

ORTH - ORTHODONTICS

ORTH 600 Orthodontic-Periodontic Seminar

Credits 0.5. 0.5 Other Hours.

An interdisciplinary course directed at topics relevant to orthodontics and periodontics; effect of orthodontics on the supporting tissues, oral hygiene and periodontal assessment, and interdisciplinary approaches to treatment are topics of discussion.

ORTH 601 TMD Clinic I

Credits 0. 0 Other Hours.

A series of lectures, guest speakers, demonstrations, laboratory exercises, and patient care activities are conducted to enable the student to diagnose, plan treatment, and treat patients with occlusal discrepancies, compromised muscle function, and TMJ abnormalities.

ORTH 602 TMD Clinic II

Credits 0. 0 Other Hours.

A series of lectures, guest speakers, demonstrations, laboratory exercises, and patient care activities are conducted to enable the student to diagnose, plan treatment, and treat patients with occlusal discrepancies, compromised muscle function, and TMJ abnormalities.

ORTH 603 TMD Clinic III

Credits 0. 0 Other Hours.

A series of lectures, guest speakers, demonstrations, laboratory exercises, and patient care activities are conducted to enable the student to diagnose, plan treatment, and treat patients with occlusal discrepancies, compromised muscle function, and TMJ abnormalities.

ORTH 604 TMD Clinic IV

Credits 0. 0 Other Hours.

A series of lectures, guest speakers, demonstrations, laboratory exercises, and patient care activities are conducted to enable the student to diagnose, plan treatment, and treat patients with occlusal discrepancies, compromised muscle function, and TMJ abnormalities.

ORTH 605 TMD Clinic V

Credits 0. 0 Other Hours.

A series of lectures, guest speakers, demonstrations, laboratory exercises, and patient care activities are conducted to enable the student to diagnose, plan treatment, and treat patients with occlusal discrepancies, compromised muscle function, and TMJ abnormalities.

ORTH 606 Craniofacial Anomalies Clinic I

Credits 0. 0 Other Hours.

During the second and third years, students rotate through the local children's hospital for the purpose of participating in the treatment of patients with a wide array of syndromes and craniofacial defects; from newborn to adult, a large number of patients are treated; orthodontics is integrated with plastic surgery in this clinic.

ORTH 607 Craniofacial Anomalies Clinic II

Credits 0. 0 Other Hours.

During the second and third years, students rotate through the local children's hospital for the purpose of participating in the treatment of patients with a wide array of syndromes and craniofacial defects; from newborn to adult, a large number of patients are treated; orthodontics is integrated with plastic surgery in this clinic.

ORTH 608 Craniofacial Anomalies Clinic III

Credits 0. 0 Other Hours.

During the second and third years, students rotate through the local children's hospital for the purpose of participating in the treatment of patients with a wide array of syndromes and craniofacial defects; from newborn to adult, a large number of patients are treated; orthodontics is integrated with plastic surgery in this clinic.

ORTH 609 Craniofacial Anomalies Clinic IV

Credits 0. 0 Other Hours.

During the second and third years, students rotate through the local children's hospital for the purpose of participating in the treatment of patients with a wide array of syndromes and craniofacial defects; from newborn to adult, a large number of patients are treated; orthodontics is integrated with plastic surgery in this clinic.

ORTH 610 Biomechanics I

Credits 0.5-1. 0.5-1 Lecture Hours.

5-1. Mechanical principles and biological factors affecting tooth movement, introduction to forces, statics, and dynamics, scalars and vectors, and analysis of force systems; force and movement; basic concepts fundamental to an understanding of tooth movement.

ORTH 611 Biomechanics II

Credits 0.5-1. 0.5-1 Lecture Hours.

5-1. Mechanical principles and biological factors affecting tooth movement, introduction to forces, statics, and dynamics, scalars and vectors, and analysis of force systems; force and movement; basic concepts fundamental to an understanding of tooth movement.

