal medicine which dentists need.

## 学生の到達目標

You should achieve following assignments;

- To understand the introduction of medical diagnostics.
- To understand the cardiovascular disease.
- To understand the respiratory disease.
- To understand the digestive diseases.
- To understand the metabolic and endocrine disorders.
- To understand the neuromuscular disease.
- To understand the blood disease.
- To understand the renal disease.
- To understand the collagen disease.
- To understand the elderly medicine.

## テキスト

Introduction of Internal Medicine for the Dentistry, 3rd edition  
出) Nankodo 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目       | 割合  |
|------------|-----|
| attendance | 30% |
| tests      | 70% |

## その他

2017年度

# Introduction of Internal Medicine (Introduction of Internal Medicine)

|       |              |     |          |    |                                  |     |   |
|-------|--------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades | 期区分 | 前期       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義           | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Fukuhara M.  |     |          |    |                                  |     |   |
| 担当教員  | 福原 正代        |     |          |    |                                  |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法             | 担当教員     | 事前・事後学習<br>学習課題 |
|----|---|------------------|----------|-----------------|
| 1  | The fundamental knowledge of the internal medicine:<br>Diagnosis, medical interview, physical examination, medical record description, vital signs, laboratory tests. | Lecture and test | Fukuhara | Text            |
| 2  | Respiratory disease   | Lecture and test | Fukuhara | Text            |
| 3  | Gastrointestinal disease  | Lecture and test | Fukuhara | Text            |
| 4  | Liver, biliary, pancreatic disease  | Lecture and test | Fukuhara | Text            |
| 5  | Endocrine disease   | Lecture and test | Fukuhara | Text            |
| 6  | Metabolic diseases  | Lecture and test | Fukuhara | Text            |
| 7  | Cardiovascular disease I  | Lecture and test | Fukuhara | Text            |
| 8  | Cardiovascular disease II   | Lecture and test | Fukuhara | Text            |
| 9  | Neuromuscular disease   | Lecture and test | Fukuhara | Text            |
| 10 | Blood disease   | Lecture and test | Fukuhara | Text            |
| 11 | Kidney disease  | Lecture and test | Fukuhara | Text            |
| 12 | Collagen disease and allergic disease   | Lecture and test | Fukuhara | Text            |
| 13 | Elderly medicine  | Lecture and test | Fukuhara | Text            |
| 14 | Review and test   | Lecture and test | Fukuhara | Text            |
| 15 | Review and test   | Lecture and test | Fukuhara | Text            |

2017年度

# Pediatric Dentistry (Basic Course) (Pediatric Dentistry (Basic Course))

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Maki K.  |     |           |    |                       |     |   |
| 担当教員  | 牧 憲司、西田 郁子、藤田 優子、森川 和政、佐伯 桂<br>Pediatric Dentistry Specialist : Maki, Nishida, Fujita, Saeki, Morikawa,<br>Specialist in Pediatric dentistry Specialist instruction : Maki, Nishida,<br>Specialist with a disability dentistry authorization : Morikawa, |     |           |    |                       |     |   |

## 授業の概要

To acquire comprehensive levels of knowledge, technique, and skill for continued management by taking into consideration physical and mental growth and development in childhood for guidance to normal permanent dentition.

## 学生の到達目標

1. Gain ability to provide treatment to pediatric patients.
2. Gain ability to treat dental caries.
3. Gain ability to provide protective care and health guidance.
4. Gain ability to treat dental injuries.
5. Gain ability to perform surgical treatment.
6. Gain ability to provide dental treatment for uncooperative or handicapped children.
7. Gain ability to deal with occlusal development.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目             | 割合   |
|------------------|------|
| average of Tests | 100% |

## その他

2017年度

# Pediatric Dentistry (Basic Course) (Pediatric Dentistry (Basic Course))

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Maki K.  |     |           |    |                       |     |   |
| 担当教員  | 牧 憲司、西田 郁子、藤田 優子、森川 和政、佐伯 桂<br>Pediatric Dentistry Specialist : Maki, Nishida, Fujita, Saeki, Morikawa,<br>Specialist in Pediatric dentistry Specialist instruction : Maki, Nishida,<br>Specialist with a disability dentistry authorization : Morikawa, |     |           |    |                       |     |   |

## 授業計画

| 回     | 学習内容  | 授業方法                            | 担当教員   | 事前・事後学習<br>学習課題   |
|-------|---|---------------------------------|--|---|
| 1,2   | Medical care interview II   | Practical training<br>Role play | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa | Medical care<br>interview<br>Mental and<br>physical<br>growth of<br>children        |
| 3,4   | Behavior modification therapy for pedodontic patients I   | Practical training<br>Role play | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa | Mental and<br>physical<br>growth of<br>children<br>Behaviormodifi<br>cation therapy |
| 5,6   | Radiography I   | Practical training              | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa | Radiography<br>-Diagnostic<br>imaging for<br>pedodontic<br>cases                    |
| 7,8   | Impression taking   | Practical training              | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa | Impression<br>taking<br>Developmental<br>growth of oral<br>cavity in<br>children    |
| 9,10  | Drafting of the treatment plan<br>You learn a diagnosis, treatment strategy while standing on a medical interview, an X-ray photograph, the treatment plan using the study model about the drafting of the treatment plan | Practical training              | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa | Examination of<br>children<br>Diagnosis,<br>treatment<br>strategy                   |
| 11,12 | Oral examination 1<br>Discussion<br>Case presentation   | Practical training              | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa |   |
| 13,14 | Local anesthesia I  | Practical training              | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa | Local<br>anesthesia   |
| 15,16 | Exclusion of moisture with rubber dam   | Practical training              | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa | Exclusion of<br>moisture with<br>rubber dam   |
| 17,18 | Crown restoration for primary teeth I   | Practical training              | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa | Characteristics<br>of primary<br>teeth<br>Coronal<br>restoration                    |

2017年度

# Pediatric Dentistry (Basic Course) (Pediatric Dentistry (Basic Course))

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Maki K.  |     |           |    |                       |     |   |
| 担当教員  | 牧 憲司、西田 郁子、藤田 優子、森川 和政、佐伯 桂<br>Pediatric Dentistry Specialist : Maki, Nishida, Fujita, Saeki, Morikawa,<br>Specialist in Pediatric dentistry Specialist instruction : Maki, Nishida,<br>Specialist with a disability dentistry authorization : Morikawa, |     |           |    |                       |     |   |

| 回     | 学習内容   | 授業方法               | 担当教員   | 事前・事後学習<br>学習課題   |
|-------|--|--------------------|--|---|
| 19,20 | Crown restoration for immature permanent teeth I                 | Practical training | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa | Characteristics of immature permanent teeth<br>Crown restoration    |
| 21,22 | Inlay restoration of the deciduous teeth                         | Practical training | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa | Inlay restoration of the deciduous teeth                            |
| 23,24 | Preformed crown restoration of the deciduous teeth               | Practical training | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa | Preformed crown restoration<br>Casting crown restoration            |
| 25,26 | Pulp capping of deciduous tooth and the immature permanent tooth | Practical training | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa | Pulp Capping  |
| 27,28 | Pulpotomy to deciduous tooth                                     | Practical training | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa | Pulpyomy  |
| 29,30 | Pulpectomy、 Infection Root Canal Treatment、 Root Canal Filling   | Practical training | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa | Pulpectomy、 Infection Root Canal Treatment、 Root Canal Filling      |
| 31,32 | Oral examination 2<br>Discussion                                 | Practical training | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa |   |
| 33,34 | A diagoins and measures of periodontal disease                   | Practical training | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa | Periodontal disease of the infant period<br>A diagoins and measures |
| 35,36 | Diagnosis of the dental trauma                                   | Practical training | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa | Diagnosis<br>Fixing method<br>progmosis                             |
| 37,38 | Tooth extraction I   | Practical training | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa | Diagnosis<br>Tooth extraction                                       |

2017年度

# Pediatric Dentistry (Basic Course) (Pediatric Dentistry (Basic Course))

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Maki K.  |     |           |    |                       |     |   |
| 担当教員  | 牧 憲司、西田 郁子、藤田 優子、森川 和政、佐伯 桂<br>Pediatric Dentistry Specialist : Maki, Nishida, Fujita, Saeki, Morikawa,<br>Specialist in Pediatric dentistry Specialist instruction : Maki, Nishida,<br>Specialist with a disability dentistry authorization : Morikawa, |     |           |    |                       |     |   |

| 回     | 学習内容   | 授業方法               | 担当教員   | 事前・事後学習<br>学習課題  |
|-------|--|--------------------|--|--|
| 39,40 | Resolution measure   | Practical training | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa | Diagnosis<br>Fenestration<br>Incision                                    |
| 41,42 | Oral examination 2<br>Discussion                                     | Practical training | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa |  |
| 43,44 | Preventive treatment   | Practical training | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa | Pit and fissure<br>sealant   |
| 45,46 | Preventive treatment II  | Practical training | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa | Preventive<br>treatment<br>Health<br>guidance                            |
| 47,48 | Treatment of apprehensive child                                      | Practical training | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa | Restraining<br><br>Nitrous oxide<br>and oxygen<br>inhalation<br>sedation |
| 49,50 | The Denture guidance diagnosis and explanation method to a protector | Practical training | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa | A diagnosis, a<br>treatment plan<br>and<br>explanation                   |
| 51,52 | Preparation of appliances for occlusal guidance I                    | Practical training | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa | Space<br>maintenance   |
| 53,54 | Preparation of appliances for occlusal guidance II                   | Practical training | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa | Space<br>Regainer  |
| 55,56 | Dental treatment of the child with a disability                      | Practical training | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa | Child with a<br>disability   |
| 57,58 | Oral examination 4<br>Discussion                                     |                    | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa |  |



2017年度

# Pediatric Dentistry (Basic Course) (Pediatric Dentistry (Basic Course))

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Maki K.  |     |           |    |                       |     |   |
| 担当教員  | 牧 憲司、西田 郁子、藤田 優子、森川 和政、佐伯 桂<br>Pediatric Dentistry Specialist : Maki, Nishida, Fujita, Saeki, Morikawa,<br>Specialist in Pediatric dentistry Specialist instruction : Maki, Nishida,<br>Specialist with a disability dentistry authorization : Morikawa, |     |           |    |                       |     |   |

| 回     | 学習内容   | 授業方法 | 担当教員   | 事前・事後学習<br>学習課題 |
|-------|--|------|--|-----------------|
| 59,60 | Case presentation<br>Examination for accreditation |      | Maki<br>Nishida<br>Saeki<br>Fujita<br>Morikawa |                 |

2017年度

# Pediatric Dentistry (Advanced Course) (Pediatric Dentistry (Advanced Course))

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Maki K.  |     |           |    |                       |     |   |
| 担当教員  | 牧 憲司、西田 郁子<br>Pediatric Dentistry Specialist : Maki, Nishida,<br>Specialist in Pediatric dentistry Specialist instruction : Maki, Nishida, |     |           |    |                       |     |   |

## 授業の概要

To acquire comprehensive levels of knowledge, technique, and skill for continued management by taking into consideration physical and mental growth and development in childhood for guidance to normal permanent dentition.

## 学生の到達目標

1. Gain ability to provide treatment to pediatric patients.
2. Gain ability to treat dental caries.
3. Gain ability to provide protective care and health guidance.
4. Gain ability to treat dental injuries.
5. Gain ability to perform surgical treatment.
6. Gain ability to provide dental treatment for uncooperative or handicapped children.
7. Gain ability to deal with occlusal development.
8. Gain ability to provide basic treatment for the oral cavity as a single unit.
9. Gain ability to practice continuous management by taking growth into consideration.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                         | 割合   |
|------------------------------|------|
| average of Tests (1) and (2) | 100% |

## その他

2017年度

# Pediatric Dentistry (Advanced Course) (Pediatric Dentistry (Advanced Course))

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Maki K.  |     |           |    |                       |     |   |
| 担当教員  | 牧 憲司、西田 郁子<br>Pediatric Dentistry Specialist : Maki, Nishida,<br>Specialist in Pediatric dentistry Specialist instruction : Maki, Nishida, |     |           |    |                       |     |   |

## 授業計画

| 回     | 学習内容   | 授業方法                            | 担当教員            | 事前・事後学習<br>学習課題   |
|-------|--|---------------------------------|-----------------|---|
| 1,2   | Medical care interview II                                    | Practical training<br>Role play | Maki<br>Nishida | Medical care<br>interview<br>Adjacent area<br>of medical<br>science                     |
| 3,4   | Behavior modification therapy for pedodontic patients II     | Practical training<br>Role play | Maki<br>Nishida | Mental and<br>physical<br>growth of<br>children<br>-Behavior<br>modification<br>therapy |
| 5,6   | Radiography II   | Practical training              | Maki<br>Nishida | Radiography ・<br>Diagnostic<br>imaging for<br>pedodontic<br>cases                       |
| 7,8   | Oral roentgenography   | Practical training              | Maki<br>Nishida | Intraoral<br>photography<br>Developmental<br>growth of oral<br>cavity in<br>children    |
| 9,10  | Whole-body management  | Practical training              | Maki<br>Nishida | Pharmacother<br>apy Systemic<br>illness   |
| 11,12 | Oral examination 1<br>Discussion<br>Case presentation        | Practical training              | Maki<br>Nishida |   |
| 13,14 | Local anesthesia II  | Practical training              | Maki<br>Nishida | Local<br>anesthesia<br>Complications  |
| 15,16 | Crown restoration for primary teeth I                        | Practical training              | Maki<br>Nishida | Characteristics<br>of primary<br>teeth<br>Resin jacket<br>crown                         |
| 17,18 | Crown restoration in child patients                          | Practical training              | Maki<br>Nishida | Crown<br>restoration<br>Continued<br>management   |
| 19,20 | Temporary indirect pulp capping for immature permanent teeth | Practical training              | Maki<br>Nishida | Immature<br>permanent<br>teeth<br>Temporary<br>indirect pulp<br>capping                 |

2017年度

# Pediatric Dentistry (Advanced Course) (Pediatric Dentistry (Advanced Course))

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Maki K.  |     |           |    |                       |     |   |
| 担当教員  | 牧 憲司、西田 郁子<br>Pediatric Dentistry Specialist : Maki, Nishida,<br>Specialist in Pediatric dentistry Specialist instruction : Maki, Nishida, |     |           |    |                       |     |   |

| 回     | 学習内容  | 授業方法               | 担当教員         | 事前・事後学習<br>学習課題  |
|-------|---|--------------------|--------------|--|
| 21,22 | Endodontic treatment for immature permanent teeth   | Practical training | Maki Nishida | immature permanent teeth<br>Endodontic treatment               |
| 23,24 | Diagnosis and treatment for acute symptoms of diseases of the pulp, apex, and periodontium  | Practical training | Maki Nishida | An acute symptom<br>Diagnosis and treatment                    |
| 25,26 | Diagnosis and treatment for tooth discoloration   | Practical training | Maki Nishida | tooth discoloration<br>Diagnosis and treatment                 |
| 27,28 | Study how to deal with intractable cases of diseases of the pulp, apex, and periodontium in light of deciduous and immature permanent tooth characteristics, indications, and operative procedures. | Practical training | Maki Nishida | Intractable cases<br>Diagnosis and treatment                   |
| 29,30 | Oral examination 2<br>Discussion  | Practical training | Maki Nishida |  |
| 31,32 | Study continuing management of periodontal diseases in child patients in light of the characteristics of periodontal diseases occurring in childhood.   | Practical training | Maki Nishida | - Periodontal surgery<br>- Continuing management               |
| 33,34 | Fixation techniques for injured teeth<br>Study fixation methods for mixed dentition period in light of fixation techniques used for injured teeth.  | Practical training | Maki Nishida | - Diagnosis<br>- Fixation technique<br>- Prognosis             |
| 35,36 | Treatment of injured teeth<br>Study reimplantation techniques in light of related indications.<br>Practical training  | Practical training | Maki Nishida | - Injured teeth<br>- Reimplantation<br>- Orthodontic extrusion |
| 37,38 | Tooth extraction II<br>Study tooth extraction methods in light of examination findings and diagnosis of impacted supernumerary teeth.   | Practical training | Maki Nishida | Extraction methods<br>Impacted supernumerary teeth             |
| 39,40 | Surgical procedures<br>Study surgical procedures for child patients in light of diagnosis and treatment of cysts, tumors, and soft tissue disease.  | Practical training | Maki Nishida | Surgical procedures  |
| 41,42 | Oral examination 3<br>Discussion  | Practical training | Maki Nishida |  |
| 43,44 | Preparation of appliances for occlusal guidance III   | Practical training | Maki Nishida | Space regainer   |
| 45,46 | Preparation of appliances for occlusal guidance<br>Study methods used for manufacturing a Muh-shield by taking into consideration the indications.  | Practical training | Maki Nishida | Muh-shield   |
| 47,48 | Muscle function training  | Practical training | Maki Nishida | Muscle function training                                       |

2017年度

# Pediatric Dentistry (Advanced Course) (Pediatric Dentistry (Advanced Course))

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Maki K.  |     |           |    |                       |     |   |
| 担当教員  | 牧 憲司、西田 郁子<br>Pediatric Dentistry Specialist : Maki, Nishida,<br>Specialist in Pediatric dentistry Specialist instruction : Maki, Nishida, |     |           |    |                       |     |   |

| 回     | 学習内容  | 授業方法               | 担当教員            | 事前・事後学習<br>学習課題   |
|-------|---|--------------------|-----------------|---|
| 49,50 | Dental therapy for disabled child patients II Study how to cope with dental therapy for disabled children in light of characteristics of the related disease                    | Practical training | Maki<br>Nishida | Disabled children<br>Behavior control<br>Dental therapy |
| 51,52 | Study methods of dental therapy performed under general anesthesia by taking into consideration the characteristics and general health of child patients.<br>Practical training | Practical training | Maki<br>Nishida | General anesthesia                                      |
| 53,54 | Study intraoral management by taking developmental stage into consideration.<br>Practical training  | Practical training | Maki<br>Nishida | Developmental stages<br>-ntraoral management            |
| 55,56 | Study maternal and child health guidance in light of prevention for pregnant women and feeding instructions for children.   | Practical training | Maki<br>Nishida | Pregnancy factors<br>Maternal and child health care     |
| 57,58 | Oral examination 4<br>Discussion  |                    | Maki<br>Nishida |   |
| 59,60 | Case presentation<br>Examination for accreditation  |                    | Maki<br>Nishida |   |

2017年度

# Developmental Stomatognathic Function Science (Developmental Stomatognathic Function Science )

|       |                             |     |          |    |                       |     |   |
|-------|-----------------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades                | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習                       | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                  |     |          |    |                       |     |   |
| 科目責任者 | Maki K.                     |     |          |    |                       |     |   |
| 担当教員  | 牧 憲司、西田 郁子、藤田 優子、森川 和政、佐伯 桂 |     |          |    |                       |     |   |

## 授業の概要

For providing comprehensive pedodontic treatment, lectures on topics ranging from basic medicine to the latest state-of-the-art therapies are given by lead instructors. The students then organize and analyze related studies, and make a presentation.

## 学生の到達目標

1. Deepen knowledge regarding clinical pedodontic care in general and ability to understand it.
2. Understand basic medicine (anatomy, histology, etc.) in order to conduct clinical pedodontic practice.
3. Master methods needed to prepare materials for both presentation and clinical practice.
4. Gain ability to collect and organize appropriate research articles, and analyze them.

## テキスト

出) \_\_\_\_\_ 著) \_\_\_\_\_

## 参考書

出) \_\_\_\_\_ 著) \_\_\_\_\_

## 成績評価方法・基準

| 評価項目                         | 割合   |
|------------------------------|------|
| average of Tests (1) and (2) | 100% |

## その他

2017年度

# Developmental Stomatognathic Function Science (Developmental Stomatognathic Function Science )

|       |                             |     |          |    |                       |     |   |
|-------|-----------------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades                | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習                       | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                  |     |          |    |                       |     |   |
| 科目責任者 | Maki K.                     |     |          |    |                       |     |   |
| 担当教員  | 牧 憲司、西田 郁子、藤田 優子、森川 和政、佐伯 桂 |     |          |    |                       |     |   |

## 授業計画

| 回  | 学習内容   | 授業方法                | 担当教員     | 事前・事後学習<br>学習課題   |
|----|--|---------------------|----------|---|
| 1  | orientation  | Lecture             | Maki     | Practice<br>Pediatric<br>dentistry outline                                  |
| 2  | Growth of teeth and the dentition                                    | Lecture<br>Prsctuce | Fujita   | Case report,<br>commentary of<br>the topics about<br>pediatric<br>dentistry |
| 3  | Mechanism of the teeth rruption                                      | Lecture<br>Prsctuce | Morikawa | Case report,<br>commentary of<br>the topics about<br>pediatric<br>dentistry |
| 4  | Endodontic treatment of the deciduous tooth                          | Lecture<br>Prsctuce | Saeki    | Case report,<br>commentary of<br>the topics about<br>pediatric<br>dentistry |
| 5  | Endodontic treatment of the immature permanebt tooth                 | Lecture<br>Prsctuce | Maki     | Case report,<br>commentary of<br>the topics about<br>pediatric<br>dentistry |
| 6  | Teeth trauma of the childhood  | Lecture<br>Prsctuce | Nishida  | Case report,<br>commentary of<br>the topics about<br>pediatric<br>dentistry |
| 7  | Space Maintenace   | Lecture<br>Prsctuce | Maki     | Case report,<br>commentary of<br>the topics about<br>pediatric<br>dentistry |
| 8  | Active Denture Guidance  | Lecture<br>Prsctuce | Maki     |   |
| 9  | Coronal restoration of deciduous tooth and the early permanent tooth | Lecture<br>Prsctuce | Nishida  | Case report,<br>commentary of<br>the topics about<br>pediatric<br>dentistry |
| 10 | Dental treatment of the child with a disability                      | Lecture<br>Prsctuce | Morikawa | Case report,<br>commentary of<br>the topics about<br>pediatric<br>dentistry |
| 11 | Correspondence to trauma teeth of the childhood                      | Lecture<br>Prsctuce | Nishida  | Case report,<br>commentary of<br>the topics about<br>pediatric<br>dentistry |
| 12 | Surgical treatment of children (I)                                   | Lecture<br>Prsctuce | Maki     | Case report,<br>commentary of<br>the topics about<br>pediatric<br>dentistry |

2017年度

# Developmental Stomatognathic Function Science (Developmental Stomatognathic Function Science )

|       |                             |     |          |    |                       |     |   |
|-------|-----------------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades                | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習                       | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                  |     |          |    |                       |     |   |
| 科目責任者 | Maki K.                     |     |          |    |                       |     |   |
| 担当教員  | 牧 憲司、西田 郁子、藤田 優子、森川 和政、佐伯 桂 |     |          |    |                       |     |   |

| 回  | 学習内容                                  | 授業方法                | 担当教員   | 事前・事後学習<br>学習課題   |
|----|---------------------------------------|---------------------|--|---|
| 13 | Surgical treatment of children ( II ) | Lecture<br>Prsctuce | Maki<br>Nishida<br>Fujita<br>Morikawa<br>Saeki | Case report,<br>commentary of<br>the topics about<br>pediatric<br>dentistry |
| 14 | Generl Discussion                     | Lecture<br>Prsctuce | Maki   | Case report,<br>commentary of<br>the topics about<br>pediatric<br>dentistry |
| 15 | Test                                  | Lecture<br>Prsctuce | Maki   | Case report,<br>commentary of<br>the topics about<br>pediatric<br>dentistry |



2017年度

# Developmental Stomatognathic Function Science (Case Conference) (Developmental Stomatognathic Function Science (Case Conference))

|       |                             |     |          |    |                       |     |   |
|-------|-----------------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades                | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 演習                          | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                  |     |          |    |                       |     |   |
| 科目責任者 | Maki K.                     |     |          |    |                       |     |   |
| 担当教員  | 牧 憲司、西田 郁子、藤田 優子、森川 和政、佐伯 桂 |     |          |    |                       |     |   |

## 授業の概要

Read published studies to increase understanding of the latest research trends in pedodontics and those related to bone morphometry. Conduct debriefing and discussion sessions regarding the content and progress status of each study, and present seminars by osteologists in other basic medicine fields.

## 学生の到達目標

Improve the ability to read studies written in English.  
Gain ability to understand the content of published studies.  
Improve the capability to comment regarding research activates.  
Gain ability to understand the trend and background of the study, and enhance knowledge.  
Enhance knowledge by obtaining the latest information in regard to pedodontics and bone morphometry.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目             | 割合   |
|------------------|------|
| average of Tests | 100% |

## その他

2017年度

# Developmental Stomatognathic Function Science (Case Conference) (Developmental Stomatognathic Function Science (Case Conference))

|       |                             |     |          |    |                       |     |   |
|-------|-----------------------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades                | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 演習                          | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                  |     |          |    |                       |     |   |
| 科目責任者 | Maki K.                     |     |          |    |                       |     |   |
| 担当教員  | 牧 憲司、西田 郁子、藤田 優子、森川 和政、佐伯 桂 |     |          |    |                       |     |   |

## 授業計画

| 回    | 学習内容   | 授業方法                     | 担当教員  | 事前・事後学習<br>学習課題  |
|------|--|--------------------------|---|--|
| 1-15 | By taking into consideration the background of the study, contents of recent reports in the field of pedodontics and those related to bone morphometry, and the results of studies performed in related fields, gain ability to understand the application of those findings to both research and clinical practice. | Discussion<br>Commentary | Maki K<br>Nishida I<br>Saeki K<br>Fujita Y<br>Morikawa<br>K | Original<br>Articles,<br>commentary of<br>the topics<br>about pediatric<br>dentistry |

2017年度

# Orthodontics (Basic) (Orthodontics (Basic))

|       |   |     |          |    |                                  |     |   |
|-------|---|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 2 grades  | 期区分 | 通年       | 科目 | Compulsory / Elective (Clinical) | 単位数 | 2 |
| 授業方法  | 講義・演習   | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                  |     |   |
| 科目責任者 | Kawamoto T.   |     |          |    |                                  |     |   |
| 担当教員  | 川元 龍夫、瀧口 玲子、郡司掛 香織、黒石 加代子、森田 淳平<br>Accredited Specialist of Orofacial Function and Orthodontics : Kawamoto, Shiga, Gunjikake, Kuroishi, Morita<br>Supervisor of Orofacial Function and Orthodontics : Kawamoto, |     |          |    |                                  |     |   |

## 授業の概要

【Language】 Japanese

You will master the basic knowledge of Orofacial orthodontics through understanding about planning and implementing of clinical research.

## 学生の到達目標

You should achieve following assignments.

1. Analysis of the various information required for diagnosis, can be summed up.
2. To understand the biological and bio-mechanical fundamentals required for orthodontic treatment.
3. Analysis and evaluation of Orofacial function.
4. To understand the indications and mechanism of action of orthodontic appliances.
5. To understand the physiological and pathological problems with jaw deformities, cleft lip and cleft palate.
6. To understand the biology of bone and soft tissue.
7. To understand the principle of the dentition and occlusion of Craniofacial growth and development.
8. To understand and implement of the occlusion with development concepts.
9. To understand the pathogenesis of congenital diseases.
10. To understand the materials of orthodontic.

## テキスト

出) 著)

## 参考書

- Contemporary Orthodontics, 5th Edition  
出) Mosby 著) W. R. Proffit
- Basics of head X-ray standard  
出) Quintessence 著) K. Miyashita
- The latest orthodontic atlas  
出) Ishiyaku publishers 著) N. Inoue
- Essentials of FACIAL GROWTH  
出) Needham Press 著) Donald H. Enlow
- Orthodontics, 5th Edition  
出) Ishiyaku publishers 著) K. Soma et al.
- Orthodontic clinical series 1 "malocclusion"  
出) Ishiyaku publishers 著) Susami T., Chugo T.
- Orthodontic clinical series 2 "malocclusion"  
出) Ishiyaku publishers 著) Yamauchi k., Sakuta M.
- Orthodontic clinical series 3 "open bite"  
出) Ishiyaku publishers 著) Kawada T., Ozeki T.
- Orthodontic clinical series 4 "crowding"  
出) Ishiyaku publishers 著) Matsumoto M., Nakagawa H.

## 成績評価方法・基準

| 評価項目  | 割合   |
|-------|------|
| Tests | 100% |

After the lecture to the exam (exam and lab).  
Each lecture and lab personnel to questions. Answers to written.

2017年度

# Orthodontics (Basic) (Orthodontics (Basic))

|       |   |     |          |    |                                     |     |   |
|-------|---|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 1 ~ 2 grades  | 期区分 | 通年       | 科目 | Compulsory / Elective<br>(Clinical) | 単位数 | 2 |
| 授業方法  | 講義・演習   | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                     |     |   |
| 科目責任者 | Kawamoto T.   |     |          |    |                                     |     |   |
| 担当教員  | 川元 龍夫、瀧口 玲子、郡司掛 香織、黒石 加代子、森田 淳平<br>Accredited Specialist of Orofacial Function and Orthodontics : Kawamoto, Shiga, Gunjikake, Kuroishi, Morita<br>Supervisor of Orofacial Function and Orthodontics : Kawamoto, |     |          |    |                                     |     |   |

その他

2017年度

# Orthodontics (Basic) (Orthodontics (Basic))

|       |  |     |          |    |                                  |     |   |
|-------|--|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 2 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (Clinical) | 単位数 | 2 |
| 授業方法  | 講義・演習  | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Kawamoto T.  |     |          |    |                                  |     |   |
| 担当教員  | 川元 龍夫、瀧口 玲子、郡司掛 香織、黒石 加代子、森田 淳平  |     |          |    |                                  |     |   |
|       | Accredited Specialist of Orofacial Function and Orthodontics : Kawamoto, Shiga, Gunjikake, Kuroishi, Morita<br>Supervisor of Orofacial Function and Orthodontics : Kawamoto, |     |          |    |                                  |     |   |

## 授業計画

| 回  | 学習内容   | 授業方法                | 担当教員      | 事前・事後学習<br>学習課題                        |
|----|--|---------------------|-----------|--|
| 1  | Preparation of diagnostic materials, impression, creating a gnathostatic model, Cephalometric tracing, Model analysis, Cephalometric analysis<br>You will master the method of the evaluation skills based on basic diagnostic data.               | Lecture<br>Practice | Kawamoto  | Review of reference books and handouts |
| 2  | Diagnostics, Tooth extraction, Model set-up, Treatment planning, Orthodontic appliance.<br>You will master basic treatment planning and treatment methods skills based on basic diagnostic.  | Lecture<br>Practice | Kawamoto  | Review of reference books and handouts |
| 3  | Diagnostic imaging of the CT and MRI<br>You will learn the relevant cases and imaging, based on the basic diagnostic imaging.  | Lecture<br>Practice | Kawamoto  | Review of reference books and handouts |
| 4  | Orofacial function, jaw movement, chewing, biting, chewing efficiency, Temporomandibular disorders.<br>You will master the method of the evaluation skills about basic Orofacial function tests, methods, results based on the relevance of cases. | Lecture             | Gunjigake | Review of reference books and handouts |
| 5  | Orthodontic force and tooth movement, Anchorage, Biologic control of tooth movement, Orthodontic implants<br>You will master the principles of tooth movement and learn the orthotic devices.  | Lecture             | Kuroishi  | Review of reference books and handouts |
| 6  | Tissue reactions and orthodontic force<br>You will learn about tooth movement and periodontal tissue reactions caused by orthodontic treatment which include root resorption, the reactions of blood flow in the periodontal ligament and hyaline. | Lecture             | Kuroishi  | Review of reference books and handouts |
| 7  | Orthopedic force and reactions.<br>You will learn about the reaction and growth change of the bone caused by orthopedic force which include growth of cartilages and growth of bone sutures.   | Lecture             | Kuroishi  | Review of reference books and handouts |
| 8  | Bone metabolism, Bone biology, Molecular cell biology<br>You will learn about the bone metabolism based on work on the orthodontic tooth movement periodontal tissue cells.  | Lecture             | Kuroishi  | Review of reference books and handouts |
| 9  | Materials science on orthodontic materials<br>You will learn about the characteristics of the materials required for orthodontic treatment and its selection   | Lecture             | Gunjigake | Review of reference books and handouts |
| 10 | Each orthodontic appliance usage and mechanisms of action<br>You will learn about the basic orthodontic structure and mechanism of action, indications, considerations.  | Lecture             | Gunjigake | Review of reference books and handouts |
| 11 | Multibracket technique<br>You will learn about multibracket structure and active orthodontic treatment   | Lecture<br>Practice | Gunjigake | Review of reference books and handouts |
| 12 | Orthodontic treatment for facial deformity<br>You will learn about surgical orthodontic treatment based on facial deformity for therapeutic purpose, indications, treatment procedures.  | Lecture             | Morita    | Review of reference books and handouts |
| 13 | Malocclusion due to congenital anomalies<br>You will learn about malocclusion due to congenital anomalies, which include causes, systemic findings and malocclusion.   | Lecture             | Morita    | Review of reference books and handouts |

2017年度

# Orthodontics (Basic) (Orthodontics (Basic))

|       |  |     |          |    |                                  |     |   |
|-------|--|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 2 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (Clinical) | 単位数 | 2 |
| 授業方法  | 講義・演習  | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Kawamoto T.  |     |          |    |                                  |     |   |
| 担当教員  | 川元 龍夫、瀧口 玲子、郡司掛 香織、黒石 加代子、森田 淳平  |     |          |    |                                  |     |   |
|       | Accredited Specialist of Orofacial Function and Orthodontics : Kawamoto, Shiga, Gunjikake, Kuroishi, Morita<br>Supervisor of Orofacial Function and Orthodontics : Kawamoto, |     |          |    |                                  |     |   |

| 回  | 学習内容   | 授業方法    | 担当教員     | 事前・事後学習<br>学習課題                        |
|----|--|---------|----------|--|
| 14 | Bone graft for patient of cleft lip and palate<br>You will learn about secular orthodontic treatment for cleft lip and palate and learn growth and development                               | Lecture | Morita   | Review of reference books and handouts |
| 15 | Retention and retainers (Removable, fixed)<br>You will learn about various types of retainers and static treatment based on physiological and orthodontic treatment                          | Lecture | Morita   | Review of reference books and handouts |
| 16 | Myofunctional therapy (MFT)<br>You will learn about prevention and treatment and the effects of bad habit to individual dental arch.   | Lecture | Shiga    | Review of reference books and handouts |
| 17 | Dentition and occlusion, and Craniofacial growth and development<br>You will learn about Craniofacial growth and development, tooth, dentition and occlusion, normal growth and development. | Lecture | Shiga    | Review of reference books and handouts |
| 18 | Growth and development with orthodontic treatment<br>You will learn about various types of malocclusion and secular treatment based on the growth and development                            | Lecture | Shiga    | Review of reference books and handouts |
| 19 | Occlusion with development concepts<br>You will learn about Occlusion with development based on secular growth and development, malocclusion.  | Lecture | Shiga    | Review of reference books and handouts |
| 20 | A comprehensive dental treatment<br>You will learn about team approach with overall treatment for oral.  | Lecture | Kawamoto | Review of reference books and handouts |

2017年度

# Orthodontics (Basic) (Orthodontics (Basic))

|       |  |     |          |    |                       |     |   |
|-------|--|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 grade  | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 1 |
| 授業方法  | 実習   | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Kawamoto T.  |     |          |    |                       |     |   |
| 担当教員  | 川元 龍夫、瀧口 玲子、郡司掛 香織、黒石 加代子、森田 淳平  |     |          |    |                       |     |   |
|       | Accredited Specialist of Orofacial Function and Orthodontics : Kawamoto, Shiga, Gunjikake, Kuroishi, Morita<br>Supervisor of Orofacial Function and Orthodontics : Kawamoto, |     |          |    |                       |     |   |

## 授業の概要

【Language】 Japanese

You will learn about the optimal materials needed for clinical research and analysis. You will learn about the basic orthodontic appliances and the mechanism of reaction.

## 学生の到達目標

You should achieve following assignments.

1. To understand about taking materials for clinical research.
2. To understand the mechanism of reaction of the orthodontic treatment, can be constructed.
3. To understand the Orofacial function and analysis and evaluation.
4. To get ability of creating the materials for the presentation and utilization.

## テキスト

出) 著)

## 参考書

The latest orthodontic atlas

出) ishiyaku publishers inc

著) N. Inoue

Contemporary Orthodontics, 5th Edition

出) Mosby

著) William R. Proffit

## 成績評価方法・基準

| 評価項目 | 割合   |
|------|------|
|      | 100% |

Judgements by all of the instructors. Impression, gnathostatic model, oral photo, round and rectangular wire bending, ideal arch bending, cephalometric tracing, tracing evaluation, etc

## その他

[Books]

Basic practice manual, Comprehensive diagnostic manual for 4 grades student.

2017年度

# Orthodontics (Basic) (Orthodontics (Basic))

|       |  |     |          |    |                       |     |   |
|-------|--|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 grade  | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 1 |
| 授業方法  | 実習   | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Kawamoto T.  |     |          |    |                       |     |   |
| 担当教員  | 川元 龍夫、瀧口 玲子、郡司掛 香織、黒石 加代子、森田 淳平  |     |          |    |                       |     |   |
|       | Accredited Specialist of Orofacial Function and Orthodontics : Kawamoto, Shiga, Gunjikake, Kuroishi, Morita<br>Supervisor of Orofacial Function and Orthodontics : Kawamoto, |     |          |    |                       |     |   |

## 授業計画

| 回  | 学習内容   | 授業方法     | 担当教員      | 事前・事後学習<br>学習課題   |
|----|--|----------|-----------|---|
| 1  | Preparation of diagnostic materials (Oral photo, Facial photo) impression, creating a gnathostatic model, Cephalometric tracing, Model analysis, Cephalometric analysis<br>You will master the method of the diagnostic material taking skills with oral photo and facial photo.         | Practice | Kuroishi  | Preparation for a basic practice manual, The latest orthodontic atlas |
| 2  | Preparation of diagnostic materials (impression, gnathostatic model)<br>You will master the method of impression and taking diagnostic materials for creating a gnathostatic model based on the technique of snap impression using alginate impression material and face bow instrument. | Practice | Kuroishi  | Preparation for a basic practice manual, The latest orthodontic atlas |
| 3  | Preparation of diagnostic materials (impression, gnathostatic model)<br>You will master the method of impression and taking diagnostic materials for creating a gnathostatic model based on the technique of snap impression using alginate impression material and face bow instrument. | Practice | Kuroishi  | Preparation for a basic practice manual, The latest orthodontic atlas |
| 4  | Basic practice (Lingual arch)<br>You will master the technique of the lingual arch and method of adjustment.   | Practice | Gunjigake | Preparation for a basic practice manual, The latest orthodontic atlas |
| 5  | Basic practice (Lingual arch)<br>You will master the technique of the lingual arch and method of adjustment.   | Practice | Gunjigake | Preparation for a basic practice manual, The latest orthodontic atlas |
| 6  | Basic practice (Lingual arch)<br>You will master the technique of the lingual arch and method of adjustment.   | Practice | Gunjigake | Preparation for a basic practice manual, The latest orthodontic atlas |
| 7  | Basic practice (Activator)<br>You will learn the method of construction bite and functional orthodontic appliances and method of adjustment.   | Practice | Shiga     | Preparation for a basic practice manual, The latest orthodontic atlas |
| 8  | Basic practice (Activator)<br>You will learn the method of construction bite and functional orthodontic appliances and method of adjustment.   | Practice | Shiga     | Preparation for a basic practice manual, The latest orthodontic atlas |
| 9  | Basic practice (Activator)<br>You will learn the method of construction bite and functional orthodontic appliances and method of adjustment.   | Practice | Shiga     | Preparation for a basic practice manual, The latest orthodontic atlas |
| 10 | Basic practice (Retainer)<br>You will learn about Begg type retainer and method of adjustment.   | Practice | Morita    | Preparation for a basic practice manual, The latest orthodontic atlas |
| 11 | Basic practice (Retainer)<br>You will learn about Begg type retainer and method of adjustment.   | Practice | Morita    | Preparation for a basic practice manual, The latest orthodontic atlas |



2017年度

# Orthodontics (Basic) (Orthodontics (Basic))

|       |  |     |          |    |                       |     |   |
|-------|--|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 grade  | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 1 |
| 授業方法  | 実習   | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Kawamoto T.  |     |          |    |                       |     |   |
| 担当教員  | 川元 龍夫、瀧口 玲子、郡司掛 香織、黒石 加代子、森田 淳平  |     |          |    |                       |     |   |
|       | Accredited Specialist of Orofacial Function and Orthodontics : Kawamoto, Shiga, Gunjikake, Kuroishi, Morita<br>Supervisor of Orofacial Function and Orthodontics : Kawamoto, |     |          |    |                       |     |   |

| 回  | 学習内容  | 授業方法     | 担当教員     | 事前・事後学習<br>学習課題   |
|----|---|----------|----------|---|
| 12 | Orofacial function and analysis and evaluation<br>You will learn basic Orofacial function inspection equipment based on its usage method and analysis data. | Practice | Morita   | Preparation for a basic practice manual, The latest orthodontic atlas |
| 13 | Orofacial function and analysis and evaluation<br>You will learn basic Orofacial function inspection equipment based on its usage method and analysis data. | Practice | Kawamoto | Preparation for a basic practice manual, The latest orthodontic atlas |
| 14 | Presentation<br>Based on the usage of digital data capture and PowerPoint, Photo shop, learn to create a presentation.                                      | Practice | Kawamoto | Preparation for a clinical manual                                     |
| 15 | Presentation<br>Based on the usage of digital data capture and PowerPoint, Photo shop, learn to create a presentation.                                      | Practice | Kawamoto | Preparation for a clinical manual                                     |

2017年度

# Orthodontics (Typodont exercise) (Orthodontics (Typodont exercise))

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 grade   | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 1 |
| 授業方法  | 実習  | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                       |     |   |
| 科目責任者 | Kawamoto T.   |     |          |    |                       |     |   |
| 担当教員  | 川元 龍夫、瀧口 玲子、郡司掛 香織、黒石 加代子、森田 淳平<br>Accredited Specialist of Orofacial Function and Orthodontics : Kawamoto, Shiga, Gunjikake, Kuroishi, Morita<br>Supervisor of Orofacial Function and Orthodontics : Kawamoto, |     |          |    |                       |     |   |

## 授業の概要

【Language】 Japanese  
To understand the mechanics of proper tooth movement and performed on typodont.

