



CDM 2110 - Radiology I

I. Course Information

Course: CDM 2110 - Radiology I
Semester and Year: Summer I 2021
Course Start and End Dates: 05/03/2021 - 07/25/2021
Course Reference Number: 50171
Semester Credit Hours: 1.0

II. Instructor Information

Professor: Maritzabel Hogge
Email: mg1161@nova.edu
Office Hours:
8:30 am to 5:00 pm

III. Class Schedule and Location

Day	Date	Time	Location	Building/Room
	05/03/2021 - 07/25/2021		Ft Lauderdale/Davie Campus	-

IV. Course Description

The fundamentals of x-ray generation physics, radiographic image production, radiographic techniques, biological effects of radiation and radiation hygiene, and practice protection principles are presented.

V. Course Objectives / Learning Outcomes

Course Learning Outcomes

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

1. Learn the physical properties of x-rays
2. Identify the basic components of x-ray machine and how it works in a dental setting
3. Recognize the different image receptors and the appropriate use in clinical situations
4. Understand the different factors that can affect x-ray production
5. Describe the principles and normal anatomy of intraoral and panoramic radiography
6. Identify the visual and geometric characteristics of radiographic image and understand how to control and influence these factors
7. Self-assess radiographic images and apply correct measures
8. Apply prescription guidelines for radiographic examinations
9. Identify the possible biological effects from ionizing radiation
10. Follow optimal radiation protection regulations for operator and patient
11. Demonstrate ideal infection control procedures
12. Understand principles and applications of advanced imaging modalities and know when to refer imaging and/or interpretive challenges to the radiology specialist

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:

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

1. Graduates must be competent in patient assessment, diagnosis, comprehensive treatment planning, prognosis, and informed consent.
Formative assessment: Exam
Summative assessment: Final Exam
 19. Graduates must be competent in the application of biomedical science knowledge in the delivery of patient care.
Formative: Exam
Summative: Final Exam
 22. Graduates must be competent in applying legal and regulatory concepts related to the provision and/or support of oral health care services.
Formative: Exam
Summative: Final Exam
 27. Graduates must demonstrate competence in the ability to self-assess, including the development of professional competencies and the demonstration of professional values and capacities associated with self-directed, lifelong learning.
Formative: Exam
Summative: 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

FK-3 Apply knowledge of physics and chemistry to explain the characteristics and use of technologies and materials used in the prevention, diagnosis, and management of oral disease and the promotion and maintenance of oral health.

Foundation Knowledge

FK3-1: Apply knowledge of the principles of radiation to understand radiobiologic concepts and the uses of radiation in the diagnosis and treatment of oral and systemic conditions (Encompasses Basic and Oral Radiology, etc.).

VI. Materials and Resources

Course Required Texts and Materials:

Required Texts:

Oral Radiology: Principles and Interpretation, Stuart C. White, Michael J. Pharoah, Elsevier, 7th edition, ISBN: 978-0-323-09633

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:

Supplemental Texts or Readings:

1. Required Assignments: Web-based assignments appropriate to the module topic

- 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:

	Date	Room	Content
1 Exam	May 13 -11:10-12:10 noon	TBD	Modules 1-3
2 Exam	June 17 8:10-9:10 am	TBD	Modules 4-7
3 Exam	July 16 - 8:10-9:10 am	TBD	Modules 8-11

Topic Outline:

The fundamentals of x-ray generation physics, radiographic image production, radiographic techniques, biological effects of radiation and radiation hygiene, and practice protection principles are presented.

“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

No modifications were necessary.

IX. Assignments

Description of Assignments, Point Value and Rubrics

Course Outline

<u>Week</u>	<u>Sessions</u>	<u>Topic</u>	<u>Assignments</u>	<u>Content Outline</u>	
1	1	Course Introduction Essentials of Dental Radiography	Chapter 1 p 1-4;8-14	Indicate diagnostic value of x-ray examinations in dental practice	
2	2	Effects of Radiation exposure	Chapter 2 p 16-27	Describe the effects of radiation on patient and the operator	
3	3	Radiation Protection	Chapter 3 p 29-40	Indicate the protection standards for patient and operator.	
4	4 5	The Dental-Ray machine components and function Image Receptors	Chapter 1 p 4-8 Chapter 4 p 41-62	Describe mechanism of x-ray generation & components of x-ray tube. Digital receptors	
5	6 7	Intraoral radiographic procedures Image assessment	Chapter 7 p 91-130 Chapter 8 p 131-152 Chapter 6 p 84- 90	Intraoral examinations, image acquisition geometric principles and normal intraoral anatomy Describe the principles & effects of projection geometry on images	
6	8 9	Panoramic Radiography Panoramic Anatomy	Chapter 10p 166-184	Describe panoramic technique, applications and normal anatomy	
7	10 11	Patient and examination selection Advanced imaging techniques	Chapter 16 p 259-269 Chapter 11 p 185-198 Chapter 12 p 199-212	Guidelines for radiographic prescription CBCT imaging principles and applications	

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 Policy: The Course grade is LETTER based ,determined by:

3 written exams (33-points, 33-points, and 34-points) + optional discussion sessions (6-points) = 106 points

- Section Examinations: Each examination will be in a written format and will cover the topics defined in the Course Outline.
- Optional Discussion Sessions: Optional discussion sessions will be available before each quiz. There will be six discussion sessions total. The discussion sessions will be related to the course material and there will be displayed in the discussion area of the blackboard. Each discussion has a value of one point if answered correctly. Any student can participate in the discussion on the date given by the instructor. The dateline to submit the answers of the discussions are final, once the discussion session is closed there will be no re-opening of the session.
- Each examination will include directions and testing protocols. Failure to abide by these procedures or the detection of cheating, in any fashion, will result in the examination to be not graded and entered as a “0”. The opportunity to take a missed examination is described in the Student Handbook.
- **Challenge committee** is not accepted in this course.
- The final **course grade is letter based** using **A-F scale** and is the summative of three written exams and the optional discussion. A **minimum grade of C** is required to pass the course.

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:

The final **course grade is letter based** using A-F scale and is the summative of three written exams and the optional discussion. A minimum grade of C is required to pass the course.

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%202020%20CDM%20PreDoctoral%20Student%20Handbook.pdf?wa=wsigin1.0>

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)

- 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)
- 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).
 - Direct Exposure/ Asymptomatic: test on day 7- if negative test result- can come back after 10 days : if NO test- quarantine 14 days
 - 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 hours
- 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).
- 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.