ORTH 612 Material Science in Orthodontics

Credits 0.5-1. 0.5-1 Lecture Hours.

5-1. Evaluation and utilization of dental materials used in clinical orthodontics.

ORTH 613 Advanced Cephalometrics

Credit 1. 1 Lecture Hour.

Advanced topics relating to the cephalometric technique are presented, including superimposition, growth and treatment prediction, treatment assessment, consideration of error, orthognathic surgery treatment planning, and image enhancement techniques.

ORTH 614 Orthognathic Surgery Conference I

Credits 0 to 10. 0 to 10 Other Hours.

Seminar/conference series involving the departments of Orthodontics and Oral and Maxillofacial Surgery in a multidisciplinary approach to the treatment of those patients with substantial craniofacial deformities; begins in the first year with a series of lectures/seminars on specific diagnostic and treatment procedures, followed by assignment of patients that will be supervised jointly by both specialties; regular conferences are held to discuss pertinent literature, review patient progress, plan treatment, and present completed cases; involvement in all phases of treatment: pre-surgical orthodontics, the surgical procedure, finishing, and retention.

ORTH 615 Orthognathic Surgery Conference II

Credits 0 to 10. 0 to 10 Other Hours.

Seminar/conference series involving the departments of Orthodontics and Oral and Maxillofacial Surgery in a multidisciplinary approach to the treatment of those patients with substantial craniofacial deformities; begins in the first year with a series of lectures/seminars on specific diagnostic and treatment procedures, followed by assignment of patients that will be supervised jointly by both specialties; regular conferences are held to discuss pertinent literature, review patient progress, plan treatment, and present completed cases; involvement in all phases of treatment: pre-surgical orthodontics, the surgical procedure, finishing, and retention.

ORTH 616 Orthognathic Surgery Conference III

Credits 0 to 10. 0 to 10 Other Hours.

Seminar/conference series involving the departments of Orthodontics and Oral and Maxillofacial Surgery in a multidisciplinary approach to the treatment of those patients with substantial craniofacial deformities; begins in the first year with a series of lectures/seminars on specific diagnostic and treatment procedures, followed by assignment of patients that will be supervised jointly by both specialties; regular conferences are held to discuss pertinent literature, review patient progress, plan treatment, and present completed cases; involvement in all phases of treatment: pre-surgical orthodontics, the surgical procedure, finishing, and retention.

ORTH 617 Orthognathic Surgery Conference IV

Credits 0 to 10. 0 to 10 Other Hours.

Seminar/conference series involving the departments of Orthodontics and Oral and Maxillofacial Surgery in a multidisciplinary approach to the treatment of those patients with substantial craniofacial deformities; begins in the first year with a series of lectures/seminars on specific diagnostic and treatment procedures, followed by assignment of patients that will be supervised jointly by both specialties; regular conferences are held to discuss pertinent literature, review patient progress, plan treatment, and present completed cases; involvement in all phases of treatment: pre-surgical orthodontics, the surgical procedure, finishing, and retention.

ORTH 618 Orthognathic Surgery Conference V

Credits 0. 0 Other Hours.

Seminar in which senior orthodontic and oral surgery residents work jointly to diagnose and generate treatment plan for patients who are anticipating combined orthodontic/orthognathic surgery treatment to correct a dental/skeletal imbalance; diagnosis and treatment plan(s) will be presented to the residents from both programs as well as attending faculty for critique and evaluation.

ORTH 619 Orthognathic Surgery Conference VI

Credits 0. 0 Other Hours.

Seminar in which senior orthodontic and oral surgery residents work jointly to diagnose and generate treatment plan for patients who are anticipating combined orthodontic/orthognathic surgery treatment to correct a dental/skeletal imbalance; diagnosis and treatment plan(s) will be presented to the residents from both programs as well as attending faculty for critique and evaluation.

ORTH 620 Orthognathic Surgery Seminar

Credits 0.5. 0.5 Other Hours.

Surgical rotations in Oral and Maxillofacial Surgery.