## 学生の到達目標

- You should achieve following assignments.
1. To understand relationships of tooth movement to orthodontic force.
  2. To understand the frictional resistance of wires and brackets.
  3. To understand the relationship of forces to moments.
  4. To understand necessity of anchorage about intramaxillary anchorage, intermaxillary anchorage, extraoral anchorage.
  5. To understand the properties of the wire.

## テキスト

出) 著)

## 参考書

- Contemporary orthodontics  
出) Mosby 著) W. R. Proffit
- The latest orthodontic atlas  
出) ishiyaku publishers inc 著) N. Inoue
- Common Sense Mechanics  
出) 著) Thomas. Mulligan
- Biomechanics in Orthodontics  
出) Quintessence 著) Ram S., Ph.D. Nanda

## 成績評価方法・基準

| 評価項目 | 割合   |
|------|------|
|      | 100% |

Receive the evaluation of the instructor for each step. In addition, students have to present each steps and discuss.

## その他

2017年度

# Orthodontics (Typodont exercise) (Orthodontics (Typodont exercise))

|       |  |     |          |    |                       |     |   |
|-------|--|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 grade  | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 1 |
| 授業方法  | 実習   | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Kawamoto T.  |     |          |    |                       |     |   |
| 担当教員  | 川元 龍夫、瀧口 玲子、郡司掛 香織、黒石 加代子、森田 淳平  |     |          |    |                       |     |   |
|       | Accredited Specialist of Orofacial Function and Orthodontics : Kawamoto, Shiga, Gunjikake, Kuroishi, Morita<br>Supervisor of Orofacial Function and Orthodontics : Kawamoto, |     |          |    |                       |     |   |

## 授業計画

| 回  | 学習内容   | 授業方法     | 担当教員      | 事前・事後学習<br>学習課題                          |
|----|--|----------|-----------|--|
| 1  | Preparation of Typodont 1<br>You will master the method of Multibracket therapy through brackets bonding, brackets positioning for full metal tooth and preparation of the molar band, electrical soldering. | Practice | Kuroishi  | Typodont syllabus preparation and review |
| 2  | Preparation of Typodont 1<br>You will master the method of Multibracket therapy through brackets bonding, brackets positioning for full metal tooth and preparation of the molar band, electrical soldering. | Practice | Kuroishi  | Typodont syllabus preparation and review |
| 3  | Preparation of Typodont 1<br>You will master the method of Multibracket therapy through brackets bonding, brackets positioning for full metal tooth and preparation of the molar band, electrical soldering. | Practice | Kuroishi  | Typodont syllabus preparation and review |
| 4  | Wire bending 1<br>Learn about standard edgewise arch wire morphology and bending round wire.   | Practice | Shiga     | Typodont syllabus preparation and review |
| 5  | Wire bending 2<br>Learn about standard edgewise rectangular wire and bend.   | Practice | Shiga     | Typodont syllabus preparation and review |
| 6  | Wire bending 3<br>Learn about the adjustment of the arch wire and bending.   | Practice | Shiga     | Typodont syllabus preparation and review |
| 7  | Typodont 1 (leveling)<br>You will learn the early changes of malocclusion by multibracket system based on physiological responses.   | Practice | Gunjigake | Typodont syllabus preparation and review |
| 8  | Typodont 2 (leveling)<br>You will learn the early changes of malocclusion by multibracket system based on physiological responses.   | Practice | Gunjigake | Typodont syllabus preparation and review |
| 9  | Typodont 3 (Canine tooth retraction)<br>You will learn the purpose of distal movement of canine tooth and the method and considerations.   | Practice | Gunjigake | Typodont syllabus preparation and review |
| 10 | Typodont 3 (Canine tooth retraction)<br>You will learn the purpose of distal movement of canine tooth and the method and considerations.   | Practice | Morita    | Typodont syllabus preparation and review |
| 11 | Typodont 5 (Incisors retraction)<br>You will learn distal movement of incisors of multibracket method based on high need presence about reinforced anchorage, incisor torque control, arch width control.    | Practice | Morita    | Typodont syllabus preparation and review |
| 12 | Typodont 5 (Incisors retraction)<br>You will learn distal movement of incisors of multibracket method based on high need presence about reinforced anchorage, incisor torque control, arch width control.    | Practice | Morita    | Typodont syllabus preparation and review |
| 13 | Typodont 7 (Ideal arch, Finish)<br>You will learn to establish a normal occlusion based on physiological and orthodontic equipment   | Practice | Kawamoto  | Typodont syllabus preparation and review |
| 14 | Typodont 7 (Ideal arch, Finish)<br>You will learn to establish a normal occlusion based on physiological and orthodontic equipment   | Practice | Kawamoto  | Typodont syllabus preparation and review |

2017年度

# Orthodontics (Typodont exercise) (Orthodontics (Typodont exercise))

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 grade   | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 1 |
| 授業方法  | 実習  | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                       |     |   |
| 科目責任者 | Kawamoto T.   |     |          |    |                       |     |   |
| 担当教員  | 川元 龍夫、瀧口 玲子、郡司掛 香織、黒石 加代子、森田 淳平<br>Accredited Specialist of Orofacial Function and Orthodontics : Kawamoto, Shiga, Gunjikake, Kuroishi, Morita<br>Supervisor of Orofacial Function and Orthodontics : Kawamoto, |     |          |    |                       |     |   |

| 回  | 学習内容   | 授業方法         | 担当教員     | 事前・事後学習<br>学習課題                          |
|----|--|--------------|----------|--|
| 15 | Typodont presentation (Course description)<br>To understand the multi-bracket system method by describing the progress of the whole for typodont practice. | Presentation | Kawamoto | Typodont syllabus preparation and review |

2017年度

# Orthodontics (Clinical training) (Orthodontics (Clinical training))

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades  | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 1 |
| 授業方法  | 実習  | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                       |     |   |
| 科目責任者 | Kawamoto T.   |     |          |    |                       |     |   |
| 担当教員  | 川元 龍夫、瀧口 玲子、郡司掛 香織、黒石 加代子、森田 淳平<br>Accredited Specialist of Orofacial Function and Orthodontics : Kawamoto, Shiga, Gunjikake, Kuroishi, Morita<br>Supervisor of Orofacial Function and Orthodontics : Kawamoto, |     |          |    |                       |     |   |

## 授業の概要

【Language】 Japanese

Carry out the treatment to the end from the start of treatment on the basis of the basic knowledge and skills that you learn in the first year. To update the knowledge and skills for the planning of clinical research.

## 学生の到達目標

You should achieve following assignments.

1. To get ability of communicate effectively with patients.
2. Analysis of the various information needed for diagnosis, can be summed up.
3. To understand the biological and bio-mechanical fundamentals required for orthodontic treatment.
4. To get ability of analysis for changes in treatment and apply to the treatment step.
5. Analysis and evaluation of the treatment mechanism.

## テキスト

出) 著)

## 参考書

Contemporary orthodontics

出)

著)W. R. Profit

Common Sense Mechanics

出)

著)Thomas. Mulligan

## 成績評価方法・基準

| 評価項目 | 割合   |
|------|------|
|      | 100% |

Receive the evaluation of the instructor for each step. In addition, students have to present each steps and discuss.

## その他

2017年度

# Orthodontics (Clinical training) (Orthodontics (Clinical training))

|       |  |     |          |    |                       |     |   |
|-------|--|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades   | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 1 |
| 授業方法  | 実習   | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Kawamoto T.  |     |          |    |                       |     |   |
| 担当教員  | 川元 龍夫、瀧口 玲子、郡司掛 香織、黒石 加代子、森田 淳平  |     |          |    |                       |     |   |
|       | Accredited Specialist of Orofacial Function and Orthodontics : Kawamoto, Shiga, Gunjigake, Kuroishi, Morita<br>Supervisor of Orofacial Function and Orthodontics : Kawamoto, |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容   | 授業方法                 | 担当教員   | 事前・事後学習<br>学習課題  |
|-------|--|----------------------|--|--|
| 1-3   | Enforcement of biomechanics<br>You will learn affecting biomechanics by considering the diagnostic materials through orthodontic patients.   | Lectures<br>practice | Kawamoto<br>Shiga<br>Gunjigake<br>Kuroishi<br>Morita | Summary of each steps from diagnosis to end of treatment |
| 4-6   | Analysis and evaluation of the treatment effect<br>You will learn orthodontic treatment by considering the analysis and evaluation of the treatment effect.  | Lectures<br>practice | Kawamoto<br>Shiga<br>Gunjigake<br>Kuroishi<br>Morita | Summary of each steps from diagnosis to treatment        |
| 7-9   | Analysis and evaluation of growth and development<br>You will learn orthodontic treatment by considering the evaluation of growth and development.   | Lectures<br>practice | Kawamoto<br>Shiga<br>Gunjigake<br>Kuroishi<br>Morita | Summary of each steps from diagnosis to treatment        |
| 10-12 | Orthodontic materials and movement of the tooth<br>You will learn orthodontic treatment by considering the orthodontic materials and movement of the tooth.  | Lectures<br>practice | Kawamoto<br>Shiga<br>Gunjigake<br>Kuroishi<br>Morita | Summary of each steps from diagnosis to treatment        |
| 13-15 | Analysis and evaluation of Orofacial function (chewing, occlusion, breathing)<br>You will learn Orofacial function by considering the evaluation to chewing, occlusion, breathing. Orofacial function in learning. | Lectures<br>practice | Kawamoto<br>Shiga<br>Gunjigake<br>Kuroishi<br>Morita | Summary of each steps from diagnosis to treatment        |

2017年度

# Orofacial Function and Orthodontics (Orofacial Function and Orthodontics )

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 grade   | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習   | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                       |     |   |
| 科目責任者 | Kawamoto T.   |     |          |    |                       |     |   |
| 担当教員  | 川元 龍夫、瀧口 玲子、郡司掛 香織、黒石 加代子、森田 淳平<br>Accredited Specialist of Orofacial Function and Orthodontics : Kawamoto, Shiga, Gunjikake, Kuroishi, Morita<br>Supervisor of Orofacial Function and Orthodontics : Kawamoto, |     |          |    |                       |     |   |

## 授業の概要

【Language】 Japanese  
You will learn about the organization and analysis of related documents of your research. You have to do oral presentation about your research.  
You will consider about the method of research.

## 学生の到達目標

You should achieve following assignments.  
1. To get ability of creating the materials for the presentation and utilization.  
2. To get ability of analysis and collect information for research.  
3. To get ability of consider methodology of research.  
4. To get ability of collecting data.

## テキスト

出) 著)

## 参考書

Contemporary Orthodontics, 5th Edition  
出)Mosby 著)William R. Proffit  
Color atlas X-ray anatomy and cephalometric analysis  
出)Quintessence 著)K. Miyashita  
Orthodontics Current Principles & Techniques  
出)ELSEVER/MOSBY 著) T.M.Grabner

## 成績評価方法・基準

| 評価項目 | 割合   |
|------|------|
|      | 100% |

Summary background research for their research and literature, submit the study protocol.

## その他

2017年度

# Orofacial Function and Orthodontics (Orofacial Function and Orthodontics )

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 grade   | 期区分 | 通年       | 科目 | Compulsory (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習   | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                       |     |   |
| 科目責任者 | Kawamoto T.   |     |          |    |                       |     |   |
| 担当教員  | 川元 龍夫、瀧口 玲子、郡司掛 香織、黒石 加代子、森田 淳平<br>Accredited Specialist of Orofacial Function and Orthodontics : Kawamoto, Shiga, Gunjikake, Kuroishi, Morita<br>Supervisor of Orofacial Function and Orthodontics : Kawamoto, |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容   | 授業方法                                  | 担当教員   | 事前・事後学習<br>学習課題  |
|-------|--|---------------------------------------|--|--|
| 1-3   | Literature search and organize<br>You will learn about research based on literature search and how to organize research.   | Lectures<br>seminars                  | Kawamoto<br>Shiga<br>Gunjigake<br>Kuroishi<br>Morita | The use of the Internet, PubMed<br>Understanding of the usage, usage of File maker                 |
| 4-7   | Background of the research and literature summary<br>You will learn about research based on literature search and how to organize research.  | Exercises and small group<br>seminars | Kawamoto<br>Shiga<br>Gunjigake<br>Kuroishi<br>Morita | Preparation for the consolidation of the literature using literature using PubMed for your collect |
| 8-9   | Biology, genetics, molecular cell and orthodontic treatment<br>You will learn the research through orthodontic treatment orthodontic treatment information based on genetics and molecular cell biology. | Exercises and small group<br>seminars | Kawamoto<br>Shiga<br>Gunjigake<br>Kuroishi<br>Morita | Preparation for the consolidation of the literature using literature using PubMed for your collect |
| 10-12 | Discussion of the research methodology<br>You will learn how to appeal your research topics through the result of research.  | Exercises and small group<br>seminars | Kawamoto<br>Shiga<br>Gunjigake<br>Kuroishi<br>Morita | PowerPoint<br>Preparation of presentation  |
| 13-15 | Literature Review (Related to domestic and foreign paper summarization)<br>You will learn how to make discussion of paper through related domestic and international paper.                              | Exercises and small group<br>seminars | Kawamoto<br>Shiga<br>Gunjigake<br>Kuroishi<br>Morita | Summarization of domestic and international related to the theme of your article                   |



2017年度

# Orofacial Function and Orthodontics (Orofacial Function and Orthodontics )

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades  | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 講義・演習   | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                       |     |   |
| 科目責任者 | Kawamoto T.   |     |          |    |                       |     |   |
| 担当教員  | 川元 龍夫、瀧口 玲子、郡司掛 香織、黒石 加代子、森田 淳平<br>Accredited Specialist of Orofacial Function and Orthodontics : Kawamoto, Shiga, Gunjikake, Kuroishi, Morita<br>Supervisor of Orofacial Function and Orthodontics : Kawamoto, |     |          |    |                       |     |   |

## 授業の概要

【Language】 Japanese

Organize the collected documents and information, analyzes the presentation. Consider the method of research. Make presentations and article submission.

## 学生の到達目標

You should achieve following assignments.

1. To understand the significance of Orofacial function and occlusion with development concept.
2. To understand the biological and bio-mechanical fundamentals required for orthodontic treatment.
3. To get ability of creating the materials for the presentation and utilization.
4. To get ability of analysis and collect information for research.
5. To get ability of considering the methodology of research.
6. To get ability of writing the article and submitting.

## テキスト

出) 著)

## 参考書

Contemporary Orthodontics, 5th Edition

出) Mosby 著) W. R. Proffit

Comprehensive Cleft Care

出) CRC Press 著) Joseph Losee, Richard E. Kirschner

Atlas of Orthodontic Treatment for Patients with Birth Defects

出) Needham Press, Inc. 著) Takayuki Kuroda, Kimie Ohyama

New atlas of congenital anomaly

出) Nanzando Publishing 著) T. Kajii

Contemporary Treatment of Dentofacial Deformity

出) Mosby 著) W.R.Proffit

Gorlin's Syndrome of the Head and Neck

出) Oxford University 著) Hennekam/Krantz/Allanson

## 成績評価方法・基準

| 評価項目 | 割合   |
|------|------|
|      | 100% |

Evaluate the progress of the research in accordance with the research protocol in oral presentations and in writing.  
Evaluate the presentation at the meeting.

## その他

2017年度

# Orofacial Function and Orthodontics (Orofacial Function and Orthodontics )

|       |  |     |          |    |                       |     |   |
|-------|--|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 3 grades   | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 講義・演習  | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Kawamoto T.  |     |          |    |                       |     |   |
| 担当教員  | 川元 龍夫、瀧口 玲子、郡司掛 香織、黒石 加代子、森田 淳平  |     |          |    |                       |     |   |
|       | Accredited Specialist of Orofacial Function and Orthodontics : Kawamoto, Shiga, Gunjikake, Kuroishi, Morita<br>Supervisor of Orofacial Function and Orthodontics : Kawamoto, |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容  | 授業方法               | 担当教員      | 事前・事後学習<br>学習課題  |
|-------|---|--------------------|-----------|--|
| 1-2   | Orofacial function and occlusion with development concept.<br>You will learn the history of occlusion by understanding the basics of Orofacial function.                                      | Lecture<br>seminar | Kawamoto  | Review<br>handouts   |
| 3-4   | Developments of Orofacial Function and Orthodontics research<br>You will learn to understand the basic and clinical research related to orthodontic correction of consensus.                  | Lecture<br>seminar | Kawamoto  | Review of 1<br>grade lectures                                |
| 5     | Histological changes during experimental tooth movement<br>You will learn about reaction of teeth and periodontal tissue by orthodontic tooth movement.                                       | Lecture<br>seminar | Shiga     | Review of 1<br>grade lectures                                |
| 6-7   | Mechanics of tooth movement<br>You will learn about tooth movement which include Tipping, Bodily movement, Intrusion, Extrusion, Rotation, Torque.  | Lecture<br>seminar | Morita    | Typodont<br>syllabus   |
| 8     | Biology, Molecular cell biology, Genetics and Orthodontic treatment<br>To understand the basic science, to learn the need for orthodontic treatment.  | Lecture<br>seminar | Morita    | Review of first<br>year lectures                             |
| 9-11  | Background of the research and literature research<br>You need to presentation of the academic background of your research.   | Lecture<br>seminar | Gunjigake | Create a<br>Power point on<br>each research,<br>individually |
| 12-14 | Presentation of the background of the research and literature research<br>You need to presentation of your research (Research presses etc. ).   | Lecture<br>seminar | Gunjigake | Create a<br>Power point on<br>each research,<br>individually |
| 15-17 | Methodology for the research<br>You will learn about the methodology of your research based on literature search and gathered information.  | Lecture<br>seminar | Morita    | Create a<br>Power point on<br>each research,<br>individually |
| 18-19 | Announcement of research methodology<br>You will learn about presentation of the methodology of your research based on fabrication of research methods, figures and tables using Power point. | Lecture<br>seminar | Kuroishi  | Create a<br>Power point on<br>each research,<br>individually |
| 20-22 | Data collection analysis presentation<br>The analysis of data collected for research presentation.  | Lecture<br>seminar | Kuroishi  | Create a<br>Power point on<br>each research,<br>individually |
| 23-25 | Meeting presentations and media creation<br>You have to present your research in the form of oral or poster proceedings at academic exhibits (No. 1).   | Lecture<br>seminar | Shiga     | Create a<br>Power point on<br>each research,<br>individually |
| 26-28 | Meeting presentations and media creation<br>You have to present your research in the form of oral or poster proceedings at academic exhibits (No. 2).   | Lecture<br>seminar | Shiga     | Create a<br>Power point on<br>each research,<br>individually |
| 29-30 | Write an article and submit<br>You will learn about the proper method of writing an article to understand the guidelines of the journal.  | Lecture<br>seminar | Kawamoto  | Review<br>journals<br>submission<br>guideline                |

2017年度

# Orofacial Function and Orthodontics (Orofacial Function and Orthodontics )

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 grade   | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 2 |
| 授業方法  | 講義・演習   | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                       |     |   |
| 科目責任者 | Kawamoto T.   |     |          |    |                       |     |   |
| 担当教員  | 川元 龍夫、瀧口 玲子、郡司掛 香織、黒石 加代子、森田 淳平<br>Accredited Specialist of Orofacial Function and Orthodontics : Kawamoto, Shiga, Gunjikake, Kuroishi, Morita<br>Supervisor of Orofacial Function and Orthodontics : Kawamoto, |     |          |    |                       |     |   |

## 授業の概要

【Language】 Japanese

Understand the relationship between occlusion and orthodontics (related to research) through chewing, swallowing and respiratory function. Also consider the cause of the risk which include root resorption and pain associated with treatment.

## 学生の到達目標

You should achieve following assignments.

1. To get ability of evaluating the respiratory function.
2. To clarify and to understand the relationship between activity of masticatory muscle EMG and occlusal sound.
3. To clarify and to understand the relationship between mouth breathing and bite if training.
4. To clarify and to understand the regulation of bone metabolism through the trigeminal ganglion.
5. To clarify and to understand the elucidation of the mechanism of periodontal tissue osteoactivin.
6. To clarify and understand the friction on the wire between the brackets.

## テキスト

出) 著)

## 参考書

Contemporary Orthodontics, 5th Edition

出) Mosby 著) William R. Proffit

Orthodontics Current Principles &amp; Techniques

出) ELSEVER/MOSBY 著) T.M.Grabner

## 成績評価方法・基準

| 評価項目                              | 割合   |
|-----------------------------------|------|
| Evaluation of a research protocol | 100% |

## その他

2017年度

# Orofacial Function and Orthodontics (Orofacial Function and Orthodontics )

|       |  |     |          |    |                       |     |   |
|-------|--|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 2 grade  | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 2 |
| 授業方法  | 講義・演習  | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Kawamoto T.  |     |          |    |                       |     |   |
| 担当教員  | 川元 龍夫、瀧口 玲子、郡司掛 香織、黒石 加代子、森田 淳平  |     |          |    |                       |     |   |
|       | Accredited Specialist of Orofacial Function and Orthodontics : Kawamoto, Shiga, Gunjikake, Kuroishi, Morita<br>Supervisor of Orofacial Function and Orthodontics : Kawamoto, |     |          |    |                       |     |   |

## 授業計画

| 回     | 学習内容   | 授業方法                               | 担当教員      | 事前・事後学習<br>学習課題                     |
|-------|--|------------------------------------|-----------|-------------------------------------|
| 1-3   | Orofacial function<br>You will learn about the Orofacial function based on growth and development  | Lecture                            | Kawamoto  | Review handouts                     |
| 4     | Biological study on the optimal orthodontic force (1)<br>You will learn about the biological study of orthodontic periodontal tissue cells of the bone resorption and mechanism based on optimal orthodontic forces.   | Exercises and small group seminars | Shiga     | One-year review of the next lecture |
| 5     | Biological study on the optimal orthodontic force (2)<br>You will learn about the biological study of orthodontic periodontal tissue cells of the bone resorption and mechanism based on optimal orthodontic forces.   | Exercises and small group seminars | Gunjikake | One-year review of the next lecture |
| 6-8   | Tooth movement and bone modeling<br>You will learn about the orthodontic tooth movement periodontal ligament fibroblast cells, osteoblasts, osteoclasts during bone remodeling.  | Exercises and small group seminars | Shiga     | A perusal of related papers         |
| 9-11  | Evaluation of masticatory function<br>You will learn about the necessity of the Orthodontic treatment to understand the basics of the masticatory function   | Exercises and small group seminars | Morita    | A perusal of related papers         |
| 12-13 | Regulation of bone metabolism through the trigeminal ganglion<br>You will learn about the relationship of the nervous system and bone metabolism   | Exercises and small group seminars | Kuroishi  | A perusal of related papers         |
| 14-15 | Mechanism of reaction of bone metabolism in periodontal tissue<br>You will learn about bone metabolism in periodontal tissue and the bone formation mechanism of traction side during orthodontic tooth movement based on the mechanism of reaction and osteoactivin on periodontal ligament fibroblast cells in bone formation factors. | Exercises and small group seminars | Kawamoto  | A perusal of related papers         |

2017年度

# Oral and Maxillofacial Radiology (Oral and Maxillofacial Radiology)

|       |   |     |           |    |                       |     |   |
|-------|---|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades  | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習  | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |           |    |                       |     |   |
| 科目責任者 | Morimoto Y.   |     |           |    |                       |     |   |
| 担当教員  | 森本 泰宏、田中 達朗、鬼頭 慎司、小田 昌史、松本 忍<br>Broad Certified Consulting Specialis Broad Certified Consulting Specialist of the Japanese Society for Oral and Maxillofacial Radiology: Morimoto, Tanaka, Kito<br>Broad Certified Specialist: Morimoto, Tanaka, Kito, Wakasugi<br>Broad Qualified Specialist: Morimoto, Tanaka, Kito, Wakasugi |     |           |    |                       |     |   |

## 授業の概要

【Language】Japanese

You can study the diagnostic methods using six hundred teaching files in our department and in fact produce the imaging diagnostic reports on the respective case. After then, you can understand the important and essential points on the respective case based on the explanations on the case by the instructors. At the same time, you can study and appropriately comprehend the pathological findings on the respective case through the textbook “Contemporary Oral and Maxillofacial Pathology”. In imaging interpretation of the respective case, you should use “CT, MRI in head and neck” and “Handbook of diagnostic imaging in head and neck” as the textbook.

## 学生の到達目標

To understand the diagnostic methods for many kinds of lesions in oral and maxillofacial regions through imaging findings on dental X-ray radiographs, panoramic radiographs, CT, MRI, ultrasonography, and 18F-FDG-PET-CT. At the same time, you should comprehend the usefulness of the judgment based on together with the medical interview of patients, anthroposcopy, and the palpation for the lesion in imaging diagnosis of the many kind of lesion in oral and maxillofacial regions

## テキスト

出) 著)

## 参考書

Head and Neck Imaging 3rd edition  
出) 著)

Contemporary Oral and Maxillofacial Pathology  
出) 著)

Basic radiology  
出) 著)

Oral Anatomy  
出) 著)

CT, MRI in head and neck  
出) 著)

Handbook of diagnostic imaging in head and neck  
出) 著)

## 成績評価方法・基準

| 評価項目               | 割合  |
|--------------------|-----|
| oral presentations | 50% |
| oral examinations  | 50% |

## その他

At every time, we are waiting for your visits about your study-counsel and advices at our departments in the 3rd floor of and the 11th floor of Dental Hospital.

2017年度

# Oral and Maxillofacial Radiology (Oral and Maxillofacial Radiology)

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Morimoto Y.  |     |           |    |                       |     |   |
| 担当教員  | 森本 泰宏、田中 達朗、鬼頭 慎司、小田 昌史、松本 忍<br>Broad Certified Consulting Specialist Broad Certified Consulting Specialist of the Japanese Society for Oral and Maxillofacial Radiology: Morimoto, Tanaka, Kito<br>Broad Certified Specialist: Morimoto, Tanaka, Kito, Wakasugi<br>Broad Qualified Specialist: Morimoto, Tanaka, Kito, Wakasugi |     |           |    |                       |     |   |

## 授業計画

| 回     | 学習内容  | 授業方法     | 担当教員                             | 事前・事後学習<br>学習課題                   |
|-------|---|----------|----------------------------------|-----------------------------------|
| 1,2   | Diagnosis of 20 teeth-related lesions in 600 cased teaching files                           | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 3,4   | Diagnosis of 20 teeth and jaw-related lesions in 600 cased teaching files                   | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 5,6   | Diagnosis of 20 periodontal lesions in 600 cased teaching files                             | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 7,8   | Diagnosis of 20 periodontal and jaw-related lesions in 600 cased teaching files             | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 9,10  | Diagnosis of 20 oral mucosa-related lesions in 600 cased teaching files I                   | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 11,12 | Diagnosis of 20 oral mucosa-related lesions in 600 cased teaching files II                  | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 13,14 | Diagnosis of 20 parapharyngeal space-related lesions in 600 cased teaching files、           | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 15,16 | Diagnosis of 20 carotid and perivertebral space-related lesions in 600 cased teaching files | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 17,18 | Diagnosis of 20 larynx and pharynx-related lesions in 600 cased teaching files              | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 19,20 | Diagnosis of 20 sublingual space-related lesions in 600 cased teaching files I              | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 21,22 | Diagnosis of 20 sublingual space-related lesions in 600 cased teaching files II             | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 23,24 | Diagnosis of 20 submandibular space-related lesions in 600 cased teaching files I           | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |

2017年度

# Oral and Maxillofacial Radiology (Oral and Maxillofacial Radiology)

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Morimoto Y.  |     |           |    |                       |     |   |
| 担当教員  | 森本 泰宏、田中 達朗、鬼頭 慎司、小田 昌史、松本 忍<br>Broad Certified Consulting Specialist Broad Certified Consulting Specialist of the Japanese Society for Oral and Maxillofacial Radiology: Morimoto, Tanaka, Kito<br>Broad Certified Specialist: Morimoto, Tanaka, Kito, Wakasugi<br>Broad Qualified Specialist: Morimoto, Tanaka, Kito, Wakasugi |     |           |    |                       |     |   |

| 回     | 学習内容  | 授業方法     | 担当教員                             | 事前・事後学習<br>学習課題                   |
|-------|---|----------|----------------------------------|-----------------------------------|
| 25,26 | Diagnosis of 20 submandibular space-related lesions in 600 cased teaching files II                    | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 27,28 | Diagnosis of 20 submandibular and sublingual spaces-related lesions in 600 cased teaching files       | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 29,30 | Diagnosis of 20 masticator space-related lesions in 600 cased teaching files                          | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 31,32 | Diagnosis of 20 maxillary sinus-related lesions in 600 cased teaching files                           | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 33,34 | Diagnosis of 20 TMJ-related lesions in 600 cased teaching files                                       | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 35,36 | Diagnosis of 20 maxilla and mandible-related lesions in 600 cased teaching files                      | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 37,38 | Diagnosis of 20 retropharyngeal space-related lesions in 600 cased teaching files                     | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 39,40 | Diagnosis of 20 parapharyngeal and retropharyngeal spaces-related lesions in 600 cased teaching files | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 41,42 | Diagnosis of 20 pharynx and masticator space-related lesions in 600 cased teaching files              | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 43,44 | Diagnosis of 20 pharynx-related lesions in 600 cased teaching files                                   | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 45,46 | Diagnosis of 20 lymph nodes-related lesions in 600 cased teaching files                               | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 47,48 | Diagnosis of 20 cystic masses in 600 cased teaching files   | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |

2017年度

# Oral and Maxillofacial Radiology (Oral and Maxillofacial Radiology)

|       |   |     |           |    |                       |     |   |
|-------|---|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades  | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習  | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |           |    |                       |     |   |
| 科目責任者 | Morimoto Y.   |     |           |    |                       |     |   |
| 担当教員  | 森本 泰宏、田中 達朗、鬼頭 慎司、小田 昌史、松本 忍<br>Broad Certified Consulting Specialis Broad Certified Consulting Specialist of the Japanese Society for Oral and Maxillofacial Radiology: Morimoto, Tanaka, Kito<br>Broad Certified Specialist: Morimoto, Tanaka, Kito, Wakasugi<br>Broad Qualified Specialist: Morimoto, Tanaka, Kito, Wakasugi |     |           |    |                       |     |   |

| 回     | 学習内容  | 授業方法     | 担当教員                             | 事前・事後学習<br>学習課題                   |
|-------|---|----------|----------------------------------|-----------------------------------|
| 49,50 | Diagnosis of 20 salivary glands-related lesions in 600 cased teaching files                 | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 51,52 | Diagnosis of 20 thyroid and parathyroid glands-related lesions in 600 cased teaching files  | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 53,54 | Diagnosis of 20 base of skull and temporal bone-related lesions in 600 cased teaching files | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 55,56 | Diagnosis for 20 kinds of diseases in oral and maxillofacial regions I                      | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 57,58 | Diagnosis for 20 kinds of diseases in oral and maxillofacial regions II                     | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 59,60 | Diagnosis for 20 kinds of diseases in oral and maxillofacial regions III                    | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |



2017年度

# Conference of Oral and Maxillofacial Radiology (Conference of Oral and Maxillofacial Radiology)

|       |   |     |          |    |                                     |     |   |
|-------|---|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades  | 期区分 | 通年       | 科目 | Compulsory / Elective<br>(Clinical) | 単位数 | 2 |
| 授業方法  | 演習  | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                     |     |   |
| 科目責任者 | Morimoto Y.   |     |          |    |                                     |     |   |
| 担当教員  | 森本 泰宏、田中 達朗、鬼頭 慎司、小田 昌史、松本 忍<br>Broad Certified Consulting Specialis Broad Certified Consulting Specialist of the Japanese Society for Oral and Maxillofacial Radiology: Morimoto, Tanaka, Kito<br>Broad Certified Specialist: Morimoto, Tanaka, Kito, Wakasugi<br>Broad Qualified Specialist: Morimoto, Tanaka, Kito, Wakasugi |     |          |    |                                     |     |   |

## 授業の概要

【Language】Japanese

You can learn and experience the real imaging diagnostic practice through the real patients in our dental hospital at the meeting of conference. In addition, you can look for and read the reference on many kinds of diseases in oral and maxillofacial regions experienced at the conference.

## 学生の到達目標

To acquire the imaging diagnostic technique for many kinds of lesions in oral and maxillofacial regions through the real patients in our dental hospital. In addition, to precisely understand the respective diseases in oral and maxillofacial regions based on the references on what you experience.

## テキスト

Imaging films and medical reports in the patient of our Dental University  
出) 著)

## 参考書

Head and Neck Imaging 3rd edition  
出) 著)

## 成績評価方法・基準

| 評価項目               | 割合  |
|--------------------|-----|
| oral presentations | 50% |
| oral examinations  | 50% |

## その他

At every time, we are waiting for your visits about your study-counsel and advices at our departments in the 3rd floor of and the 11th floor of Dental Hospital.

2017年度

# Conference of Oral and Maxillofacial Radiology (Conference of Oral and Maxillofacial Radiology)

|       |   |     |          |    |                                     |     |   |
|-------|---|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades  | 期区分 | 通年       | 科目 | Compulsory / Elective<br>(Clinical) | 単位数 | 2 |
| 授業方法  | 演習  | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                     |     |   |
| 科目責任者 | Morimoto Y.   |     |          |    |                                     |     |   |
| 担当教員  | 森本 泰宏、田中 達朗、鬼頭 慎司、小田 昌史、松本 忍<br>Broad Certified Consulting Specialist Broad Certified Consulting Specialist of the Japanese Society for Oral and Maxillofacial Radiology:<br>Morimoto, Tanaka, Kito<br>Broad Certified Specialist: Morimoto, Tanaka, Kito, Wakasugi<br>Broad Qualified Specialist: Morimoto, Tanaka, Kito, Wakasugi |     |          |    |                                     |     |   |

## 授業計画

| 回      | 学習内容   | 授業方法     | 担当教員                                      | 事前・事後学習<br>学習課題                          |
|--------|--|----------|---|--|
| 1 ~ 15 | Diagnosis for many kinds of diseases in oral and maxillofacial regions of the real patients in our Dental College through our conference, and read the reference on the respective disease | Practice | Morimoto,<br>Tanaka,<br>Kito,<br>Wakasugi | Pre- and post-<br>reading of<br>textbook |

2017年度

# Outline of Oral and Maxillofacial Radiology (Outline of Oral and Maxillofacial Radiology)

|       |  |     |          |    |                       |     |   |
|-------|--|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 2 |
| 授業方法  | 講義・演習  | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Morimoto Y.  |     |          |    |                       |     |   |
| 担当教員  | 森本 泰宏、田中 達朗、鬼頭 慎司、小田 昌史、松本 忍<br>Broad Certified Consulting Specialist Broad Certified Consulting Specialist of the Japanese Society for Oral and Maxillofacial Radiology: Morimoto, Tanaka, Kito<br>Broad Certified Specialist: Morimoto, Tanaka, Kito, Wakasugi<br>Broad Qualified Specialist: Morimoto, Tanaka, Kito, Wakasugi |     |          |    |                       |     |   |

## 授業の概要

【Language】 Japanese

Firstly, you can sufficiently review the oral anatomy and the oral pathology. After then, you can learn the basic imaging diagnosis, the basic radiobiology, and the basic radiological physics. As the form of the present subject, you will present the respective content in front of our professors after the respective tutorial study, and the professor in charge of the respective content will precisely explain it

## 学生の到達目標

To perfectly comprehend the basic oral anatomy and oral pathology. To understand the basic imaging principles, technique of many kinds of imaging modalities, imaging diagnostic interpretation, and the basic radiobiology.

## テキスト

出) 著)

## 参考書

Head and Neck Imaging 3rd edition  
出) 著)

Contemporary Oral and Maxillofacial Pathology  
出) 著)

Basic radiology  
出) 著)

Oral Anatomy  
出) 著)

MRI in head and neck  
出) 著)

Handbook of diagnostic imaging in head and neck  
出) 著)

## 成績評価方法・基準

| 評価項目               | 割合  |
|--------------------|-----|
| oral presentations | 50% |
| oral examinations  | 50% |

## その他

At every time, we are waiting for your visits about your study-counsel and advices at our departments in the 3rd floor of and the 11th floor of Dental Hospital.

