



CDM 2005 - Craniofacial Growth and Development

I. Course Information

Course: CDM 2005 - Craniofacial Growth and Development
Semester and Year: Summer I 2021
Course Start and End Dates: 05/03/2021 - 07/25/2021
Course Reference Number: 50198
Semester Credit Hours: 1.0
Building and Room: HPD-Assembly I Building - 2101TERY

II. Instructor Information

Professor: Chin Yu Lin
Email: clin@nova.edu
Phone: 964-262-1755
Office Hours:
 By Appointment only. Please email Dr. Lin at clin@nova.edu. Tuesday 9AM-12 PM and Wednesday 9AM-12 PM, 2 PM-5 PM.

III. Class Schedule and Location

Day	Date	Time	Location	Building/Room
W	05/05/2021 - 07/21/2021	7:50 AM - 8:40 AM	Ft Lauderdale/Davie Campus	HPD-Assembly I Building-2101TERY

IV. Course Description

This course is intended to be an introductory course in growth and development. General concepts of somatic and craniofacial growth will be presented. Theories of craniofacial growth and development, the method of the directional descent of the maxillary and mandibular complex, and correlation with the development of the occlusion will be included. An overview of the social and behavioral development of the child and adolescent will also be presented.

V. Course Objectives / Learning Outcomes

Course Learning Outcomes

At the conclusion of this course, the students will be able to:

1. Describe the usual Orthodontic problem, epidemiology of malocclusion.
2. Describe the classification of malocclusion and normal occlusion in the permanent dentition.
3. Describe the cognitive and behavioral psychosocial development of the child and adolescent.
4. Describe the motor and physical development of the child and adolescent.
5. Describe basic mechanisms of bone growth in the human face.
6. Describe the major theories of bone growth regulation.
7. Describe the development of the human dentition including:

- a. Prenatal and postnatal development of the primary and permanent tooth buds.
- b. Typical timing and eruption sequences of the primary teeth
- c. Typical timing and eruption sequences of the permanent teeth.
- d. Typical eruption pathways of the permanent teeth
- e. Define and understand the clinical significance of dental age vs. chronologic age.
- f. Anomaly related to the development, timing, and eruption of the primary dentition.
8. Describe development of the occlusion and changes in arch perimeter during late adolescence.
9. Describe the relationship between changes in occlusion and growth patterns of the mandible and the maxilla.

COLLEGE OF DENTAL MEDICINE COMPETENCY STATEMENTS Faculty Note: Use the most updated version of the CDM Predoctoral Competency document to select the corresponding competencies for this course. Be sure to select the number of the competency statement and the verbatim competency statement as it appears on the competency document. For each competency indicate the type of assessment (formative or summative) that will be employed to measure the attainment of the competency

Core Competencies:

1. Graduates must be competent in patient assessment, diagnosis, comprehensive treatment planning, prognosis, and informed consent. [*CODA Predoctoral Standard 2-24(a)*]. The formative assessment is performed based on random quizzes. The summative assessment is performed based on a final exam.
 3. Graduates must be competent in recognizing the complexity of patient treatment and identifying when referral is indicated. [*CODA Predoctoral Standard 2-24(c)*]. The formative assessment is performed based on random quizzes. The summative assessment is performed based on a final exam.
 14. Graduates must be competent in managing malocclusion and space management. [*CODA Predoctoral Standard 2-24(n)*]. The formative assessment is performed based on random quizzes. The summative assessment is performed based on a final exam.
- This refers to the same as the items in the CDM Competency Document; please see them listed below.

FOUNDATION KNOWLEDGE

STATEMENTS FOR THE GENERAL DENTIST

FK1-1: Apply knowledge of the structure and function of the normal cell and basic types of tissues comprising the human body. (Encompasses Gross and Head and Neck Anatomy, General and Oral Histology, Dental Anatomy, Occlusion, TMJ, etc.).

Select examples include: • structure of the human body in general and the craniofacial region in particular • structure and function of salivary glands, including the production, secretion, content and the function of saliva • development and structure of the deciduous and permanent teeth • development and structure of periodontal tissues • development, structure and function of the major muscles of mastication and facial expression • development, structure and function of the temporomandibular joint and its supporting and accessory structures. • anatomical and functional relationships of landmarks of the oral cavity and contiguous regions • structure and function of oral mucosa • structure, function, and metabolism of collagen, proteoglycans and other proteins in connective and mineralized tissue • calcium and phosphorus metabolism, the formation of biological hydroxyapatite and its role in the mineralization of hard tissues (e.g., bone and teeth) • calcium and phosphorus metabolism - role of osteoblasts, osteoclasts, osteocytes, as well as Vitamin D3. • Blood coagulation systems and its control.