ORTH 621 Clinical Specialty Seminars I

Credits 0 to 3. 0 to 3 Other Hours.

Series of courses are a companion to clinical training in orthodontics and involves faculty and student evaluation of historically significant as well as contemporary literature; other sessions, lectures and seminars complement the clinic experience with topics including patient management, treatment of variously aged patients and types of malocclusions, and various types of orthodontic and orthopedic appliances; exposure to the historical development of orthodontics, additional treatment philosophies through guest speakers and new developments in treatment; presentation of cases through descriptions of diagnosis, treatment planning, and treatment results.

ORTH 622 Clinical Specialty Seminars II

Credits 0 to 3. 0 to 3 Other Hours.

Series of courses are a companion to clinical training in orthodontics and involves faculty and student evaluation of historically significant as well as contemporary literature; other sessions, lectures and seminars complement the clinic experience with topics including patient management, treatment of variously aged patients and types of malocclusions, and various types of orthodontic and orthopedic appliances; exposure to the historical development of orthodontics, additional treatment philosophies through guest speakers and new developments in treatment; presentation of cases through descriptions of diagnosis, treatment planning, and treatment results.

ORTH 623 Clinical Specialty Seminars III

Credits 0 to 3. 0 to 3 Other Hours.

Series of courses are a companion to clinical training in orthodontics and involves faculty and student evaluation of historically significant as well as contemporary literature; other sessions, lectures and seminars complement the clinic experience with topics including patient management, treatment of variously aged patients and types of malocclusions, and various types of orthodontic and orthopedic appliances; exposure to the historical development of orthodontics, additional treatment philosophies through guest speakers and new developments in treatment; presentation of cases through descriptions of diagnosis, treatment planning, and treatment results.

ORTH 624 Clinical Specialty Seminars IV

Credits 0 to 10. 0 to 10 Other Hours.

Series of courses are a companion to clinical training in orthodontics and involves faculty and student evaluation of historically significant as well as contemporary literature; other sessions, lectures and seminars complement the clinic experience with topics including patient management, treatment of variously aged patients and types of malocclusions, and various types of orthodontic and orthopedic appliances; exposure to the historical development of orthodontics, additional treatment philosophies through guest speakers and new developments in treatment; presentation of cases through descriptions of diagnosis, treatment planning, and treatment results.

ORTH 625 Clinical Specialty Seminars V

Credits 0 to 10. 0 to 10 Other Hours.

Series of courses are a companion to clinical training in orthodontics and involves faculty and student evaluation of historically significant as well as contemporary literature; other sessions, lectures and seminars complement the clinic experience with topics including patient management, treatment of variously aged patients and types of malocclusions, and various types of orthodontic and orthopedic appliances; exposure to the historical development of orthodontics, additional treatment philosophies through guest speakers and new developments in treatment; presentation of cases through descriptions of diagnosis, treatment planning, and treatment results.

ORTH 626 Clinical Specialty Seminars VI**Credits 0 to 10. 0 to 10 Other Hours.**

Series of courses are a companion to clinical training in orthodontics and involves faculty and student evaluation of historically significant as well as contemporary literature; other sessions, lectures and seminars complement the clinic experience with topics including patient management, treatment of variously aged patients and types of malocclusions, and various types of orthodontic and orthopedic appliances; exposure to the historical development of orthodontics, additional treatment philosophies through guest speakers and new developments in treatment; presentation of cases through descriptions of diagnosis, treatment planning, and treatment results.

ORTH 627 Clinical Specialty Seminars VII**Credits 0 to 10. 0 to 10 Other Hours.**

Series of courses are a companion to clinical training in orthodontics and involves faculty and student evaluation of historically significant as well as contemporary literature; other sessions, lectures and seminars complement the clinic experience with topics including patient management, treatment of variously aged patients and types of malocclusions, and various types of orthodontic and orthopedic appliances; exposure to the historical development of orthodontics, additional treatment philosophies through guest speakers and new developments in treatment; presentation of cases through descriptions of diagnosis, treatment planning, and treatment results.