2017年度

# Outline of Oral and Maxillofacial Radiology (Outline of Oral and Maxillofacial Radiology)

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades  | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 2 |
| 授業方法  | 講義・演習   | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                       |     |   |
| 科目責任者 | Morimoto Y.   |     |          |    |                       |     |   |
| 担当教員  | 森本 泰宏、田中 達朗、鬼頭 慎司、小田 昌史、松本 忍<br>Broad Certified Consulting Specialis Broad Certified Consulting Specialist of the Japanese Society for Oral and Maxillofacial Radiology: Morimoto, Tanaka, Kito<br>Broad Certified Specialist: Morimoto, Tanaka, Kito, Wakasugi<br>Broad Qualified Specialist: Morimoto, Tanaka, Kito, Wakasugi |     |          |    |                       |     |   |

## 授業計画

| 回  | 学習内容   | 授業方法                 | 担当教員                             | 事前・事後学習<br>学習課題                   |
|----|--|----------------------|----------------------------------|-----------------------------------|
| 1  | History of Radiology, Physics of radiation   | Lecture and Practice | Morimoto                         | Pre- and post-reading of textbook |
| 2  | Radiation chemistry  | Lecture and Practice | Morimoto                         | Pre- and post-reading of textbook |
| 3  | Basic radiobiology   | Lecture and Practice | Morimoto                         | Pre- and post-reading of textbook |
| 4  | Basic radiation measurement methods I  | Lecture and Practice | Morimoto                         | Pre- and post-reading of textbook |
| 5  | Basic radiation measurement methods II   | Lecture and Practice | Morimoto                         | Pre- and post-reading of textbook |
| 6  | Radiation-related laws and ordinances  | Lecture and Practice | Morimoto                         | Pre- and post-reading of textbook |
| 7  | Medical image engineering  | Lecture and Practice | Morimoto                         | Pre- and post-reading of textbook |
| 8  | Image storage translation, reproduction, and transfer  | Lecture and Practice | Morimoto                         | Pre- and post-reading of textbook |
| 9  | Reviews of basic radiology from 1 to 10.   | Lecture and Practice | Morimoto                         | Pre- and post-reading of textbook |
| 10 | Imaging technique for many kinds of diseases in oral and maxillofacial regions I (Mainly Dental and Panoramic radiographs) | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 11 | Imaging technique for many kinds of diseases in oral and maxillofacial regions I (Mainly X-ray CT scans)                   | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 12 | Imaging technique for many kinds of diseases in oral and maxillofacial regions I (Mainly MRI)                              | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 13 | Imaging technique for many kinds of diseases in oral and maxillofacial regions I (Mainly Ultrasonography)                  | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 14 | Imaging technique for many kinds of diseases in oral and maxillofacial regions I (Mainly Scintigraphy)                     | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 15 | Reviews of imaging techniques from 10 to 14.   | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 16 | Diagnosis for many kinds of diseases in oral and maxillofacial regions I (Mainly maxillary sinus-related diseases)         | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |

2017年度

# Outline of Oral and Maxillofacial Radiology (Outline of Oral and Maxillofacial Radiology)

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades  | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 2 |
| 授業方法  | 講義・演習   | 時間数 | 60 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                       |     |   |
| 科目責任者 | Morimoto Y.   |     |          |    |                       |     |   |
| 担当教員  | 森本 泰宏、田中 達朗、鬼頭 慎司、小田 昌史、松本 忍<br>Broad Certified Consulting Specialis Broad Certified Consulting Specialist of the Japanese Society for Oral and Maxillofacial Radiology: Morimoto, Tanaka, Kito<br>Broad Certified Specialist: Morimoto, Tanaka, Kito, Wakasugi<br>Broad Qualified Specialist: Morimoto, Tanaka, Kito, Wakasugi |     |          |    |                       |     |   |

| 回  | 学習内容   | 授業方法                 | 担当教員                             | 事前・事後学習<br>学習課題                   |
|----|--|----------------------|----------------------------------|-----------------------------------|
| 17 | Diagnosis for many kinds of diseases in oral and maxillofacial regions II (Mainly TMJ-related diseases)  | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 18 | Diagnosis for many kinds of diseases in oral and maxillofacial regions III (Mainly Maxilla and mandible-related diseases)  | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 19 | Diagnosis for many kinds of diseases in oral and maxillofacial regions IV (Mainly Parapharyngeal, Masticator, and Carotid space-related diseases)                      | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 20 | Diagnosis for many kinds of diseases in oral and maxillofacial regions V (Mainly Retropharyngeal, Perivertebral, Sublingual, and Submandibular space-related diseases) | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 21 | Diagnosis for many kinds of diseases in oral and maxillofacial regions VI (Mainly Oropharynx-related diseases)   | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 22 | Diagnosis for many kinds of diseases in oral and maxillofacial regions VII (Mainly Epipharynx, Hypopharynx, Larynx-related diseases)                                   | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 23 | Diagnosis for many kinds of diseases in oral and maxillofacial regions VII (Mainly Lymph nodes-related diseases)   | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 24 | Diagnosis for many kinds of diseases in oral and maxillofacial regions VIII (Mainly Cystic masses)   | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 25 | Diagnosis for many kinds of diseases in oral and maxillofacial regions IX (Mainly Salivary glands-related diseases)  | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 26 | Diagnosis for many kinds of diseases in oral and maxillofacial regions IX (Mainly Thyroid and Parathyroid glands-related diseases)                                     | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 27 | Diagnosis for many kinds of diseases in oral and maxillofacial regions X (Mainly Base of skull and Temporary bone-related diseases)                                    | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 28 | Review of diagnosis for many kinds of diseases in oral and maxillofacial regions from 16 to 27   | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 29 | Interventional Radiology for many kinds of diseases in maxillofacial regions   | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 30 | Radiotherapy for oral cancers  | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |

2017年度

# Practice of Oral and Maxillofacial Radiology (Practice of Oral and Maxillofacial Radiology )

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 4 grades  | 期区分 | 前期       | 科目 | Compulsory (Clinical) | 単位数 | 2 |
| 授業方法  | 講義・演習   | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                       |     |   |
| 科目責任者 | Morimoto Y.   |     |          |    |                       |     |   |
| 担当教員  | 森本 泰宏、田中 達朗、鬼頭 慎司、小田 昌史、松本 忍<br>Broad Certified Consulting Specialis Broad Certified Consulting Specialist of the Japanese Society for Oral and Maxillofacial Radiology: Morimoto, Tanaka, Kito<br>Broad Certified Specialist: Morimoto, Tanaka, Kito, Wakasugi<br>Broad Qualified Specialist: Morimoto, Tanaka, Kito, Wakasugi |     |          |    |                       |     |   |

## 授業の概要

【Language】Japanese  
You can learn the applied imaging diagnosis, the applied radiobiology, and the applied radiological physics based on your knowledge through Basic Dental Radiology.

## 学生の到達目標

To understand the applied imaging diagnosis, the applied radiobiology, and the applied radiological physics.

## テキスト

出) 著)

## 参考書

Basic Radiology  
出) 著)

## 成績評価方法・基準

| 評価項目               | 割合  |
|--------------------|-----|
| oral presentations | 50% |
| oral examinations  | 50% |

## その他

At every time, we are waiting for your visits about your study-counsel and advices at our departments in the 3rd floor of and the 11th floor of Dental Hospital.

2017年度

# Practice of Oral and Maxillofacial Radiology (Practice of Oral and Maxillofacial Radiology )

|       |   |     |          |    |                       |     |   |
|-------|---|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 4 grades  | 期区分 | 前期       | 科目 | Compulsory (Clinical) | 単位数 | 2 |
| 授業方法  | 講義・演習   | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                       |     |   |
| 科目責任者 | Morimoto Y.   |     |          |    |                       |     |   |
| 担当教員  | 森本 泰宏、田中 達朗、鬼頭 慎司、小田 昌史、松本 忍<br>Broad Certified Consulting Specialis Broad Certified Consulting Specialist of the Japanese Society for Oral and Maxillofacial Radiology: Morimoto, Tanaka, Kito<br>Broad Certified Specialist: Morimoto, Tanaka, Kito, Wakasugi<br>Broad Qualified Specialist: Morimoto, Tanaka, Kito, Wakasugi |     |          |    |                       |     |   |

## 授業計画

| 回  | 学習内容   | 授業方法                 | 担当教員                             | 事前・事後学習<br>学習課題                   |
|----|--|----------------------|----------------------------------|-----------------------------------|
| 1  | The examinations of radiation protection supervisor I and II | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 2  | History of Radiology, Physics of radiation I                 | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 3  | Physics of radiation II                                      | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 4  | Radioisotope   | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 5  | Basic radiation measurement methods                          | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 6  | Radiation control  | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 7  | Radiation protection   | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 8  | Radiation-related laws and ordinances I                      | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 9  | Radiation-related laws and ordinances II                     | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 10 | Radiobiology   | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 11 | Radiation chemistry I  | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 12 | Radiation chemistry II                                       | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |
| 13 | Review I (Compound questions)                                | Lecture and Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook |

2017年度

# Practice of Oral and Maxillofacial Radiology (Practice of Oral and Maxillofacial Radiology )

|       |  |     |          |    |                       |     |   |
|-------|--|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 4 grades   | 期区分 | 前期       | 科目 | Compulsory (Clinical) | 単位数 | 2 |
| 授業方法  | 講義・演習  | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                       |     |   |
| 科目責任者 | Morimoto Y.  |     |          |    |                       |     |   |
| 担当教員  | 森本 泰宏、田中 達朗、鬼頭 慎司、小田 昌史、松本 忍<br>Broad Certified Consulting Specialist Broad Certified Consulting Specialist of the Japanese Society for Oral and Maxillofacial Radiology: Morimoto, Tanaka, Kito<br>Broad Certified Specialist: Morimoto, Tanaka, Kito, Wakasugi<br>Broad Qualified Specialist: Morimoto, Tanaka, Kito, Wakasugi |     |          |    |                       |     |   |

| 回  | 学習内容                            | 授業方法                 | 担当教員                                      | 事前・事後学習<br>学習課題                          |
|----|---------------------------------|----------------------|---|--|
| 14 | Review II (Compound questions)  | Lecture and Practice | Morimoto,<br>Tanaka,<br>Kito,<br>Wakasugi | Pre- and post-<br>reading of<br>textbook |
| 15 | Review III (Compound questions) | Lecture and Practice | Morimoto,<br>Tanaka,<br>Kito,<br>Wakasugi | Pre- and post-<br>reading of<br>textbook |



2017年度

# Practice of Oral and Maxillofacial Radiology (Practice of Oral and Maxillofacial Radiology )

|       |  |     |          |    |                                     |     |   |
|-------|--|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades   | 期区分 | 前期       | 科目 | Compulsory / Elective<br>(Clinical) | 単位数 | 2 |
| 授業方法  | 講義・演習  | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                     |     |   |
| 科目責任者 | Morimoto Y.  |     |          |    |                                     |     |   |
| 担当教員  | 森本 泰宏、田中 達朗、鬼頭 慎司、小田 昌史、松本 忍<br>Broad Certified Consulting Specialis Broad Certified Consulting Specialist of the Japanese Society for Oral and Maxillofacial Radiology:<br>Morimoto, Tanaka, Kito<br>Broad Certified Specialist: Morimoto, Tanaka, Kito, Wakasugi<br>Broad Qualified Specialist: Morimoto, Tanaka, Kito, Wakasugi |     |          |    |                                     |     |   |

## 授業の概要

【Language】Japanese

You can study and examine many kinds of the recent imaging diagnostic investigations based on your knowledge through Basic Dental Radiology.

## 学生の到達目標

You can basically and specially operate the CT scan and MRI system, and can take photographs of CT images and MRI. In addition, you can easily use the special software on analysis of CT and MRI imaging data in attached workstation. Moreover, you can apply the analytical software “ SPSS ” on imaging data analysis.

## テキスト

出) 著)

## 参考書

imaging technique-related books

出) 著)

## 成績評価方法・基準

| 評価項目               | 割合  |
|--------------------|-----|
| oral presentations | 50% |
| oral examinations  | 50% |

## その他

At every time, we are waiting for your visits about your study-counsel and advices at our departments in the 3rd floor of and the 11th floor of Dental Hospital.

2017年度

# Practice of Oral and Maxillofacial Radiology (Practice of Oral and Maxillofacial Radiology )

|       |  |     |          |    |                                     |     |   |
|-------|--|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades   | 期区分 | 前期       | 科目 | Compulsory / Elective<br>(Clinical) | 単位数 | 2 |
| 授業方法  | 講義・演習  | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                     |     |   |
| 科目責任者 | Morimoto Y.  |     |          |    |                                     |     |   |
| 担当教員  | 森本 泰宏、田中 達朗、鬼頭 慎司、小田 昌史、松本 忍<br>Broad Certified Consulting Specialis Broad Certified Consulting Specialist of the Japanese Society for Oral and Maxillofacial Radiology:<br>Morimoto, Tanaka, Kito<br>Broad Certified Specialist: Morimoto, Tanaka, Kito, Wakasugi<br>Broad Qualified Specialist: Morimoto, Tanaka, Kito, Wakasugi |     |          |    |                                     |     |   |

## 授業計画

| 回  | 学習内容   | 授業方法                 | 担当教員                                      | 事前・事後学習<br>学習課題                          |
|----|--|----------------------|---|--|
| 1  | Imaging techniques and analysis of conventional X-ray CT scans | Lecture and Practice | Morimoto,<br>Tanaka,<br>Kito,<br>Wakasugi | Pre- and post-<br>reading of<br>textbook |
| 2  | Imaging techniques and analysis of CT angiography              | Practice             | Morimoto,<br>Tanaka,<br>Kito,<br>Wakasugi | Pre- and post-<br>reading of<br>textbook |
| 3  | Data analysis using statistical analytical software SPSS (I)   | Lecture and Practice | Morimoto,<br>Tanaka,<br>Kito,<br>Wakasugi | Pre- and post-<br>reading of<br>textbook |
| 4  | Imaging techniques and analysis of conventional MRI (I)        | Lecture and Practice | Morimoto,<br>Tanaka,<br>Kito,<br>Wakasugi | Pre- and post-<br>reading of<br>textbook |
| 5  | Imaging techniques and analysis of conventional MRI (II)       | Practice             | Morimoto,<br>Tanaka,<br>Kito,<br>Wakasugi | Pre- and post-<br>reading of<br>textbook |
| 6  | Imaging techniques and analysis of conventional MRI (III)      | Practice             | Morimoto,<br>Tanaka,<br>Kito,<br>Wakasugi | Pre- and post-<br>reading of<br>textbook |
| 7  | Imaging analysis for Dynamic MR sialography (I)                | Lecture and Practice | Morimoto,<br>Tanaka,<br>Kito,<br>Wakasugi | Pre- and post-<br>reading of<br>textbook |
| 8  | Imaging analysis for Dynamic MR sialography (II)               | Practice             | Morimoto,<br>Tanaka,<br>Kito,<br>Wakasugi | Pre- and post-<br>reading of<br>textbook |
| 9  | Imaging analysis for Functional MRI (I)                        | Lecture and Practice | Morimoto,<br>Tanaka,<br>Kito,<br>Wakasugi | Pre- and post-<br>reading of<br>textbook |
| 10 | Imaging analysis for Functional MRI (II)                       | Practice             | Morimoto,<br>Tanaka,<br>Kito,<br>Wakasugi | Pre- and post-<br>reading of<br>textbook |
| 11 | Imaging analysis for Functional MRI (III )                     | Practice             | Morimoto,<br>Tanaka,<br>Kito,<br>Wakasugi | Pre- and post-<br>reading of<br>textbook |
| 12 | Imaging analysis for MR angiography (I)                        | Lecture and Practice | Morimoto,<br>Tanaka,<br>Kito,<br>Wakasugi | Pre- and post-<br>reading of<br>textbook |
| 13 | Imaging analysis for MR angiography (II)                       | Practice             | Morimoto,<br>Tanaka,<br>Kito,<br>Wakasugi | Pre- and post-<br>reading of<br>textbook |

2017年度

# Practice of Oral and Maxillofacial Radiology (Practice of Oral and Maxillofacial Radiology )

|       |  |     |          |    |                                     |     |   |
|-------|--|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades   | 期区分 | 前期       | 科目 | Compulsory / Elective<br>(Clinical) | 単位数 | 2 |
| 授業方法  | 講義・演習  | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                     |     |   |
| 科目責任者 | Morimoto Y.  |     |          |    |                                     |     |   |
| 担当教員  | 森本 泰宏、田中 達朗、鬼頭 慎司、小田 昌史、松本 忍<br>Broad Certified Consulting Specialis Broad Certified Consulting Specialist of the Japanese Society for Oral and Maxillofacial Radiology:<br>Morimoto, Tanaka, Kito<br>Broad Certified Specialist: Morimoto, Tanaka, Kito, Wakasugi<br>Broad Qualified Specialist: Morimoto, Tanaka, Kito, Wakasugi |     |          |    |                                     |     |   |

| 回  | 学習内容  | 授業方法                 | 担当教員                                      | 事前・事後学習<br>学習課題                          |
|----|---|----------------------|---|--|
| 14 | Data analysis using statistical analytical software SPSS (II) | Lecture and Practice | Morimoto,<br>Tanaka,<br>Kito,<br>Wakasugi | Pre- and post-<br>reading of<br>textbook |
| 15 | Review from 1 to 14   | Lecture and Practice | Morimoto,<br>Tanaka,<br>Kito,<br>Wakasugi | Pre- and post-<br>reading of<br>textbook |

2017年度

# A reading circle on Oral and Maxillofacial Radiology (A reading circle on Oral and Maxillofacial Radiology)

|       |   |     |          |    |                                  |     |   |
|-------|---|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades  | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習  | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                  |     |   |
| 科目責任者 | Morimoto Y.   |     |          |    |                                  |     |   |
| 担当教員  | 森本 泰宏、田中 達朗、鬼頭 慎司、小田 昌史、松本 忍<br>Broad Certified Consulting Specialis Broad Certified Consulting Specialist of the Japanese Society for Oral and Maxillofacial Radiology: Morimoto, Tanaka, Kito<br>Broad Certified Specialist: Morimoto, Tanaka, Kito, Wakasugi<br>Broad Qualified Specialist: Morimoto, Tanaka, Kito, Wakasugi |     |          |    |                                  |     |   |

## 授業の概要

【Language】Japanese

You can learn and study the imaging diagnostic method for many kind of diseases in oral and maxillofacial regions through the representative textbook “ Head and Neck Imaging 3rd edition ” by Som, Curtin et al

## 学生の到達目標

To understand of imaging findings on many kind of diseases in oral and maxillofacial regions through the representative textbook “ Head and Neck Imaging 3rd edition ” by Som, Curtin et al

## テキスト

出) 著)

## 参考書

Head and Neck Imaging 3rd edition

出)Curtin et al Mosby 1996

著)Som

## 成績評価方法・基準

| 評価項目               | 割合  |
|--------------------|-----|
| oral presentations | 50% |
| oral examinations  | 50% |

## その他

At every time, we are waiting for your visits about your study-counsel and advices at our departments in the 3rd floor of and the 11th floor of Dental Hospital.

2017年度

# A reading circle on Oral and Maxillofacial Radiology (A reading circle on Oral and Maxillofacial Radiology)

|       |  |     |          |    |                                  |     |   |
|-------|--|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習   | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Morimoto Y.  |     |          |    |                                  |     |   |
| 担当教員  | 森本 泰宏、田中 達朗、鬼頭 慎司、小田 昌史、松本 忍<br>Broad Certified Consulting Specialist Broad Certified Consulting Specialist of the Japanese Society for Oral and Maxillofacial Radiology: Morimoto, Tanaka, Kito<br>Broad Certified Specialist: Morimoto, Tanaka, Kito, Wakasugi<br>Broad Qualified Specialist: Morimoto, Tanaka, Kito, Wakasugi |     |          |    |                                  |     |   |

## 授業計画

| 回      | 学習内容  | 授業方法     | 担当教員                             | 事前・事後学習<br>学習課題   |
|--------|---|----------|----------------------------------|---|
| 1 ~ 15 | A reading circle of " Head and Neck Imaging " | Practice | Morimoto, Tanaka, Kito, Wakasugi | Pre- and post-reading of textbook " Head and Neck Imaging 3rd edition " |

2017年度

# Basic treatment strategy of Oral and Maxillofacial Surgery (Basic treatment strategy of Oral and Maxillofacial Surgery)

|       |   |     |           |    |                       |     |   |
|-------|---|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades  | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習  | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |           |    |                       |     |   |
| 科目責任者 | Tominaga K.   |     |           |    |                       |     |   |
| 担当教員  | 富永 和宏、笹栗 正明、上原 雅隆、土生 学、吉賀 大午、岩永 賢二郎、三次 翔、高橋 理、河野 通直、藤井 誠子<br>Supervisor of Oral and Maxillofacial Surgery : Tominaga, Uehara,<br>Specialist in Oral and Maxillofacial Surgery : Tominaga, Sasaguri, Uehara, Habu, Iwanaga, Yoshiga, |     |           |    |                       |     |   |

## 授業の概要

【Language】 English and Japanese

To acquire basic treatment skills and strategies of Oral and Maxillofacial Surgery including systemic management for hospitalized patients.

## 学生の到達目標

- 1.To acquire the basic skills of minor oral surgery
- 2.To acquire the basic knowledge of major oral and maxillofacial surgery
- 3.To acquire the basic skills of pre- and post- operative management for oral surgery
4. To acquire the basic skills of systemic management for hospitalized patients
- 5.To acquire the basic skills of management for medical emergency

## テキスト

Contemporary Oral and Maxillofacial Surgery

出) 著) Mosby

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目 | 割合   |
|------|------|
|      | 100% |

Total evaluation by case presentations, operation records and oral examinations

## その他

2017年度

# Basic treatment strategy of Oral and Maxillofacial Surgery (Basic treatment strategy of Oral and Maxillofacial Surgery)

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Tominaga K.  |     |           |    |                       |     |   |
| 担当教員  | 富永 和宏、笹栗 正明、上原 雅隆、土生 学、吉賀 大午、岩永 賢二郎、三次 翔、高橋 理、河野 通直、藤井 誠子  |     |           |    |                       |     |   |
|       | Supervisor of Oral and Maxillofacial Surgery : Tominaga, Uehara,<br>Specialist in Oral and Maxillofacial Surgery : Tominaga, Sasaguri, Uehara, Habu, Iwanaga, Yoshiga, |     |           |    |                       |     |   |

## 授業計画

| 回     | 学習内容   | 授業方法                                   | 担当教員      | 事前・事後学習<br>学習課題                      |
|-------|--|--|-----------|--------------------------------------|
| 1,2   | Uncomplicated exodontia                                | Practice                               | Fujii     | Preparation and review of text books |
| 3,4   | Complicated exodontia                                  | Practice                               | Mitsugi   | Preparation and review of text books |
| 5,6   | Management of impacted teeth                           | Practice                               | Mitsugi   | Preparation and review of text books |
| 7,8   | Oral examination 1                                     | Case presentation and oral examination | Tominaga  | Preparation of case presentation     |
| 9,10  | Surgical management of cysts of the jaws               | Practice                               | Fujii     | Preparation and review of text books |
| 11,12 | Periapical surgery                                     | Practice                               | Takahashi | Preparation and review of text books |
| 13,14 | Surgical management of jaw tumors                      | Practice                               | Takahashi | Preparation and review of text books |
| 15,16 | Preprosthetic surgery                                  | Practice                               | Iwanaga   | Preparation and review of text books |
| 17,18 | Prevention of surgical site infection                  | Practice                               | Fujii     | Preparation and review of text books |
| 19,20 | Oral examination 2                                     | Case presentation and oral examination | Sasaguri  | Preparation of case presentation     |
| 21,22 | Preparation for orthognathic surgery                   | Practice                               | Mitsugi   | Preparation and review of text books |
| 23,24 | Surgical management of jaw deformities                 | Practice                               | Habu      | Preparation and review of text books |
| 25,26 | Postsurgical management of orthognathic surgery        | Practice                               | Takahashi | Preparation and review of text books |
| 27,28 | Oral examination 3                                     | Case presentation and oral examination | Tominaga  | Preparation of case presentation     |
| 29,30 | Principles of anti-cancer chemotherapy for oral cancer | Practice                               | Hayakawa  | Preparation and review of text books |

2017年度

# Basic treatment strategy of Oral and Maxillofacial Surgery (Basic treatment strategy of Oral and Maxillofacial Surgery)

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Tominaga K.  |     |           |    |                       |     |   |
| 担当教員  | 富永 和宏、笹栗 正明、上原 雅隆、土生 学、吉賀 大午、岩永 賢二郎、三次 翔、高橋 理、河野 通直、藤井 誠子  |     |           |    |                       |     |   |
|       | Supervisor of Oral and Maxillofacial Surgery : Tominaga, Uehara,<br>Specialist in Oral and Maxillofacial Surgery : Tominaga, Sasaguri, Uehara, Habu, Iwanaga, Yoshiga, |     |           |    |                       |     |   |

| 回     | 学習内容   | 授業方法                                   | 担当教員     | 事前・事後学習課題                            |
|-------|--|--|----------|--------------------------------------|
| 31,32 | Principles of irradiation therapy for oral cancer    | Practice                               | Hayakawa | Preparation and review of text books |
| 33,34 | Surgical management of oral cancer                   | Practice                               | Uehara   | Preparation and review of text books |
| 35,36 | Surgical reconstruction of oro-facial region         | Practice                               | Uehara   | Preparation and review of text books |
| 37,38 | Postsurgical management of oral cancer patients      | Practice                               | Iwanaga  | Preparation and review of text books |
| 39,40 | Principles of terminal care for oral cancer patients | Practice                               | Iwanaga  | Preparation and review of text books |
| 41,42 | Oral examination 4                                   | Case presentation and oral examination | Uehara   | Preparation of case presentation     |
| 43,44 | Surgical management of temporomandibular disorders   | Practice                               | Yoshiga  | Preparation and review of text books |
| 45,46 | Preparation for cleft lip and palate (CLP) surgery   | Practice                               | Habu     | Preparation and review of text books |
| 47,48 | Postsurgical management of CLP patients              | Practice                               | Habu     | Preparation and review of text books |
| 49,50 | Surgical management of CLP                           | Practice                               | Sasaguri | Preparation and review of text books |
| 51,52 | Oral examination 5                                   | Case presentation and oral examination | Sasaguri | Preparation of case presentation     |
| 53,54 | Intravenous sedation for oral surgery                | Practice                               | Hayakawa | Preparation and review of text books |
| 55,56 | General anesthesia for oral surgery                  | Practice                               | Yoshiga  | Preparation and review of text books |
| 57,58 | Management of medical emergenc                       | Practice                               | Yoshiga  | Preparation and review of text books |
| 59,60 | Oral examination 6                                   | Case presentation and oral examination | Tominaga | Preparation of case presentation     |



2017年度

# Basic diagnostic strategy of Oral and Maxillofacial Surgery (Basic diagnostic strategy of Oral and Maxillofacial Surgery)

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Tominaga K.  |     |           |    |                       |     |   |
| 担当教員  | 富永 和宏、笹栗 正明、上原 雅隆、土生 学、吉賀 大午、岩永 賢二郎、三次 翔、高橋 理、河野 通直、藤井 誠子  |     |           |    |                       |     |   |
|       | Supervisor of Oral and Maxillofacial Surgery : Tominaga, Uehara,<br>Specialist in Oral and Maxillofacial Surgery : Tominaga, Sasaguri, Uehara, Habu, Iwanaga, Yoshiga, |     |           |    |                       |     |   |

## 授業の概要

【Language】 English and Japanese

To acquire basic treatment skills and strategies of Oral and Maxillofacial Surgery including systemic management for hospitalized patients.

## 学生の到達目標

- 1.To acquire the basic skills of minor oral surgery
- 2.To acquire the basic knowledge of major oral and maxillofacial surgery
- 3.To acquire the basic skills of pre- and post- operative management for oral surgery
4. To acquire the basic skills of systemic management for hospitalized patients
- 5.To acquire the basic skills of management for medical emergency

## テキスト

Contemporary Oral and Maxillofacial Surgery  
出)Mosby 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目   | 割合   |
|--|------|
| case presentations and oral/paper examinations | 100% |

## その他

2017年度

# Basic diagnostic strategy of Oral and Maxillofacial Surgery (Basic diagnostic strategy of Oral and Maxillofacial Surgery)

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Tominaga K.  |     |           |    |                       |     |   |
| 担当教員  | 富永 和宏、笹栗 正明、上原 雅隆、土生 学、吉賀 大午、岩永 賢二郎、三次 翔、高橋 理、河野 通直、藤井 誠子  |     |           |    |                       |     |   |
|       | Supervisor of Oral and Maxillofacial Surgery : Tominaga, Uehara,<br>Specialist in Oral and Maxillofacial Surgery : Tominaga, Sasaguri, Uehara, Habu, Iwanaga, Yoshiga, |     |           |    |                       |     |   |

## 授業計画

| 回     | 学習内容  | 授業方法                                   | 担当教員      | 事前・事後学習<br>学習課題                      |
|-------|---|--|-----------|--------------------------------------|
| 1,2   | Medical interview   | Practice                               | Mitsugi   | Preparation and review of text books |
| 3,4   | Clinical laboratory test 1;<br>Blood test, biochemical test | Practice                               | Mitsugi   | Preparation and review of text books |
| 5,6   | Clinical laboratory test 2;<br>Immunochemical blood test    | Practice                               | Mitsugi   | Preparation and review of text books |
| 7,8   | Image reading of computed tomography                        | Practice                               | Takahashi | Preparation and review of text books |
| 9,10  | Image reading of magnetic resonance image                   | Practice                               | Takahashi | Preparation and review of text books |
| 11,12 | Image reading of ultrasound examination                     | Practice                               | Takahashi | Preparation and review of text books |
| 13,14 | Selection of the optimal modalities for various diseases    | Practice                               | Yoshiga   | Preparation and review of text books |
| 15,16 | Analysis of the collected data and diagnosis                | Practice                               | Yoshiga   | Preparation and review of text books |
| 17,18 | Oral examination 1  | Case presentation and oral examination | Uehara    | Preparation of case presentation     |
| 19,20 | Pathological characteristics of mucous membrane diseases    | Practice                               | Hayakawa  | Preparation and review of text books |
| 21,22 | Clinical characteristics of mucous membrane diseases        | Practice                               | Hayakawa  | Preparation and review of text books |
| 23,24 | Basic strategy for diagnosis of mucous membrane diseases    | Practice                               | Hayakawa  | Preparation and review of text books |
| 25,26 | Diagnosis of odontogenic infection                          | Practice                               | Iwanaga   | Preparation and review of text books |
| 27,28 | Management of odontogenic infection                         | Practice                               | Iwanaga   | Preparation and review of text books |
| 29,30 | Diagnosis of temporomandibular disorders                    | Practice                               | Habu      | Preparation and review of text books |

2017年度

# Basic diagnostic strategy of Oral and Maxillofacial Surgery (Basic diagnostic strategy of Oral and Maxillofacial Surgery)

|       |  |     |           |    |                       |     |   |
|-------|--|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |           |    |                       |     |   |
| 科目責任者 | Tominaga K.  |     |           |    |                       |     |   |
| 担当教員  | 富永 和宏、笹栗 正明、上原 雅隆、土生 学、吉賀 大午、岩永 賢二郎、三次 翔、高橋 理、河野 通直、藤井 誠子  |     |           |    |                       |     |   |
|       | Supervisor of Oral and Maxillofacial Surgery : Tominaga, Uehara,<br>Specialist in Oral and Maxillofacial Surgery : Tominaga, Sasaguri, Uehara, Habu, Iwanaga, Yoshiga, |     |           |    |                       |     |   |

| 回     | 学習内容   | 授業方法                                   | 担当教員      | 事前・事後学習<br>学習課題                      |
|-------|--|--|-----------|--------------------------------------|
| 31,32 | Principles of management of temporomandibular disorders          | Practice                               | Habu      | Preparation and review of text books |
| 33,34 | Diagnosis of oral psychosomatic disorders                        | Practice                               | Sasaguri  | Preparation and review of text books |
| 35,36 | Principles of management of oral psychosomatic disorders         | Practice                               | Sasaguri  | Preparation and review of text books |
| 37,38 | Oral examination 2   | Case presentation and oral examination | Sasaguri  | Preparation of case presentation     |
| 39,40 | Dental management of the patients with diabetes mellitus         | Practice                               | Yoshiga   | Preparation and review of text books |
| 41,42 | Dental management of the patients with cardiovascular disorders  | Practice                               | Habu      | Preparation and review of text books |
| 43,44 | Dental management of the patients under anticoagulant therapy    | Practice                               | Iwanaga   | Preparation and review of text books |
| 45,46 | Dental management of the patients with liver and kidney diseases | Practice                               | Fujii     | Preparation and review of text books |
| 47,48 | Dental management of the patients under bisphosphonate therapy   | Practice                               | Uehara    | Preparation and review of text books |
| 49,50 | Dental management of medically compromised host                  | Practice                               | Uehara    | Preparation and review of text books |
| 51,52 | Oral examination 3   | Case presentation and oral examination | Tominaga  | Preparation of case presentation     |
| 53,54 | Medical and dental ethics  | Practice                               | Fujii     | Preparation and review of text books |
| 55,56 | Medical record writing based on problem oriented system          | Practice                               | Fujii     | Preparation and review of text books |
| 57,58 | Oral examination 4   | Case presentation and oral examination | Tominaga, | Preparation of case presentation     |
| 59,60 | Final test of basic diagnosis course                             | Paper examination                      | Tominaga, |                                      |

2017年度

# Oral and Maxillofacial Surgery 1(Pathology and disease mechanisms) (Oral and Maxillofacial Surgery 1(Pathology and disease mechanisms))

|       |  |     |          |    |                                  |     |   |
|-------|--|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1～3 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (research) | 単位数 | 2 |
| 授業方法  | 講義・演習  | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Tominaga K.  |     |          |    |                                  |     |   |
| 担当教員  | 富永 和宏、笹栗 正明、上原 雅隆、土生 学、吉賀 大午、岩永 賢二郎、三次 翔、高橋 理、河野 通直、藤井 誠子  |     |          |    |                                  |     |   |
|       | Supervisor of Oral and Maxillofacial Surgery : Tominaga, Uehara,<br>Specialist in Oral and Maxillofacial Surgery : Tominaga, Sasaguri, Uehara, Habu, Iwanaga, Yoshiga, |     |          |    |                                  |     |   |

## 授業の概要

【Language】 English and Japanese

To acquire the basic knowledge of various disease models in orofacial region

## 学生の到達目標

- 1.To acquire the basic skills of histopathological specimens
- 2.To acquire the basic skills of immunohistopathological staining
- 3.To acquire the knowledge of osteonecrosis model induced by bisphosphonate
- 4.To acquire the knowledge of arthritis model of temporomandibular joint
- 5.To acquire the knowledge of transplanted cancer model

## テキスト

出)

著)

## 参考書

出)

著)

## 成績評価方法・基準

| 評価項目                                  | 割合   |
|---------------------------------------|------|
| practice outcome and oral examination | 100% |

## その他

2017年度

# Oral and Maxillofacial Surgery 1(Pathology and disease mechanisms) (Oral and Maxillofacial Surgery 1(Pathology and disease mechanisms))

|       |  |     |          |    |                                  |     |   |
|-------|--|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (research) | 単位数 | 2 |
| 授業方法  | 講義・演習  | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Tominaga K.  |     |          |    |                                  |     |   |
| 担当教員  | 富永 和宏、笹栗 正明、上原 雅隆、土生 学、吉賀 大午、岩永 賢二郎、三次 翔、高橋 理、河野 通直、藤井 誠子  |     |          |    |                                  |     |   |
|       | Supervisor of Oral and Maxillofacial Surgery : Tominaga, Uehara,<br>Specialist in Oral and Maxillofacial Surgery : Tominaga, Sasaguri, Uehara, Habu, Iwanaga, Yoshiga, |     |          |    |                                  |     |   |

## 授業計画

| 回  | 学習内容   | 授業方法                 | 担当教員               | 事前・事後学習<br>学習課題                      |
|----|--|----------------------|--------------------|--------------------------------------|
| 1  | Processing of histopathological specimens 1: from tissue fixation to embedding           | Lecture and practice | Takahashi          | Preparation and review of text book  |
| 2  | Processing of histopathological specimens 2: decalcification and slicing                 | Lecture and practice | Takahashi, Fujii   | Preparation and review of text book  |
| 3  | Processing of histopathological specimens 3: H-E staining                                | Lecture and practice | Fujii              | Preparation and review of text book  |
| 4  | Immunohistopathological staining 1:undecalcified specimens                               | Lecture and practice | Mitsugi            | Preparation and review of text book  |
| 5  | Immunohistopathological staining 2: decalcified specimens                                | Lecture and practice | Mitsugi, Hayakawa  | Preparation and review of text book  |
| 6  | Arthritis model of the temporomandibular joint: the impact and the mechanisms            | Lecture and practice | Hayakawa           | Preparation and review of text book  |
| 7  | Histopathological findings of the arthritis model  | lecture              | Habu,              | Preparation and review of text book  |
| 8  | Model of bisphosphonate related osteonecrosis of the jaw : the impact and the mechanisms | lecture              | Habu, Iwanaga      | Preparation and review of text book  |
| 9  | BRONJ model on osteoporotic animals: the impact and the mechanisms                       | lecture              | Iwanaga,           | Preparation and review of text book  |
| 10 | Histopathological findings of the BRONJ model  | lecture              | Uehara,            | Preparation and review of text book  |
| 11 | Immunohistopathological findings of the BRONJ model                                      | lecture              | Uehara, Yoshiga    | Preparation and review of text book  |
| 12 | Development of treatment methods using BRONJ models                                      | lecture              | Yoshiga,           | Preparation and review of text book  |
| 13 | Transplanted cancer: the impact and the mechanisms                                       | lecture              | Sasaguri,          | Preparation and review of text book  |
| 14 | Histopathological findings of the transplanted cancer                                    | lecture              | Sasaguri, Tominaga | Preparation and review of text book  |
| 15 | Oral examination   |                      | Tominaga,          | Preparation of research presentation |

2017年度

# Oral and Maxillofacial Surgery 2 (Drug and gene induction) (Oral and Maxillofacial Surgery 2 (Drug and gene induction))

|       |  |     |          |    |                                  |     |   |
|-------|--|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (research) | 単位数 | 2 |
| 授業方法  | 講義・演習  | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Tominaga K.  |     |          |    |                                  |     |   |
| 担当教員  | 富永 和宏、笹栗 正明、上原 雅隆、土生 学、吉賀 大午、岩永 賢二郎、三次 翔、高橋 理、河野 通直、藤井 誠子  |     |          |    |                                  |     |   |
|       | Supervisor of Oral and Maxillofacial Surgery : Tominaga, Uehara,<br>Specialist in Oral and Maxillofacial Surgery : Tominaga, Sasaguri, Uehara, Habu, Iwanaga, Yoshiga, |     |          |    |                                  |     |   |

## 授業の概要

【Language】English and Japanese

To acquire the skills of electroporation and sonoporation

## 学生の到達目標

- 1.To acquire the basic skills of cell culture
- 2.To acquire the basic skills of microorganisms culture
- 3.To acquire the basic skills of DNA management
4. To acquire the basic skills of electroporation and sonoporation
- 5.To acquire the basic analyzing methods

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                                  | 割合   |
|---------------------------------------|------|
| practice outcome and oral examination | 100% |

## その他

2017年度

# Oral and Maxillofacial Surgery 2 (Drug and gene induction) (Oral and Maxillofacial Surgery 2 (Drug and gene induction))

|       |  |     |          |    |                                  |     |   |
|-------|--|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (research) | 単位数 | 2 |
| 授業方法  | 講義・演習  | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Tominaga K.  |     |          |    |                                  |     |   |
| 担当教員  | 富永 和宏、笹栗 正明、上原 雅隆、土生 学、吉賀 大午、岩永 賢二郎、三次 翔、高橋 理、河野 通直、藤井 誠子  |     |          |    |                                  |     |   |
|       | Supervisor of Oral and Maxillofacial Surgery : Tominaga, Uehara,<br>Specialist in Oral and Maxillofacial Surgery : Tominaga, Sasaguri, Uehara, Habu, Iwanaga, Yoshiga, |     |          |    |                                  |     |   |

## 授業計画

| 回     | 学習内容   | 授業方法                 | 担当教員      | 事前・事後学習<br>学習課題                      |
|-------|--|----------------------|-----------|--------------------------------------|
| 1     | cell culture 1: aseptic processing             | Lecture and practice | Takahashi | Preparation and review of text book  |
| 2,3   | Cell culture 2: subcultivation                 | Lecture and practice | Fujii     | Preparation and review of text book  |
| 4     | Bacterial culture                              | Lecture and practice | Mitsugi   | Preparation and review of text book  |
| 5,6   | Extraction of DNA                              | Lecture and practice | Hayakawa  | Preparation and review of text book  |
| 7     | Electroporation                                | Lecture and practice | Habu      | Preparation and review of text book  |
| 8     | Sonoporation                                   | Lecture and practice | Iwanaga,  | Preparation and review of text book  |
| 9,10  | Analyzing method 1: polymerase chain reaction  | Lecture and practice | Uehara    | Preparation and review of text book  |
| 11,12 | Analyzing method 2: western blotting and ELISA | Lecture and practice | Yoshiga   | Preparation and review of text book  |
| 13,14 | Analyzing method 3: flowcytometry              | Lecture and practice | Sasaguri, | Preparation and review of text book  |
| 15    | Oral examination                               |                      | Tominaga  | Preparation of research presentation |

2017年度

# Oral and Maxillofacial Surgery 3 (Conferences) (Oral and Maxillofacial Surgery 3 (Conferences))

|       |   |     |          |    |                                  |     |   |
|-------|---|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades  | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習   | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                  |     |   |
| 科目責任者 | Tominaga K.   |     |          |    |                                  |     |   |
| 担当教員  | 富永 和宏、笹栗 正明、上原 雅隆、土生 学、吉賀 大午、岩永 賢二郎、三次 翔、高橋 理、河野 通直、藤井 誠子<br>Supervisor of Oral and Maxillofacial Surgery : Tominaga, Uehara,<br>Specialist in Oral and Maxillofacial Surgery : Tominaga, Sasaguri, Uehara, Habu, Iwanaga, Yoshiga, |     |          |    |                                  |     |   |

## 授業の概要

【Language】 English and Japanese

Case conference, Research conference, Circle reading of English text book of OMFS, Attending to team approach conference

## 学生の到達目標

To improve comprehension of the clinical and research background

To improve comprehension of the clinical and research future scope

To be critical reader

## テキスト

出) (著)

## 参考書

出) (著)

## 成績評価方法・基準

| 評価項目         | 割合   |
|--------------|------|
| presentation | 100% |

The contents of their presentation are evaluated by the instructors.