FK10-1: Apply basic mathematical tools and concepts, including functions, graphs and modeling, measurement and scale, and quantitative knowledge, to an understanding of the specialized functions of membranes, cells, tissues, organs, and the human organism, especially those related to the head and neck, in both health and disease. (Encompasses Basic Algebra, Basic Mathematics, Analytical and Descriptive

VI. Materials and Resources

Course Required Texts and Materials:

Contemporary Orthodontics (primary resource)

Resource Type: Book

Primary Author: W. R. Proffit

Edition/Version: 5th

Faculty Note: Please indicate the textbooks that are **required** for the class and if available, a hyperlink to the textbook. Also, indicate if there are articles or links to **required readings** that are required for the class *and* the site where the articles are available for the student (such as: Canvas, library, database).

Course Supplemental Materials:

Classroom PowerPoint Presentations

Files of PowerPoint Presentations posted in the Files on Canvas

- Supplemental, Recommended, Optional, NOT required.

The access to all instructional resources included in this course, such as, lectures, handouts, manuals, PowerPoint presentations, videos, photographs, pictures, articles and web links is limited to students who are enrolled in the course and is not for public distribution. The use of these instructional resources is exclusively for non-commercial and non-profit educational use. Students are recommended to download the instructional resources provided in the course, UNLESS, the course director instructs NOT to download specific files. We recommend that all students download, save, and keep the instructional materials from all the courses. These instructional resources will be very helpful references as you progress from year to year in the program.

VII. Course Schedule and Topic Outline

Course Schedule:

Session #	Date	Topic	Instructor
1	5/5/2021	Introduction	Dr. Lin
2	5/12/2021	Etiology of Malocclusion	Dr. Lin
3	5/19/2021	Cognitive, Psychosocial Development	Dr. Ocanto
4	6/9/2021	Biological, Physical, Motor Development	Dr. Ocanto
5	6/16/2021	Craniofacial Growth & Development	Dr. Lin
6	6/23/2021	Craniofacial Growth & Development	Dr. Lin
7	6/30/2021	Craniofacial Growth & Development	Dr. Lin

8	7/7/2021	Craniofacial Growth & Development	Dr. Lin
9	7/14/2021	Self Study	
10	7/21/2021	Final exam	Dr. Lin

Topic Outline:

Session #	Date	Topic	Content Outline	Instructor
1	5/5/2021	Introduction	Introduction to Course Policy and Introduction to Growth & Development	Dr. Lin
2	5/12/2021	Etiology of Malocclusion	Genetic & Environmental Etiological Factors of Malocclusion	Dr. Lin
3	5/19/2021	Cognitive, Psychosocial Development	Cognitive, Psychosocial Development From Childhood to Adulthood	Dr. Ocanto
4	6/9/2021	Biological, Physical, Motor Development	Biological, Physical, Motor Development From Childhood to Adulthood	Dr. Ocanto
5	6/16/2021	Craniofacial Growth & Development	Growth of Cranial Base & Maxilla	Dr. Lin
6	6/23/2021	Craniofacial Growth & Development	Growth of Mandible	Dr. Lin
7	6/30/2021	Craniofacial Growth & Development	Growth of Dentition	Dr. Lin
8	7/7/2021	Craniofacial Growth & Development	Growth of Soft Tissue	Dr. Lin
9	7/14/2021	Self Study		
10	7/21/2021	Final exam		Dr. Lin

“Important note – Please note that due to the current Coronavirus pandemic, course schedules and course activities may be modified now and in future. Faculty and students are responsible for keeping apprised of these changes and adjusting their schedules accordingly.”

VIII. Instructional Methods

In this section of the syllabus you will find information about any course (instructional, assessment, assignments, benchmarks and/or clinical) modifications that were added to the course as a result of COVID-19 Lectures through electronic ZOOM meetings.

IX. Assignments

Description of Assignments, Point Value and Rubrics

The reading assignments are listed below. (No point is assigned)

Session #	Date	Topic	Assignments	Instructor
1	5/5/2021	Introduction	Reading (p. 2-18; others)	Dr. Lin
2	5/12/2021	Etiology of Malocclusion	Reading (p. 114 – 145; others)	Dr. Lin
3	5/19/2021	Cognitive, Psychosocial Development	Reading (p. 50 – 64; others)	Dr. Ocanto
4	6/9/2021	Biological, Physical, Motor Development	Reading (p. 50-64; others)	Dr. Ocanto
5	6/16/2021	Craniofacial Growth & Development	Reading (p. 21 – 26; 36-50; others)	Dr. Lin
6	6/23/2021	Craniofacial Growth & Development	Reading (p. 21 – 26; 36-50; others)	Dr. Lin
7	6/30/2021	Craniofacial Growth & Development	Reading (p. 21 – 26; 36-50; others)	Dr. Lin
8	7/7/2021	Craniofacial Growth & Development	Reading (p. 104 – 113; others)	Dr. Lin
9	7/14/2021	Self Study		
10	7/21/2021	Final exam		Dr. Lin

X. Grading Criteria

Provide a List of all the graded work in the course (Assessments, Class Activities, Classwork and Assignments) with Point or Percentage Values, or required Completion item.