ORTH 628 Clinical Specialty Seminars VIII**Credits 0 to 10. 0 to 10 Other Hours.**

Series of courses are a companion to clinical training in orthodontics and involves faculty and student evaluation of historically significant as well as contemporary literature; other sessions, lectures and seminars complement the clinic experience with topics including patient management, treatment of variously aged patients and types of malocclusions, and various types of orthodontic and orthopedic appliances; exposure to the historical development of orthodontics, additional treatment philosophies through guest speakers and new developments in treatment; presentation of cases through descriptions of diagnosis, treatment planning, and treatment results.

ORTH 629 Clinical Specialty Seminars IX**Credits 0 to 10. 0 to 10 Other Hours.**

Series of courses are a companion to clinical training in orthodontics and involves faculty and student evaluation of historically significant as well as contemporary literature; other sessions, lectures and seminars complement the clinic experience with topics including patient management, treatment of variously aged patients and types of malocclusions, and various types of orthodontic and orthopedic appliances; exposure to the historical development of orthodontics, additional treatment philosophies through guest speakers and new developments in treatment; presentation of cases through descriptions of diagnosis, treatment planning, and treatment results.

ORTH 630 Advanced Orthodontic Practice Management I**Credits 0 to 2. 0 to 2 Lecture Hours.**

Course considers the ethical approach to practice promotion and professional interactions in addition to the basic principles of office management; includes consideration of staff selection, office design, accounting methods, insurance considerations, inventory control and financial planning.

ORTH 631 Advanced Orthodontic Practice Management II**Credits 0 to 2. 0 to 2 Lecture Hours.**

Course considers the ethical approach to practice promotion and professional interactions in addition to the basic principles of office management; includes consideration of staff selection, office design, accounting methods, insurance considerations, inventory control and financial planning.

ORTH 632 Principles of Scientific Methodology/Thesis Protocol**Credits 0.5. 0.5 Lecture Hours.**

Basic precepts of research and the methodology of critical literature review in preparation of a research proposal.

ORTH 633 Scientific Writing**Credits 0.5. 0.5 Other Hours.**

Series of courses designed to assist the student in the preparation of a research proposal, a proposal to secure extramural funding and the thesis; once research is concluded, instructions are given to enable the preparation of a manuscript suitable for publication.

ORTH 634 Independent Research I**Credits 0 to 10. 0 to 10 Other Hours.**

Activity related to definition of a research problem, searching the literature, conducting the research, analyzing the results and preparing the thesis.

ORTH 635 Independent Research II**Credits 0 to 10. 0 to 10 Other Hours.**

Activity related to definition of a research problem, searching the literature, conducting the research, analyzing the results and preparing the thesis.

ORTH 636 Independent Research III**Credits 0 to 10. 0 to 10 Other Hours.**

Activity related to definition of a research problem, searching the literature, conducting the research, analyzing the results and preparing the thesis.

ORTH 637 Independent Research-Manuscript Development I**Credits 0 to 2. 0 Lecture Hours. 0 to 2 Other Hours.**

Provides the guidance and time necessary for the residents to successfully complete the journal article summarizing the methods and results of their Master's research projects; orthodontic residents should endeavor to publish their research projects; need understanding of how to prepare their work for publication; publication requires a good understanding of the IMRAD structure; work closely with mentors, committees, and Dr. Buschang; learn how to outline the manuscript, prepare tables and figures, and write the text of the manuscript; accomplished primarily by one-to-one interactions with Dr. Buschang.

ORTH 638 Independent Research-Manuscript Development II**Credits 0 to 2. 0 Lecture Hours. 0 to 2 Other Hours.**

Provides the guidance and time necessary for the residents to successfully complete the journal article summarizing the methods and results of their Master's research projects; orthodontic residents should endeavor to publish their research projects; need understanding of how to prepare their work for publication; publication requires a good understanding of the IMRAD structure; work closely with mentors, committees, and Dr. Buschang; learn how to outline the manuscript, prepare tables and figures, and write the text of the manuscript; accomplished primarily by one-to-one interactions with Dr. Buschang.