## その他



2017年度

# Oral and Maxillofacial Surgery 3 (Conferences) (Oral and Maxillofacial Surgery 3 (Conferences))

|       |  |     |          |    |                                  |     |   |
|-------|--|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習  | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Tominaga K.  |     |          |    |                                  |     |   |
| 担当教員  | 富永 和宏、笹栗 正明、上原 雅隆、土生 学、吉賀 大午、岩永 賢二郎、三次 翔、高橋 理、河野 通直、藤井 誠子  |     |          |    |                                  |     |   |
|       | Supervisor of Oral and Maxillofacial Surgery : Tominaga, Uehara,<br>Specialist in Oral and Maxillofacial Surgery : Tominaga, Sasaguri, Uehara, Habu, Iwanaga, Yoshiga, |     |          |    |                                  |     |   |

## 授業計画

| 回    | 学習内容   | 授業方法                    | 担当教員   | 事前・事後学習<br>学習課題              |
|------|--|-------------------------|--|------------------------------|
| 1-15 | Back ground and future scope of individual researches and clinical cases | Conference presentation | Tominaga<br>Sasaguri<br>Uehara<br>Habu<br>Iwanaga<br>Yoshig<br>Takahashi<br>Mitsugi<br>Fujii<br>Hayakawa | Research of related articles |

2017年度

# Oral Medicine ( Basic Course ) (Oral Medicine ( Basic Course ) )

|       |  |     |          |    |                                     |     |   |
|-------|--|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective<br>(clinical) | 単位数 | 2 |
| 授業方法  | 講義・演習  | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                     |     |   |
| 科目責任者 | Yoshioka I.  |     |          |    |                                     |     |   |
| 担当教員  | 吉岡 泉、宮本 郁也、國領 真也<br>Advisor and Specialist of Oral and Maxillofacial Surgery : Yoshioka, Miyamoto,<br>Certifying physician of Oral and Maxillofacial Surgery : Kokuryo |     |          |    |                                     |     |   |

## 授業の概要

The purpose of oral medicine is not only to examine the oral cavity of a dental patient, but also diagnose and treat oral disease in consideration of the patient's systemic backgrounds. Oral Medicine is the discipline of dentistry with the internal medical approach. We will study about the basic way of thinking of oral medicine.

## 学生の到達目標

- 1 . You can diagnose and treat oral disease in consideration of systemic disease.
- 2 . You can understand the effects that oral disease can affect to systemic status and systemic disease can affect to oral disease, when you treat the patient of oral disease with systemic disease.
- 3 . You can understand the medical relationship and team medicine between medical doctors, co-staff and other related people.

## テキスト

Oral Surgery (Japanese)  
出 )Ishiyaku Publishers, Inc

著 )Kanemitsu Shirasuna, Kogo  
Mikihiko edt

## 参考書

出 ) 著 )

## 成績評価方法・基準

| 評価項目   | 割合  |
|--|-----|
| report after each lecture (1*4points) 1st-15th | 60% |
| portfolios (1*4points) 1st-10th                | 40% |

## その他

Choose an article or suggestive paper that you would like to introduce and discuss with the members.

2017年度

# Oral Medicine ( Basic Course ) (Oral Medicine ( Basic Course ) )

|       |  |     |          |    |                                     |     |   |
|-------|--|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective<br>(clinical) | 単位数 | 2 |
| 授業方法  | 講義・演習  | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                     |     |   |
| 科目責任者 | Yoshioka I.  |     |          |    |                                     |     |   |
| 担当教員  | 吉岡 泉、宮本 郁也、國領 真也<br>Advisor and Specialist of Oral and Maxillofacial Surgery : Yoshioka, Miyamoto,<br>Certifying physician of Oral and Maxillofacial Surgery : Kokuryo |     |          |    |                                     |     |   |

## 授業計画

| 回  | 学習内容   | 授業方法    | 担当教員     | 事前・事後学習<br>学習課題                             |
|----|--|---------|----------|---|
| 1  | General statements of Oral Medicine, diagnoses of Oral Medicine<br>You will study the diagnoses and treatments of oral disease with internal medical approach. And you can study the relationship between oral and systemic disease. | Lecture | Yoshioka | Pre reading of literature and textbook      |
| 2  | Treatment and diagnoses of disease of oral mucosa.<br>You will study about the structure of Oral mucosa. And you can study about the characteristics, symptom, diagnoses and treatments of disease of oral mucosa.                   | Lecture | Yoshioka | Pre-post reading of literature and textbook |
| 3  | Treatment and diagnoses of temporomandibular disease.<br>You will study the function and structure of temporomandibular joint, classification of temporomandibular disease, and differential diagnoses.                              | Lecture | Yoshioka | Pre-post reading of literature and textbook |
| 4  | Treatment and diagnoses of Dry Mouth<br>You will study the classification, symptom, differential diagnosis and treatment of Dry Mouth.   | Lecture | Yoshioka | Pre-post reading of literature and textbook |
| 5  | Treatment and diagnoses of oral psychosomatic disease.<br>You will study the classification, symptom, differential diagnosis and treatment of oral psychosomatic disease.  | Lecture | Yoshioka | Pre-post reading of literature and textbook |
| 6  | Treatments of Oro-facial pain and taste disorder.<br>You will study the diagnoses and treatment plan of Oro-facial pain and taste disorder.  | Lecture | Miyamoto | Pre-post reading of literature and textbook |
| 7  | General principles of antibiotic therapy.<br>You will study the classification, characteristics and usage of antibiotic therapy.   | Lecture | Miyamoto | Pre-post reading of literature and textbook |
| 8  | Practical managements of arthrocentesis of TMJ.<br>You will study about arthrocentesis of TMJ  | Lecture | Miyamoto | Pre-post reading of literature and textbook |
| 9  | Perioperative oral management on patients of cancer.<br>You will study about the significance of perioperative oral management on patients of cancer and practical techniques of management.   | Lecture | Miyamoto | Pre-post reading of literature and textbook |
| 10 | Non-surgical treatment of Oral cancer.<br>You will study about non-surgical treatment of oral malignancy such as chemotherapy, immunotherapy and so on.  | Lecture | Miyamoto | Pre-post reading of literature and textbook |
| 11 | Oral treatment of cardiovascular disease and respiratory patients.<br>You will study about the important points about oral treatment of cardiovascular and respiratory disease patients.   | Lecture | Kokuryo  | Pre-post reading of literature and textbook |
| 12 | Oral treatment of metabolism, endocrinology and gynecological diseases patients.<br>You will study about the important points about oral treatment of metabolism, endocrinology and gynecological diseases patients.                 | Lecture | Kokuryo  | Pre-post reading of literature and textbook |
| 13 | Oral treatment of digestive, urological diseases patients.<br>You will study about the important points about the oral treatment of digestive, urological diseases patients.   | Lecture | Kokuryo  | Pre-post reading of literature and textbook |
| 14 | Oral treatment of blood, autoimmune disease patients.<br>You will study about the important points about the oral treatment of blood, autoimmune disease patients.   | Lecture | Kokuryo  | Pre-post reading of literature and textbook |
| 15 | Medical cooperation/ Summary<br>You will study about clinic, hospital collaboration, medical collaboration, medical-dental collaboration multidisciplinary collaboration and consultation for the purpose of team medicine.          | Lecture | Kokuryo  | Post reading of literature and textbook     |

2017年度

# Oral Medicine (Advanced Course ) (Oral Medicine (Advanced Course ))

|       |   |     |           |    |                                  |     |   |
|-------|---|-----|-----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades  | 期区分 | 通年        | 科目 | Compulsory / Elective (Clinical) | 単位数 | 4 |
| 授業方法  | 実習  | 時間数 | 120 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |           |    |                                  |     |   |
| 科目責任者 | Yoshioka K.   |     |           |    |                                  |     |   |
| 担当教員  | 吉岡 泉、宮本 郁也、國領 真也、坂口 修、鶴島 弘基、大澤 賢次、田中 純平<br>Advisor and Specialist of Oral and Maxillofacial Surgery : Yoshioka, Miyamoto,<br>Certifying physician of Oral and Maxillofacial Surgery : Kokuryo |     |           |    |                                  |     |   |

## 授業の概要

【Language】 English and Japanese

In this course, you will practice basic skills about oral mucosal disease, temporomandibular disorders cancer, orofacial pain and dry mouth. Under the management by Supervisors, you will carry out simulation training and clinical practice, and acquire fundamental knowledge as well as skills for a specialist in the area of oral medicine.

## 学生の到達目標

To acquire fundamental knowledge and skills about oral mucosal disease, temporomandibular disorders and dry mouth.

You should achieve following assignments;

- Construction of good relationship with patients and stuffs
- Collection of clinical cases
- Acquisition of skills about oral mucosal disease, temporomandibular disorders cancer, orofacial pain and dry mouth.

## テキスト

Oral Surgery (Japanese)

出 )Ishiyaku Publishers, Inc

著 )Kanemitsu Shirasuna, Kogo  
Mikihiko edt

## 参考書

出 )

著 )

## 成績評価方法・基準

| 評価項目   | 割合  |
|--|-----|
| report after each lecture (1*4points) 1st-15th | 60% |
| portfolios (1*4points) 1st-10th                | 40% |

## その他

Choose an article or suggestive paper that you would like to introduce and discuss with the members.

2017年度

# Oral Medicine (Advanced Course ) (Oral Medicine (Advanced Course ))

|       |   |     |           |    |                                  |     |   |
|-------|---|-----|-----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades  | 期区分 | 通年        | 科目 | Compulsory / Elective (Clinical) | 単位数 | 4 |
| 授業方法  | 実習  | 時間数 | 120 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |           |    |                                  |     |   |
| 科目責任者 | Yoshioka K.   |     |           |    |                                  |     |   |
| 担当教員  | 吉岡 泉、宮本 郁也、國領 真也、坂口 修、鶴島 弘基、大澤 賢次、田中 純平<br>Advisor and Specialist of Oral and Maxillofacial Surgery : Yoshioka, Miyamoto,<br>Certifying physician of Oral and Maxillofacial Surgery : Kokuryo |     |           |    |                                  |     |   |

## 授業計画

| 回     | 学習内容  | 授業方法     | 担当教員           | 事前・事後学習<br>学習課題                        |
|-------|---|----------|----------------|--|
| 1,2   | Oral mucosal diseases1<br>You will learn clinical diagnostic reasoning.(1)            | Practice | Tanaka         | Pre reading of literature and textbook |
| 3,4   | Oral mucosal diseases2<br>You will learn clinical diagnostic reasoning.(2)            | Practice | Tanaka         | Pre reading of literature and textbook |
| 5,6   | Oral mucosal diseases3<br>You will learn clinical diagnostic reasoning.(3)            | Practice | Tanaka         | Pre reading of literature and textbook |
| 7,8   | Oral mucosal diseases4<br>You will learn treatment for oral mucosal disease.          | Practice | Tanaka         | Pre reading of literature and textbook |
| 9,10  | Temporomandibular disorder1<br>You will learn clinical diagnostic reasoning. (1)      | Practice | Tanaka         | Pre reading of literature and textbook |
| 11,12 | Temporomandibular disorder2<br>You will learn clinical diagnostic reasoning.(2)       | Practice | Sakaguchi      | Pre reading of literature and textbook |
| 13,14 | Temporomandibular disorder3<br>You will learn clinical diagnostic reasoning.(3)       | Practice | Sakaguchi      | Pre reading of literature and textbook |
| 15,16 | Temporomandibular disorder4<br>You will learn treatment for TMD.( physical therapy)   | Practice | Sakaguchi      | Pre reading of literature and textbook |
| 17,18 | Temporomandibular disorder5<br>You will learn treatment for TMD.( splint therapy)     | Practice | Sakaguchi      | Pre reading of literature and textbook |
| 19,20 | Temporomandibular disorder6<br>You will learn treatment for TMD.( manipulation)       | Practice | Sakaguchi      | Pre reading of literature and textbook |
| 21,22 | Temporomandibular disorder7<br>You will learn treatment for TMD.( arthrocentesis)     | Practice | Kokuryo        | Pre reading of literature and textbook |
| 23,24 | Temporomandibular disorder8<br>You will learn treatment for TMD.( surgical operation) | Practice | Kokuryo        | Pre reading of literature and textbook |
| 25,26 | Dislocation of the temporomandibular joint1<br>You will learn conservative treatment. | Practice | Kokuryo        | Pre reading of literature and textbook |
| 27,28 | Dislocation of the temporomandibular joint2<br>You will learn surgical operation.     | Practice | Kokuryo        | Pre reading of literature and textbook |
| 29,30 | Tumor of the temporomandibular joint<br>You will learn surgical operation.            | Practice | Kokuryo        | Pre reading of literature and textbook |
| 31,32 | Dry mouse1<br>You will learn clinical diagnostic reasoning.                           | Practice | Tsurushim<br>a | Pre reading of literature and textbook |

2017年度

# Oral Medicine (Advanced Course ) (Oral Medicine (Advanced Course ))

|       |   |     |           |    |                                  |     |   |
|-------|---|-----|-----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades  | 期区分 | 通年        | 科目 | Compulsory / Elective (Clinical) | 単位数 | 4 |
| 授業方法  | 実習  | 時間数 | 120 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |           |    |                                  |     |   |
| 科目責任者 | Yoshioka K.   |     |           |    |                                  |     |   |
| 担当教員  | 吉岡 泉、宮本 郁也、國領 真也、坂口 修、鶴島 弘基、大澤 賢次、田中 純平<br>Advisor and Specialist of Oral and Maxillofacial Surgery : Yoshioka, Miyamoto,<br>Certifying physician of Oral and Maxillofacial Surgery : Kokuryo |     |           |    |                                  |     |   |

| 回     | 学習内容   | 授業方法     | 担当教員           | 事前・事後学習<br>学習課題                        |
|-------|--|----------|----------------|--|
| 33,34 | Dry mouse2<br>You will learn clinical diagnostic reasoning.                              | Practice | Tsurushim<br>a | Pre reading of literature and textbook |
| 35,36 | Dry mouse3<br>You will learn clinical diagnostic reasoning.                              | Practice | Tsurushim<br>a | Pre reading of literature and textbook |
| 37,38 | Dry mouse4<br>You will learn treatment for dry mouth.                                    | Practice | Tsurushim<br>a | Pre reading of literature and textbook |
| 39,40 | Oral psychosomatic disease 1<br>You will learn clinical diagnostic reasoning.            | Practice | Tsurushim<br>a | Pre reading of literature and textbook |
| 41,42 | Oral psychosomatic disease 2<br>You will learn clinical diagnostic reasoning.            | Practice | Osawa          | Pre reading of literature and textbook |
| 43,44 | Oral psychosomatic disease 3<br>You will learn clinical diagnostic reasoning.            | Practice | Osawa          | Pre reading of literature and textbook |
| 45,46 | Oral psychosomatic disease 4<br>You will learn treatment for oral psychosomatic disease. | Practice | Osawa          | Pre reading of literature and textbook |
| 47,48 | Orofacial pain1<br>You will learn clinical diagnostic reasoning.                         | Practice | Osawa          | Pre reading of literature and textbook |
| 49,50 | Orofacial pain2<br>You will learn clinical diagnostic reasoning.                         | Practice | Osawa          | Pre reading of literature and textbook |
| 51,52 | Orofacial pain3<br>You will learn clinical diagnostic reasoning.                         | Practice | Miyamoto       | Pre reading of literature and textbook |
| 53,54 | Orofacial pain4<br>You will learn treatment for orofacial pain.                          | Practice | Miyamoto       | Pre reading of literature and textbook |
| 55,56 | Chemotherapy<br>You will learn chemotherapy for oral cancer.                             | Practice | Miyamoto       | Pre reading of literature and textbook |
| 57,58 | Radiation therapy<br>You will learn radiation therapy for oral cancer.                   | Practice | Miyamoto       | Pre reading of literature and textbook |
| 59,60 | Chemoradiation therapy<br>You will learn chemoradiation therapy for oral cancer          | Practice | Miyamoto       | Pre reading of literature and textbook |

2017年度

# Oral Medicine (Advanced Course ) (Oral Medicine (Advanced Course ))

|       |  |     |          |    |                                  |     |   |
|-------|--|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (Clinical) | 単位数 | 2 |
| 授業方法  | 実習   | 時間数 | 60 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Yoshioka I.  |     |          |    |                                  |     |   |
| 担当教員  | 吉岡 泉、鶴島 弘基、大澤 賢次<br>Advisor and Specialist of Oral and Maxillofacial Surgery : Yoshioka, Miyamoto,<br>Certifying physician of Oral and Maxillofacial Surgery : Kokuryo |     |          |    |                                  |     |   |

## 授業の概要

【Language】 English and Japanese

In this course, you will practice basic skills about oral treatment of the patients with systemic disease. Under the management by Supervisors, you will carry out simulation training and clinical practice, and acquire fundamental knowledge as well as skills for a specialist in the area of oral medicine.

## 学生の到達目標

To acquire fundamental knowledge and skills about oral treatment of the patients with systemic disease. .

You should achieve following assignments;

- Construction of good relationship with patients and stuffs
- Collection of clinical cases
- Acquisition of skills about oral treatment of the patients with systemic disease.

## テキスト

出) 著)

## 参考書

Oral and maxillofacial surgery  
出) Ishiyaku Published

著) Shirasuna K., kogou M.

## 成績評価方法・基準

| 評価項目              | 割合  |
|-------------------|-----|
| case presentation | 60% |
| report            | 40% |

## その他

2017年度

# Oral Medicine (Advanced Course ) (Oral Medicine (Advanced Course ))

|       |  |     |          |    |                                  |     |   |
|-------|--|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (Clinical) | 単位数 | 2 |
| 授業方法  | 実習   | 時間数 | 60 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Yoshioka I.  |     |          |    |                                  |     |   |
| 担当教員  | 吉岡 泉、鶴島 弘基、大澤 賢次<br>Advisor and Specialist of Oral and Maxillofacial Surgery : Yoshioka, Miyamoto,<br>Certifying physician of Oral and Maxillofacial Surgery : Kokuryo |     |          |    |                                  |     |   |

## 授業計画

| 回     | 学習内容  | 授業方法     | 担当教員        | 事前・事後学習<br>学習課題                        |
|-------|---|----------|-------------|--|
| 1,2   | Hypertension<br>You will learn oral treatment for patients with hypertension.   | Practice | Yoshioka    | Pre reading of literature and textbook |
| 3,4   | Heart disease<br>You will learn oral treatment for patients with heart disease.   | Practice | Yoshioka    | Pre reading of literature and textbook |
| 5,6   | Respiratory disease<br>You will learn oral treatment for patients with respiratory disease.   | Practice | Yoshioka    | Pre reading of literature and textbook |
| 7,8   | Diabetes mellitus<br>You will learn oral treatment for patients with diabetes mellitus.   | Practice | Yoshioka    | Pre reading of literature and textbook |
| 9,10  | Gynecological disease - pregnant women<br>You will learn oral treatment for patients with gynecological disease and pregnant women. | Practice | Yoshioka    | Pre reading of literature and textbook |
| 11,12 | Hemodyscrasia<br>You will learn oral treatment for patients with hemodyscrasia.   | Practice | Tsurushim a | Pre reading of literature and textbook |
| 13,14 | Autoimmune disease<br>You will learn oral treatment for patients with autoimmune disease.   | Practice | Tsurushim a | Pre reading of literature and textbook |
| 15,16 | Hepatic disease<br>You will learn oral treatment for patients with hepatic disease.   | Practice | Tsurushim a | Pre reading of literature and textbook |
| 17,18 | Renal disease<br>You will learn oral treatment for patients with renal disease.   | Practice | Tsurushim a | Pre reading of literature and textbook |
| 19,20 | Orthopedic disorder<br>You will learn oral treatment for patients with orthopedic disorder.   | Practice | Tsurushim a | Pre reading of literature and textbook |
| 21,22 | Neurological disease<br>You will learn oral treatment for patients with neurological disease.                                       | Practice | Osawa       | Pre reading of literature and textbook |
| 23,24 | Neurosurgical disease<br>You will learn oral treatment for patients with neurosurgical disease.                                     | Practice | Osawa       | Pre reading of literature and textbook |
| 25,26 | Otorhinolaryngological disease<br>You will learn oral treatment for patients with otorhinolaryngological disease.                   | Practice | Osawa       | Pre reading of literature and textbook |
| 27,28 | Infection<br>You will learn oral treatment for patients with infection.   | Practice | Osawa       | Pre reading of literature and textbook |
| 29,30 | Dermatological disease<br>You will learn oral treatment for patients with dermatological disease.                                   | Practice | Osawa       | Pre reading of literature and textbook |



2017年度

# Oral Medicine (Advanced Course ) (Oral Medicine (Advanced Course ))

|       |   |     |          |    |                                  |     |   |
|-------|---|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades  | 期区分 | 通年       | 科目 | Compulsory / Elective (Clinical) | 単位数 | 2 |
| 授業方法  | 実習  | 時間数 | 60 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                  |     |   |
| 科目責任者 | Osawa K.  |     |          |    |                                  |     |   |
| 担当教員  | 大澤 賢次、田中 純平、坂口 修  |     |          |    |                                  |     |   |
|       | Certifying physician of Oral and Maxillofacial Surgery : Tanaka, Sakaguchi, |     |          |    |                                  |     |   |

## 授業の概要

【Language】English and Japanese

・ In this course, you will learn the medical cooperation through this workshop. Under the management by Supervisors, you will carry out simulation training and clinical practice, and acquire fundamental knowledge as well as skills about medical collaboration.

## 学生の到達目標

To acquire fundamental knowledge and skills about oral mucosal disease, temporomandibular disorders and dry mouth.

You should achieve following assignments;

- ・ Construction of good relationship with patients and stuffs
- ・ Collection of clinical cases
- ・ Acquisition of skills about medical collaboration

## テキスト

Oral Surgery (Japanese)

出) Ishiyaku Publishers, Inc

著) Kanemitsu Shirasuna, Kogo  
Mikihiko edt

## 参考書

出)

著)

## 成績評価方法・基準

| 評価項目         | 割合  |
|--------------|-----|
| Presentation | 60% |
| Report       | 40% |

## その他

2017年度

# Oral Medicine (Advanced Course ) (Oral Medicine (Advanced Course ))

|       |   |     |          |    |                                     |     |   |
|-------|---|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades  | 期区分 | 通年       | 科目 | Compulsory / Elective<br>(Clinical) | 単位数 | 2 |
| 授業方法  | 実習  | 時間数 | 60 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                     |     |   |
| 科目責任者 | Osawa K.  |     |          |    |                                     |     |   |
| 担当教員  | 大澤 賢次、田中 純平、坂口 修  |     |          |    |                                     |     |   |
|       | Certifying physician of Oral and Maxillofacial Surgery : Tanaka, Sakaguchi, |     |          |    |                                     |     |   |

## 授業計画

| 回     | 学習内容   | 授業方法     | 担当教員      | 事前・事後学習<br>学習課題                        |
|-------|--|----------|-----------|--|
| 1,2   | Hospital and hospital cooperation<br>You will learn the hospital and hospital cooperation.   | Practice | Osawa     | Pre reading of literature and textbook |
| 3,4   | Hospital and clinic cooperation<br>You will learn the hospital and clinic cooperation.   | Practice | Osawa     | Pre reading of literature and textbook |
| 5,6   | Medical Consultation<br>You will learn about the consultation.   | Practice | Osawa     | Pre reading of literature and textbook |
| 7,8   | Medical and dental cooperation<br>You will learn the medical and dental cooperation.   | Practice | Osawa     | Pre reading of literature and textbook |
| 9,10  | Multidisciplinary collaboration<br>You will learn the collaboration with doctors.  | Practice | Osawa     | Pre reading of literature and textbook |
| 11,12 | Multidisciplinary collaboration<br>You will learn the collaboration with nurses.   | Practice | Tanaka    | Pre reading of literature and textbook |
| 13,14 | Multidisciplinary collaboration<br>You will learn the collaboration with registered dietitians.  | Practice | Tanaka    | Pre reading of literature and textbook |
| 15,16 | Multidisciplinary collaboration<br>You will learn about the collaboration with dental hygienists.  | Practice | Tanaka    | Pre reading of literature and textbook |
| 17,18 | Multidisciplinary collaboration<br>You will learn about the collaboration with medical social workers.   | Practice | Tanaka    | Pre reading of literature and textbook |
| 19,20 | Multidisciplinary collaboration<br>You will learn the collaboration with personal care workers.  | Practice | Tanaka    | Pre reading of literature and textbook |
| 21,22 | Multidisciplinary collaboration<br>You will learn the collaboration with medical assistants.   | Practice | Sakaguchi | Pre reading of literature and textbook |
| 23,24 | Perioperative oral management of cancer patients 1<br>You will learn the oral management of the patient with cancer undergoing chemotherapy.     | Practice | Sakaguchi | Pre reading of literature and textbook |
| 25,26 | Perioperative oral management of cancer patients 2<br>You will learn the oral management of patient with cancer undergoing radiation therapy.    | Practice | Sakaguchi | Pre reading of literature and textbook |
| 27,28 | Oral management of patient taking bisphosphonates<br>You will learn the oral management of patient taking bisphosphonates.                       | Practice | Sakaguchi | Pre reading of literature and textbook |
| 29,30 | The treatment of Bisphosphonate Related osteonecrosis of the jaw<br>You will learn treatment of Bisphosphonate Related Osteonecrosis of the jaw. | Practice | Sakaguchi | Pre reading of literature and textbook |

2017年度

# Oral Medicine (Jaw Deformity) (Oral Medicine (Jaw Deformity))

|       |  |     |          |    |                                  |     |   |
|-------|--|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (research) | 単位数 | 2 |
| 授業方法  | 講義・演習  | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Yoshioka I.  |     |          |    |                                  |     |   |
| 担当教員  | 吉岡 泉、坂口 修、鶴島 弘基<br>Advisor and Specialist of Oral and Maxillofacial Surgery : Yoshioka,<br>Certifying physician of Oral and Maxillofacial Surgery : Sakaguchi, Tsurushima, |     |          |    |                                  |     |   |

## 授業の概要

【Language】 English and Japanese  
In this course, you will get knowledge and practice basic skills about the research of jaw deformity.

## 学生の到達目標

You should understand following subjects;  
1. The methods of analysis and evaluation about the form of jaw deformity.  
2. The methods of analysis and evaluation about the function of jaw deformity.

## テキスト

Oral and Maxillofacial Surgery  
出) Ishiyaku Publishers, Inc. 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                              | 割合  |
|-----------------------------------|-----|
| reports after the lectures (4x15) | 60% |
| assignments (4x10)                | 40% |

## その他

2017年度

# Oral Medicine (Jaw Deformity) (Oral Medicine (Jaw Deformity))

|       |  |     |          |    |                                  |     |   |
|-------|--|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (research) | 単位数 | 2 |
| 授業方法  | 講義・演習  | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Yoshioka I.  |     |          |    |                                  |     |   |
| 担当教員  | 吉岡 泉、坂口 修、鶴島 弘基<br>Advisor and Specialist of Oral and Maxillofacial Surgery : Yoshioka,<br>Certifying physician of Oral and Maxillofacial Surgery : Sakaguchi, Tsurushima, |     |          |    |                                  |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法                  | 担当教員       | 事前・事後学習<br>学習課題                        |
|----|---|-----------------------|------------|--|
| 1  | Survey of jaw deformities<br>You will learn about the trends of jaw deformities.  | Lectures and Seminars | Yoshioka   | Pre reading of literature and textbook |
| 2  | Inspection of jaw de- -formities<br>You will learn about the trends of jaw deformities.   | Lectures and Seminars | Yoshioka   | Pre reading of literature and textbook |
| 3  | Analysis of jaw defomities<br>You will learn about the analysis of jaw deformities.   | Lectures and Seminars | Yoshioka   | Pre reading of literature and textbook |
| 4  | Preoperative assessment of jaw deformities.<br>You will learn about the Pre- -operative assessment.   | Lectures and Seminars | Yoshioka   | Pre reading of literature and textbook |
| 5  | Preoperative association of jaw deformities.<br>You will learn about the pre- -operative association.   | Lectures and Seminars | Yoshioka   | Pre reading of literature and textbook |
| 6  | Medical cooperation of jaw deformities.<br>You will learn about the medical cooperation.  | Lectures and Seminars | Sakaguchi  | Pre reading of literature and textbook |
| 7  | Orthognatic surgery<br>You will learn about the orthognatic surgery.  | Lectures and Seminars | Sakaguchi  | Pre reading of literature and textbook |
| 8  | Post-operative assessment of jaw deformities.<br>You will earn about the post-operative assessment.   | Lectures and Seminars | Sakaguchi  | Pre reading of literature and textbook |
| 9  | Evaluation of the masti- -catory function<br>you will learn about the Evaluation of the masticatory function.   | Lectures and Seminars | Sakaguchi  | Pre reading of literature and textbook |
| 10 | Psychological evaluation of patients with jaw defor- -mities.<br>You will learn about the psychological evaluation of patients with jaw deform- -ities.   | Lectures and Seminars | Sakaguchi  | Pre reading of literature and textbook |
| 11 | Respiratory function of patients with jaw defor- -mities.<br>you will learn about the relationship between respi- -ratory function and jaw deformities.   | Lectures and Seminars | Tsurushima | Pre reading of literature and textbook |
| 12 | Articulation function of patients with jaw defor- -mities.<br>You will learn about the relationship between arti- -culation function and jaw deformities. | Lectures and Seminars | Tsurushima | Pre reading of literature and textbook |
| 13 | Digestive function of patients with jaw defor- -mities.<br>You will learn about the relationship between digestive function and jaw deformities.          | Lectures and Seminars | Tsurushima | Pre reading of literature and textbook |
| 14 | Three-dimensional evalu- -ation of jaw deformities.<br>You will learn about three- -dimensional evaluation of jaw deformities.                            | Lectures and Seminars | Tsurushima | Pre reading of literature and textbook |
| 15 | Genetic features of patients with jaw deformities.<br>You will learn about genetic features of patients with jaw deformities.                             | Lectures and Seminars | Tsurushima | Pre reading of literature and textbook |

2017年度

# Oral Medicine (Oral Medicine )

|       |  |     |          |    |                                  |     |   |
|-------|--|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (research) | 単位数 | 2 |
| 授業方法  | 講義・演習  | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Miyamoto I.  |     |          |    |                                  |     |   |
| 担当教員  | 宮本 郁也、國領 真也、田中 純平<br>Advisor and Specialist of Oral and Maxillofacial Surgery : Miyamoto,<br>Certifying physician of Oral and Maxillofacial Surgery : Kokuryo, Tanaka, |     |          |    |                                  |     |   |

## 授業の概要

【Language】English and Japanese

In this course, you will learn fundamental knowledge as well as skills for research in the area of oral surgery. Under the management by Supervisors, you will carry out simulation training and clinical practice.

## 学生の到達目標

You should achieve acquisition of skills for research in the area of oral surgery.

## テキスト

Oral Surgery (Japanese)

出) Ishiyaku Publishers, Inc

著) Kanemitsu Shirasuna, Kogo  
Mikihiko edt

## 参考書

出)

著)

## 成績評価方法・基準

| 評価項目   | 割合  |
|--|-----|
| report after each lecture (1st ~ 15th, 1x4 points) | 60% |
| submission of exercises (1st - 10th, 1x4 points)   | 40% |

## その他

2017年度

# Oral Medicine (Oral Medicine )

|       |  |     |          |    |                                  |     |   |
|-------|--|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (research) | 単位数 | 2 |
| 授業方法  | 講義・演習  | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                  |     |   |
| 科目責任者 | Miyamoto I.  |     |          |    |                                  |     |   |
| 担当教員  | 宮本 郁也、國領 真也、田中 純平<br>Advisor and Specialist of Oral and Maxillofacial Surgery : Miyamoto,<br>Certifying physician of Oral and Maxillofacial Surgery : Kokuryo, Tanaka, |     |          |    |                                  |     |   |

## 授業計画

| 回  | 学習内容   | 授業方法                 | 担当教員     | 事前・事後学習<br>学習課題                        |
|----|--|----------------------|----------|--|
| 1  | Bone augmentation research<br>You will learn the trend of bone augmentation research.  | Lecture,<br>Practice | Miyamoto | Pre reading of literature and textbook |
| 2  | Distraction osteogenesis of animal jaw<br>You will learn the distraction osteogenesis of animal jaw.   | Lecture,<br>Practice | Miyamoto | Pre reading of literature and textbook |
| 3  | The animal models of sinus lift<br>You will learn the animal models of sinus lift.   | Lecture,<br>Practice | Miyamoto | Pre reading of literature and textbook |
| 4  | The animal models of graft You will learn the animal models of bone graft.   | Lecture,<br>Practice | Miyamoto | Pre reading of literature and textbook |
| 5  | Manufacturing method of hard tissue specimen<br>You will learn the manufacturing method of hard tissue specimen.   | Lecture,<br>Practice | Miyamoto | Pre reading of literature and textbook |
| 6  | Oral mucosal diseases research<br>You will learn oral mucosal diseases research.   | Lecture,<br>Practice | Kokuryo  | Pre reading of literature and textbook |
| 7  | The sampling method of oral mucosal diseases<br>You will learn the sampling method of oral mucosal diseases.   | Lecture,<br>Practice | Kokuryo  | Pre reading of literature and textbook |
| 8  | The immunologic mechanism of oral mucosal diseases<br>You will learn immunologic mechanism of oral mucosal diseases.                                       | Lecture,<br>Practice | Kokuryo  | Pre reading of literature and textbook |
| 9  | The xerostomia model animal<br>You will learn preparing animal models of xerostomia.   | Lecture,<br>Practice | Kokuryo  | Pre reading of literature and textbook |
| 10 | The metal allergy model animal<br>You will learn preparing animal models of metal allergy.   | Lecture,<br>Practice | Kokuryo  | Pre reading of literature and textbook |
| 11 | Temporomandibular joint disorders research<br>You will learn the trend of temporomandibular joint disorders research.                                      | Lecture,<br>Practice | Tanaka   | Pre reading of literature and textbook |
| 12 | Temporomandibular arthritis model animal<br>You will learn preparing the animal models of temporomandibular arthritis.                                     | Lecture,<br>Practice | Tanaka   | Pre reading of literature and textbook |
| 13 | The sampling method of temporomandibular joint synovial fluids<br>You will learn the sampling method of temporomandibular joint synovial fluids.           | Lecture,<br>Practice | Tanaka   | Pre reading of literature and textbook |
| 14 | The analysis method of temporomandibular joint synovial fluids<br>You will learn the analysis method of temporomandibular joint synovial fluids.           | Lecture,<br>Practice | Tanaka   | Pre reading of literature and textbook |
| 15 | The measurement procedure of temporomandibular joint pain threshold<br>You will learn the measurement procedure of temporomandibular joint pain threshold. | Lecture,<br>Practice | Tanaka   | Pre reading of literature and textbook |

2017年度

# Oral Medicine (Oral Medicine )

|       |   |     |          |    |                                  |     |   |
|-------|---|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades  | 期区分 | 通年       | 科目 | Compulsory / Elective (research) | 単位数 | 2 |
| 授業方法  | 講義・演習   | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                  |     |   |
| 科目責任者 | Yoshioka I.   |     |          |    |                                  |     |   |
| 担当教員  | 吉岡 泉、宮本 郁也、國領 真也、鶴島 弘基、坂口 修、大澤 賢次、田中 純平<br>Advisor and Specialist of Oral and Maxillofacial Surgery : Yoshioka, Miyamoto,<br>Certifying physician of Oral and Maxillofacial Surgery : Kokuryo, Sakaguchi, Tsurushima, Tanaka, Ohtani, |     |          |    |                                  |     |   |

## 授業の概要

You can increase scientific information and understand recent research trend, related to oral medicine ,by reading and presenting English-language journals in turns.

## 学生の到達目標

1. To develop reading skill of English-language journals
2. To develop presentation skill
3. To develop an ability to criticize the journals
4. To understand the background on own research field.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                        | 割合  |
|-----------------------------|-----|
| Selection of article        | 60% |
| Ability of the presentation | 40% |

## その他

You have to choose the article, to prepare the materials necessary for your presentation.

2017年度

# Oral Medicine (Oral Medicine )

|       |   |     |          |    |                                  |     |   |
|-------|---|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades  | 期区分 | 通年       | 科目 | Compulsory / Elective (research) | 単位数 | 2 |
| 授業方法  | 講義・演習   | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                  |     |   |
| 科目責任者 | Yoshioka I.   |     |          |    |                                  |     |   |
| 担当教員  | 吉岡 泉、宮本 郁也、國領 真也、鶴島 弘基、坂口 修、大澤 賢次、田中 純平<br>Advisor and Specialist of Oral and Maxillofacial Surgery : Yoshioka, Miyamoto,<br>Certifying physician of Oral and Maxillofacial Surgery : Kokuryo, Sakaguchi, Tsurushima, Tanaka, Ohtani, |     |          |    |                                  |     |   |

## 授業計画

| 回    | 学習内容  | 授業方法  | 担当教員  | 事前・事後学習<br>学習課題                          |
|------|---|---|---|--|
| 1-15 | English-language journals<br>To learn the background and future prospect of own research work, current topics and so on | Reading and presenting<br>English-language journals in<br>turns | Yoshioka<br>Miyamoto<br>Kokuryo<br>Sakaguchi<br>Tsurushim<br>a<br>Osawa<br>Tanaka<br>Ohtani | Pre- and post-<br>reading of<br>journals |



2017年度

# Dental Anesthesiology (Dental Anesthesiology)

|       |  |     |       |    |                                |     |   |
|-------|--|-----|-------|----|--------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades                           | 期区分 | 通年    | 科目 | Dentistry for disabled persons | 単位数 | 4 |
| 授業方法  | 講義・実習                                  | 時間数 | 120時間 | 曜日 |                                | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                             |     |       |    |                                |     |   |
| 科目責任者 | Harano N                               |     |       |    |                                |     |   |
| 担当教員  | 原野 望、椎葉 俊司、左合 徹平、渡邊 誠之                 |     |       |    |                                |     |   |
|       | Harano N, Shiiba S, Sago T, Watanabe S |     |       |    |                                |     |   |

## 授業の概要

Recently, expansion of the dental service, differentiation and maturity are necessary, because the demands for health medical care of the persons with disabilities increased. Therefore, by this seminar, you can study the type of disabilities and dental features. Besides, you can learn the whole body management of the persons with disabilities.

