



CDM 1130 - Neuroanatomy Lecture/Lab

I. Course Information

Course: CDM 1130 - Neuroanatomy Lecture/Lab
Semester and Year: Winter 2021
Course Start and End Dates: 01/04/2021 - 04/25/2021
Course Reference Number: 31897
Semester Credit Hours: 3.0
Building and Room: Online Venue - CANVAS

II. Instructor Information

Professor: Lori Beth Dribin
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Phone: (954) 262-1341
Office Hours: Office #1341 Terry Building, HPD. Hours by Appointment
Office Hours:
 By appointment

III. Class Schedule and Location

Day	Date	Time	Location	Building/Room
	01/04/2021 - 04/25/2021		Programs On-line	Online Venue-CANVAS
TR	01/05/2021 - 03/10/2021	10:10 AM - 11:59 AM	Programs On-line	Online Venue-CANVAS

IV. Course Description

This course will introduce students to structural, functional and developmental features of the human nervous system with an emphasis on clinical presentations.

V. Course Objectives / Learning Outcomes

Course Learning Outcomes

The student will be able to identify the surface and internal features of the cerebrum, cerebellum, brain stem and spinal cord. The student will also be able to identify the cranial nerves and the arteries of the central nervous system. The student will be able to relate the development of the nervous system to normal adult morphology and congenital defects. The student will know the regional anatomy and functional features of the human nervous system. This knowledge will include the formation and function of the twelve cranial nerves. The student will be familiar with the neurological deficits resulting from injury or disease to circumscribed parts of the nervous system. The student will be able to identify normal neuroanatomical structures on CAT and MRI scans.

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:

19. Graduates must be competent in the application of biomedical science knowledge in the delivery of patient care.

[CODA Predoctoral Standard 2-15].

Formative Assessment: Laboratory assignments

Summative Assessment: Midterm and Final written examination

26. Graduates must be competent in the use of critical thinking and problem-solving, including their use in the comprehensive care of patients, scientific inquiry and research methodology.

[CODA Predoctoral Standard 2-10]

Formative Assessment: Laboratory assignments

Summative Assessment: Midterm and Final written examination

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.

[CODA Predoctoral Standard 2-11]

Formative Assessment: Laboratory assignments

Summative Assessment: Midterm and Final written examination

- 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

Foundation Knowledge for the General Dentist:

FK 1-1: Apply knowledge of molecular, biochemical, cellular, and systems-level development, structure and function to the prevention, diagnosis, and management of oral disease and the promotion and maintenance of oral health.

FK4: Apply knowledge of the principles of genetic, congenital and developmental diseases and conditions and their clinical features to understand patient risk in the prevention, diagnosis, and management of oral disease and the promotion and maintenance of oral health.

VI. Materials and Resources

Course Required Texts and Materials:

Nolte's the Human Brain in Photographs and Diagrams, Vanderah, Todd, W.5th edition, 2020, Elsevier, ISBN: 978-0- 323- 59816- 3 (available as an e-book in the HPD library, Clinical Key database)

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:

Clinical Neuroanatomy, Waxman, Stephen, 29th ed., 2020, McGraw-Hill (available as an e-book in the HPD library (Access Medicine)

Clinical Neuroanatomy Made Ridiculously Simple, Goldberg, Stephen, 4th ed., 2010, MedMaster, Inc., ISBN 0-940780927 [Simple concise book that helps understand main concepts]
 Clinical neurology and Neuroanatomy, a localization-based approach, Aaron L. Berkowitz, 2017, McGraw-Hill , ISBN 978-1-83440-0

- 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:

PART I:

DAY	DATE	TIME	TOPIC	Room
Tuesday	1/05/2021	10:10 AM 11:10 AM 3:10-5:00 PM	1. Introduction to Neuroanatomy 2. Ventricular system and Meninges <i>LAB: Introduction to the CNS</i>	Terry Auditori
Thursday	1/07/2021	10:10 AM 11:10 AM	3. Peripheral NS 1 4. Peripheral NS 2	Terry Auditori
Tuesday	1/12/2021	10:10 AM 11:10 AM 3:10-5:00 PM	5. Spinal cord: Introduction 6. Spinal cord: Upper motor neurons <i>LAB: Spinal cord</i>	Terry Auditori
Thursday	1/14/2021	10:10 AM 11:10 AM	7. Spinal cord: Discriminative Pathway 8. Spinal cord: Pain & Temperature Pathway	Terry Auditori
Tuesday	1/19/2021	10:10 AM 11:10 AM 3:10-5:00 PM	9. Spinal cord: Review and damage 10. Spinal cord: Diseases and blood supply <i>LAB: Brainstem</i>	Terry Auditori
Thursday	1/21/2021	10:10 AM 11:10 AM	11. Brainstem: Overview and caudal medulla 12. Brainstem: Medulla, middle	Terry Auditori
Tuesday	1/26/2021	10:10 AM 11:10 AM 3:10-5 PM	13. Brainstem: Medulla rostra 14. Brainstem: Pons, caudal <i>LAB: Brainstem review</i>	Terry Auditori