ORTH 639 Independent Research-Manuscript Development III**Credits 0 to 2. 0 to 2 Other Hours.**

Provides the guidance and time necessary for the residents to successfully complete the journal article summarizing the methods and results of their Master's research projects; orthodontic residents should endeavor to publish their research projects; need understanding of how to prepare their work for publication; publication requires a good understanding of the IMRAD structure; work closely with mentors, committees, and Dr. Buschang; learn how to outline the manuscript, prepare tables and figures, and write the text of the manuscript; accomplished primarily by one-to-one interactions with Dr. Buschang.

ORTH 640 Introduction to Orthodontics I**Credits 0.50 to 1.5. 0.50 to 1.5 Lecture Hours.**

Basic topics related to the specialty of orthodontics; series of lectures covers material presented in a textbook directed toward graduate education.

ORTH 641 Introduction to Orthodontics II**Credits 0.50 to 1.5. 0.50 to 1.5 Lecture Hours.**

Basic topics related to the specialty of orthodontics; series of lectures covers material presented in a textbook directed toward graduate education.

ORTH 642 Introduction to Orthodontics III**Credits 1 to 2. 1 to 2 Lecture Hours.**

Basic topics related to the specialty of orthodontics; series of lectures covers material presented in textbooks directed toward graduate education.

ORTH 643 Introduction to Orthodontics IV**Credits 1 to 2. 1 to 2 Lecture Hours.**

Basic topics related to the specialty of orthodontics; series of lectures covers material presented in textbooks directed toward graduate education.

ORTH 644 Introduction to Cephalometrics (Advanced Cephalometrics)**Credit 1. 0.5 Lecture Hours. 0.5 Lab Hours.**

Provides a thorough understanding of craniofacial radiographic techniques with emphasis on cephalometric roentgenography; acquaintance with the use of X-rays, radiation hygiene, pathology and cephalometric techniques to assure proficiency in technical skills and in interpretation as needed for diagnostic procedures; includes both lecture and laboratory instruction.

ORTH 645 Craniofacial Growth and Development**Credits 1 to 1.5. 1 to 1.5 Lecture Hours.**

5. Clinical implications of changes in craniofacial form and function are presented; critical review of the literature is conducted relating knowledge of facial growth and clinical practice.

ORTH 646 Orthodontic Techniques**Credits 2. 2 Other Hours.**

Basic pre-clinical exercises designed to prepare the student for clinical practice; series of exercises are performed involving wire bending, soldering, impressions and model trimming, and the manipulation of acrylic.; edgewise course is conducted on typodonts simulating the treatment of various malocclusions.

ORTH 647 Clinical Orthodontics I**Credits 0 to 10. 0 to 10 Other Hours.**

Diagnosis and treatment of patients with a broad variety of malocclusions; patient with typical malocclusions and requiring early treatment, dentofacial orthopedics, orthognathic surgery, and interdisciplinary care are selected as educational models; techniques focus on standard edgewise technique including pretorqued and preangulated brackets and lingual orthodontics.

ORTH 648 Clinical Orthodontics II**Credits 0 to 10. 0 to 10 Other Hours.**

Diagnosis and treatment of patients with a broad variety of malocclusions; patient with typical malocclusions and requiring early treatment, dentofacial orthopedics, orthognathic surgery, and interdisciplinary care are selected as educational models; techniques focus on standard edgewise technique including pretorqued and preangulated brackets and lingual orthodontics.

ORTH 649 Clinical Orthodontics III**Credits 0 to 10. 0 to 10 Other Hours.**

Diagnosis and treatment of patients with a broad variety of malocclusions; patient with typical malocclusions and requiring early treatment, dentofacial orthopedics, orthognathic surgery, and interdisciplinary care are selected as educational models; techniques focus on standard edgewise technique including pretorqued and preangulated brackets and lingual orthodontics.