## 学生の到達目標

1. Understanding the law and social problem of persons with disabilities.
2. Understanding the type of disabilities and dental features.
3. Understanding the dental treatment for persons with disabilities and Behavioral managements.
4. Understanding the whole body management of persons with disabilities.
5. Learning how to operate Sedation.
6. Understanding the role of the Dentistry persons.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目             | 割合  |
|------------------|-----|
| S(100-80 points) | 20% |
| A(79-70 points)  | 40% |
| B(69-60 points)  | 30% |
| C(Failure 59-)   | 10% |

Judgments based on your oral presentations and oral examinations in lectures and practices.

## その他

2017年度

# Dental Anesthesiology (Dental Anesthesiology)

|       |  |     |       |    |                                |     |   |
|-------|--|-----|-------|----|--------------------------------|-----|---|
| 開講年次  | 1 ~ 3 grades                           | 期区分 | 通年    | 科目 | Dentistry for disabled persons | 単位数 | 4 |
| 授業方法  | 講義・実習                                  | 時間数 | 120時間 | 曜日 |                                | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                             |     |       |    |                                |     |   |
| 科目責任者 | Harano N                               |     |       |    |                                |     |   |
| 担当教員  | 原野 望、椎葉 俊司、左合 徹平、渡邊 誠之                 |     |       |    |                                |     |   |
|       | Harano N, Shiiba S, Sago T, Watanabe S |     |       |    |                                |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法                         | 担当教員                                 | 事前・事後学習<br>学習課題                  |
|----|---|------------------------------|--------------------------------------|----------------------------------|
| 1  | Persons with disabilities and social background<br>Psychologic and social problem of disabled person    | Lecture<br>Reading of papers | Harano<br>Watanabe                   | Pre-and post-reading of textbook |
| 2  | Persons with disabilities and social background<br>Special needs and social security of disabled person | Lecture<br>Reading of papers | Harano                               | Pre-and post-reading of textbook |
| 3  | Type of disabilities and dental features<br>Psychogenesis and behavioral disorder                       | Lecture<br>Reading of papers | Harano                               | Pre-and post-reading of textbook |
| 4  | Type of disabilities and dental features<br>Neuropathy and motor deficit                                | Lecture<br>Reading of papers | Harano                               | Pre-and post-reading of textbook |
| 5  | Type of disabilities and dental features<br>Sensory disorder and dysphonics and aphasics                | Lecture<br>Reading of papers | Harano                               | Pre-and post-reading of textbook |
| 6  | Type of disabilities and dental features<br>Eating disorder and dysphagia                               | Lecture<br>Reading of papers | Harano                               | Pre-and post-reading of textbook |
| 7  | Type of disabilities and dental features<br>Mental disorder and behavior disorder                       | Lecture<br>Reading of papers | Harano                               | Pre-and post-reading of textbook |
| 8  | Type of disabilities and dental features<br>Disease and syndrome are to be careful.                     | Lecture<br>Reading of papers | Harano                               | Pre-and post-reading of textbook |
| 9  | Type of disabilities and dental features<br>Elderly who requires nursing care                           | Lecture<br>Reading of papers | Harano                               | Pre-and post-reading of textbook |
| 10 | Dental treatment and behavioral managements<br>Behavior management of disabled person                   | Lecture<br>Reading of papers | Harano                               | Pre-and post-reading of textbook |
| 11 | Dental treatment and behavioral managements<br>Health support of disabled person                        | Lecture<br>Reading of papers | Harano                               | Pre-and post-reading of textbook |
| 12 | Inhalation Sedation<br>Inhalation sedation for the disabled person                                      | Practice                     | Harano<br>Shiiba                     | Pre-and post-reading of textbook |
| 13 | Intravenous Sedation<br>Intravenous sedation for the disabled person                                    | Practice                     | Shiiba<br>Sago                       | Pre-and post-reading of textbook |
| 14 | Role of the Dentistry person<br>Risk assessment and safety management                                   | Practice                     | Harano                               | Pre-and post-reading of textbook |
| 15 | Report meeting<br>Making treatment plans and presenting the real case.                                  | Presentation                 | Harano<br>Shiiba<br>Sago<br>Watanabe | Pre-and post-reading of textbook |

2017年度

# Dental Anesthesiology (Dental Anesthesiology)

|       |                        |     |    |    |                       |     |   |
|-------|------------------------|-----|----|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 4 grades           | 期区分 | 通年 | 科目 | Compulsory (Clinical) | 単位数 | 2 |
| 授業方法  | 講義                     | 時間数 | 30 | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻             |     |    |    |                       |     |   |
| 科目責任者 | Sago T.                |     |    |    |                       |     |   |
| 担当教員  | 左合 徹平、椎葉 俊司、原野 望、渡邊 誠之 |     |    |    |                       |     |   |

## 授業の概要

This course is designed for postgraduates in dentistry aspiring to be a specialist in orofacial pain (OFP). You can learn the pathopoiesis mechanism, diagnostic methods and pain management of OFP throughout the files of real cases in our clinical department. Our department keeps many useful OFP cases on file to acquire a knowledge and a pain management skill for OFP, e.g. trigeminal neuralgia, atypical odontalgia, myofascial pain, primary headache, somatoform disorder, etc. In addition, you can learn the paralytic and spasmodic disease of sensory and the motor nerves, e.g. facial paralysis, facial numbness after dental treatment, etc. At the same time, you can also learn and appropriately comprehend the pathological findings on the respective case through the textbook “ Bell's Orofacial Pains: The Clinical Management of Orofacial Pain ” .

## 学生の到達目標

The course have following contents.

1. The relationship between Patient and dentist
2. The hospital and clinic cooperation
3. The classification of OFP
4. The pathopoiesis mechanism of OFP
5. The pain management for OFP
6. The sensory and motor paralysis in orofacial region
7. Basic life support in dentistry

## テキスト

The Clinical Management of Orofacial Pain  
出) Bell's Orofacial Pains (著)

## 参考書

出) (著)

## 成績評価方法・基準

| 評価項目               | 割合   |
|--------------------|------|
| oral presentations | 100% |

## その他

2017年度

# Dental Anesthesiology (Dental Anesthesiology)

|       |                        |     |    |    |                       |     |   |
|-------|------------------------|-----|----|----|-----------------------|-----|---|
| 開講年次  | 2 ~ 4 grades           | 期区分 | 通年 | 科目 | Compulsory (Clinical) | 単位数 | 2 |
| 授業方法  | 講義                     | 時間数 | 30 | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻             |     |    |    |                       |     |   |
| 科目責任者 | Sago T.                |     |    |    |                       |     |   |
| 担当教員  | 左合 徹平、椎葉 俊司、原野 望、渡邊 誠之 |     |    |    |                       |     |   |

## 授業計画

| 回  | 学習内容   | 授業方法    | 担当教員                           | 事前・事後学習<br>学習課題   |
|----|--|---------|--------------------------------|---|
| 1  | The outline of medical risk management   | lecture | Sago,<br>Watanabe              | Basic Life Support, Venipuncture, endotracheal intubation       |
| 2  | The definition of informed consent   | lecture | Sago,<br>Watanabe              | Collection of cases   |
| 3  | The definition of a medical accident and a medical malpractice                 | lecture | Sago,<br>Watanabe              | Collection of cases   |
| 4  | Cope with an incident and an accident  | lecture | Sago,<br>Watanabe              | Collection of cases   |
| 5  | Pathological finding of OFP<br>A definition of Pain                            | lecture | Shiiba,<br>Sago                | The relationship of unpleasant emotional and sensory experience |
| 6  | Classification of OFP  | lecture | Shiiba,<br>Sago                | The classification of orofacial pain                            |
| 7  | Diagnostic methods for OFP   | lecture | Shiiba,<br>Sago                | Palpation and electro detective threshold                       |
| 8  | OFP<br>nociceptive pain and pathogenesis of referred pain                      | lecture | Shiiba,<br>Sago                | Ectopic pain, Deep nociceptive pain                             |
| 9  | OFP<br>The pathogenesis and treatment of neuropathic pain and psychogenic pain | lecture | Shiiba,<br>Sago                | Allodynia, Hyperalgesia, dyesthesia                             |
| 10 | OFP<br>A principlea fundamental rule in treatment for cancer pain              | lecture | Nunomaki,<br>Sago              | Step ladder, narcotic analgesic                                 |
| 11 | Motor paralysis in orofacial region (facial paralysis)                         | lecture | Nunomaki,<br>Sago              | Stellate ganglion block, The estimation of nerve damage         |
| 12 | Sensory paralysis in orofacial region (trigeminal neuropathy)                  | lecture | Shiiba,<br>Nunomaki,<br>Harano | Stellate ganglion block, The estimation of nerve damage         |
| 13 | Involuntary movement of facial muscle (facial spasm, Meige syndrome)           | lecture | Shiiba,<br>Nunomaki            | Botox, microvascular decompression                              |
| 14 | Involuntary movement of facial muscle (oral dystonia)                          | lecture | Shiiba,<br>Nunomaki,           | Botox, Trigeminal Nerve block                                   |
| 15 | Medication for OFP   | lecture | Shiiba,<br>Sago                | Antidepressant, anticonvulsant, pregabalin, narcotic            |

2017年度

# Dental Anesthesiology (Dental Anesthesiology)

|       |   |     |    |    |             |     |   |
|-------|---|-----|----|----|-------------|-----|---|
| 開講年次  | 2 ~ 4 grades  | 期区分 | 通年 | 科目 | Pain Clinic | 単位数 | 2 |
| 授業方法  | 演習  | 時間数 | 30 | 曜日 |             | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |    |    |             |     |   |
| 科目責任者 | Shunji Shiiba   |     |    |    |             |     |   |
| 担当教員  | 椎葉 俊司、原野 望、左合 徹平、渡邊 誠之                                    |     |    |    |             |     |   |
|       | Shunji Shiiba, Teppei Sago, Nozomu Harano, Seiji Watanabe |     |    |    |             |     |   |

## 授業の概要

This course aims at acquisition of clinical skills for the patients suffering from orofacial pain (OFP) . You can learn the examination, evaluation, diagnosis and treatment skills throughout real cases in our clinical department. After then, You should have appropriate knowledges and treatment skills which are comparable as a specialist of OFP.

## 学生の到達目標

The basic study about following contents.

1. The pathopoiesis mechanism of OFP and paralysis in orofacial region
2. The examination for OFP and paralysis of orofacial region
3. The diagnosis for OFP and paralysis of orofacial region
4. The evaluation for OFP and paralysis of orofacial region
5. The treatment for OFP and paralysis of orofacial region
6. Basic life support in dentistry

## テキスト

Bell's Orofacial Pains: The Clinical Management of Orofacial Pain  
出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                         | 割合   |
|------------------------------|------|
| Report and Case presentation | 100% |

## その他

2017年度

# Dental Anesthesiology (Dental Anesthesiology)

|       |   |     |    |    |             |     |   |
|-------|---|-----|----|----|-------------|-----|---|
| 開講年次  | 2 ~ 4 grades  | 期区分 | 通年 | 科目 | Pain Clinic | 単位数 | 2 |
| 授業方法  | 演習  | 時間数 | 30 | 曜日 |             | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |    |    |             |     |   |
| 科目責任者 | Shunji Shiiba   |     |    |    |             |     |   |
| 担当教員  | 椎葉 俊司、原野 望、左合 徹平、渡邊 誠之                                    |     |    |    |             |     |   |
|       | Shunji Shiiba, Teppei Sago, Nozomu Harano, Seiji Watanabe |     |    |    |             |     |   |

## 授業計画

| 回  | 学習内容   | 授業方法     | 担当教員           | 事前・事後学習<br>学習課題  |
|----|--|----------|----------------|--|
| 1  | The pathopoiesis mechanism of OFP and paralysis in orofacial region (1)<br>A peripheral sensitaization.    | Practice | Shiiba         | Pre- and post-reading of textbook, Collection of cases, sensory nerve ( A , A , C )  |
| 2  | The pathopoiesis mechanism for OFP and paralysis of orofacial region (2)<br>A central sensitaization.      | Practice | Shiiba         | Pre- and post-reading of textbook, Collection of cases, thalamus, secondary neuron   |
| 3  | The pathological findings of OFP and paralysis in orofacial region<br>The simulation of nerve constriction | Practice | Shiiba         | Pre- and post-reading of textbook, Collection of cases, nerve constriction           |
| 4  | The examination for OFP and paralysis of orofacial region<br>A perception of pain threshold                | Practice | Shiiba         | Pre- and post-reading of textbook, Collection of cases, Current perception threshold |
| 5  | The diagnosis for OFP<br>Myofascial pain syndrome; a kind of deep nociceptive pain-1                       | Practice | Shiiba         | Pre- and post-reading of textbook, Collection of cases, trigger point.               |
| 6  | The diagnosis for OFP<br>Myofascial pain syndrome; a kind of deep nociceptive pain-2                       | Practice | Shiiba ,Sago   | Pre- and post-reading of textbook, Collection of cases, trigger point injection.     |
| 7  | he diagnosis for OFP<br>neuropathic pain, psychogenic pain-1   | Practice | Shiiba ,Sago   | Pre- and post-reading of textbook, Collection of cases                               |
| 8  | The diagnosis for OFP<br>neuropathic pain, psychogenic pain -2)  | Practice | Shiiba ,Sago   | Pre- and post-reading of textbook, Collection of cases                               |
| 9  | The diagnosis for OFP<br>cancer pain-1, The estimation of pain   | Practice | Shiiba ,Sago   | Pre- and post-reading of textbook, Collection of cases, Visual analogue scale        |
| 10 | The diagnosis for OFP<br>cancer pain -2, The efficacy of acetaminophen for cancer pain                     | Practice | Shiiba ,Harano | Pre- and post-reading of textbook, Collection of cases                               |

2017年度

# Dental Anesthesiology (Dental Anesthesiology)

|       |   |     |    |    |             |     |   |
|-------|---|-----|----|----|-------------|-----|---|
| 開講年次  | 2 ~ 4 grades  | 期区分 | 通年 | 科目 | Pain Clinic | 単位数 | 2 |
| 授業方法  | 演習  | 時間数 | 30 | 曜日 |             | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |    |    |             |     |   |
| 科目責任者 | Shunji Shiiba   |     |    |    |             |     |   |
| 担当教員  | 椎葉 俊司、原野 望、左合 徹平、渡邊 誠之                                    |     |    |    |             |     |   |
|       | Shunji Shiiba, Teppei Sago, Nozomu Harano, Seiji Watanabe |     |    |    |             |     |   |

| 回  | 学習内容   | 授業方法     | 担当教員                | 事前・事後学習<br>学習課題  |
|----|--|----------|---------------------|--|
| 11 | The diagnosis for OFP<br>cancer pain -2, The efficacy of acetaminophen for cancer pain       | Practice | Shiiba<br>,Watanabe | Pre- and post-reading of textbook, Collection of cases |
| 12 | Sensory paralysis in orofacial region The efficacy of steroid for trigeminal neuropathy)     | Practice | Shiiba<br>,Watanabe | Pre- and post-reading of textbook, Collection of cases |
| 13 | Involuntary movement of facial muscle<br>The nerve block for facial spasm and Meige syndrome | Practice | Shiiba<br>,Watanabe | Pre- and post-reading of textbook, Collection of cases |
| 14 | Involuntary movement of facial muscle<br>The physiotherapy of orofacial dystonia             | Practice | Shiiba              | Pre- and post-reading of textbook, Collection of cases |
| 15 | Medication for OFP   | Practice | Shiiba              | Pre- and post-reading of textbook, Collection of cases |

2017年度

# Anesthesiology (Anesthesiology)

|       |                        |     |    |    |                       |     |   |
|-------|------------------------|-----|----|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 4 grades           | 期区分 | 通年 | 科目 | Compulsory / Elective | 単位数 | 2 |
| 授業方法  | 演習                     | 時間数 | 30 | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻             |     |    |    |                       |     |   |
| 科目責任者 | S.Watanabe             |     |    |    |                       |     |   |
| 担当教員  | 渡邊 誠之、椎葉 俊司、原野 望、左合 徹平 |     |    |    |                       |     |   |

## 授業の概要

Every Thursday evening (from 5:00 p.m.), the topic pick up from the article in the article written in English related to Anesthesiology, and You present the summary of the article to the audience in the journal club.

## 学生の到達目標

- 1 . To augment the ability of the reading and understanding of the article written in English.
- 2 . To understanding the newest topics related to Anesthesiology.
- 3 . To build up the ability to criticize the each part of the articles.

## テキスト

出) 著)

## 参考書

Anestghesiology  
出)LWW Journals 著)Evan D. Kharasch

Anesthesia & Analgesia  
出)Wloters Kluwer 著)Jean-Francois Pittet

British Journal of Anaesthesia  
出)Oxford Journals 著)Ravi P. Mahajan

## 成績評価方法・基準

| 評価項目                              | 割合   |
|-----------------------------------|------|
| oral presentations and discussion | 100% |

## その他

Feel free to contact through the e-mail or visit directly our office, located in the 9th floor of Kyushu Dental University Hospital.



2017年度

# Anesthesiology (Anesthesiology)

|       |                        |     |    |    |                       |     |   |
|-------|------------------------|-----|----|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 4 grades           | 期区分 | 通年 | 科目 | Compulsory / Elective | 単位数 | 2 |
| 授業方法  | 演習                     | 時間数 | 30 | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻             |     |    |    |                       |     |   |
| 科目責任者 | S.Watanabe             |     |    |    |                       |     |   |
| 担当教員  | 渡邊 誠之、椎葉 俊司、原野 望、左合 徹平 |     |    |    |                       |     |   |

## 授業計画

| 回     | 学習内容  | 授業方法                        | 担当教員        | 事前・事後学習<br>学習課題   |
|-------|---|-----------------------------|-------------|---|
| 1-13  | Understanding the background and the newest knowledge in the worldwide articles (Anesthesiology, Anesthesia & Analgesia, British Journal of Anesthesia, et al). You will present and discuss the core of the article in our journal club. | Presentation and discussion | S. Watanabe | Read and think about the topics in the articles related to Anesthesiology . |
| 14-15 | Review  | Lecture<br>Practice         | S. Watanabe | Review of lecture   |

2017年度

# Dental Anesthesiology (Cardiac physiology & Cardiac Medicine ) (Dental Anesthesiology (Cardiac physiology & Cardiac Medicine ))

|       |             |     |          |    |                                  |     |   |
|-------|-------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1-4grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習          | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                  |     |   |
| 科目責任者 | Watanabe S. |     |          |    |                                  |     |   |
| 担当教員  | 渡邊 誠之       |     |          |    |                                  |     |   |

## 授業の概要

Every Monday evening (from 3:00 p.m.), the topic pick up the article in the textbook related to the basic cardiac physiology, and You present the summary of the article to the audience in the journal club.

## 学生の到達目標

- 1 . To augment the ability of the reading and understanding of the article written in English.
- 2 . To understanding the basic science and topics related to the cardiac physiology and cardiac medicine.
- 3 . To build up the ability to criticize the each part of the articles.

## テキスト

Cardiovascular Physiology  
出)

著 )Mohrman and Heller

Pathophysiology of Heart Disease  
出)

著 )Lilly

## 参考書

出)

著)

## 成績評価方法・基準

| 評価項目                              | 割合   |
|-----------------------------------|------|
| oral presentations and discussion | 100% |

## その他

Feel free to contact through the e-mail or visit directly our office, located in the 9th floor of Kyushu Dental University Hospital.

2017年度

# Dental Anesthesiology (Cardiac physiology & Cardiac Medicine ) (Dental Anesthesiology (Cardiac physiology & Cardiac Medicine ))

|       |             |     |          |    |                                  |     |   |
|-------|-------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1-4grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習          | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                  |     |   |
| 科目責任者 | Watanabe S. |     |          |    |                                  |     |   |
| 担当教員  | 渡邊 誠之       |     |          |    |                                  |     |   |

## 授業計画

| 回    | 学習内容   | 授業方法                                      | 担当教員     | 事前・事後学習<br>学習課題  |
|------|--|---|----------|--|
| 1-15 | <p>Understanding the background and the basic knowledge in the textbook. You will present and discuss the core of the article in our journal club.</p> <ol style="list-style-type: none"> <li>1. Cardiac Mechanics</li> <li>2. Events of the Cardiac Cycle</li> <li>3. Valvular Heart Disease</li> <li>4. Cardiac Output</li> <li>5. Coronary Circulation</li> <li>6. Ischemic Heart Disease</li> <li>7. Microcirculation and Lymph</li> <li>8. Heart Failure</li> <li>9. The Cardiomyopathies</li> <li>10. The Pericardium</li> </ol> | Student's presentation & Group discussion | Watanabe | Reading and understanding for the topics of task area. |

2017年度

# Dental Anesthesiology (Cardiac physiology & Cardiac Medicine ) (Dental Anesthesiology (Cardiac physiology & Cardiac Medicine ))

|       |             |     |          |    |                                  |     |   |
|-------|-------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1-4grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習          | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                  |     |   |
| 科目責任者 | Watanabe S. |     |          |    |                                  |     |   |
| 担当教員  | 渡邊 誠之       |     |          |    |                                  |     |   |

## 授業の概要

Every Tuesday evening (from 3:00 p.m.), the topic pick up the article in the textbook related to the basic cardiac physiology, and You present the summary of the article to the audience in the journal club.

## 学生の到達目標

- 1 . To augment the ability of the reading and understanding of the article written in English.
- 2 . To understanding the basic science and topics related to the cardiac physiology and cardiac medicine.
- 3 . To build up the ability to criticize the each part of the articles.

## テキスト

Human Biology 540 Introduction to Cardiovascular Medicine

出) 著)

Cardiovascular Physiology

出) 著)Mohrman and Heller

Pathophysiology of Heart Disease

出) 著)Lilly

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                              | 割合   |
|-----------------------------------|------|
| oral presentations and discussion | 100% |

## その他

Feel free to contact through the e-mail or visit directly our office, located in the 9th floor of Kyushu Dental University Hospital.

2017年度

# Dental Anesthesiology (Cardiac physiology & Cardiac Medicine ) (Dental Anesthesiology (Cardiac physiology & Cardiac Medicine ))

|       |             |     |          |    |                                  |     |   |
|-------|-------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1-4grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習          | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                  |     |   |
| 科目責任者 | Watanabe S. |     |          |    |                                  |     |   |
| 担当教員  | 渡邊 誠之       |     |          |    |                                  |     |   |

## 授業計画

| 回    | 学習内容  | 授業方法                                      | 担当教員       | 事前・事後学習<br>学習課題  |
|------|---|---|------------|--|
| 1-15 | Lecture 1 ~ 10, minor and final exam 11 ~ 15<br>Understanding the background and the basic knowledge in the textbook. You will present and discuss the core of the article in our journal club.<br>1. Cardiac Imaging<br>2. Fetal Development and Circulation<br>3. Congenital Heart Disease<br>4. Peripheral Vascular Disease<br>5. Circulatory Shock<br>6. Arrhythmia Management for the GP<br>7. Exercise and Aging<br>8. Cardiothoracic / Cardiovascular Surgery<br>9. ECG1<br>10. ECG2 | Student's presentation & Group discussion | Watanabe S | Reading and understanding for the topics of task area. |

2017年度

# Dental Anesthesiology (Respiratory physiology and Pulmonary Pathophysiology ) (Dental Anesthesiology (Respiratory physiology and Pulmonary Pathophysiology ))

|       |             |     |          |    |                                  |     |   |
|-------|-------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1-4grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習          | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                  |     |   |
| 科目責任者 | Watanabe S. |     |          |    |                                  |     |   |
| 担当教員  | 渡邊 誠之       |     |          |    |                                  |     |   |

## 授業の概要

Every Monday evening (from 4:00 p.m.), the topic pick up the article in the textbook related to the basic respiratory physiology, and You present the summary of the article to the audience in the journal club.

## 学生の到達目標

- 1 . To augment the ability of the reading and understanding of the article written in English.
- 2 . To understanding the basic science and topics related to the respiratory physiology and pathophysiology.
- 3 . To build up the ability to criticize the each part of the articles.

## テキスト

West ' s Respiratory Physiology: The Essentials, 10th Edition  
出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                              | 割合   |
|-----------------------------------|------|
| oral presentations and discussion | 100% |

## その他

2017年度

# Dental Anesthesiology (Respiratory physiology and Pulmonary Pathophysiology ) (Dental Anesthesiology (Respiratory physiology and Pulmonary Pathophysiology ))

|       |             |     |          |    |                                  |     |   |
|-------|-------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1-4grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習          | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                  |     |   |
| 科目責任者 | Watanabe S. |     |          |    |                                  |     |   |
| 担当教員  | 渡邊 誠之       |     |          |    |                                  |     |   |

## 授業計画

| 回      | 学習内容   | 授業方法                                      | 担当教員       | 事前・事後学習<br>学習課題  |
|--------|--|---|------------|--|
| 1 ~ 15 | <p>Understanding the background and the basic knowledge in the textbook. You will present and discuss the core of the article in our journal club.</p> <ol style="list-style-type: none"> <li>1. Structure and Function</li> <li>2. Ventilation</li> <li>3. Diffusion</li> <li>4. Blood flow and Metabolism</li> <li>5. Ventilation-Perfusion Relationship</li> <li>6. Gas Transport by the blood</li> <li>7. Mechanics of Breathing</li> <li>8. Control of ventilation</li> <li>9. Respiratory system under stress</li> <li>10. Test of pulmonary function</li> </ol> | Student's presentation & Group discussion | Watanabe S | Reading and understanding for the topics of task area. |

2017年度

# Dental Anesthesiology (Respiratory physiology and Pulmonary Pathophysiology ) (Dental Anesthesiology (Respiratory physiology and Pulmonary Pathophysiology ))

|       |             |     |          |    |                                  |     |   |
|-------|-------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1-4grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習          | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                  |     |   |
| 科目責任者 | Watanabe S. |     |          |    |                                  |     |   |
| 担当教員  | 渡邊 誠之       |     |          |    |                                  |     |   |

## 授業の概要

Every Tuesday evening (from 4:00 p.m.), the topic pick up the article in the textbook related to the pulmonary pathophysiology, and You present the summary of the article to the audience in the journal club.

## 学生の到達目標

- 1 . To augment the ability of the reading and understanding of the article written in English.
- 2 . To understanding the basic science and topics related to the respiratory physiology and pulmonary pathophysiology.
- 3 . To build up the ability to criticize the each part of the articles.

## テキスト

Pulmonary Pathophysiology: The Essentials, 8th Edition  
出) (著)

## 参考書

出) (著)

## 成績評価方法・基準

| 評価項目                              | 割合   |
|-----------------------------------|------|
| oral presentations and discussion | 100% |

## その他

Feel free to contact through the e-mail or visit directly our office, located in the 9th floor of Kyushu Dental University Hospital.



2017年度

# Dental Anesthesiology (Respiratory physiology and Pulmonary Pathophysiology ) (Dental Anesthesiology (Respiratory physiology and Pulmonary Pathophysiology ))

|       |             |     |          |    |                                  |     |   |
|-------|-------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1-4grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 演習          | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                  |     |   |
| 科目責任者 | Watanabe S. |     |          |    |                                  |     |   |
| 担当教員  | 渡邊 誠之       |     |          |    |                                  |     |   |

## 授業計画

| 回    | 学習内容  | 授業方法                                      | 担当教員       | 事前・事後学習<br>学習課題  |
|------|---|---|------------|--|
| 1-15 | Lecture 1 ~ 15<br>Understanding the background and the basic knowledge in the textbook. You will present and discuss the core of the article in our journal club.<br>1. Lung function tests and what they mean<br>2. Function of the diseased lung<br>3. Function of the failing lung | Student's presentation & Group discussion | Watanabe S | Reading and understanding for the topics of task area. |

2017年度

# Dental Anesthesiology Basic course (practice) (Dental Anesthesiology Basic course (practice))

|       |             |     |          |    |                                  |     |   |
|-------|-------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1-4grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (Clinical) | 単位数 | 2 |
| 授業方法  | 演習          | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                  |     |   |
| 科目責任者 | Watanabe S. |     |          |    |                                  |     |   |
| 担当教員  | 渡邊 誠之       |     |          |    |                                  |     |   |

## 授業の概要

Lecture will be provided to understanding the basic respiratory and cardia monitoring and the practice related to the content of lecture will be carried out at the end of course.

## 学生の到達目標

Understanding the background and the basic knowledge in the textbook and getting the basic skill of the physiologic monitoring, respiratory and cardiac care.

## テキスト

Visual Manual of Clinical Basic Techniques(Injection and collecting of blood, Tracheal intubation)

出)Yodosha 著)

Perioperative monitoring

出)Yodosha 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                              | 割合   |
|-----------------------------------|------|
| oral presentations and discussion | 100% |

## その他

Feel free to contact through the e-mail or visit directly our office, located in the 9th floor of Kyushu Dental University Hospital.

2017年度

# Dental Anesthesiology Basic course (practice) (Dental Anesthesiology Basic course (practice))

|       |             |     |          |    |                                  |     |   |
|-------|-------------|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1-4grades   | 期区分 | 通年       | 科目 | Compulsory / Elective (Clinical) | 単位数 | 2 |
| 授業方法  | 演習          | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                  |     |   |
| 科目責任者 | Watanabe S. |     |          |    |                                  |     |   |
| 担当教員  | 渡邊 誠之       |     |          |    |                                  |     |   |

## 授業計画

| 回   | 学習内容  | 授業方法                                      | 担当教員       | 事前・事後学習<br>学習課題  |
|-----|---|---|------------|--|
| 1-7 | Lecture and practice<br>1. Respiratory monitoring<br>2. Cardiac monitoring<br>3. Other physiologic monitoring<br>4. Mask ventilation<br>5. Tracheal intubation<br>6. IV line<br>7. Clinical evaluation for respiratory and cardiac function | Student's presentation & Group discussion | Watanabe S | Reading and understanding for the topics of task area. |

2017年度

# Dental Anesthesiology(Advanced course) (Dental Anesthesiology(Advanced course))

|       |             |     |          |    |                       |     |   |
|-------|-------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1-4grades   | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 2 |
| 授業方法  | 演習          | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                       |     |   |
| 科目責任者 | Watanabe S. |     |          |    |                       |     |   |
| 担当教員  | 渡邊 誠之       |     |          |    |                       |     |   |

## 授業の概要

Lecture will be provided to understanding the advanced respiratory and cardia monitoring and the practice related to the content of lecture will be carried out at the end of course.

## 学生の到達目標

Understanding the background and the basic knowledge in the textbook and getting the basic skill of the physiologic monitoring, respiratory and cardiac care.

## テキスト

Visual Manual of Clinical Basic Techniques  
出)Yodosha 著)

Perioperative monitoring  
出)Yodosha 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                              | 割合   |
|-----------------------------------|------|
| oral presentations and discussion | 100% |

## その他

Feel free to contact through the e-mail or visit directly our office, located in the 9th floor of Kyushu Dental University Hospital.

2017年度

# Dental Anesthesiology(Advanced course) (Dental Anesthesiology(Advanced course))

|       |             |     |          |    |                       |     |   |
|-------|-------------|-----|----------|----|-----------------------|-----|---|
| 開講年次  | 1-4grades   | 期区分 | 通年       | 科目 | Compulsory (Clinical) | 単位数 | 2 |
| 授業方法  | 演習          | 時間数 | 30 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                       |     |   |
| 科目責任者 | Watanabe S. |     |          |    |                       |     |   |
| 担当教員  | 渡邊 誠之       |     |          |    |                       |     |   |

## 授業計画

| 回   | 学習内容  | 授業方法                                      | 担当教員       | 事前・事後学習<br>学習課題  |
|-----|---|---|------------|--|
| 1~7 | Lecture and practice<br>1. Advanced Respiratory and cardiac monitoring<br>2. Central venous line, PICC<br>3. Pulmonary arterial catheter<br>4. Artificial ventilation<br>5. Motor Evoked Potential・Sensory Evoked Potential<br>6. rSO <sub>2</sub> , brain metabolism<br>7. Clinical evaluation for advanced respiratory and cardiac function | Student's presentation & Group discussion | Watanabe S | Reading and understanding for the topics of task area. |

2017年度

# Clinical Dental Anesthesiology (Clinical Dental Anesthesiology)

|       |  |     |    |    |                                  |     |   |
|-------|--|-----|----|----|----------------------------------|-----|---|
| 開講年次  | 1-4grades  | 期区分 | 通年 | 科目 | Compulsory / Elective (Clinical) | 単位数 | 2 |
| 授業方法  | 講義   | 時間数 | 30 | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |    |    |                                  |     |   |
| 科目責任者 | Sago T.  |     |    |    |                                  |     |   |
| 担当教員  | 左合 徹平、椎葉 俊司、原野 望、渡邊 誠之<br>Certified Dentists of Dental Anesthesiology:Sago,Shiiba,Harano<br>Specialist of Dental Anesthesiology:Sago,Shiiba,Harano<br>Advisor of Anesthesiology:Watanabe |     |    |    |                                  |     |   |

## 授業の概要

There are general anesthesia, intravenous sedation, inhalation sedation and local anesthesia in clinical dental practice and these skills are essential in making secure dental practice. Various anesthesia method needed to be carried out safely and reliably anatomy, physiology, to understand the basic theory of image diagnosis, preoperative to acquire the knowledge necessary to patient assessment and anesthesia planning.

Simulation from anesthesia planning for the presented cases to perioperative management, performs feedback, enhancing the clinical capabilities of dental anesthesia.

## 学生の到達目標

1. Understanding the skills for collection of patients ' information.
2. Understanding the hospital and clinic cooperation.
3. Understanding the category of anesthesia.
4. Understanding the mechanism of abnormal vital signs.
5. Understanding about the disease requiring anesthesia administrative attention.
6. Learning the corresponding method for abnormal situation during surgery.
7. Learning the basics of advanced cardiac life support.

## テキスト

Dental Anesthesiology

出)Ishiyaku Pub,Inc

著)

Miller ' s Anesthesia

出)

著)

## 参考書

出)

著)

## 成績評価方法・基準

| 評価項目                                     | 割合   |
|--|------|
| oral presentations and oral examinations | 100% |

## その他

2017年度

# Clinical Dental Anesthesiology (Clinical Dental Anesthesiology)

|       |  |     |    |    |                                  |     |   |
|-------|--|-----|----|----|----------------------------------|-----|---|
| 開講年次  | 1-4grades  | 期区分 | 通年 | 科目 | Compulsory / Elective (Clinical) | 単位数 | 2 |
| 授業方法  | 講義   | 時間数 | 30 | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |    |    |                                  |     |   |
| 科目責任者 | Sago T.  |     |    |    |                                  |     |   |
| 担当教員  | 左合 徹平、椎葉 俊司、原野 望、渡邊 誠之<br>Certified Dentists of Dental Anesthesiology:Sago,Shiiba,Harano<br>Specialist of Dental Anesthesiology:Sago,Shiiba,Harano<br>Advisor of Anesthesiology:Watanabe |     |    |    |                                  |     |   |

## 授業計画

| 回  | 学習内容   | 授業方法                         | 担当教員                                    | 事前・事後学習<br>学習課題                  |
|----|--|------------------------------|---|----------------------------------|
| 1  | Collection of preoperative informations  | Lecture<br>Reading of papers | Sago,<br>Watanabe                       | Pre-and post-reading of textbook |
| 2  | Diseases that requires an anesthetic administrative attention (cardiovascular disease)                                       | Lecture<br>Reading of papers | Sago,<br>Watanabe                       | Pre-and post-reading of textbook |
| 3  | Diseases that requiress an anesthetic administrative attention (respiratory disease)   | Lecture<br>Reading of papers | Sago,<br>Watanabe                       | Pre-and post-reading of textbook |
| 4  | Diseases that requiress an anesthetic administrative attention (metabolic disease)   | Lecture<br>Reading of papers | Sago,<br>Watanabe                       | Pre-and post-reading of textbook |
| 5  | Diagnostic imaging   | Lecture<br>Reading of papers | Sago,<br>Watanabe                       | Pre-and post-reading of textbook |
| 6  | Classification and adaptation of various types of anesthesia   | Lecture<br>Reading of papers | Sago, Shiiba                            | Pre-and post-reading of textbook |
| 7  | General anesthesia(drug)<br>Learning about the drug to be used in general anesthesia.  | Lecture<br>Reading of papers | Sago, Shiiba                            | Pre-and post-reading of textbook |
| 8  | General anesthesia (airway management)<br>Learning about the various airway management device, to be proficient in its use.  | Lecture<br>Reading of papers | Sago, Shiiba                            | Pre-and post-reading of textbook |
| 9  | General anesthesia (postoperative management)<br>Learning how to manage post-operative general anesthesia.                   | Lecture<br>Reading of papers | Sago,<br>Harano                         | Pre-and post-reading of textbook |
| 10 | Intravenous sedation<br>Learning about the drug and actual intravenous sedation to be used for intravenous sedation.         | Lecture<br>Reading of papers | Sago,<br>Harano                         | Pre-and post-reading of textbook |
| 11 | Inhalation sedation<br>Pharmacological action of nitrous oxide, we learn about the actual nitrous oxide inhalation sedation. | Lecture<br>Reading of papers | Sago                                    | Pre-and post-reading of textbook |
| 12 | Perioperative troubleshooting<br>Learning about various problems occurring in the perioperative and about the remedy.        | Lecture<br>Reading of papers | Sago                                    | Pre-and post-reading of textbook |
| 13 | Case study   | Lecture<br>Pesentation       | Sago,<br>Shiiba,<br>Harano,<br>Watanabe | Textbook and case presentation   |
| 14 | Case study   | Lecture<br>Pesentation       | Sago,<br>Shiiba,<br>Harano,<br>Watanabe | Textbook and case presentation   |
| 15 | Case study   | Lecture<br>Pesentation       | Sago,<br>Shiiba,<br>Harano,<br>Watanabe | Textbook and case presentation   |

2017年度

# Oral Care and Rehabilitation ( Basic ) (Oral Care and Rehabilitation ( Basic ) )

|       |   |     |           |    |                       |     |   |
|-------|---|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades  | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 講義・実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |           |    |                       |     |   |
| 科目責任者 | Yasuaki Kakinoki  |     |           |    |                       |     |   |
| 担当教員  | 柿木 保明、藤井 航、多田 葉子、木村 貴之、久保田 潤平   |     |           |    |                       |     |   |
|       | Yasuaki Kakinoki, Wataru Fujii, Yoko Tada, Takayuki Kimura, Jumpei Kubota |     |           |    |                       |     |   |

## 授業の概要

【Language】English and Japanese

You will carry out examinations for dysphagia, and learn procedures and effects of rehabilitation and diagnosis for rehabilitation prescription including precise functional exercise.