Thursday	1/28/2021	10:10 AM 11:10:AM	15. Brainstem: Pons, middle 16. Brainstem: Midbrain	Terry Auditori
Tuesday	2/02/2021	10:10 AM 11:10 AM 3:10-5 PM	17. Brainstem: Control of eye movements 18. Pupillary constriction and accommodation <i>NO LAB</i>	Terry Auditori
Thursday	2/04/2021	10:10 AM 11:10 AM	19. Vestibular System 20. Auditory System	Terry Auditori
Tuesday	2/09/2020	<i>Tentatively 3-5 PM</i>	<i>MID-COURSE EXAMINATION</i>	

PART II:

DAY	DATE	TIME	TOPIC	Room
Thursday	2/11/2021	10:10 AM 11:10 AM	21. Visual System I 22. Visual System II	Terry Auditorium
Tuesday	2/16/2021	10:10 AM 11:10 AM 3:10-5 PM	23. Forebrain 24. Thalamus / Internal capsule <i>LAB: Brain sections</i>	Terry Auditorium
Thursday	2/18/2021	10:10 AM 11:10 AM	25. Upper Motor neurons 26. Basal Ganglia I	Terry Auditorium
Tuesday	2/23/2021	10:10 AM 11:10 AM 3:10-5 PM	27. Basal Ganglia II 28. Cerebellum I <i>LAB: Cerebellum</i>	Terry Auditorium
Thursday	2/25/2021	10:10 AM 11:10 AM	29. Cerebellum II 30. Cerebral cortex I	Terry Auditorium
Tuesday	3/09/2021	10:10 AM 11:10 AM 3:10 - 5 PM	31. Cerebral cortex II 32. Cerebral cortex III/ Blood Supply <i>Self study LAB: Cerebrum & blood supply</i>	Terry Auditorium
Thursday	3/11/2021	10:10 AM 11:10 AM	33. Olfaction/Hypothalamus 34. Limbic system	Terry Auditorium
Tuesday	3/16/2021	<i>Tentatively 3-5 PM</i>	<i>FINAL EXAMINATION</i>	Terry Auditorium

Topic Outline:

LECTURE OBJECTIVES

Lecture Objectives: 1-10

Introduction to Neuroanatomy, Ventricular system and meninges

1. List the derivatives of the neural tube and crest.
2. Understand the function of the glia in the peripheral and CNS.
3. Describe congenital neural tube defects including spina bifida, anencephaly and skull defects.
4. List the major divisions of the brain including the spaces and ventricles.
5. Understand how CSF is produced, its flow through the ventricular system and absorption into the dural venous sinuses.

6. Describe what happens when there is a blockage in the flow or absorption of CSF.
7. List the types and causes of hydrocephalus and treatment for aqueductal stenosis.
8. Understand the significance of blood cells in the CSF and subarachnoid space.
9. List the layers of the meninges and spaces.

Peripheral nervous system

1. Describe the anatomy and functional features of spinal nerves, dorsal and ventral roots, rami and peripheral nerves.
2. Describe the degeneration, regeneration and possible recovery sequence, and functional loss following injury to peripheral nerves and roots.
3. List the deep tendon reflexes and describe how they can be disrupted.
4. Describe the relationship of vertebral levels to spinal cord segments and cauda equina.
5. List the components of the cauda equina and what happens when it is damaged.
6. Describe a lumbar tap or puncture.
7. Define a lower motor neuron and describe the symptoms associated with damage.

Spinal cord (SC)

1. Describe the organization of spinal cord gray and white matter and into nuclei, columns and tracts.
2. List the location, levels, and function of SC nuclei and tracts and relate them to roots and nerves.
3. Define upper motor neurons (UMN) and list the different tracts in the pyramidal or extrapyramidal system.
4. Describe the pyramidal UMN pathway and formation of the lateral and ventral corticospinal tracts. Indicate the anatomical location of cell bodies and fibers throughout the pathway.
5. Define the terms contralateral and ipsilateral in relation to nervous system lesions
6. Explain what happens when the pyramidal fibers are damaged at different points of the pathway, in terms of chromatolysis and fiber degeneration, deficits and side of loss.
7. Compare upper and lower motor neuron lesions in terms of location and symptoms.
8. Describe the different types of sensations transmitted to the spinal cord, their receptors and methods of testing.
9. Describe the components of the discriminative pathway and describe what happens when it is damaged at different points in the pathway in terms of chromatolysis and fiber degeneration, deficits and side of loss.
10. Describe the Romberg test and Tabes dorsalis
11. Describe the components of the pain and temperature pathway and describe what happens when it is damaged at different points in the pathway.
12. Describe the reticular formation and ascending reticular activating system.
13. Describe the spreading of pain sensations into other areas and the methods that the body uses to inhibit pain transmission at the spinal cord level.
14. Describe strategies to eliminate intractable pain such as dorsal rhizotomy, anterolateral cordotomy and TENS units.
15. Describe syringomyelia
16. Compare and contrast the discriminative, pain & temperature and upper motor neuron pathway.
17. Understand the structure, function and lesions of dorsal and ventral roots, nerves and rami spinal nerve and relate them to spinal cord nuclei and pathways in the spinal cord.
18. Describe the features of Brown-Sequard syndrome (hemi-section of the spinal cord).
19. Describe the pathway for the sympathetic control of the superior cervical ganglion and how damage to the pathway leads to a Horner's syndrome.
20. Describe the deficits associated with bilateral damage to the spinal cord, relate it to levels and describe spinal shock.
21. Define paraplegia, quadriplegia, hemiplegia, and monoplegia and relate them to level of damage.
22. Compare segmental demyelination and Wallerian degeneration.
23. Describe the major diseases of nerves, roots, spinal cord, and pathways.
24. Learn the blood supply of the spinal cord and relate it to areas of damage.