ORTH 650 Clinical Orthodontics IV**Credits 0 to 10. 0 to 10 Other Hours.**

Diagnosis and treatment of patients with a broad variety of malocclusions; patients with typical malocclusions requiring early treatment, dentofacial orthopedics, orthognathic surgery, and interdisciplinary care are selected; emphasis on the edgewise appliances system with its many variations including pretorqued and preangulated brackets, self-ligation systems and lingual orthodontics.

ORTH 651 Clinical Orthodontics V**Credits 0 to 10. 0 to 10 Other Hours.**

Diagnosis and treatment of patients with a broad variety of malocclusions; patients with typical malocclusions requiring early treatment, dentofacial orthopedics, orthognathic surgery, and interdisciplinary care are selected; emphasis on the edgewise appliances system with its many variations including pretorqued and preangulated brackets, self-ligation systems and lingual orthodontics.

ORTH 652 Clinical Orthodontics VI**Credits 0 to 10. 0 to 10 Other Hours.**

Diagnosis and treatment of patients with a broad variety of malocclusions; patients with typical malocclusions requiring early treatment, dentofacial orthopedics, orthognathic surgery, and interdisciplinary care are selected; emphasis on the edgewise appliances system with its many variations including pretorqued and preangulated brackets, self-ligation systems and lingual orthodontics.

ORTH 653 Clinical Orthodontics VII**Credits 1 to 3. 1 to 3 Other Hours.**

Core clinical education of the orthodontic program; treatment of malocclusions requiring early treatment, dentofacial orthopedics, orthognathic surgery and multidisciplinary care are selected as educational models; structured, yet flexible, course outline to ensure familiarity with all aspects of contemporary clinical practice as presented by the various well-qualified clinical instructors; envisaged that no one treatment technique or philosophy will outrank another; complete orthodontic education is of the essence; broad range of appliance usage ranging from removable appliances to the more sophisticated fixed preangulated brackets and lingual orthodontics (018 and 022); clinics include the screening of potential orthodontic patients, underling the importance of obtaining ABO standard clinical records, complete case diagnosis, case analysis, treatment techniques, individualization of appliances, evidence-based treatment procedures, a pursuit of ABO treatment outcomes, as well as proven retention protocols; emphasis on the attendance of continuing in orthodontic private practice; a philosophy of continued learning encouraged; opportunity to consolidate the basic principles of case analysis and treatment planning, communication between clinician and patient, as well as interaction between different specialties to ensure competency in multidisciplinary treatment; planning for long-term esthetic, healthy, functional and stable treatment is the order of the day.

ORTH 654 Clinical Orthodontics VIII**Credits 1 to 3. 1 to 3 Other Hours.**

Core clinical education of the orthodontic program; treatment of malocclusions requiring early treatment, dentofacial orthopedics, orthognathic surgery and multidisciplinary care are selected as educational models; structured, yet flexible, course outline to ensure familiarity with all aspects of contemporary clinical practice as presented by the various well-qualified clinical instructors; envisaged that no one treatment technique or philosophy will outrank another; complete orthodontic education is of the essence; broad range of appliance usage ranging from removable appliances to the more sophisticated fixed preangulated brackets and lingual orthodontics (018 and 022); clinics include the screening of potential orthodontic patients, underling the importance of obtaining ABO standard clinical records, complete case diagnosis, case analysis, treatment techniques, individualization of appliances, evidence-based treatment procedures, a pursuit of ABO treatment outcomes, as well as proven retention protocols; emphasis on the attendance of continuing in orthodontic private practice; a philosophy of continued learning encouraged; opportunity to consolidate the basic principles of case analysis and treatment planning, communication between clinician and patient, as well as interaction between different specialties to ensure competency in multidisciplinary treatment; planning for long-term esthetic, healthy, functional and stable treatment is the order of the day.