## 学生の到達目標

You should achieve following assignments;

- 1.Understanding the dysphagia type
- 2.Practicing rehabilitation for dysphagia
- 3.Choice of modified diet for dysphagic persons
- 4.Correspondence for functional prosthesis dental treatment for dysphagia

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                                     | 割合  |
|--|-----|
| report including mini tests              | 10% |
| examinations and unit certification test | 90% |

## その他

CertifiedDentists:Kakinoki,Fujii,Tada,Kimura,Kubota  
Supervisor of DisabilityOralHealth:Kakinoki,Fujii  
CertifyingPhysician:Kakinoki,Fujii,Tada,Kimura,Kubota  
AccreditedSpecialist:Kakinoki,Fujii,Tada  
Supervisor of Gerodontology:Kakinoki,Fujii  
CertifiedDentists of DysphagiaRehabilitation:Kakinoki,Fujii  
CertifiedDentists of Complementary and AlternativeMedicine:Kakinoki,Tada



2017年度

# Oral Care and Rehabilitation ( Basic ) (Oral Care and Rehabilitation ( Basic ) )

|       |   |     |           |    |                       |     |   |
|-------|---|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades  | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 講義・実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |           |    |                       |     |   |
| 科目責任者 | Yasuaki Kakinoki  |     |           |    |                       |     |   |
| 担当教員  | 柿木 保明、藤井 航、多田 葉子、木村 貴之、久保田 潤平   |     |           |    |                       |     |   |
|       | Yasuaki Kakinoki, Wataru Fujii, Yoko Tada, Takayuki Kimura, Jumpei Kubota |     |           |    |                       |     |   |

## 授業計画

| 回     | 学習内容   | 授業方法     | 担当教員     | 事前・事後学習<br>学習課題  |
|-------|--|----------|----------|--|
| 1,2   | Normal development mechanism of eating and swallowing<br>(developmental disability, elderly)                                     | Lecture  | Kakinoki | (Review)<br>Report   |
| 3,4   | Oral care for dysphagic persons  | Practice | Kakinoki | (Review)<br>Report   |
| 5,6   | Functional assessment of eating and swallowing;<br>Inquiry , Interviews of medical history                                       | Practice | Fujii    | (Preparation)<br>RSST, MWST,<br>coughing test,<br>FT   |
| 7,8   | Functional assessment of eating and swallowing;<br>Screening   | Practice | Fujii    | (Preparation)<br>RSST, MWST,<br>coughing test,<br>FT   |
| 9,10  | Examination1   |          | Kakinoki | Feedback   |
| 11,12 | Breathing and Coughing exercise  | Practice | Fujii    | (Preparation)<br>Breathing<br>and Coughing<br>exercise   |
| 13,14 | Open and close mouth exercises;<br>Exercise for trismus<br>Exercise for closed failure   | Practice | Fujii    | (Preparation)<br>Open and<br>close mouth<br>exercises  |
| 15,16 | Exercise for perioral muscle and tongue muscle 1 ;<br>Lip closure exercise,<br>the method of vangede                             | Practice | Kubota   | (Preparation)<br>Lip closure<br>exercise   |
| 17,18 | Exercise for perioral muscle and tongue muscle 2 ;<br>Buccal exercise,<br>the method of vangede,<br>tongue exercise              | Practice | Kubota   | (Preparation)<br>Buccal<br>exercise  |
| 19,20 | Exercise for perioral muscle and tongue muscle 3 ;<br>Soft palate elevation exercise   | Practice | Kubota   | (Preparation)<br>Soft palate<br>elevation<br>exercise  |
| 21,22 | Exercise for perioral muscle and tongue muscle 4 ;<br>Tongue exercise,<br>elevation exercise of tongue dorsum and apex of tongue | Practice | Fujii    | (Preparation)<br>Tongue<br>exercise,<br>elevation<br>exercise of<br>tongue dorsum<br>and apex of<br>tongue |
| 23,24 | Chewing and infeed exercise  | Practice | Fujii    | (Preparation)<br>Chewing and<br>infeed exercise  |
| 25,26 | Exercises of swallowing;<br>Thermal tactile stimulation  | Practice | Fujii    | (Preparation)<br>Thermal tactile<br>stimulation  |

2017年度

# Oral Care and Rehabilitation ( Basic ) (Oral Care and Rehabilitation ( Basic ) )

|       |   |     |           |    |                       |     |   |
|-------|---|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades  | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 講義・実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |           |    |                       |     |   |
| 科目責任者 | Yasuaki Kakinoki  |     |           |    |                       |     |   |
| 担当教員  | 柿木 保明、藤井 航、多田 葉子、木村 貴之、久保田 潤平   |     |           |    |                       |     |   |
|       | Yasuaki Kakinoki, Wataru Fujii, Yoko Tada, Takayuki Kimura, Jumpei Kubota |     |           |    |                       |     |   |

| 回     | 学習内容   | 授業方法     | 担当教員     | 事前・事後学習<br>学習課題  |
|-------|--|----------|----------|--|
| 27,28 | Exercises of swallowing;<br>Tongue recession exercise,<br>Tongue holding maneuver                | Practice | Fujii    | (Preparation)<br>Tongue recession exercise,<br>Tongue holding maneuver                     |
| 29,30 | Exercises of swallowing;<br>Shaker exercises   | Practice | Fujii    | (Preparation)<br>Shaker exercises  |
| 31,32 | Neck relaxation;<br>Neck range of motion expanding exercise,<br>stretch of larynx muscles        | Practice | Kakinoki | (Preparation)<br>Neck range of motion expanding exercise                                   |
| 33,34 | Acquisition of the swallowing procedure;<br>Mendelson maneuver<br>Use of Biofeedback             | Practice | Kakinoki | (Preparation)<br>Mendelson maneuver  |
| 35,36 | Compensatory swallowing<br>neck rotation swallowing, multiple swallowing, alternate swallowing   | Practice | Kimura   | (Preparation)<br>neck rotation swallowing,<br>multiple swallowing,<br>alternate swallowing |
| 37,38 | Examination2   |          | Kakinoki | Feedback   |
| 39,40 | Operation of naso pharyngo laryngoscope  | Practice | Kimura   | (Review)<br>Report   |
| 41,42 | Exploration of dysphagia by naso pharyngo laryngoscope   | Practice | Kimura   | (Review)<br>Report   |
| 43,44 | Procedure of videofluoroscopic examination of swallowing   | Lecture  | Fujii    | (Review)<br>Report   |
| 45,46 | Modification of imitation foods for videofluoroscopic examination of swallowing                  | Practice | Fujii    | (Review)<br>Report   |
| 47,48 | Manufacture of palatal augmentation prosthesis (PAP)1;<br>Impression , manufacture of wire clasp | Practice | Kimura   | (Preparation)<br>wire clasp  |
| 49,50 | Manufacture of PAP2;<br>Adjustment of tongue contact surface form                                | Practice | Kimura   | (Review)<br>Report   |
| 51,52 | Adjustment of PAP;<br>Set and adjustment   | Practice | Kimura   | (Preparation)<br>Adjustment of PAP   |
| 53,54 | Manufacture of palatal Lift prosthesis (PLP)1 ;<br>Impression , manufacture of wire clasp        | Practice | Tada     | (Preparation)<br>Impression for manufacture of PLP   |
| 55,56 | Manufacture of PLP 2 ;   | Practice | Tada     | Report   |
| 57,58 | Adjustment of PLP;<br>Set and adjustment   | Practice | Tada     | (Preparation)<br>Adjustment of PLP   |

2017年度

# Oral Care and Rehabilitation ( Basic ) (Oral Care and Rehabilitation ( Basic ) )

|       |   |     |           |    |                       |     |   |
|-------|---|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 2 grades  | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 講義・実習   | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |           |    |                       |     |   |
| 科目責任者 | Yasuaki Kakinoki  |     |           |    |                       |     |   |
| 担当教員  | 柿木 保明、藤井 航、多田 葉子、木村 貴之、久保田 潤平   |     |           |    |                       |     |   |
|       | Yasuaki Kakinoki, Wataru Fujii, Yoko Tada, Takayuki Kimura, Jumpei Kubota |     |           |    |                       |     |   |

| 回     | 学習内容   | 授業方法 | 担当教員     | 事前・事後学習<br>学習課題 |
|-------|--|------|----------|-----------------|
| 59,60 | Review, Examination3,<br>unit certification test | -    | Kakinoki | Feedback        |

2017年度

# Oral Care and Rehabilitation (Advanced) (Oral Care and Rehabilitation (Advanced))

|       |   |     |           |    |                       |     |   |
|-------|---|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades  | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習  | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |           |    |                       |     |   |
| 科目責任者 | Kakinoki Y.   |     |           |    |                       |     |   |
| 担当教員  | 柿木 保明、藤井 航、多田 葉子、木村 貴之<br>Yasuaki Kakinoki, Wataru Fujii, Yoko Tada, Takayuki Kimura, Jumpei Kubota |     |           |    |                       |     |   |

## 授業の概要

【Language】English and Japanese

You will learn dental treatment, oral care, and guidance in consideration of systemic disorders of elderly.

You will learn to repair and adjust denture in consideration of dysphagic persons.

You will learn how to examination and guidance with understanding Chinese medicine.

## 学生の到達目標

You should achieve following assignments:

- 1.Evaluation of systemic condition of elderly, evaluation of intraoral and perioral condition
- 2.Oral care and oral functional exercise in consideration of systemic disorders of elderly
- 3.Dental treatment with Chinese medicine in consideration of systemic disorders of elderly
- 4.Health guidance by basic skill of tongue diagnosis
- 5.Homebound treatment for bedridden elderly
6. To repair and adjust denture in consideration of dysphagic persons.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                                    | 割合  |
|---|-----|
| report including test                   | 10% |
| examination and unit certification test | 90% |

## その他

CertifiedDentists:Kakinoki,Fujii,Tada,Kimura,Kubota

Supervisor of DisabilityOralHealth:Kakinoki,Fujii

CertifyingPhysician:Kakinoki,Fujii,Tada,Kimura,Kubota

AccreditedSpecialist:Kakinoki,Fujii,Tada

Supervisor of Gerodontology:Kakinoki,Fujii

CertifiedDentists of DysphagiaRehabilitation:Kakinoki,Fujii

CertifiedDentists of Complementary and AlternativeMedicine:Kakinoki,Tada

2017年度

# Oral Care and Rehabilitation (Advanced) (Oral Care and Rehabilitation (Advanced))

|       |   |     |           |    |                       |     |   |
|-------|---|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades  | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習  | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |           |    |                       |     |   |
| 科目責任者 | Kakinoki Y.   |     |           |    |                       |     |   |
| 担当教員  | 柿木 保明、藤井 航、多田 葉子、木村 貴之  |     |           |    |                       |     |   |
|       | Yasuaki Kakinoki, Wataru Fujii, Yoko Tada, Takayuki Kimura, Jumpei Kubota |     |           |    |                       |     |   |

## 授業計画

| 回     | 学習内容   | 授業方法     | 担当教員     | 事前・事後学習<br>学習課題  |
|-------|--|----------|----------|--|
| 1,2   | Evaluation of QOL (Quality Of Life) and ADL (Activities Of Daily Living)<br>Evaluation of vital signs                    | Practice | Kimura   | (Preparation)<br>QOL and ADL   |
| 3,4   | Mental test and depression test  | Practice | Kimura   | (Review)<br>Report   |
| 5,6   | Evaluation of perioral muscle;<br>Muscle related occlusion, mimic, and facial muscle                                     | Practice | Kimura   | (Preparation)<br>How to use<br>Muscle<br>hardness<br>meter                     |
| 7,8   | Evaluation of muscle related oral function;<br>Neck and shoulder   | Practice | Kimura   | (Review)<br>Report   |
| 9,10  | Taste test   | Practice | Kimura   | (Preparation)<br>Taste test  |
| 11,12 | Evaluation of sense of intraoral and face  | Practice | Kimura   | (Review)<br>Report   |
| 13,14 | Saliva secretion test;<br>Evaluation of resting saliva<br>Spitting method  | Practice | Kakinoki | (Preparation)<br>Watte method<br>Sialemesis<br>method                          |
| 15,16 | Saliva secretion test;<br>Evaluation of Saxon test and gum test  | Practice | Kakinoki | (Preparation)<br>Saxon test<br>Gum test<br>(Review)<br>Report                  |
| 17,18 | Saliva secretion and distribution test;<br>Evaluation by saliva wetness tester   | Practice | Kakinoki | (Preparation)<br>Saliva wetness<br>tester                                      |
| 19,20 | Physical inspection of saliva:<br>Viscometer<br>(ultrasonic type and rotation type)<br>Spinnability measuring instrument | Practice | Kakinoki | (Preparation)<br>Spinnability<br>measuring<br>instrument<br>(Review)<br>Report |
| 21,22 | Halitosis measurement and evaluation by oral chroma  | Practice | Fujii    | (Preparation)<br>How to use<br>Oral chroma                                     |
| 23,24 | Examination1:<br>Case presentation   | -        | Kakinoki | Feedback   |
| 25,26 | Improvement of oral function:<br>Structural oral care and functional oral care   | Practice | Fujii    | (Preparation)<br>Basic oral care<br>skill                                      |
| 27,28 | Improvement of oral function:<br>Oral care using liquid and gel type oral moisturizer                                    | Practice | Fujii    | (Preparation)<br>Oral<br>moisturizers  |
| 29,30 | Basic oral care skill for bedridden elderly  | Practice | Fujii    | (Review)<br>Report   |

2017年度

# Oral Care and Rehabilitation (Advanced) (Oral Care and Rehabilitation (Advanced))

|       |   |     |           |    |                       |     |   |
|-------|---|-----|-----------|----|-----------------------|-----|---|
| 開講年次  | 1 ~ 3 grades  | 期区分 | 通年        | 科目 | Compulsory (Clinical) | 単位数 | 4 |
| 授業方法  | 実習  | 時間数 | 120 hours | 曜日 |                       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |           |    |                       |     |   |
| 科目責任者 | Kakinoki Y.   |     |           |    |                       |     |   |
| 担当教員  | 柿木 保明、藤井 航、多田 葉子、木村 貴之  |     |           |    |                       |     |   |
|       | Yasuaki Kakinoki, Wataru Fujii, Yoko Tada, Takayuki Kimura, Jumpei Kubota |     |           |    |                       |     |   |

| 回     | 学習内容   | 授業方法     | 担当教員     | 事前・事後学習<br>学習課題  |
|-------|--|----------|----------|--|
| 31,32 | Evaluation of oral mucosal disease<br>Recode by intraoral camera                                     | Practice | Fujii    | (Preparation)<br>Basic skill of<br>intraoral<br>camera                         |
| 33,34 | Evaluation of oral mucosa and tongue mucosa:<br>Western and Chinese medical evaluation and diagnosis | Practice | Kakinoki | (Preparation)<br>Evaluation of<br>oral mucosa                                  |
| 35,36 | Basic skill of tongue diagnosis  | Practice | Kakinoki | (Preparation)<br>Basic skill of<br>tongue<br>diagnosis,<br>Chinese<br>medicine |
| 37,38 | Choice of Chinese medicine by tongue diagnosis(1)  | Practice | Kakinoki | (Review)<br>Report   |
| 39,40 | Choice of Chinese medicine by tongue diagnosis(2)  | Practice | Kakinoki | (Review)<br>Report   |
| 41,42 | Choice of Chinese medicine by tongue diagnosis(3)  | Practice | Kakinoki | (Review)<br>Report   |
| 43,44 | Guidance of health, life, and dietary by tongue diagnosis  | Practice | Kakinoki | (Review)<br>Report   |
| 45,46 | Examination2<br>Case presentation  | -        | Kakinoki | Feedback   |
| 47,48 | Preparation of homebound treatment   | Practice | Tada     | (Preparation)<br>Understanding<br>of instrument                                |
| 49,50 | Choice of homebound treatment instrument   | Practice | Tada     | (Review)<br>Report   |
| 51,52 | Basic skill of homebound treatment with water(assistant)   | Practice | Tada     | (Preparation)<br>Vacuum<br>Syringe   |
| 53,54 | Basic skill of homebound treatment with water(surgeon)   | Practice | Tada     | (Preparation)<br>Engine<br>Turbine   |
| 55,56 | Denture repair for bedridden elderly   | Practice | Tada     | (Review)<br>Report   |
| 57,58 | Denture adjustment for bedridden elderly   | Practice | Kakinoki | (Review)<br>Report   |
| 59,60 | Review, Examination3, Unit certification test  | -        | Kakinoki | Feedback   |

2017年度

# Geriatric Dentistry (Geriatric Dentistry )

|       |   |     |          |    |                                  |     |   |
|-------|---|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades  | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義  | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                  |     |   |
| 科目責任者 | Kakinoki Y.   |     |          |    |                                  |     |   |
| 担当教員  | 柿木 保明、藤井 航、多田 葉子、木村 貴之  |     |          |    |                                  |     |   |
|       | Yasuaki Kakinoki, Wataru Fujii, Yoko Tada, Takayuki Kimura, Jumpei Kubota |     |          |    |                                  |     |   |

## 授業の概要

【Language】 English and Japanese

You will understand the research about geriatric dentistry and dysphagia rehabilitation.

You will learn method of assessment, treatment, and exercise.

## 学生の到達目標

You should achieve following assignments and increase the ability of understanding the research.

- 1.Understanding the basic geriatric dentistry
- 2.Understanding the basic dysphagia rehabilitation
- 3.Increasing the ability of evaluate the research of clinical and basic

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                      | 割合  |
|---------------------------|-----|
| percentage of attendance  | 15% |
| reports and presentations | 85% |

## その他

CertifiedDentists:Kakinoki,Fujii,Tada,Kimura,Kubota

Supervisor of DisabilityOralHealth:Kakinoki,Fujii

CertifyingPhysician:Kakinoki,Fujii,Tada,Kimura,Kubota

AccreditedSpecialist:Kakinoki,Fujii,Tada

Supervisor of Gerodontology:Kakinoki,Fujii

CertifiedDentists of DysphagiaRehabilitation:Kakinoki,Fujii

CertifiedDentists of Complementary and AlternativeMedicine:Kakinoki,Tada

2017年度

# Geriatric Dentistry (Geriatric Dentistry )

|       |   |     |          |    |                                  |     |   |
|-------|---|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades  | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義  | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                  |     |   |
| 科目責任者 | Kakinoki Y.   |     |          |    |                                  |     |   |
| 担当教員  | 柿木 保明、藤井 航、多田 葉子、木村 貴之  |     |          |    |                                  |     |   |
|       | Yasuaki Kakinoki, Wataru Fujii, Yoko Tada, Takayuki Kimura, Jumpei Kubota |     |          |    |                                  |     |   |

## 授業計画

| 回    | 学習内容   | 授業方法  | 担当教員  | 事前・事後学習<br>学習課題                                 |
|------|--|---|---|---|
| 1-15 | You will understand future prospect by searching and evaluating the literature related geriatric dentistry and oral care and rehabilitation. | Clinical lectures,<br>Seminar,<br>Reading<br>papers | Kakinoki,<br>Fujii,<br>Tada,<br>Kimura,<br>Kubota | Searching<br>textbooks<br>and reading<br>papers |



2017年度

# Geriatric Dentistry (Geriatric Dentistry )

|       |   |     |          |    |                                  |     |   |
|-------|---|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades  | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習   | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                  |     |   |
| 科目責任者 | Kakinoki Y.   |     |          |    |                                  |     |   |
| 担当教員  | 柿木 保明、藤井 航、多田 葉子、木村 貴之、久保田 潤平   |     |          |    |                                  |     |   |
|       | Yasuaki Kakinoki, Wataru Fujii, Yoko Tada, Takayuki Kimura, Jumpei Kubota |     |          |    |                                  |     |   |

## 授業の概要

【English and Japanese】

You will understand basic integrative medicine related study of dental treatment for elderly and geriatric dentistry. You will learn method of assessment, treatment, and exercise.

You will learn action of Chinese medicine, and mechanism of action. You will learn method to apply for dental clinical of tongue diagnosis.

You will understand Chinese medicine and western medicine for dental treatment of elderly and learn knowledge to practice integrative medicine.

You will learn the research of clinical and basic related integrative medicine.

## 学生の到達目標

You should achieve following assignments and increase the ability of understanding the research.;

- 1.Understanding the basic integrative medicine
- 2.Understanding the basic Chinese medicine and western medicine
- 3.Understanding the basic complementary and alternative medicine, and applying clinical
4. Increasing the ability of evaluate the research of clinical and basic

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                      | 割合  |
|---------------------------|-----|
| percentage of attendance  | 15% |
| reports and presentations | 85% |

## その他

CertifiedDentists:Kakinoki,Fujii,Tada,Kimura,Kubota

Supervisor of DisabilityOralHealth:Kakinoki,Fujii

CertifyingPhysician:Kakinoki,Fujii,Tada,Kimura,Kubota

AccreditedSpecialist:Kakinoki,Fujii,Tada

Supervisor of Gerodontology:Kakinoki,Fujii

CertifiedDentists of DysphagiaRehabilitation:Kakinoki,Fujii

CertifiedDentists of Complementary and AlternativeMedicine:Kakinoki,Tada

2017年度

# Geriatric Dentistry (Geriatric Dentistry )

|       |   |     |          |    |                                  |     |   |
|-------|---|-----|----------|----|----------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades  | 期区分 | 通年       | 科目 | Compulsory / Elective (Research) | 単位数 | 2 |
| 授業方法  | 講義・演習   | 時間数 | 30 hours | 曜日 |                                  | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                  |     |   |
| 科目責任者 | Kakinoki Y.   |     |          |    |                                  |     |   |
| 担当教員  | 柿木 保明、藤井 航、多田 葉子、木村 貴之、久保田 潤平   |     |          |    |                                  |     |   |
|       | Yasuaki Kakinoki, Wataru Fujii, Yoko Tada, Takayuki Kimura, Jumpei Kubota |     |          |    |                                  |     |   |

## 授業計画

| 回    | 学習内容   | 授業方法  | 担当教員  | 事前・事後学習<br>学習課題  |
|------|--|---|---|--|
| 1-15 | You will understand future prospect by searching and evaluating the literature related integrative medicine and Chinese medicine and western medicine. | Clinical lectures,<br>Exercises,<br>Seminar | Kakinoki,<br>Fujii,<br>Tada,<br>Kimura,<br>Kubota | Lectures,<br>Searching<br>textbooks<br>and reading<br>papers |

2017年度

# Geriatric and Special Needs Dentistry (Advanced) (Geriatric and Special Needs Dentistry (Advanced))

|       |  |     |          |    |                                     |     |   |
|-------|--|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades   | 期区分 | 通年       | 科目 | Compulsory / Elective<br>(Research) | 単位数 | 2 |
| 授業方法  | 講義・演習  | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |                                     |     |   |
| 科目責任者 | Kakinoki Y.  |     |          |    |                                     |     |   |
| 担当教員  | 柿木 保明、藤井 航、多田 葉子、木村 貴之、久保田 潤平<br>Yasuaki Kakinoki, Wataru Fujii, Yoko Tada, Takayuki Kimura, Jumpei Kubota |     |          |    |                                     |     |   |

## 授業の概要

【English and Japanese】

You will understand particularity of dental treatment and oral care for elderly and special needs. You will learn method of assessment, treatment, and oral care. Especially, you should learn knowledge to practice homebound treatment and rehabilitation for bedridden elderly. You will learn knowledge to practice dental treatment and rehabilitation for special needs, and dental treatment for patients who complain of psychogenic.

## 学生の到達目標

You should achieve following assignments and increase the ability of understanding the research.;

1. Understanding the geriatric dentistry
2. Understanding the clinical states and systemic disease of elderly and disability
3. Understanding the dental treatment of patients who complain of psychogenic general malaise
4. Increasing the ability of evaluate the research of clinical and basic about geriatric and special needs dentistry, and psychosomatic medicine.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                      | 割合  |
|---------------------------|-----|
| percentage of attendance  | 15% |
| reports and presentations | 85% |

## その他

Certified Dentists: Kakinoki, Fujii, Tada, Kimura, Kubota  
Supervisor of Disability Oral Health: Kakinoki, Fujii  
Certifying Physician: Kakinoki, Fujii, Tada, Kimura, Kubota  
Accredited Specialist: Kakinoki, Fujii, Tada  
Supervisor of Gerodontology: Kakinoki, Fujii  
Certified Dentists of Dysphagia Rehabilitation: Kakinoki, Fujii  
Certified Dentists of Complementary and Alternative Medicine: Kakinoki, Tada

2017年度

# Geriatric and Special Needs Dentistry (Advanced) (Geriatric and Special Needs Dentistry (Advanced))

|       |   |     |          |    |                                     |     |   |
|-------|---|-----|----------|----|-------------------------------------|-----|---|
| 開講年次  | 1 ~ 4 grades  | 期区分 | 通年       | 科目 | Compulsory / Elective<br>(Research) | 単位数 | 2 |
| 授業方法  | 講義・演習   | 時間数 | 30 hours | 曜日 |                                     | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |          |    |                                     |     |   |
| 科目責任者 | Kakinoki Y.   |     |          |    |                                     |     |   |
| 担当教員  | 柿木 保明、藤井 航、多田 葉子、木村 貴之、久保田 潤平   |     |          |    |                                     |     |   |
|       | Yasuaki Kakinoki, Wataru Fujii, Yoko Tada, Takayuki Kimura, Jumpei Kubota |     |          |    |                                     |     |   |

## 授業計画

| 回    | 学習内容   | 授業方法  | 担当教員  | 事前・事後学習<br>学習課題                                 |
|------|--|---|---|---|
| 1-15 | You will understand future prospect, by searching and evaluating the literature.<br>You will search latest knowledge and study: homebound treatment and oral care for elderly, dental treatment and rehabilitation for disability, and psychosomatic medicine. | Clinical lectures,<br>Exercises,<br>Seminar | Kakinoki,<br>Fujii,<br>Tada,<br>Kimura,<br>Kubota | Searching<br>textbooks<br>and reading<br>papers |

2017年度

# Basic surgical skills (Basic surgical skills)

|       |              |     |          |    |       |     |   |
|-------|--------------|-----|----------|----|-------|-----|---|
| 開講年次  | 1 ~ 3 grades | 期区分 | 通年       | 科目 | Minor | 単位数 | 2 |
| 授業方法  | 講義・演習        | 時間数 | 30 hours | 曜日 |       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |       |     |   |
| 科目責任者 | Nakashima H. |     |          |    |       |     |   |
| 担当教員  | 中島 秀彰        |     |          |    |       |     |   |

## 授業の概要

【Language】 Japanese

This course provides basic knowledge of basic surgical skills and patients management during peri-operative period.

## 学生の到達目標

- 1) Understanding basic knowledge of metabolic response to surgical invasion in human body.
- 2) Understanding basic concept of patients care during pre- and post-operative period.
- 3) Understanding basic concept of patient safety and infection control in hospitals.
- 4) Understanding basic concept of clinical path and patient satisfaction.
- 5) Understanding basic knowledge of treatment and care of cancer patients.
- 6) Understanding basic knowledge of novel surgical devices.
- 7) Understanding basic concept of novel methods of surgical operation including navigation surgery and robotic surgery.
- 8) Understanding basic concept of training of endoscopic surgery.
- 9) Understanding basic knowledge of basic surgical skills.
- 10) Understanding basic knowledge of sports medicine.

## テキスト

出) 著)

## 参考書

"Hyojun Geka " 13th ed.  
出) Igaku Shoin, Tokyo

著) S. Kitano

## 成績評価方法・基準

| 評価項目                       | 割合  |
|----------------------------|-----|
| Class participation        | 30% |
| participation and attitude | 20% |
| oral exam                  | 50% |

## その他

2017年度

# Basic surgical skills (Basic surgical skills)

|       |              |     |          |    |       |     |   |
|-------|--------------|-----|----------|----|-------|-----|---|
| 開講年次  | 1 ~ 3 grades | 期区分 | 通年       | 科目 | Minor | 単位数 | 2 |
| 授業方法  | 講義・演習        | 時間数 | 30 hours | 曜日 |       | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |       |     |   |
| 科目責任者 | Nakashima H. |     |          |    |       |     |   |
| 担当教員  | 中島 秀彰        |     |          |    |       |     |   |

## 授業計画

| 回  | 学習内容   | 授業方法                           | 担当教員                     | 事前・事後学習<br>学習課題 |
|----|--|--------------------------------|--------------------------|-----------------|
| 1  | Introduction and orientation   | Lecture                        | Hideaki<br>NAKASHIM<br>A | Review          |
| 2  | Metabolic response to surgical invasion in human body  | Lecture                        | Hideaki<br>NAKASHIM<br>A | Review          |
| 3  | Patients care during pre- and post-operative period and prevention of surgical complications | Lecture                        | Hideaki<br>NAKASHIM<br>A | Review          |
| 4  | Basic surgical skills 1  | Lecture and practical training | Hideaki<br>NAKASHIM<br>A | Review          |
| 5  | Basic surgical skills 2  | Lecture and practical training | Hideaki<br>NAKASHIM<br>A | Review          |
| 6  | Patient safety and clinical path   | Lecture                        | Hideaki<br>NAKASHIM<br>A | Review          |
| 7  | Multimodality treatment and terminal care of cancer patients                                 | Lecture                        | Hideaki<br>NAKASHIM<br>A | Review          |
| 8  | Wound healing and sports medicine  | Lecture                        | Hideaki<br>NAKASHIM<br>A | Review          |
| 9  | Infection control in hospitals   | Lecture                        | Hideaki<br>NAKASHIM<br>A | Review          |
| 10 | Novel surgical devices   | Lecture                        | Hideaki<br>NAKASHIM<br>A | Review          |
| 11 | Robotic surgery and navigation surgery   | Lecture                        | Hideaki<br>NAKASHIM<br>A | Review          |
| 12 | Practical infection control and patient safety in hospitals                                  | Lecture                        | Hideaki<br>NAKASHIM<br>A | Review          |
| 13 | Training of endoscopic surgery   | Lecture                        | Hideaki<br>NAKASHIM<br>A | Review          |
| 14 | Training of endoscopic surgical skills using VR simulator                                    | Lecture                        | Hideaki<br>NAKASHIM<br>A | Review          |
| 15 | Management of nutrition and fluid / Oral examination   | Lecture                        | Hideaki<br>NAKASHIM<br>A | Review          |

2017年度

# Advanced Lecture (Advanced Lecture)

|       |  |     |    |    |          |     |   |
|-------|--|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 4 grades   | 期区分 | 通年 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義   | 時間数 | 32 | 曜日 | 木曜日      | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |    |    |          |     |   |
| 科目責任者 | Dean, Graduate School of Dentistry   |     |    |    |          |     |   |
| 担当教員  | 歯学研究科長、細川 隆司、森本 泰宏、北村 知昭、小野 堅太郎、福泉 隆喜、自見 英治郎、瀬田 祐司、川元 龍夫、木尾 哲朗、牧 憲司、安細 敏弘、竹内 弘 |     |    |    |          |     |   |

## 授業の概要

【Language】 English and Japanese

We invite researchers who are at the forefront, and they give the graduate school students current topics.

## 学生の到達目標

1. You can obtain the knowledge the current topics of the specialized area of each speaker.
2. You can understand the background of the study, motivation for the research, the results and discussion of the research.
3. You can consider and respond to the development of the future research.
4. You can use the content of lectures in your own research project.

## テキスト

出) \_\_\_\_\_ 著) \_\_\_\_\_

## 参考書

出) \_\_\_\_\_ 著) \_\_\_\_\_

## 成績評価方法・基準

| 評価項目                  | 割合   |
|-----------------------|------|
| attendance and report | 100% |

## その他

2017年度

# Advanced Lecture (Advanced Lecture)

|       |  |     |    |    |          |     |   |
|-------|--|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 4 grades   | 期区分 | 通年 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義   | 時間数 | 32 | 曜日 | 木曜日      | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |    |    |          |     |   |
| 科目責任者 | Dean, Graduate School of Dentistry   |     |    |    |          |     |   |
| 担当教員  | 歯学研究科長、細川 隆司、森本 泰宏、北村 知昭、小野 堅太郎、福泉 隆喜、自見 英治郎、瀬田 祐司、川元 龍夫、木尾 哲朗、牧 憲司、安細 敏弘、竹内 弘 |     |    |    |          |     |   |

## 授業計画

| 回 | 学習内容  | 授業方法    | 担当教員  | 事前・事後学習<br>学習課題 |
|---|---|---------|---|-----------------|
| 1 | New role of masticatory function in high order brain  | Lecture | Kimoto K.(Kanagawa Dental University),<br>Hosoawa R.  | Report          |
| 2 | A mathematical study of molecular evolution - mechanism of coevolution with compensatory fitness interaction -  | Lecture | Iizuka M.,<br>Morimoto Y.   | Report          |
| 3 | Translational research of the new anti-inflammatory agent (NF- $\kappa$ B inhibitor)  | Lecture | Okamoto K.(The Institute of Scientific and Industrial Research, Osaka Univ.)<br>Kitamura C. | Report          |
| 4 | Examination, Diagnosis and Treatment of Nonodontogenic Toothache -clinical overview and pathophysiology of referred pain and neuropathic pain-                              | Lecture | Komiyama M.(Nihon University),<br>Ono K.  | Report          |
| 5 | Dysphagia and quality of life: an introduction to quality of life assessment and current approaches   | Lecture | Naito M.(Nagoya University),<br>Fukuizumi T.  | Report          |
| 6 | Evaluation and management of dysphagia in different types of dementia   | Lecture | Hirano H.(Tokyo Metropolitan Geriatric Hospital),<br>Fukuizumi T.                           | Report          |
| 7 | Importance of orofacial sensory inputs occurring during ingestion from a physiological perspective and effects of gustatory sensory inputs on the initiation of swallowing. | Lecture | Yamamura K.(Niigata University),<br>Ono K.  | Report          |
| 8 | Fibrodysplasia ossificans progressiva (FOP) characterized by heterotopic ossification in skeletal muscle tissue   | Lecture | Katagiri T.(Saitama Medical University),<br>Jimi E.   | Report          |



2017年度

# Advanced Lecture (Advanced Lecture)

|       |  |     |    |    |          |     |   |
|-------|--|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 4 grades   | 期区分 | 通年 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義   | 時間数 | 32 | 曜日 | 木曜日      | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |    |    |          |     |   |
| 科目責任者 | Dean, Graduate School of Dentistry   |     |    |    |          |     |   |
| 担当教員  | 歯学研究科長、細川 隆司、森本 泰宏、北村 知昭、小野 堅太郎、福泉 隆喜、自見 英治郎、瀬田 祐司、川元 龍夫、木尾 哲朗、牧 憲司、安細 敏弘、竹内 弘 |     |    |    |          |     |   |

| 回  | 学習内容  | 授業方法    | 担当教員   | 事前・事後学習<br>学習課題 |
|----|---|---------|--|-----------------|
| 9  | Cell Biology of Tooth Germs : Leading Player and Supporting Players in Amelogenesis                             | Lecture | Tabata J.(Tokyo Medical and Dental University)<br>, Seta Y.  | Report          |
| 10 | The tongue, upper airway and obstructive sleep apnea  | Lecture | Ono T.(Tokyo Medical and Dental University)<br>, Kawamoto T. | Report          |
| 11 | Trends of Medical education research  | Lecture | Fujisaki K.(Gifu University)<br>, Konoo T.                   | Report          |
| 12 | Space maintenance and active denture guidance   | Lecture | Kimoto S.(Kanagawa Dental University)<br>, Maki K.           | Report          |
| 13 | Study on reproduction of the salivary gland   | Lecture | Fukumoto S.(Tohoku University)<br>, Maki K.                  | Report          |
| 14 | Interdisciplinary study for health and longevity: Comprehensive approach by the team of humanities and sciences | Lecture | Ikebe K.(Osaka University)<br>, Ansai T.                     | Report          |
| 15 | iPS cells and their expected role in the future of dentistry  | Lecture | Egusa H.(Tohoku University)<br>, Takeuchi H.                 | Report          |
| 16 | Strategy to Oral frail  | Lecture | Watanabe Y.(Tokyo Metropolitan Geriatric Hospital), Ansai T. | Report          |

2017年度

# Molecular Biological Morphology (Molecular Biological Morphology)

|       |                        |     |    |    |          |     |   |
|-------|------------------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 2 grades           | 期区分 | 通年 | 科目 | Elective | 単位数 | 1 |
| 授業方法  | 演習                     | 時間数 | 16 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻             |     |    |    |          |     |   |
| 科目責任者 | Seta Y.                |     |    |    |          |     |   |
| 担当教員  | 瀬田 祐司、豊野 孝、中富 満城、片岡 真司 |     |    |    |          |     |   |

## 授業の概要

【Language】 English and Japanese

This course deals with the basis of fundamental morphological analysis. It also enhances the development of students' skill in carrying out a morphological experiment.

## 学生の到達目標

The goals of this course are to

- (1) be able to understand morphological analysis,
- (2) be able to prepare tissue section
- (3) be able to carry out immunohistochemistry
- (4) be able to carry out in situ hybridization

## テキスト

出) \_\_\_\_\_ 著) \_\_\_\_\_

## 参考書

出) \_\_\_\_\_ 著) \_\_\_\_\_

## 成績評価方法・基準

| 評価項目                                | 割合  |
|-------------------------------------|-----|
| Usual performance score             | 60% |
| experimental performance in the lab | 40% |

## その他

2017年度

# Molecular Biological Morphology (Molecular Biological Morphology)

|       |                        |     |    |    |          |     |   |
|-------|------------------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 2 grades           | 期区分 | 通年 | 科目 | Elective | 単位数 | 1 |
| 授業方法  | 演習                     | 時間数 | 16 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻             |     |    |    |          |     |   |
| 科目責任者 | Seta Y.                |     |    |    |          |     |   |
| 担当教員  | 瀬田 祐司、豊野 孝、中富 満城、片岡 真司 |     |    |    |          |     |   |

## 授業計画

| 回 | 学習内容  | 授業方法     | 担当教員                                  | 事前・事後学習<br>学習課題 |
|---|---|----------|---------------------------------------|-----------------|
| 1 | Introduction<br>What is morphological analysis  | Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 2 | Preparing method of tissue section (1): Fixation  | Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 3 | Preparing method of tissue section (2): Embedding tissue                                      | Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 4 | Preparing method of tissue section (3): Sectioning tissue                                     | Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 5 | Immunohistochemistry (1): Apply first antibody  | Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 6 | Immunohistochemistry (2): Apply second antibody   | Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 7 | in situ hybridization (1): Probe preparation  | Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |
| 8 | in situ hybridization (2): Pre-treatment of section and antibody visualization of digoxigenin | Practice | Seta<br>Toyono<br>Nakatomi<br>Kataoka |                 |

2017年度

# Molecular Biology Training Program (Molecular Biology Training Program )

|       |  |     |              |    |          |     |   |
|-------|--|-----|--------------|----|----------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 夏期または冬期休暇期間中 | 科目 | Elective | 単位数 | 1 |
| 授業方法  | 講義・演習  | 時間数 | 20 hours     | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |              |    |          |     |   |
| 科目責任者 | Jimi E.  |     |              |    |          |     |   |
| 担当教員  | 自見 英治郎、古株 彰一郎、松原 琢磨<br>D.D.Sc., Ph.D : Jimi,Kokabu,Matsubara |     |              |    |          |     |   |

## 授業の概要

Molecular biology pertains to the study of living systems at the molecular level, especially DNA and RNA, and provides a background for further work in the rapidly expanding areas of genomics, cell biology, biotechnology, microbiology, diagnostics, and therapeutics. Molecular biology methods are used extensively in modern day drug discovery, research and development, and diagnostics.

This course is intended for personnel who are seeking basic-level molecular biology training. This course will focus on selected aspects of molecular biology that provides principles for understanding the structure and functional relationships of molecular biology techniques including RNA isolation, cDNA synthesis (RT-PCR) and the preparation of whole cell lysates from cell and Western blotting.

## 学生の到達目標

1. Graduates of this program will be able to explain and discuss how processes are integrated at the molecular level to create a functional eukaryotic cell.
2. Graduates of this program will be able to prepare RNA and protein from cells.
3. Graduates of this program will have experience in and be able to perform RT-PCR and Western blotting.

## テキスト

What is necessary is to use the experimental protocols in our laboratory.

出) 著)

What is necessary is to purchase a reference book according to your own necessity

出) 著)

(If you do not know what kind of reference book is suitable, we will be able to advise you).