Grading Scale:

Grading will follow the Nova Southeastern University College of Dental Medicine Letter grading system. A minimum of a grade C (70%) will be required to pass this course.

1. Final written examination 100% (Summative assessment)

Course Final Grade Mode for the course (Pass/Fail, PR/NPR or Letter Grade). For a continuum course, please specify the grade mode for each semester.

Grade Mode:

Grading will follow the Nova Southeastern University College of Dental Medicine Letter grading system. The final exam will be performed on ExamSoft.

Course Grading Scale

Letter Grade	GPA	Equivalence
A	4	93 to 100
A-	3.75	90 to < 93
B+	3.5	86 to < 90
B	3	83 to < 86
B-	2.75	80 to < 83
C+	2.5	76 to < 80
C	2	70 to < 76
F	0	<70

XI. Course Policies

COURSE ATTENDANCE REQUIREMENTS, REMEDIATION POLICY, ALL CDM POLICIES

Attendance Policy : Please refer to appropriate pages of the NSU-CDM 2020-2021 Student Handbook.

Link to the handbook:

<https://liverootnova.sharepoint.com/dentmed/Active%20Docs/Policies%20and%20Procedures/Pre%20a2020%20CDM%20PreDoctoral%20Student%20Handbook.pdf?wa=wsignin1.0>

Remediation Policy: Please refer to appropriate pages of the NSU-CDM 2020-2021 Student Handbook.

“Successful completion of each CDM course requires compliance with the CDM Code of Behavioral Conduct.”

CDM College Attendance Policy Please note that, the Office of Admissions, Student Affairs and Services manages excused absences including sick days, mission trips, dental meetings, externships, interviews, family events, and other personal leave time, etc. and all student absences will continue to be tracked in axiUm. (Please refer to NSU Wide Religious Holidays Policy in the Student Handbook.) • Planned excused absences: please fill out the appropriate paperwork, with backup documentation (e.g. physician’s note), and submit on the online portal for the Office of Student Services prior to the scheduled absence, so that we can approve the leave time, and help you map out a plan to make up the work. It is the student’s responsibility to inform the course director for any courses you will be missing, your team leader for any clinic sessions that will be missed and/or the Coordinator of Extramural Programs (Dr. Mairelina Godoy), etc. of your planned absence(s). • Unplanned excused absences: please email Dr. Galka at agalka@nova.edu with a cc to cdmservices@nova.edu to report that you will be out, the reason for your absence and to also let us know if you plan to return to school the following day. You should also email the course director for any courses you will be missing, Dr. Mairelina Godoy mg1189@nova.edu for any rotations you will be missing and/or your team leader for any clinic sessions scheduled for that day. You must continue to email us daily to keep us updated if you will be out additional days and you can submit your SREA form together with backup documentation when you know the date you will return to school. • The student will be responsible for making up all missed rotations, all material presented in lectures, all laboratory projects, all written and practical examinations (including OSCEs) and must fulfill all didactic and clinical responsibilities as outlined in the individual course syllabi. Also, please review the attendance policy in the individual course syllabi. • Please do not schedule externships or interviews when you are scheduled for an examination or rotation. • Remember, it is your responsibility to reach out to our office for any unexcused absences to see if these fall under excused absences and/or to see how the unexcused absence will be managed. Also, please contact Dr. Mairelina Godoy directly to arrange makeup of any and