ORTH 655 Clinical Orthodontics IX**Credits 1 to 3. 1 to 3 Other Hours.**

Core clinical education of the orthodontic program; treatment of malocclusions requiring early treatment, dentofacial orthopedics, orthognathic surgery and multidisciplinary care are selected as educational models; structured, yet flexible, course outline to ensure familiarity with all aspects of contemporary clinical practice as presented by the various well-qualified clinical instructors; envisaged that no one treatment technique or philosophy will outrank another; complete orthodontic education is of the essence; broad range of appliance usage ranging from removable appliances to the more sophisticated fixed preangulated brackets and lingual orthodontics (018 and 022); clinics include the screening of potential orthodontic patients, underling the importance of obtaining ABO standard clinical records, complete case diagnosis, case analysis, treatment techniques, individualization of appliances, evidence-based treatment procedures, a pursuit of ABO treatment outcomes, as well as proven retention protocols; emphasis on the attendance of continuing in orthodontic private practice; a philosophy of continued learning encouraged; opportunity to consolidate the basic principles of case analysis and treatment planning, communication between clinician and patient, as well as interaction between different specialties to ensure competency in multidisciplinary treatment; planning for long-term esthetic, healthy, functional and stable treatment is the order of the day.

ORTH 656 TMD Clinic VI**Credits 0. 0 Lecture Hours.**

Principles of diagnosis and treatment of TMJ disorders using anatomy, neurology, pathology of the TMJ, patient examination, principles of diagnosis, radiology, pharmacology, principles of non-surgical treatment, principles of intra-oral splints (types and indication for each); physical medicine modalities; diagnostic and therapeutic blocks for TMD; myofascial dysfunction. Must be taken on a satisfactory/unsatisfactory basis.

Prerequisites: ORTH 601, ORTH 602, ORTH 603, ORTH 604 and ORTH 605.

ORTH 657 TMD Clinic VII**Credits 0. 0 Lecture Hours.**

Principles of diagnosis and treatment of TMJ disorders using anatomy, neurology, pathology of the TMJ, patient examination, principles of diagnosis, radiology, pharmacology, principles of non-surgical treatment, principles of intra-oral splints (types and indication for each); physical medicine modalities; diagnostic and therapeutic blocks for TMD; myofascial dysfunction. Must be taken on a satisfactory/unsatisfactory basis.

Prerequisites: ORTH 601, ORTH 602, ORTH 603, ORTH 604 and ORTH 605.

ORTH 658 TMD Clinic VIII**Credits 0. 0 Lecture Hours.**

Principles of diagnosis and treatment of TMJ disorders using anatomy, neurology, pathology of the TMJ, patient examination, principles of diagnosis, radiology, pharmacology, principles of non-surgical treatment, principles of intra-oral splints (types and indication for each); physical medicine modalities; diagnostic and therapeutic blocks for TMD; myofascial dysfunction. Must be taken on a satisfactory/unsatisfactory basis.

Prerequisites: ORTH 601, ORTH 602, ORTH 603, ORTH 604 and ORTH 605.

ORTH 659 TMD Clinic IX

Credits 0. 0 Lecture Hours.

Principles of diagnosis and treatment of TMJ disorders using anatomy, neurology, pathology of the TMJ, patient examination, principles of diagnosis, radiology, pharmacology, principles of non-surgical treatment, principles of intra-oral splints (types and indication for each); physical medicine modalities; diagnostic and therapeutic blocks for TMD; myofascial dysfunction. Must be taken on a satisfactory/unsatisfactory basis.

Prerequisites: ORTH 601, ORTH 602, ORTH 603, ORTH 604 and ORTH 605.

ORTH 689 Special Topics In...

Credits 0 to 4. 0 to 4 Other Hours.

Selected topics in an identified area of orthodontics. May be repeated for credit.

ORTH 691 Research

Credits 0 to 10. 0 to 10 Other Hours.

Research for thesis or dissertation.