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                           | 割合   |
|--------------------------------|------|
| the posture in your experiment | 100% |

## その他

We accept your visit at any time at our office in the 10th floor of main building.

2017年度

# Molecular Biology Training Program (Molecular Biology Training Program )

|       |                                       |     |              |    |          |     |   |
|-------|---------------------------------------|-----|--------------|----|----------|-----|---|
| 開講年次  | 1 ~ 3 grades                          | 期区分 | 夏期または冬期休暇期間中 | 科目 | Elective | 単位数 | 1 |
| 授業方法  | 講義・演習                                 | 時間数 | 20 hours     | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                            |     |              |    |          |     |   |
| 科目責任者 | Jimi E.                               |     |              |    |          |     |   |
| 担当教員  | 自見 英治郎、古株 彰一郎、松原 琢磨                   |     |              |    |          |     |   |
|       | D.D.Sc., Ph.D : Jimi,Kokabu,Matsubara |     |              |    |          |     |   |

## 授業計画

| 回    | 学習内容  | 授業方法                       | 担当教員                            | 事前・事後学習<br>学習課題  |
|------|---|----------------------------|---------------------------------|--|
| 1,2  | Western blotting #1<br>Osteoblasts were treated with BMP and then prepared whole cell lysates.  | Lecture<br>and<br>Practice | Jimi<br>and<br>Kokabu           | Prepare for the protocol of preparation of whole cell lysates. |
| 3,4  | Western blotting #2<br>SDS-PAGE, Transfer, Blocking, and Incubation with primary antibody.  | Lecture<br>and<br>Practice | Jimi<br>and<br>Matusbara        | Prepare for the principal of Western blotting                  |
| 5,6  | ?Western blotting #3<br>Incubation with secondary antibody and Detection.<br>?RT-PCR #1<br>Osteoblasts were treated with BMP and then prepared total RNA. | Lecture<br>and<br>Practice | Kokabu<br>and<br>Matsubara<br>, | Prepare for the protocol of preparation of Total RNA.          |
| 7,8  | RT-PCR #2<br>cDNA synthesis and perform PCR   | Lecture<br>and<br>Practice | Kokabu                          | Prepare for the principal of RT-PCR                            |
| 9,10 | RT-PCR #3<br>Agarose gel electrophoresis  | Lecture<br>and<br>Practice | Kokabu                          | Review what was learned  |

2017年度

# Molecular Biology Training Program (Molecular Biology Training Program )

|       |  |     |              |    |          |     |   |
|-------|--|-----|--------------|----|----------|-----|---|
| 開講年次  | 1 ~ 3 grades   | 期区分 | 夏期または冬期休暇期間中 | 科目 | Elective | 単位数 | 1 |
| 授業方法  | 講義・演習  | 時間数 | 20 hours     | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |              |    |          |     |   |
| 科目責任者 | Jimi E.  |     |              |    |          |     |   |
| 担当教員  | 自見 英治郎、古株 彰一郎、松原 琢磨<br>D.D.Sc., Ph.D : Jimi,Kokabu,Matsubara |     |              |    |          |     |   |

## 授業の概要

Molecular biology pertains to the study of living systems at the molecular level, especially DNA and RNA, and provides a background for further work in the rapidly expanding areas of genomics, cell biology, biotechnology, microbiology, diagnostics, and therapeutics. Molecular biology methods are used extensively in modern day drug discovery, research and development, and diagnostics.

This course is intended for personnel who are seeking middle-level molecular biology training. This course will focus on selected aspects of molecular biology that provides principles for understanding the structure and functional relationships of molecular biology techniques including gene transfection, detection method of tagged-protein and luciferase assay.

## 学生の到達目標

1. Graduates of this program will be able to explain the principal of (reporter) gene transfection and how to detect of expression transfected genes in the cells.
2. Graduates of this program will have experience in and be able to detect tagged-protein.
3. Graduates of this program will have experience in and be able to perform luciferase assay.

## テキスト

What is necessary is to use the experimental protocols in our laboratory.

出) 著)

What is necessary is to purchase a reference book according to your own necessity

出) 著)

(If you do not know what kind of reference book is suitable, we will be able to advise you).

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                           | 割合   |
|--------------------------------|------|
| the posture in your experiment | 100% |

## その他

We accept your visit at any time at our office in the 10th floor of main building.

2017年度

# Molecular Biology Training Program (Molecular Biology Training Program )

|       |                                       |     |              |    |          |     |   |
|-------|---------------------------------------|-----|--------------|----|----------|-----|---|
| 開講年次  | 1 ~ 3 grades                          | 期区分 | 夏期または冬期休暇期間中 | 科目 | Elective | 単位数 | 1 |
| 授業方法  | 講義・演習                                 | 時間数 | 20 hours     | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                            |     |              |    |          |     |   |
| 科目責任者 | Jimi E.                               |     |              |    |          |     |   |
| 担当教員  | 自見 英治郎、古株 彰一郎、松原 琢磨                   |     |              |    |          |     |   |
|       | D.D.Sc., Ph.D : Jimi,Kokabu,Matsubara |     |              |    |          |     |   |

## 授業計画

| 回    | 学習内容  | 授業方法                 | 担当教員      | 事前・事後学習<br>学習課題                                |
|------|---|----------------------|-----------|--|
| 1,2  | ?Lecture about gene transfection, including principals, fusion-protein and detection.<br>?Transfection of FLAG or V5-tagged genes into cells. | Lecture and Practice | Jimi      | Prepare for the principal of gene transfection |
| 3,4  | Perform Luciferase assay.   | Lecture and Practice | Kokabu    | Prepare for the principal of Luciferase assay  |
| 5,6  | Detection of tagged-protein by Western blotting.  | Lecture and Practice | Kokabu    | Prepare for the protocol of Western blotting   |
| 7,8  | Transfection of GFP-fused protein into cells.   | Lecture and Practice | Matsubara | Prepare for the principal of GFP-fused protein |
| 9,10 | Observation of GFP-expressing protein using fluorescence microscope   | Lecture and Practice | Matsubara | Review what was learned                        |

2017年度

# Neurophysiological Techniques (Neurophysiological Techniques)

|       |              |     |    |    |          |     |   |
|-------|--------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 2 grades | 期区分 | 通年 | 科目 | Elective | 単位数 | 1 |
| 授業方法  | 演習           | 時間数 | 16 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |    |    |          |     |   |
| 科目責任者 | Ono K.       |     |    |    |          |     |   |
| 担当教員  | 小野 堅太郎、人見 涼露 |     |    |    |          |     |   |

## 授業の概要

【Language】English and Japanese

In this course, you will practice basic skills about makings of cell and tissue preparations, patch-clamp recording and evaluations of pain inductions in animal experiments.

## 学生の到達目標

1. To develop techniques of cell and tissue preparations
2. To understand how to record electrical signals from neurons
3. To understand how to evaluate pain in experimental animals

## テキスト

出) \_\_\_\_\_ 著) \_\_\_\_\_

## 参考書

出) \_\_\_\_\_ 著) \_\_\_\_\_

## 成績評価方法・基準

| 評価項目              | 割合  |
|-------------------|-----|
| course attendance | 30% |
| report            | 70% |

## その他



2017年度

# Neurophysiological Techniques (Neurophysiological Techniques)

|       |              |     |    |    |          |     |   |
|-------|--------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 2 grades | 期区分 | 通年 | 科目 | Elective | 単位数 | 1 |
| 授業方法  | 演習           | 時間数 | 16 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |    |    |          |     |   |
| 科目責任者 | Ono K.       |     |    |    |          |     |   |
| 担当教員  | 小野 堅太郎、人見 涼露 |     |    |    |          |     |   |

## 授業計画

| 回   | 学習内容  | 授業方法     | 担当教員          | 事前・事後学習<br>学習課題        |
|-----|---|----------|---------------|------------------------|
| 1-8 | Making of cell and tissue preparations<br>Patch-clamp recording<br>Measurements of pain-related behaviors | Practice | Ono<br>Hitomi | Review of<br>practices |

2017年度

# Imaging technique and its analysis (Imaging technique and its analysis)

|       |  |     |          |    |          |     |   |
|-------|--|-----|----------|----|----------|-----|---|
| 開講年次  | 1 ~ 2 grades   | 期区分 | 通年       | 科目 | Elective | 単位数 | 1 |
| 授業方法  | 演習   | 時間数 | 16 hours | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |          |     |   |
| 科目責任者 | Morimoto Y.  |     |          |    |          |     |   |
| 担当教員  | 森本 泰宏、田中 達朗、鬼頭 慎司、小田 昌史、松本 忍<br>Advisor of Oral and Maxillofacial Radiology:Morimoto,Tanaka,Kito<br>Specialist of Oral and Maxillofacial Radiology:Morimoto,Tanaka,Kito,Oda<br>Certified Dentists of Oral and Maxillofacial Radiology:Morimoto,Tanaka,Kito,Oda,Matsumoto |     |          |    |          |     |   |

## 授業の概要

【Language】 Japanese  
You can learn the imaging techniques and analytical methods of CT, dental CBCT, MRI, and ultrasonography.

## 学生の到達目標

To comprehend the imaging techniques and analytical methods of CT, dental CBCT, MRI, and ultrasonography.

## テキスト

出) 著)

## 参考書

Instruction manuals of CT、CBCT、MRI、and US  
出) 著)

## 成績評価方法・基準

| 評価項目        | 割合  |
|-------------|-----|
| attendances | 40% |
| reports     | 40% |
| practices   | 20% |

## その他

At every time, we are waiting for your visits about your study-counsel and advices at our departments in the 3rd floor of and the 11th floor of Dental Hospital.

2017年度

# Imaging technique and its analysis (Imaging technique and its analysis)

|       |  |     |          |    |          |     |   |
|-------|--|-----|----------|----|----------|-----|---|
| 開講年次  | 1 ~ 2 grades   | 期区分 | 通年       | 科目 | Elective | 単位数 | 1 |
| 授業方法  | 演習   | 時間数 | 16 hours | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |          |    |          |     |   |
| 科目責任者 | Morimoto Y.  |     |          |    |          |     |   |
| 担当教員  | 森本 泰宏、田中 達朗、鬼頭 慎司、小田 昌史、松本 忍<br>Advisor of Oral and Maxillofacial Radiology:Morimoto,Tanaka,Kito<br>Specialist of Oral and Maxillofacial Radiology:Morimoto,Tanaka,Kito,Oda<br>Certified Dentists of Oral and Maxillofacial Radiology:Morimoto,Tanaka,Kito,Oda,Matsumoto |     |          |    |          |     |   |

## 授業計画

| 回     | 学習内容  | 授業方法     | 担当教員  | 事前・事後学習<br>学習課題                   |
|-------|---|----------|---|-----------------------------------|
| 1 ~ 3 | Imaging techniques and analytical methods of CT and dental CBCT | Practice | Morimoto,<br>Tanaka,<br>Kito, Oda,<br>Matsumoto | Pre- and post-reading of textbook |
| 4 ~ 6 | Imaging techniques and analytical methods of MRI                | Practice | Morimoto,<br>Tanaka,<br>Kito, Oda,<br>Matsumoto | Pre- and post-reading of textbook |
| 7,8   | Imaging techniques and analytical methods of US                 | Practice | Morimoto,<br>Tanaka,<br>Kito, Oda,<br>Matsumoto | Pre- and post-reading of textbook |

2017年度

# Risk management of the medically compromised patient (Risk management of the medically compromised patient)

|       |            |     |    |    |          |     |   |
|-------|------------|-----|----|----|----------|-----|---|
| 開講年次  | 1～3        | 期区分 | 通年 | 科目 | Elective | 単位数 | 1 |
| 授業方法  | 講義・演習      | 時間数 | 16 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻 |     |    |    |          |     |   |
| 科目責任者 | Owatari T. |     |    |    |          |     |   |
| 担当教員  | 大渡 凡人      |     |    |    |          |     |   |

## 授業の概要

Practical education for the medical risk management of the dental patients with systemic diseases based on medical evidence.  
【Language】 Japanese

## 学生の到達目標

Draw up a appropriate medical risk management plan of the patient with systemic disorders based on the robust medical evidence.

## テキスト

全身的偶発症とリスクマネジメント 高齢者歯科診療のストラテジー  
出)医歯薬出版; 2012 著)大渡凡人

## 参考書

Little and Falace's Dental Management of the Medically Compromised Patient, 8e  
出)Mosby

著)James W. Little DMD MS, Craig Miller DMD MS, Nelson L. Rhodus DMD MPH, Donald Falace DMD

## 成績評価方法・基準

| 評価項目  | 割合   |
|---|------|
| Pre- and post- testing, and a report if necessary | 100% |

## その他

2017年度

# Risk management of the medically compromised patient (Risk management of the medically compromised patient)

|       |            |     |    |    |          |     |   |
|-------|------------|-----|----|----|----------|-----|---|
| 開講年次  | 1～3        | 期区分 | 通年 | 科目 | Elective | 単位数 | 1 |
| 授業方法  | 講義・演習      | 時間数 | 16 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻 |     |    |    |          |     |   |
| 科目責任者 | Owatari T. |     |    |    |          |     |   |
| 担当教員  | 大渡 凡人      |     |    |    |          |     |   |

## 授業計画

| 回   | 学習内容   | 授業方法                         | 担当教員    | 事前・事後学習<br>学習課題  |
|-----|--|------------------------------|---------|--|
| 1-8 | 1. Risk assessment before dental treatment<br>2. Medical risk management during dental treatment<br>3. Medical risk management after dental treatment<br>4. Circulatory diseases 1st: hypertension, ischemic heart disease, and arrhythmia<br>5. Circulatory diseases 2nd:<br>heart failure, valvular heart disease, infective endocarditis, cardiomyopathy, aortic disease, and new cardiac devices.<br>6. Neural disease, psychological disease, respiratory disease, and metabolic disease.<br>7. Endocrine disease, renal disease, liver disease, hemostatic disease, and rheumatic disease<br>8. Electrocardiogram and analysis | Lecture and TBI, if possible | Owatari | Preparation of the pathophysiological basis of systemic diseases |

2017年度

# Advanced Analytical Chemistry (Advanced Analytical Chemistry)

|       |              |     |    |    |          |     |   |
|-------|--------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 3 grades | 期区分 | 通年 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義           | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |    |    |          |     |   |
| 科目責任者 | Takenaka S.  |     |    |    |          |     |   |
| 担当教員  | 〔非常勤講師〕竹中 繁織 |     |    |    |          |     |   |

## 授業の概要

Analytical Chemistry is positioned as indispensable science in the all of studying areas. In this lecture, basic analytical chemistry will be reviewed with addition of the cutting edge technology connected with analytical chemistry. Since this lecture is stand at engineer English one, attendance should understand technical word in English.

## 学生の到達目標

Participant should understand how contribute the following subjects in Analytical Chemistry.

- 1) Thermodynamics
- 2) Kinetics
- 3) Equilibrium
- 4) Quantum chemistry
- 5) Statistical thermodynamics
- 6) Electrochemistry
- 7) Group theory

## テキスト

出) \_\_\_\_\_ 著)

## 参考書

出) \_\_\_\_\_ 著)

## 成績評価方法・基準

| 評価項目 | 割合   |
|------|------|
|      | 100% |

Teacher requests your lecture note. Teacher evaluates your ability from small quiz in the class and examination.

## その他

Participants should review topics after lecture every times using the related text books and/or references. Teacher noticed the topic of next lecture and participants should search the important point of the topic

2017年度

# Advanced Analytical Chemistry (Advanced Analytical Chemistry)

|       |              |     |    |    |          |     |   |
|-------|--------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 3 grades | 期区分 | 通年 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義           | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |    |    |          |     |   |
| 科目責任者 | Takenaka S.  |     |    |    |          |     |   |
| 担当教員  | 〔非常勤講師〕竹中 繁織 |     |    |    |          |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法    | 担当教員        | 事前・事後学習<br>学習課題                |
|----|---|---------|-------------|--------------------------------|
| 1  | Ion equilibrium and acid-base reaction in an aqueous solution | Lecture | Takenaka S. | Homework of previously lecture |
| 2  | Complex formation and Chelate titration                       | Lecture | Takenaka S. | Homework of previously lecture |
| 3  | Solid-liquid equilibrium and ion exchange reaction            | Lecture | Takenaka S. | Homework of previously lecture |
| 4  | Distribution equilibrium and extraction                       | Lecture | Takenaka S. | Homework of previously lecture |
| 5  | Redox reaction  | Lecture | Takenaka S. | Homework of previously lecture |
| 6  | Electrochemical measurement using electrode                   | Lecture | Takenaka S. | Homework of previously lecture |
| 7  | Chromatography and electrophoresis                            | Lecture | Takenaka S. | Homework of previously lecture |
| 8  | Interaction of material and light                             | Lecture | Takenaka S. | Homework of previously lecture |
| 9  | Molecular spectroscopic analysis                              | Lecture | Takenaka S. | Homework of previously lecture |
| 10 | Atomic spectroscopic analysis                                 | Lecture | Takenaka S. | Homework of previously lecture |
| 11 | X-ray crystal structure analysis                              | Lecture | Takenaka S. | Homework of previously lecture |
| 12 | Analysis using a magnetics                                    | Lecture | Takenaka S. | Homework of previously lecture |
| 13 | Microscopic analysis  | Lecture | Takenaka S. | Homework of previously lecture |
| 14 | Thermal analysis, micro-area analysis, and chemical sensor    | Lecture | Takenaka S. | Homework of previously lecture |
| 15 | Labeling of proteins and nucleic acids                        | Lecture | Takenaka S. | Homework of previously lecture |
| 16 | Significance and treatment of obtained measurement results    | Lecture | Takenaka S. | Homework of previously lecture |

2017年度

# Advanced Bioanalytical chemistry (Advanced Bioanalytical chemistry)

|       |               |     |    |    |          |     |   |
|-------|---------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 2 grades  | 期区分 | 通年 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義            | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻    |     |    |    |          |     |   |
| 科目責任者 | Sato S.       |     |    |    |          |     |   |
| 担当教員  | 〔非常勤講師〕佐藤 しのぶ |     |    |    |          |     |   |

## 授業の概要

【Language】 English and Japanese

The aim of this course is to help students acquire an understanding of Chemical Biology from interaction analysis methods between small molecules and Nucleic Acid, or small molecules and Protein.

## 学生の到達目標

Upon completion of this course, students will be able to do the following:

1. Learn about proteins, nucleic acids and enzymes
2. Understand the principle of UV-Vis spectroscopy analysis, isothermal titration calorimetry, quartz crystal microbalance, surface plasmon resonance, circular polarization dichroism analysis, electrochemical measurement, atomic force microscope which are representative analytical methods
3. How to handle data, and statistical analysis method.

## テキスト

出) 著)

## 参考書

Understanding Bioanalytical Chemistry-Principle and Applications-(2009)  
出)Wiley 著)

## 成績評価方法・基準

| 評価項目 | 割合   |
|------|------|
|      | 100% |

Some reports on specific theme should be submitted. The submitted reports are used for the evaluation.

## その他



2017年度

# Advanced Bioanalytical chemistry (Advanced Bioanalytical chemistry)

|       |               |     |    |    |          |     |   |
|-------|---------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 2 grades  | 期区分 | 通年 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義            | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻    |     |    |    |          |     |   |
| 科目責任者 | Sato S.       |     |    |    |          |     |   |
| 担当教員  | 〔非常勤講師〕佐藤 しのぶ |     |    |    |          |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法    | 担当教員    | 事前・事後学習<br>学習課題                |
|----|---|---------|---------|--------------------------------|
| 1  | Intoroduction to Biomolecules                           | Lecture | Sato S. | Homework of previously lecture |
| 2  | Property of Protein, Nucleac Acid, and Enzyme           | Lecture | Sato S. | Homework of previously lecture |
| 3  | Applications of spectroscopy-1 (Binding analysis)       | Lecture | Sato S. | Homework of previously lecture |
| 4  | Applications of spectroscopy-2 (Kinetic analysis)       | Lecture | Sato S. | Homework of previously lecture |
| 5  | Applications of spectroscopy-3 (Thermodynamic analysis) | Lecture | Sato S. | Homework of previously lecture |
| 6  | Isothermal Titration Calorimetry                        | Lecture | Sato S. | Homework of previously lecture |
| 7  | Quartz Crystal Microbalance                             | Lecture | Sato S. | Homework of previously lecture |
| 8  | Surface Plasmon Resonance                               | Lecture | Sato S. | Homework of previously lecture |
| 9  | Circular Dichroism Spectroscopy analysis                | Lecture | Sato S. | Homework of previously lecture |
| 10 | Electrochemical measurement (Diffusion process)         | Lecture | Sato S. | Homework of previously lecture |
| 11 | Electrochemical measurement (Adsorption process)-1      | Lecture | Sato S. | Homework of previously lecture |
| 12 | Electrochemical measurement (Adsorption process)-2      | Lecture | Sato S. | Homework of previously lecture |
| 13 | Atomic Force Microscope                                 | Lecture | Sato S. | Homework of previously lecture |
| 14 | Statistical analysis                                    | Lecture | Sato S. | Homework of previously lecture |
| 15 | Summary   | Lecture | Sato S. | Homework of previously lecture |

2017年度

# Advanced Intelligent System (Advanced Intelligent System)

|       |             |     |    |    |          |     |   |
|-------|-------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 grade     | 期区分 | 前期 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義          | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |    |    |          |     |   |
| 科目責任者 | Kim H.      |     |    |    |          |     |   |
| 担当教員  | 〔非常勤講師〕金 亨燮 |     |    |    |          |     |   |

## 授業の概要

To develop the advanced information processing instruments, it is necessary to understand hardware and software system. In this course, basic concepts of data structures and algorithms which is concerned image systems are lectured.

## 学生の到達目標

Upon completion of this course, students will be able to do the following:

- 1) Demonstrate a familiarity with major algorithms and data structures
- 2) Algorithmic design paradigms and its analysis
- 3) Analyze the performance of algorithms.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目 | 割合   |
|------|------|
|      | 100% |

The final grade will be primarily based on understanding of the lecture and presentation. Also teacher evaluates your ability from small quiz in the class.

## その他

Participants should review topics after lecture every times using the related text books and/or references.

2017年度

# Advanced Intelligent System (Advanced Intelligent System)

|       |             |     |    |    |          |     |   |
|-------|-------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 grade     | 期区分 | 前期 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義          | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |    |    |          |     |   |
| 科目責任者 | Kim H.      |     |    |    |          |     |   |
| 担当教員  | 〔非常勤講師〕金 亨燮 |     |    |    |          |     |   |

## 授業計画

| 回  | 学習内容                                      | 授業方法    | 担当教員   | 事前・事後学習<br>学習課題                |
|----|---|---------|--------|--------------------------------|
| 1  | Introduction                              | Lecture | Kim H. | Homework of previously lecture |
| 2  | What are the advanced intelligent systems | Lecture | Kim H. | Homework of previously lecture |
| 3  | Medical engineering system                | Lecture | Kim H. | Homework of previously lecture |
| 4  | Medical imaging system                    | Lecture | Kim H. | Homework of previously lecture |
| 5  | Basic algorithms                          | Lecture | Kim H. | Homework of previously lecture |
| 6  | Design and analysis of algorithms         | Lecture | Kim H. | Homework of previously lecture |
| 7  | Data structures                           | Lecture | Kim H. | Homework of previously lecture |
| 8  | Basic data structures                     | Lecture | Kim H. | Homework of previously lecture |
| 9  | Lists                                     | Lecture | Kim H. | Homework of previously lecture |
| 10 | Stacks, Queues                            | Lecture | Kim H. | Homework of previously lecture |
| 11 | Trees                                     | Lecture | Kim H. | Homework of previously lecture |
| 12 | Search                                    | Lecture | Kim H. | Homework of previously lecture |
| 13 | Binary search and AVL trees               | Lecture | Kim H. | Homework of previously lecture |
| 14 | Graph                                     | Lecture | Kim H. | Homework of previously lecture |
| 15 | Summary                                   | Lecture | Kim H. | Homework of previously lecture |

2017年度

# Environmental Bio-adaptation (Environmental Bio-adaptation)

|       |              |     |    |    |          |     |   |
|-------|--------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 2 grades | 期区分 | 通年 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義           | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |    |    |          |     |   |
| 科目責任者 | Maeda T.     |     |    |    |          |     |   |
| 担当教員  | 〔非常勤講師〕前田 憲成 |     |    |    |          |     |   |

## 授業の概要

Bacterial can adapt any environments such as high salinity, acidic, alkaline, high pressure conditions. The adaptation can be regulated by the gene expression (on-off switch), gene mutation, and protein evolution. As a result, there are several unique bacterial functions by which bacterial cannibalism, biofilm formation, cell-to-cell communication, and bioenergy production can be seen as a bacterial event. The objective of this lecture is to understand how living organisms can adapt and regulate the functions and how the bacterial functions can be applied to an eco-friendly technology.

## 学生の到達目標

1. To understand the concept of “ Environmental bio-adaptation ” .
2. To understand the structure of DNA and chromosome.
3. To understand DNA replication, DNA repair, and DNA mutation.
4. To understand the concept of Central Dogma.
- 5-6. To understand the mechanism of gene expression and regulation.
- 7-8. To understand the mechanism of translation and catalytic function.
9. To discuss the protein evolution and then understand the protein engineering.
- 10-11. To understand the mechanism of bacterial predation and cannibalism.
- 12-13. To understand the mechanism of biofilm formation and bacterial quorum sensing.
14. To understand the mechanism of chemotaxis.
15. To understand the future biotechnology and discuss about the next-generation technology.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                      | 割合  |
|---------------------------|-----|
| Attendance to the lecture | 20% |
| final examination         | 80% |

## その他

Lecture materials can be downloaded from the following homepage (<http://www.life.kyutech.ac.jp/~toshi.maeda/>).

2017年度

# Environmental Bio-adaptation (Environmental Bio-adaptation)

|       |              |     |    |    |          |     |   |
|-------|--------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 2 grades | 期区分 | 通年 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義           | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |    |    |          |     |   |
| 科目責任者 | Maeda T.     |     |    |    |          |     |   |
| 担当教員  | 〔非常勤講師〕前田 憲成 |     |    |    |          |     |   |

## 授業計画

| 回 | 学習内容                          | 授業方法    | 担当教員     | 事前・事後学習<br>学習課題   |
|---|-------------------------------|---------|----------|---|
| 1 | Environmental bio-adaptation  | Lecture | Maeda T. | Reading lecture materials before the lecture and careful re-reading after the lecture |
| 2 | DNA and chromosome DNA        | Lecture | Maeda T. | Reading lecture materials before the lecture and careful re-reading after the lecture |
| 3 | replication, repair, mutation | Lecture | Maeda T. | Reading lecture materials before the lecture and careful re-reading after the lecture |
| 4 | Central Dogma                 | Lecture | Maeda T. | Reading lecture materials before the lecture and careful re-reading after the lecture |
| 5 | Gene expression               | Lecture | Maeda T. | Reading lecture materials before the lecture and careful re-reading after the lecture |
| 6 | Regulation of gene expression | Lecture | Maeda T. | Reading lecture materials before the lecture and careful re-reading after the lecture |
| 7 | Translation                   | Lecture | Maeda T. | Reading lecture materials before the lecture and careful re-reading after the lecture |
| 8 | Protein & catalytic mechanism | Lecture | Maeda T. | Reading lecture materials before the lecture and careful re-reading after the lecture |
| 9 | Protein evolution             | Lecture | Maeda T. | Reading lecture materials before the lecture and careful re-reading after the lecture |

2017年度

# Environmental Bio-adaptation (Environmental Bio-adaptation)

|       |              |     |    |    |          |     |   |
|-------|--------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 2 grades | 期区分 | 通年 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義           | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |    |    |          |     |   |
| 科目責任者 | Maeda T.     |     |    |    |          |     |   |
| 担当教員  | 〔非常勤講師〕前田 憲成 |     |    |    |          |     |   |

| 回  | 学習内容                        | 授業方法    | 担当教員     | 事前・事後学習<br>学習課題   |
|----|-----------------------------|---------|----------|---|
| 10 | Bacterial predation         | Lecture | Maeda T. | Reading lecture materials before the lecture and careful re-reading after the lecture |
| 11 | Bacterial cannibalism       | Lecture | Maeda T. | Reading lecture materials before the lecture and careful re-reading after the lecture |
| 12 | Bacterial biofilm formation | Lecture | Maeda T. | Reading lecture materials before the lecture and careful re-reading after the lecture |
| 13 | Bacterial quorum sensing    | Lecture | Maeda T. | Reading lecture materials before the lecture and careful re-reading after the lecture |
| 14 | Bacterial chemotaxis        | Lecture | Maeda T. | Reading lecture materials before the lecture and careful re-reading after the lecture |
| 15 | Future biotechnology        | Lecture | Maeda T. | Reading lecture materials before the lecture and careful re-reading after the lecture |

2017年度

# Functional Biomaterials (Functional Biomaterials)

|       |                           |     |    |    |          |     |   |
|-------|---------------------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 3 grades              | 期区分 | 前期 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義                        | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                |     |    |    |          |     |   |
| 科目責任者 | Miyazaki T.               |     |    |    |          |     |   |
| 担当教員  | 〔非常勤講師〕宮崎 敏樹、〔非常勤講師〕城崎 由紀 |     |    |    |          |     |   |

## 授業の概要

This course deals with structure, design and development of biomaterials used for medical fields. Especially this course focuses on hard tissue repair such as bone and tooth. Ceramics, metals, polymers and composites materials for biomaterials will be introduced.

## 学生の到達目標

The attendee can explain chemical properties of biomaterials.  
The attendee can explain mechanical properties of biomaterials.  
The attendee can explain biological properties of biomaterials.  
The attendee can explain preparation of biomaterials.

## テキスト

An Introduction to Bioceramics (2nd Edition)  
出)Imperial College Press, 2013 著)L.L. Hench (ed.)  
Bioceramics and their Clinical Applications  
出)Woodhead Publishing, 2008 著)T. Kokubo (ed.)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                         | 割合   |
|------------------------------|------|
| Midterm paper and final exam | 100% |

## その他

Students should read English handout distributed by PDF file in advance.

2017年度

# Functional Biomaterials (Functional Biomaterials)

|       |                           |     |    |    |          |     |   |
|-------|---------------------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 3 grades              | 期区分 | 前期 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義                        | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻                |     |    |    |          |     |   |
| 科目責任者 | Miyazaki T.               |     |    |    |          |     |   |
| 担当教員  | 〔非常勤講師〕宮崎 敏樹、〔非常勤講師〕城崎 由紀 |     |    |    |          |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法    | 担当教員        | 事前・事後学習<br>学習課題                                       |
|----|---|---------|-------------|---|
| 1  | What is biomaterial?  | Lecture | Miyazaki T. | Review and preparation by text distributed in advance |
| 2  | Current development process and production of biomaterials                    | Lecture | Miyazaki T. | Review and preparation by text distributed in advance |
| 3  | Structure and function of bone  | Lecture | Miyazaki T. | Review and preparation by text distributed in advance |
| 4  | Structure and function of tooth   | Lecture | Miyazaki T. | Review and preparation by text distributed in advance |
| 5  | Interaction between biomaterial and body                                      | Lecture | Miyazaki T. | Review and preparation by text distributed in advance |
| 6  | Cytotoxicity of various elements  | Lecture | Miyazaki T. | Review and preparation by text distributed in advance |
| 7  | Ceramic biomaterials  | Lecture | Miyazaki T. | Review and preparation by text distributed in advance |
| 8  | Polymer biomaterials  | Lecture | Miyazaki T. | Review and preparation by text distributed in advance |
| 9  | Composite biomaterials  | Lecture | Miyazaki T. | Review and preparation by text distributed in advance |
| 10 | Metallic biomaterials   | Lecture | Miyazaki T. | Review and preparation by text distributed in advance |
| 11 | Ceramics produced by living things  | Lecture | Miyazaki T. | Review and preparation by text distributed in advance |
| 12 | Principle of biomimetic process   | Lecture | Miyazaki T. | Review and preparation by text distributed in advance |
| 13 | Development of biomaterials and environmental materials by biomimetic process | Lecture | Miyazaki T. | Review and preparation by text distributed in advance |
| 14 | Biomaterials for tissue engineering   | Lecture | Miyazaki T. | Review and preparation by text distributed in advance |
| 15 | Biomaterials for cancer treatment   | Lecture | Miyazaki T. | Review  |



2017年度

# Biomechanics (Biomechanics)

|       |              |     |    |    |          |     |   |
|-------|--------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 2 grades | 期区分 | 前期 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義           | 時間数 | 32 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |    |    |          |     |   |
| 科目責任者 | Yamada H.    |     |    |    |          |     |   |
| 担当教員  | 〔非常勤講師〕山田 宏  |     |    |    |          |     |   |

## 授業の概要

【Language】 Japanese

A human body is subjected to external and internal forces, and some functions and behaviors of body components can be dealt as mechanical phenomena. By revealing the correlations between biological phenomena and mechanical factors, one can enhance healthy conditions and protect the body from disorders and diseases with an aid of engineering. This class introduces the methods in solid biomechanics to evaluate or analyze the structures, functions and responses of human body components to learn the mechanical characteristics of musculoskeletal and cardiovascular systems, etc. It also introduces some approaches to the body components with engineering discipline.

## 学生の到達目標

1. One can explain an overview of biomechanics and related fields.
2. One can calculate the force on the musculoskeletal system.
3. One can explain the mechanical characteristics and stress state of bones and teeth.
4. One can explain the stress relaxation and creep deformation of soft tissues.
5. One can explain the large deformation of soft tissues based on the concept of continuum mechanics.
6. One can explain the mechanical tests and the analyses of stress and strain by finite element method for biological tissues and cells.

## テキスト

Fundamentals of mechanics and biomechanics, in Japanese (ISBN 978-4-339-07230-3)  
出) 著) H. Yamada

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                        | 割合  |
|-----------------------------|-----|
| short reports in each class | 50% |
| reports of investigations   | 50% |

## その他

2017年度

# Biomechanics (Biomechanics)

|       |              |     |    |    |          |     |   |
|-------|--------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 2 grades | 期区分 | 前期 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義           | 時間数 | 32 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |    |    |          |     |   |
| 科目責任者 | Yamada H.    |     |    |    |          |     |   |
| 担当教員  | 〔非常勤講師〕山田 宏  |     |    |    |          |     |   |

## 授業計画

| 回  | 学習内容   | 授業方法     | 担当教員      | 事前・事後学習<br>学習課題  |
|----|--|----------|-----------|--|
| 1  | Overview of biomechanics   | Lecture  | Yamada H. | preparation and review for the lectures and exercises. |
| 2  | Mechanics of human body with microgravity                        | Lecture  | Yamada H. | preparation and review for the lectures and exercises. |
| 3  | Mechanics in the musculoskeletal system                          | Lecture  | Yamada H. | preparation and review for the lectures and exercises. |
| 4  | Infinitesimal deformation of hard tissues                        | Lecture  | Yamada H. | preparation and review for the lectures and exercises. |
| 5  | Mechanics of bone and teeth                                      | Lecture  | Yamada H. | preparation and review for the lectures and exercises. |
| 6  | Viscoelasticity of soft tissues                                  | Lecture  | Yamada H. | preparation and review for the lectures and exercises. |
| 7  | Investigation and report for an individual theme for Lecture 1-6 | Practice | Yamada H. | preparation and review for the investigation           |
| 8  | Investigation and report for an individual theme for Lecture 1-6 | Practice | Yamada H. | preparation and review for the investigation           |
| 9  | Mechanics of skeletal muscles                                    | Lecture  | Yamada H. | preparation and review for the lectures and exercises. |
| 10 | Large deformation of soft tissues                                | Lecture  | Yamada H. | preparation and review for the lectures and exercises. |
| 11 | Cardiovascular mechanics   | Lecture  | Yamada H. | preparation and review for the lectures and exercises. |
| 12 | Cardiovascular mechanics   | Lecture  | Yamada H. | preparation and review for the lectures and exercises. |
| 13 | Dynamics in biological tissues                                   | Lecture  | Yamada H. | preparation and review for the lectures and exercises. |

2017年度

# Biomechanics (Biomechanics)

|       |              |     |    |    |          |     |   |
|-------|--------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 2 grades | 期区分 | 前期 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義           | 時間数 | 32 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |    |    |          |     |   |
| 科目責任者 | Yamada H.    |     |    |    |          |     |   |
| 担当教員  | 〔非常勤講師〕山田 宏  |     |    |    |          |     |   |

| 回  | 学習内容  | 授業方法     | 担当教員      | 事前・事後学習<br>学習課題  |
|----|---|----------|-----------|--|
| 14 | Mechanical tests and finite element analyses of tissues & cells   | Lecture  | Yamada H. | preparation and review for the lectures and exercises. |
| 15 | Investigation and report for an individual theme for Lecture 9-14 | Practice | Yamada H. | preparation and review for the investigation           |
| 16 | Investigation and report for an individual theme for Lecture 9-14 | Practice | Yamada H. | preparation and review for the investigation           |

2017年度

# Advanced Biology of Chemosensory Organs (Advanced Biology of Chemosensory Organs)

|       |            |     |    |    |          |     |   |
|-------|------------|-----|----|----|----------|-----|---|
| 開講年次  | 1～4年       | 期区分 | 通年 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義         | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻 |     |    |    |          |     |   |
| 科目責任者 | Seta Y.    |     |    |    |          |     |   |
| 担当教員  | 瀬田 祐司      |     |    |    |          |     |   |

## 授業の概要

This course introduces the foundations of anatomy and molecular biology of sensory organs to students taking this course.

The goals of this course are to

- (1) be able to explain the structure and function of sensory organ,
- (2) be able to explain the synapse transduction,
- (3) be able to explain the mechanism of sensory reception,
- (4) be able to explain the taste and olfactory organs.

## 学生の到達目標

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                    | 割合   |
|-------------------------|------|
| attendance and reports. | 100% |

## その他

This course will be taught in Japanese.

2017年度

# Advanced Biology of Chemosensory Organs (Advanced Biology of Chemosensory Organs)

|       |            |     |    |    |          |     |   |
|-------|------------|-----|----|----|----------|-----|---|
| 開講年次  | 1～4年       | 期区分 | 通年 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義         | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻 |     |    |    |          |     |   |
| 科目責任者 | Seta Y.    |     |    |    |          |     |   |
| 担当教員  | 瀬田 祐司      |     |    |    |          |     |   |

## 授業計画

| 回  | 学習内容   | 授業方法    | 担当教員 | 事前・事後学習<br>学習課題                      |
|----|--|---------|------|--------------------------------------|
| 1  | Introduction: the foundation of sensory organs                   | Lecture | Seta | Preparation and review of each class |
| 2  | The structure of sensory organ (taste organ)                     | Lecture | Seta | Preparation and review of each class |
| 3  | The structure of sensory organ (olfactory organ)                 | Lecture | Seta | Preparation and review of each class |
| 4  | The mechanism of chemoreception ( taste cell )                   | Lecture | Seta | Preparation and review of each class |
| 5  | The mechanism of chemoreception ( olfactory neuron )             | Lecture | Seta | Preparation and review of each class |
| 6  | The mechanism of signal transduction 1                           | Lecture | Seta | Preparation and review of each class |
| 7  | The mechanism of signal transduction 2                           | Lecture | Seta | Preparation and review of each class |
| 8  | Taste organ 1  | Lecture | Seta | Preparation and review of each class |
| 9  | Taste organ 2  | Lecture | Seta | Preparation and review of each class |
| 10 | Olfactory neuron 1   | Lecture | Seta | Preparation and review of each class |
| 11 | Olfactory neuron 2   | Lecture | Seta | Preparation and review of each class |
| 12 | The development of taste organ                                   | Lecture | Seta | Preparation and review of each class |
| 13 | The development of olfactory organ                               | Lecture | Seta | Preparation and review of each class |
| 14 | The molecular mechanism of differentiation of chemoreceptor cell | Lecture | Seta | Preparation and review of each class |
| 15 | Review for this course   | Lecture | Seta | Preparation and review of each class |

2017年度

# Outline of Tooth Therapeutics and Research (Outline of Tooth Therapeutics and Research)

|       |             |     |    |    |          |     |   |
|-------|-------------|-----|----|----|----------|-----|---|
| 開講年次  | 1～4年        | 期区分 | 通年 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義          | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |    |    |          |     |   |
| 科目責任者 | Kitamura C. |     |    |    |          |     |   |
| 担当教員  | 北村 知昭       |     |    |    |          |     |   |

## 授業の概要

Functioning tooth consists of dental pulp and hard tissues (enamel, dentin, and cementum), and is supported by periodontal tissue (periodontal ligament and bone). In lectures, the overview of tooth therapeutics, the essential base of dentistry, as well as the overview of research including the regenerative dentistry, are shown.