all missed rotations, which will take place during optional clinic weeks. • Every student will be able to take 1 Personal Day/per Semester (3 Personal Days/Academic Year) with NO BACKUP DOCUMENTATION REQUIRED, provided the day(s) are not taken when you are scheduled for a rotation, written examination, practical/competency examination, OSCE or taken directly before/after a school holiday, etc. These absences will be managed through our office and designated as excused absences, provided our office is notified by email in advance or on the day of the absence. (Please indicate in the email if you will be using a personal day and designate D-1, D-2, D-3 or D-4 student.) For any additional absences to the 1 Personal Day/per semester, or in the event that you will be missing a written examination, a preclinical or clinical practical/competency examination, including an OSCE, or rotation, backup documentation WILL be required. Again, it is the student's responsibility to notify all course directors, team leaders, and/or the Coordinator of Extramural Programs, etc. affected by your absence(s). Please check your individual schedule before requesting a personal day, to be sure that you will not be missing a rotation or an exam. A personal day will be recorded as a full day. (Half days cannot be requested.) A personal day must be requested on or before the day in question and cannot be used retroactively. **COVID-19 Protocol (subject to change)**1. NO STUDENT IS TO COME TO SCHOOL SICK- if you do not feel right- please do NOT come to school. Email Dr. Galka- Assistant Dean for Admissions, Student Affairs and Services (agalka@nova.edu) 2. If a student has had direct/close contact with someone who has been infected with COVID-19 or is experiencing COVID-like symptoms- immediately self- isolate/quarantine. Email Dr. Galka and Dr. Schweizer- Director Infection Prevention Programs (schweize@nova.edu). a. Direct Exposure/ Asymptomatic: test on day 7- if negative test result- can come back after 10 days : if NO test- quarantine 14 days b. Symptomatic (with or without Direct Exposure): test immediately and then again on day 7- if negative test result on day 7- can come back after 10 days : NO test- quarantine 14 days and must be symptom-free for 72 hours3. If a student tests positive for COVID-19: remain self-isolated. To return to school: student needs to have 2 consecutive negative test results in a row (at least 24 hours apart). 4. Students who are in quarantine, need to contact both Dr. Galka and Dr. Hernandez (marher@nova.edu) to determine if they can participate in online courses during this time

XII. University Policies

Academic Integrity: Cheating or inappropriate behavior during any written examination, quiz, any assignment, any project; plagiarism of any work(s), or other unethical behavior will not be tolerated; the student risks receiving a grade of zero (0) for said examination, quiz, assignment, project and may be referred to the Associate Dean for Academic Affairs and the Student Progress Committee. Please refer to appropriate pages of the NSU-CDM 2020-2021 Student Handbook. and the NSU Student Handbook located at

<https://liverootnova.sharepoint.com/dentmed/Active%20Docs/Policies%20and%20Procedures/Pre%20and%202020%20CDM%20PreDoctoral%20Student%20Handbook.pdf?wa=wsignin1.0> .

Plagiarism Policy: All assignments, exams, works, patient care - written, laboratory, oral, clinical must be done as the independent work of each individual student. Plagiarism, copying or sharing the work of another or altering documentation to reflect something is your own work that is not; reflect false attendance, are considered serious offences that will not be tolerated. THESE ACTIONS WILL BE CONSIDERED IN VIOLATION OF THE UNIVERSITY AND THE CDM CODE OF BEHAVIORAL CONDUCT AND WILL BE REFERRED FOR APPROPRIATE ACTION. Students who need assistance in their learning goals should communicate with the appropriate NSU-CDM course director and/or faculty. Please refer to appropriate pages of the NSU and the CDM 2020-2021 Student Handbook. Following a link to the NSU Student Handbook

<https://liverootnova.sharepoint.com/dentmed/Active%20Docs/Policies%20and%20Procedures/Pre%20and%202020%20CDM%20PreDoctoral%20Student%20Handbook.pdf?wa=wsignin1.0>

University Policy

Class content throughout this course may be recorded in accordance with the NSU Class Recording Policy. If class content is recorded, these recordings will be made available to students registered for this

course as a supplement to the classroom experience. Recordings will be made available to all students who were registered to attend the live offering of the class, regardless of a student's section or discipline, or whether the student is participating in the course online. If recordings are intended to be accessible to students or third parties who were not registered for the live offering of the class, students' personally identifiable information will be removed or redacted from the recording, unless (1) their written consent to such disclosure was previously provided, or (2) the disclosure is permissible in accordance with the Family Educational Rights and Privacy Act ("FERPA").

Students are prohibited from recording audio or video, or taking photographs in classrooms (including online classes) without prior permission from the instructor or pursuant to an approved disability accommodation, and from reproducing, sharing, or disseminating classroom recordings to individuals outside of this course.

Students found engaging in such conduct will be in breach of the Student Code of Conduct and subject to disciplinary action.

Title IX/Sexual Misconduct: Sexual violence and sexual harassment are contrary to our core values and have no place at Nova Southeastern University. In accordance with Title IX and other laws, NSU prohibits discrimination, including sex-based discrimination and discrimination towards pregnant/parenting students. If you or someone you know experience(s) sexual violence and/or sexual harassment, there are resources and options available. To learn more or to report an incident, please visit the NSU Title IX website at www.nova.edu/title-ix. Please be aware that as an instructor, I am not a confidential resource, and I will need to report any incidents of sexual misconduct to the NSU Title IX Coordinator. You can also contact Laura Bennett, NSU's Title IX Coordinator directly at laura.bennett@nova.edu or 954-262-7858.