## 学生の到達目標

## テキスト

Operative Dentistry 21 4th Ed  
出)NAGASUE SHOTEN 著)

Textbook of Endodontics 4th Ed  
出)NAGASUE SHOTEN 著)

## 参考書

Operative Dentistry 6th Ed  
出)ISHIYAKU PUBLISHERS, Inc. 著)

Endodontics 4th Ed  
出)ISHIYAKU PUBLISHERS, Inc. 著)

## 成績評価方法・基準

| 評価項目                               | 割合   |
|------------------------------------|------|
| test, report, and Oral examination | 100% |

## その他

The lecture contains clinical and basic science about tooth therapeutics, so students should have interests to dentistry and life science.

2017年度

# Outline of Tooth Therapeutics and Research (Outline of Tooth Therapeutics and Research)

|       |             |     |    |    |          |     |   |
|-------|-------------|-----|----|----|----------|-----|---|
| 開講年次  | 1～4年        | 期区分 | 通年 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義          | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |    |    |          |     |   |
| 科目責任者 | Kitamura C. |     |    |    |          |     |   |
| 担当教員  | 北村 知昭       |     |    |    |          |     |   |

## 授業計画

| 回 | 学習内容  | 授業方法    | 担当教員     | 事前・事後学習<br>学習課題   |
|---|---|---------|----------|---|
| 1 | Basic Oral Bioscience for Tooth therapy (1) Normal Tissue           | Lecture | Kitamura | Submission of report about the theme that is indicated at the end of each lecture |
| 2 | Basic Oral Bioscience for Tooth therapy (2) Response to Stimulation | Lecture | Kitamura | Submission of report about the theme that is indicated at the end of each lecture |
| 3 | Tooth Disease (1) In Hard Tissues of Tooth                          | Lecture | Kitamura | Submission of report about the theme that is indicated at the end of each lecture |
| 4 | Tooth Disease (2) In Tissues Around Tooth                           | Lecture | Kitamura | Submission of report about the theme that is indicated at the end of each lecture |
| 5 | Tooth Disease (3) Diagnose  | Lecture | Kitamura | Submission of report about the theme that is indicated at the end of each lecture |
| 6 | Preservation of Dental Pulp and Restoration: Overview               | Lecture | Kitamura | Submission of report about the theme that is indicated at the end of each lecture |
| 7 | Tooth Therapeutics: Overview  | Lecture | Kitamura | Submission of report about the theme that is indicated at the end of each lecture |
| 8 | Endodontics With Microscope: Micro-Endodontics                      | Lecture | Kitamura | Submission of report about the theme that is indicated at the end of each lecture |
| 9 | Rehabilitation After Tooth Therapy: Overview                        | Lecture | Kitamura | Submission of report about the theme that is indicated at the end of each lecture |

2017年度

# Outline of Tooth Therapeutics and Research (Outline of Tooth Therapeutics and Research)

|       |             |     |    |    |          |     |   |
|-------|-------------|-----|----|----|----------|-----|---|
| 開講年次  | 1～4年        | 期区分 | 通年 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義          | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻  |     |    |    |          |     |   |
| 科目責任者 | Kitamura C. |     |    |    |          |     |   |
| 担当教員  | 北村 知昭       |     |    |    |          |     |   |

| 回  | 学習内容   | 授業方法    | 担当教員     | 事前・事後学習<br>学習課題   |
|----|--|---------|----------|---|
| 10 | Relationship with Other Disease and Their Treatment    | Lecture | Kitamura | Submission of report about the theme that is indicated at the end of each lecture |
| 11 | Follow up and Maintenance After Treatment              | Lecture | Kitamura | Submission of report about the theme that is indicated at the end of each lecture |
| 12 | Limit of Diagnosis and Treatment, and Desired Research | Lecture | Kitamura | Submission of report about the theme that is indicated at the end of each lecture |
| 13 | Outline of Research for Tooth Therapeutics (1)         | Lecture | Kitamura | Submission of report about the theme that is indicated at the end of each lecture |
| 14 | Outline of Research for Tooth Therapeutics (2)         | Lecture | Kitamura | Submission of report about the theme that is indicated at the end of each lecture |
| 15 | Outline of Research for Tooth Therapeutics (3)         | Lecture | Kitamura |   |



2017年度

# Periodontology (Periodontology)

|       |              |     |    |    |          |     |   |
|-------|--------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義           | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |    |    |          |     |   |
| 科目責任者 | Nakashima K. |     |    |    |          |     |   |
| 担当教員  | 中島 啓介        |     |    |    |          |     |   |

## 授業の概要

Dental caries and periodontal disease are common among oral diseases. Numbers of patients with tooth decay recently have decreased in Japanese population; however, numbers of patients with periodontal disease remains the same. Good quality of life in elderly population needs to maintain the masticatory function by preventing tooth loss due to periodontal disease. The lecturer teaches pathology and treatment of periodontal disease showing diagnostic and treatment devices.

## 学生の到達目標

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                              | 割合   |
|-----------------------------------|------|
| Examination, report and interview | 100% |

## その他

2017年度

# Periodontology (Periodontology)

|       |              |     |    |    |          |     |   |
|-------|--------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義           | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |    |    |          |     |   |
| 科目責任者 | Nakashima K. |     |    |    |          |     |   |
| 担当教員  | 中島 啓介        |     |    |    |          |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法    | 担当教員      | 事前・事後学習<br>学習課題                        |
|----|---|---------|-----------|--|
| 1  | Periodontal tissue (gingiva)                        | Lecture | Nakashima | Review the contents after each lecture |
| 2  | Periodontal tissue (alveolar bone)                  | Lecture | Nakashima | Review the contents after each lecture |
| 3  | Periodontal tissue (periodontal ligament)           | Lecture | Nakashima | Review the contents after each lecture |
| 4  | Periodontal tissue (cementum)                       | Lecture | Nakashima | Review the contents after each lecture |
| 5  | Periodontal tissue in periodontitis                 | Lecture | Nakashima | Review the contents after each lecture |
| 6  | Periodontal examination (periodontal pocket)        | Lecture | Nakashima | Review the contents after each lecture |
| 7  | Periodontal examination (X-ray diagnosis)           | Lecture | Nakashima | Review the contents after each lecture |
| 8  | Classification and diagnosis of periodontal disease | Lecture | Nakashima | Review the contents after each lecture |
| 9  | Periodontal initial preparation (dental plaque)     | Lecture | Nakashima | Review the contents after each lecture |
| 10 | Periodontal initial preparation (occlusal trauma)   | Lecture | Nakashima | Review the contents after each lecture |
| 11 | Re-evaluation                                       | Lecture | Nakashima | Review the contents after each lecture |
| 12 | Periodontal surgery                                 | Lecture | Nakashima | Review the contents after each lecture |
| 13 | Final evaluation and maintenance                    | Lecture | Nakashima | Review the contents after each lecture |
| 14 | Periodontal disease and systemic condition          | Lecture | Nakashima | Review the contents after each lecture |
| 15 | Summary   | Lecture | Nakashima |  |

2017年度

# Introduction to Oral and Maxillofacial Radiology (Introduction to Oral and Maxillofacial Radiology)

|       |              |     |    |    |          |     |   |
|-------|--------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義           | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |    |    |          |     |   |
| 科目責任者 | Morimoto Y.  |     |    |    |          |     |   |
| 担当教員  | 森本 泰宏        |     |    |    |          |     |   |

## 授業の概要

You can learn the applied imaging diagnosis, the applied radiobiology, and the applied radiological physics based on your knowledge for the pass of the examinations of radiation protection supervisor I and II.

## 学生の到達目標

## テキスト

出) 著)

## 参考書

Basic Radiology  
出) 著)

## 成績評価方法・基準

| 評価項目               | 割合  |
|--------------------|-----|
| oral presentations | 50% |
| oral examinations  | 50% |

## その他

2017年度

# Introduction to Oral and Maxillofacial Radiology (Introduction to Oral and Maxillofacial Radiology)

|       |              |     |    |    |          |     |   |
|-------|--------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義           | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |    |    |          |     |   |
| 科目責任者 | Morimoto Y.  |     |    |    |          |     |   |
| 担当教員  | 森本 泰宏        |     |    |    |          |     |   |

## 授業計画

| 回  | 学習内容   | 授業方法    | 担当教員     | 事前・事後学習<br>学習課題                           |
|----|--|---------|----------|---|
| 1  | History of Radiology, Physics of radiation I                 | Lecture | Morimoto | The prereading of textbook as preparation |
| 2  | Radioisotope   | Lecture | Morimoto | The prereading of textbook as preparation |
| 3  | Biology of radiation   | Lecture | Morimoto | The prereading of textbook as preparation |
| 4  | Basic radiation measurement methods                          | Lecture | Morimoto | The prereading of textbook as preparation |
| 5  | Radiation protection   | Lecture | Morimoto | The prereading of textbook as preparation |
| 6  | Radiation-related laws and ordinances I                      | Lecture | Morimoto | The prereading of textbook as preparation |
| 7  | Visualization of radiological imaging                        | Lecture | Morimoto | The prereading of textbook as preparation |
| 8  | Radiographs  | Lecture | Morimoto | The prereading of textbook as preparation |
| 9  | X-ray CT imaging   | Lecture | Morimoto | The prereading of textbook as preparation |
| 10 | Magnetic resonance imaging                                   | Lecture | Morimoto | The prereading of textbook as preparation |
| 11 | Ultrasonography  | Lecture | Morimoto | The prereading of textbook as preparation |
| 12 | Nuclear medicine   | Lecture | Morimoto | The prereading of textbook as preparation |
| 13 | Radiological therapy   | Lecture | Morimoto | The prereading of textbook as preparation |
| 14 | The examinations of radiation protection supervisor I and II | Lecture | Morimoto | The prereading of textbook as preparation |
| 15 | Review (Compound questions)                                  | Lecture | Morimoto |   |

2017年度

# Oral and Maxillofacial Surgery (Oral and Maxillofacial Surgery)

|       |              |     |    |    |          |     |   |
|-------|--------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義           | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |    |    |          |     |   |
| 科目責任者 | Tominaga K.  |     |    |    |          |     |   |
| 担当教員  | 富永 和宏        |     |    |    |          |     |   |

## 授業の概要

To acquire basic knowledge of Oral and Maxillofacial Surgery and the latest improvement of diagnosis and management of various lesions in this area.

To learn the role of engineering skill and knowledge in regenerative medicine, innovative drug development , novel cancer therapy and so on.

## 学生の到達目標

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                               | 割合   |
|------------------------------------|------|
| reports of the individual lectures | 100% |

## その他

2017年度

# Oral and Maxillofacial Surgery (Oral and Maxillofacial Surgery)

|       |              |     |    |    |          |     |   |
|-------|--------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 4 grades | 期区分 | 通年 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義           | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻   |     |    |    |          |     |   |
| 科目責任者 | Tominaga K.  |     |    |    |          |     |   |
| 担当教員  | 富永 和宏        |     |    |    |          |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法    | 担当教員     | 事前・事後学習<br>学習課題                    |
|----|---|---------|----------|------------------------------------|
| 1  | Embryology and anatomy of oral and maxillofacial region | Lecture | Tominaga | Reports of the individual lectures |
| 2  | Congenital disorders                                    | Lecture | Tominaga | Reports of the individual lectures |
| 3  | Developmental disorders                                 | Lecture | Tominaga | Reports of the individual lectures |
| 4  | Jaw deformities   | Lecture | Tominaga | Reports of the individual lectures |
| 5  | Traumatology  | Lecture | Tominaga | Reports of the individual lectures |
| 6  | Infectious diseases                                     | Lecture | Tominaga | Reports of the individual lectures |
| 7  | Benign tumors   | Lecture | Tominaga | Reports of the individual lectures |
| 8  | Malignant tumors (1)                                    | Lecture | Tominaga | Reports of the individual lectures |
| 9  | Malignant tumors (2)                                    | Lecture | Tominaga | Reports of the individual lectures |
| 10 | Temporomandibular disorders                             | Lecture | Tominaga | Reports of the individual lectures |
| 11 | Mucous diseases   | Lecture | Tominaga | Reports of the individual lectures |
| 12 | Dental implantology                                     | Lecture | Tominaga | Reports of the individual lectures |
| 13 | Oral facial prosthesis                                  | Lecture | Tominaga | Reports of the individual lectures |
| 14 | Disinfection  | Lecture | Tominaga | Reports of the individual lectures |
| 15 | Summary   | Lecture | Tominaga |                                    |

2017年度

# Clinical Research Design (Clinical Research Design)

|       |                           |     |    |    |          |     |   |
|-------|---------------------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 3 grades              | 期区分 | 前期 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義・演習                     | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻, 歯学研究科 口腔保健学専攻 |     |    |    |          |     |   |
| 科目責任者 | Kakudate N.               |     |    |    |          |     |   |
| 担当教員  | 角館 直樹、唐木 純一、日高 勝美         |     |    |    |          |     |   |

## 授業の概要

【Language】English and Japanese

In this lecture, you will learn basic aspects of clinical research design. In addition, to develop practical skills in Evidence-Based Dentistry (EBD), you will conduct a literature search based on a question you derive from your own dental practice, and make a presentation after critical appraisal of the selected papers.

## 学生の到達目標

At the completion of this course, you will be able to:

1. Formulate questions arising in clinical practice into research questions.
2. Understand the outlines of clinical study design.
3. Select appropriate clinical study designs.
4. Critically appraise clinical research papers and structured abstracts.
5. Practice Evidence-based Dentistry.

## テキスト

Introduction to Evidence-Based Dentistry  
出) Ishiyaku Publishers. 著)

## 参考書

Designing Clinical Research  
出) Lippincott Williams & Wilkins 著) Stephen B Hulley

Guide to Practice-Based Research and Scientific Writing  
出) Ishiyaku Publishers 著)

## 成績評価方法・基準

| 評価項目                                | 割合  |
|-------------------------------------|-----|
| attendance                          | 30% |
| deliverables during your coursework | 50% |
| presentation                        | 20% |

## その他

2017年度

# Clinical Research Design (Clinical Research Design )

|       |                           |     |    |    |          |     |   |
|-------|---------------------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 3 grades              | 期区分 | 前期 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義・演習                     | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻, 歯学研究科 口腔保健学専攻 |     |    |    |          |     |   |
| 科目責任者 | Kakudate N.               |     |    |    |          |     |   |
| 担当教員  | 角館 直樹、唐木 純一、日高 勝美         |     |    |    |          |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法                 | 担当教員               | 事前・事後学習<br>学習課題   |
|----|---|----------------------|--------------------|---|
| 1  | Introduction to EBD:<br>You will learn about the definition of EBD and clinical research.   | Lecture              | Kakudate           | Definition of EBD/Level of evidence   |
| 2  | Study design:<br>You will learn about clinical research design and biases.  | Lecture              | Kakudate           | Clinical Research design/ Concept of bias                                     |
| 3  | Observational study:<br>You will learn about critical appraisal of reports of observational studies.  | Lecture and practice | Kakudate           | Critical appraisal/ Screening test  |
| 4  | Randomized Controlled Trials:<br>You will learn about critical appraisal of reports of RCT  | Lecture and practice | Kakudate           | Critical appraisal of research articles of RCT                                |
| 5  | Research articles:<br>You will learn about the structure of research articles and abstracts on clinical research                              | Lecture              | Kakudate           | Structure of the research articles and abstracts                              |
| 6  | EBD step 1:<br>You will learn how to formulate an answerable question.  | Lecture and Practice | Kakudate           | P I C O:<br>Formulate an answerable question                                  |
| 7  | Outcome of interest: You will learn about outcome indicators in clinical research   | Lecture and Practice | Kakudate           | Measuring outcomes of interest  |
| 8  | EBD step 2:<br>You will learn how to search the literature using PubMed.  | Lecture and Practice | Kakudate           | Literature search   |
| 9  | EBD step 2:<br>You will learn how to search the literature using the Cochrane library and Minds.  | Lecture and Practice | Kakudate           | Cochrane review / Clinical guidelines   |
| 10 | Systematic reviews, Meta-analyses and Clinical guidelines:<br>You will learn about systematic reviews, meta-analyses and clinical guidelines. | Lecture              | Kakudate           | Systematic review / Meta-analysis / Clinical guidelines                       |
| 11 | Systematic reviews and meta-analyses:<br>You will critically appraise research reports of meta-analyses.                                      | Lecture and Practice | Kakudate           | Critical appraisal of research papers of systematic reviews and meta-analysis |
| 12 | EBD step 3:<br>You will perform critical appraisal of the literature based on your own research question                                      | Practice             | Kakudate           | Preparing PowerPoint presentations  |
| 13 | Final presentation<br>-Part 1-  | Presentation         | Kakudate<br>Karaki | Preparing PowerPoint presentations  |
| 14 | Final presentation<br>-Part 2-  | Presentation         | Kakudate<br>Karaki | Preparing PowerPoint presentations  |
| 15 | Final presentation<br>-Part 3-  | Presentation         | Kakudate<br>Karaki | Preparing PowerPoint presentations  |



2017年度

# Clinical Research Design (Clinical Research Design )

|       |                           |     |    |    |          |     |   |
|-------|---------------------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 3 grades              | 期区分 | 後期 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義・演習                     | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻, 歯学研究科 口腔保健学専攻 |     |    |    |          |     |   |
| 科目責任者 | Kakudate N.               |     |    |    |          |     |   |
| 担当教員  | 角館 直樹、唐木 純一、日高 勝美         |     |    |    |          |     |   |

## 授業の概要

【Language】 English and Japanese

In this lecture, you will obtain specialized knowledge on clinical research design and applied skills in the conduct of clinical research. In addition, you will develop the ability to create a study protocol based on a clinical question you derive from your own dental practice. Finally, you will make a presentation of the study protocol.

## 学生の到達目標

At the completion of this course, you will be able to:

1. Understand the process flow from the planning of clinical epidemiology research up to implementation.
2. Formulate a research question derived from your own dental practice.
3. Develop a research design.
4. Understand the basics of statistical analysis methods.
5. Create a research protocol.

## テキスト

Introduction to Evidence-Based Dentistry  
出) Ishiyaku Publishers. 著)

## 参考書

Designing Clinical Research  
出) Lippincott Williams & Wilkins 著) Stephen B Hulley

Guide to Practice-Based Research and Scientific Writing  
出) Ishiyaku Publishers. 著)

## 成績評価方法・基準

| 評価項目                                | 割合  |
|-------------------------------------|-----|
| attendance                          | 30% |
| deliverables during your coursework | 50% |
| presentation                        | 20% |

## その他

2017年度

# Clinical Research Design (Clinical Research Design)

|       |                           |     |    |    |          |     |   |
|-------|---------------------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 3 grades              | 期区分 | 後期 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義・演習                     | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻, 歯学研究科 口腔保健学専攻 |     |    |    |          |     |   |
| 科目責任者 | Kakudate N.               |     |    |    |          |     |   |
| 担当教員  | 角館 直樹、唐木 純一、日高 勝美         |     |    |    |          |     |   |

## 授業計画

| 回  | 学習内容   | 授業方法                 | 担当教員                | 事前・事後学習<br>学習課題   |
|----|--|----------------------|---------------------|---|
| 1  | Introduction to clinical research:<br>You will learn how to formulate an answerable question.  | Lecture              | Kakudate            | PICO/Finer ' s<br>check   |
| 2  | Controlling bias part 1:<br>You will learn how to control information bias and selection bias.   | Lecture and Practice | Kakudate            | Study<br>design/Informati<br>on and selection<br>bias   |
| 3  | Controlling bias part 2:<br>You will learn how to control confounding bias.  | Lecture and Practice | Kakudate            | Confounding<br>bias   |
| 4  | Hypothetical conceptual model:<br>You will learn how to build a hypothetical conceptual model.   | Lecture and Practice | Kakudate            | Hypothetical<br>conceptual<br>model   |
| 5  | Selecting study design part 1:<br>You will learn how to select an appropriate epidemiological study design.  | Lecture and Practice | Kakudate            | Epidemiological<br>study design   |
| 6  | Selecting study design part 2:<br>You will learn how to plan and conduct epidemiological studies.  | Practice             | Kakudate            | Epidemiological<br>study design   |
| 7  | Finding the Evidence Part 1:<br>You will search the literature based on your PICO framework.   | Practice             | Kakudate            | Literature search   |
| 8  | Finding the Evidence Part 2:<br>You will search the literature based on your PICO framework.   | Practice             | Kakudate            | Literature search   |
| 9  | Questionnaire survey and research protocol:<br>You will learn how to produce questionnaires and research protocol for an Institutional<br>Review Board | Lecture and Practice | Kakudate            | Questionnaire<br>survey<br>and Research<br>protocolfor an<br>Institutional<br>Review Board                    |
| 10 | Statistical analysis part 1:<br>You will learn the types of data and correlation.  | Lecture              | Kakudate            | Correlation<br>coefficient  |
| 11 | Statistical analysis part 2:<br>You will learn hypothesis testing, chi-square test and the t-test.   | Lecture and Practice | Kakudate            | Hypothesis<br>testing/ Chi-<br>square test and<br>t-test  |
| 12 | Statistical analysis part 3:<br>You will learn various kinds of statistical analysis methods including multivariate<br>analysis and survival analysis. | Lecture              | Kakudate            | Various kinds of<br>statistical<br>analysis<br>including<br>multivariate<br>analysis and<br>survival analysis |
| 13 | Final presentation<br>-Part -  | Presentation         | Kakudate            | Preparing<br>PowerPoint<br>presentations  |
| 14 | Final presentation<br>-Part -  | Presentation         | Kakudate,<br>Karaki | Preparing<br>PowerPoint<br>presentations  |
| 15 | Final presentation<br>-Part -  | Presentation         | Kakudate,<br>Karaki | Preparing<br>PowerPoint<br>presentations  |

2017年度

# Geriatric Dentistry (Geriatric Dentistry )

|       |                           |     |    |    |          |     |   |
|-------|---------------------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 3 grades              | 期区分 | 前期 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義・演習                     | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻, 歯学研究科 口腔保健学専攻 |     |    |    |          |     |   |
| 科目責任者 | Karaki J., Hidaka K.      |     |    |    |          |     |   |
| 担当教員  | 唐木 純一、日高 勝美               |     |    |    |          |     |   |

## 授業の概要

【Language】 Japanese

This course deals with the basic concepts and knowledge of gerodontology.  
It also enhances the development of students' skill in carrying out a microbial experiment.

## 学生の到達目標

By the end of the course, students acquire fundamental knowledge about:

- (1) Oral and general health in elderly
- (2) Social Institution for elderly
- (3) Oral disease in elderly.
- (4) Outline the use of Polymerase Chain Reaction
- (5) Biological toxins

## テキスト

出) \_\_\_\_\_ 著) \_\_\_\_\_

## 参考書

出) \_\_\_\_\_ 著) \_\_\_\_\_

## 成績評価方法・基準

| 評価項目       | 割合  |
|------------|-----|
| Attendance | 30% |
| attitude   | 20% |
| report     | 50% |

## その他

2017年度

# Geriatric Dentistry (Geriatric Dentistry )

|       |                           |     |    |    |          |     |   |
|-------|---------------------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 3 grades              | 期区分 | 前期 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義・演習                     | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻, 歯学研究科 口腔保健学専攻 |     |    |    |          |     |   |
| 科目責任者 | Karaki J., Hidaka K.      |     |    |    |          |     |   |
| 担当教員  | 唐木 純一、日高 勝美               |     |    |    |          |     |   |

## 授業計画

| 回  | 学習内容   | 授業方法     | 担当教員                          | 事前・事後学習<br>学習課題  |
|----|--|----------|-------------------------------|--|
| 1  | Introduction to gerodontology  | Lecture  | Junichi Karaki, Katsmi Hidaka | none   |
| 2  | Social Institution for elderly   | Lecture  | Junichi Karaki, Katsmi Hidaka | review: Introduction to gerodontology                      |
| 3  | General remarks on current status of gerodontology   | Lecture  | Junichi Karaki                | review: Social Institution for elderly                     |
| 4  | Characteristic of Oral disease in elderly  | Practice | Junichi Karaki                | review: General remarks on current status of gerodontology |
| 5  | Characteristic of Oral disease in elderly  | Practice | Junichi Karaki                | review: General remarks on current status of gerodontology |
| 6  | Sample Preparation for Polymerase Chain Reaction.  | Lecture  | Junichi Karaki                | none   |
| 7  | Polymerase Chain Reaction for detection and quantification of bacteria in periodontal pocket | Practice | Junichi Karaki                | review: Sample Preparation for Polymerase Chain Reaction.  |
| 8  | Polymerase Chain Reaction for detection and quantification of bacteria in periodontal pocket | Practice | Junichi Karaki                | review: Sample Preparation for Polymerase Chain Reaction.  |
| 9  | Polymerase Chain Reaction for detection and quantification of bacteria in periodontal pocket | Practice | Junichi Karaki                | review: Sample Preparation for Polymerase Chain Reaction.  |
| 10 | Polymerase Chain Reaction for detection and quantification of bacteria in periodontal pocket | Practice | Junichi Karaki                | review: Sample Preparation for Polymerase Chain Reaction.  |
| 11 | Introduction to bacterial enzyme assay   | Lecture  | Junichi Karaki                | none   |
| 12 | Cytotoxicity test of oral mucosa cell  | Practice | Junichi Karaki                | review: Introduction to bacterial enzyme assay             |
| 13 | Cytotoxicity test of oral mucosa cell  | Lecture  | Junichi Karaki                | none   |
| 14 | Cytotoxicity test of oral mucosa cell  | Practice | Junichi Karaki                | review: Cytotoxicity test of oral mucosa cell              |
| 15 | Cytotoxicity test of oral mucosa cell  | Practice | Junichi Karaki                | review: Cytotoxicity test of oral mucosa cell              |

2017年度

# Geriatric Dentistry (Geriatric Dentistry )

|       |                           |     |    |    |          |     |   |
|-------|---------------------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 3 grades              | 期区分 | 後期 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義・演習                     | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻, 歯学研究科 口腔保健学専攻 |     |    |    |          |     |   |
| 科目責任者 | Karaki J., Hidaka K.      |     |    |    |          |     |   |
| 担当教員  | 唐木 純一、日高 勝美               |     |    |    |          |     |   |

## 授業の概要

【Language】 Japanese

This course deals with the basic concepts and knowledge of gerontology and gerodontology. It also enhances the development of students' skill in, carrying out

## 学生の到達目標

By the end of the course, students acquire fundamental knowledge about:

- (1) Importance of quality of life in elderly
- (2) Common oral diseases in elderly
- (3) Determining the components of halitosis and microbial culture
- (4) Evidence search and presentation

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目       | 割合  |
|------------|-----|
| Attendance | 30% |
| attitude   | 20% |
| report     | 50% |

## その他

2017年度

# Geriatric Dentistry (Geriatric Dentistry )

|       |                           |     |    |    |          |     |   |
|-------|---------------------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 3 grades              | 期区分 | 後期 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義・演習                     | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻, 歯学研究科 口腔保健学専攻 |     |    |    |          |     |   |
| 科目責任者 | Karaki J., Hidaka K.      |     |    |    |          |     |   |
| 担当教員  | 唐木 純一、日高 勝美               |     |    |    |          |     |   |

## 授業計画

| 回  | 学習内容                                    | 授業方法     | 担当教員                           | 事前・事後学習<br>学習課題                               |
|----|---|----------|--------------------------------|---|
| 1  | Quality of Life                         | Lecture  | Junichi Karaki, Katsumi Hidaka | none  |
| 2  | Quality of Life                         | Lecture  | Junichi Karaki, Katsumi Hidaka | review:Quality of Life                        |
| 3  | Xerostomia                              | Lecture  | Junichi Karaki,                | review:Quality of Life                        |
| 4  | Xerostomia                              | Lecture  | Junichi Karaki,                | review:Xerostomia                             |
| 5  | Complementary and Alternative Medicine  | Lecture  | Junichi Karaki,                | review:Xerostomia                             |
| 6  | Aspiration Pneumonia                    | Lecture  | Junichi Karaki,                | review:Complementary and Alternative Medicine |
| 7  | Aspiration Pneumonia                    | Lecture  | Junichi Karaki,                | review:Aspiration Pneumonia                   |
| 8  | Functional Assessment                   | Lecture  | Junichi Karaki,                | review:Aspiration Pneumonia                   |
| 9  | Functional Assessment                   | Lecture  | Junichi Karaki,                | review:Functional Assessment                  |
| 10 | Risk Management                         | Lecture  | Junichi Karaki, Katsumi Hidaka | review:Functional Assessment                  |
| 11 | Sampling and microbial culture          | Lecture  | Junichi Karaki,                | review:Risk Management                        |
| 12 | Determining the components of halitosis | Practice | Junichi Karaki,                | review:Sampling and microbial culture         |
| 13 | Microbial culture                       | Practice | Junichi Karaki,                | review:Sampling and microbial culture         |
| 14 | Recent study of gerodontology           | Practice | Junichi Karaki,                | none  |
| 15 | Recent study of gerodontology           | Practice | Junichi Karaki,                | review:Recent study of gerodontology          |

2017年度

# Introduction to Polymer Physics (Introduction to Polymer Physics)

|       |                           |     |    |    |          |     |   |
|-------|---------------------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 2 grades              | 期区分 | 後期 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義                        | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻, 歯学研究科 口腔保健学専攻 |     |    |    |          |     |   |
| 科目責任者 | Sakurai K.                |     |    |    |          |     |   |
| 担当教員  | 〔非常勤講師〕 櫻井 和朗             |     |    |    |          |     |   |

## 授業の概要

【Language】 Official language; Japanese  
To conduct research on biopolymers and environmental materials, understanding physical properties of polymers is extremely important. This lecture explains physical properties of polymers.

## 学生の到達目標

Studying the several basic knowledge required in industrial field such as molecular distribution, crystallization, scattering, and rheology.

## テキスト

Basic Polymer Science(The Society of Polymer Science)ISBN-10:4807906356  
出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目   | 割合   |
|--------|------|
| Report | 100% |

## その他

2017年度

# Introduction to Polymer Physics (Introduction to Polymer Physics)

|       |                           |     |    |    |          |     |   |
|-------|---------------------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 2 grades              | 期区分 | 後期 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義                        | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻, 歯学研究科 口腔保健学専攻 |     |    |    |          |     |   |
| 科目責任者 | Sakurai K.                |     |    |    |          |     |   |
| 担当教員  | 〔非常勤講師〕 櫻井 和朗             |     |    |    |          |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法    | 担当教員       | 事前・事後学習<br>学習課題 |
|----|---|---------|------------|-----------------|
| 1  | What is the Polymer                                 | Lecture | Sakurai K. |                 |
| 2  | Single Chain Conformations                          | Lecture | Sakurai K. |                 |
| 3  | Configurations of Polymers                          | Lecture | Sakurai K. |                 |
| 4  | Conformations of Polymers                           | Lecture | Sakurai K. |                 |
| 5  | Crystalline State                                   | Lecture | Sakurai K. |                 |
| 6  | Primary Crystallization                             | Lecture | Sakurai K. |                 |
| 7  | Secondary Crystallization                           | Lecture | Sakurai K. |                 |
| 8  | Rubber Elasticity                                   | Lecture | Sakurai K. |                 |
| 9  | Viscoelasticity                                     | Lecture | Sakurai K. |                 |
| 10 | Dielectric Property                                 | Lecture | Sakurai K. |                 |
| 11 | Interfacial Property                                | Lecture | Sakurai K. |                 |
| 12 | Polymer and Scattering I 【Colloid】                  | Lecture | Sakurai K. |                 |
| 13 | Polymer and Scattering II 【Light scattering method】 | Lecture | Sakurai K. |                 |
| 14 | Polymer and Scattering III 【Molecular weight】       | Lecture | Sakurai K. |                 |
| 15 | Summary   | Lecture | Sakurai K. |                 |



2017年度

# Biomaterials (Biomaterials)

|       |                           |     |    |    |          |     |   |
|-------|---------------------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 2 grades              | 期区分 | 前期 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義                        | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻, 歯学研究科 口腔保健学専攻 |     |    |    |          |     |   |
| 科目責任者 | Nakazawa K.               |     |    |    |          |     |   |
| 担当教員  | 〔非常勤講師〕中澤 浩二              |     |    |    |          |     |   |

## 授業の概要

【Language】 Official language; Japanese

Biomaterial is any substance (other than drugs) or combination of substances synthetic and natural in origin, which can be used for any period of time, as a whole or as a system which treats, augments, or replaces any tissue, organ, or function of the body. In this lecture, we discuss the biomaterials.

## 学生の到達目標

1. You can understand the properties and requirements of biomaterials.
2. You can understand the reactions between the living body and biomaterials.
3. You can acquire the knowledge for development of biomaterials.
4. You can learn the trend of current biomaterial development.
5. You can propose the direction and idea for biomaterial development.

## テキスト

出) 著)

## 参考書

出) 著)

## 成績評価方法・基準

| 評価項目                              | 割合  |
|-----------------------------------|-----|
| Active participation to the class | 30% |
| Report                            | 70% |

## その他

2017年度

# Biomaterials (Biomaterials)

|       |                           |     |    |    |          |     |   |
|-------|---------------------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 2 grades              | 期区分 | 前期 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義                        | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻, 歯学研究科 口腔保健学専攻 |     |    |    |          |     |   |
| 科目責任者 | Nakazawa K.               |     |    |    |          |     |   |
| 担当教員  | 〔非常勤講師〕中澤 浩二              |     |    |    |          |     |   |

## 授業計画

| 回  | 学習内容                                  | 授業方法         | 担当教員        | 事前・事後学習<br>学習課題 |
|----|---------------------------------------|--------------|-------------|-----------------|
| 1  | What are biomaterials ?               | Lecture      | Nakazawa K. |                 |
| 2  | Necessary conditions of biomaterials  | Lecture      | Nakazawa K. |                 |
| 3  | Biocompatibility                      | Lecture      | Nakazawa K. |                 |
| 4  | Foreign matter reactions              | Lecture      | Nakazawa K. |                 |
| 5  | Biomaterials and biological reactions | Lecture      | Nakazawa K. |                 |
| 6  | Surface design of biomaterials        | Lecture      | Nakazawa K. |                 |
| 7  | Safety testing                        | Lecture      | Nakazawa K. |                 |
| 8  | Metals                                | Lecture      | Nakazawa K. |                 |
| 9  | Ceramics                              | Lecture      | Nakazawa K. |                 |
| 10 | Polymers                              | Lecture      | Nakazawa K. |                 |
| 11 | Composites                            | Lecture      | Nakazawa K. |                 |
| 12 | Presentation and Discussion 1         | Presentation | Nakazawa K. |                 |
| 13 | Presentation and Discussion 2         | Presentation | Nakazawa K. |                 |
| 14 | Discussion                            | Lecture      | Nakazawa K. |                 |
| 15 | Summary                               | Lecture      | Nakazawa K. |                 |

2017年度

# Introduction to physical chemistry (Introduction to physical chemistry)

|       |                           |     |    |    |          |     |   |
|-------|---------------------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 2 grades              | 期区分 | 前期 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義                        | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻, 歯学研究科 口腔保健学専攻 |     |    |    |          |     |   |
| 科目責任者 | Takenaka S.               |     |    |    |          |     |   |
| 担当教員  | 〔非常勤講師〕横野 照尚、〔非常勤講師〕竹中 繁織 |     |    |    |          |     |   |

## 授業の概要

To improve the knowledge about physical Chemistry, Advanced Physical Chemistry is lectured with taking up from fundamental to advanced subjects every year.

## 学生の到達目標

Participant should understand following subjects in Physical Chemistry.

- 1) Thermodynamics
- 2) Kinetics
- 3) Equilibrium
- 4) Quantum chemistry
- 5) Statistical thermodynamics
- 6) Electrochemistry
- 7) Group theory

## テキスト

出) \_\_\_\_\_ 著)

## 参考書

出) \_\_\_\_\_ 著)

## 成績評価方法・基準

| 評価項目 | 割合   |
|------|------|
|      | 100% |

Teacher requests your lecture note. Teacher evaluates your ability from small quiz in the class and examination.

## その他

2017年度

# Introduction to physical chemistry (Introduction to physical chemistry)

|       |                           |     |    |    |          |     |   |
|-------|---------------------------|-----|----|----|----------|-----|---|
| 開講年次  | 1 ~ 2 grades              | 期区分 | 前期 | 科目 | Elective | 単位数 | 2 |
| 授業方法  | 講義                        | 時間数 | 30 | 曜日 |          | 時限  |   |
| 開講学科  | 歯学研究科 歯学専攻, 歯学研究科 口腔保健学専攻 |     |    |    |          |     |   |
| 科目責任者 | Takenaka S.               |     |    |    |          |     |   |
| 担当教員  | 〔非常勤講師〕横野 照尚、〔非常勤講師〕竹中 繁織 |     |    |    |          |     |   |

## 授業計画

| 回  | 学習内容  | 授業方法    | 担当教員                   | 事前・事後学習<br>学習課題                    |
|----|---|---------|------------------------|------------------------------------|
| 1  | Gas and thermodynamics law zero                   | Lecture | Takenaka S.<br>Ohno T. | Homework about fundamental subject |
| 2  | Thermodynamics Law I                              | Lecture | Takenaka S.<br>Ohno T. | Homework of previously lecture     |
| 3  | Thermodynamics Law II and III                     | Lecture | Takenaka S.<br>Ohno T. | Homework of previously lecture     |
| 4  | Free energy and chemical potential                | Lecture | Takenaka S.<br>Ohno T. | Homework of previously lecture     |
| 5  | Thermodynamic equilibrium                         | Lecture | Takenaka S.<br>Ohno T. | Homework of previously lecture     |
| 6  | Equilibrium under single-component system         | Lecture | Takenaka S.<br>Ohno T. | Homework of previously lecture     |
| 7  | Electrochemistry and ionic solution               | Lecture | Takenaka S.<br>Ohno T. | Homework of previously lecture     |
| 8  | Before Quantum Chemistry                          | Lecture | Takenaka S.<br>Ohno T. | Homework of previously lecture     |
| 9  | Quantum Chemistry: Model system and hydrogen atom | Lecture | Takenaka S.<br>Ohno T. | Homework of previously lecture     |
| 10 | Atom and molecule                                 | Lecture | Takenaka S.<br>Ohno T. | Homework of previously lecture     |
| 11 | Symmetry in Quantum Chemistry                     | Lecture | Takenaka S.<br>Ohno T. | Homework of previously lecture     |
| 12 | Rotation and vibration spectroscopies             | Lecture | Takenaka S.<br>Ohno T. | Homework of previously lecture     |
| 13 | Statistical thermodynamics                        | Lecture | Takenaka S.<br>Ohno T. | Homework of previously lecture     |
| 14 | Kinetic theory of gases                           | Lecture | Takenaka S.<br>Ohno T. | Homework of previously lecture     |
| 15 | Kinetics  | Lecture | Takenaka S.<br>Ohno T. | Homework of previously lecture     |