Lecture Objectives: 11-20

Brainstem: General

1. Describe the organization of the brain stem and list the significant surface and internal structures at

each level, including the location of pathways, reticular formation, cranial nerve nuclei and fibers and ventricles.

2. Learn the location and components of each cranial nerve including their nuclei, fibers, function and deficits when lesioned.
3. Compare and contrast the nuclei and nerves of the spinal cord to those of the cranial nerves.
4. Understand the important reflexes in the brainstem.
5. Learn the arterial supply to the brainstem
6. List the major syndromes associated in the brainstem. Match the deficit with the structure damaged. List the most common reason for the syndrome or disease, including blood vessel involvement.
7. Apply the general concepts of nerve regeneration and myelination associated with spinal nerves to that of the cranial nerves.

Medulla

1. Describe the sensory and pyramidal decussations.
2. Compare the components of the closed (caudal) and upper medulla.
3. Describe the structure, function, and damage to CN 12 and 10
4. Describe the medial and lateral medullary syndromes.
5. Describe alternating hemiplegias and give examples in the medulla and pons
6. Describe the structure and function of CN 9 and 8.
7. Name the structures involved in the carotid sinus and gag reflexes.
8. Describe the reticular formation, its structure, location and functions in the brainstem.
9. List the structures located in the cerebellopontine angle.

Pons

1. Describe the organization of the pons and divide it into a base and tegmentum.
2. Describe the structure, function, and lesions associated with CN 6 and 7.
3. Understand the diseases and syndromes associated with damage to CN 6 nerve and nuclei
4. Describe the diseases and syndromes associated with damage to the facial nerve and nearby structures.
5. Discuss the corticobulbar tract, its origin, pathway and target nuclei.
6. Explain what happens when the corticobulbar tract is damaged.
7. Compare facial nerve palsy to central or supranuclear facial paralysis
8. Describe the formation and function of trigeminal nerve) and its three divisions.
9. Compare the motor and sensory root in terms of fibers, associated nuclei, function and damage.
10. List the components of the jaw jerk reflex and how it can be damaged.
11. Describe the pathways for discriminative, touch, and pain & temperature sensations from the face.
12. Describe the formation of the spinal tract of V and contributions from CN 7, 9, and 10.
13. List the structures involved in the corneal reflex and describe the loss when CN5 or 7 is damaged.
14. Compare damage at different points in the trigeminal system, including nerve divisions, ganglia, roots, and tracts.
15. Describe trigeminal neuralgia (Tic Douloureux), causes and surgical treatments.

Midbrain

1. Describe the organization of the midbrain.
2. Describe the structure, function and lesions associated with CN 4.
3. Describe the structure, function, and lesions associated with CN 3.
4. Discuss Weber's syndrome (alternating oculomotor hemiplegia) and compare to similar alternating syndromes in the medulla and pons.
5. Explain how the sympathetic and parasympathetic NS controls pupil size.
6. Describe the pupillary light reflex, how it is elicited, components of the pathway and deficits when damaged.
7. Explain Argyll-Robertson pupils and how it can occur.
8. Describe the pathway for accommodation and convergence for near vision and compare it to the pupillary light reflex.
9. Explain how the eye movements are coordinated.
10. Describe the vertical gaze center and relate it to Parinaud's syndrome.
11. Describe the pathway for lateral gaze.

12. Compare damage to the abducens nerve and nucleus and the medial longitudinal fasciculus.
13. Explain internuclear ophthalmoplegia, bilateral or unilateral.

Vestibular and Auditory system

1. Describe the structure and function of components of the inner ear, including the bony and membranous labyrinth, hair cells and the macula and cristae ampullares
2. Explain how the static labyrinth/macula helps maintain an upright posture.
3. Explain how the kinetic labyrinth/cristae ampullares help regain balance and head and eye position with angular movements.
4. Describe the anatomical and physiological basis for the vestibulo-ocular reflexes.
5. List the symptoms which occur with damage to the vestibular system
6. Describe the warm and cold-water caloric tests and the different scenarios for testing.
7. Explain some of the causes of pathological nystagmus and relate it to the caloric test.
8. Describe the Doll's eye phenomenon.
9. Explain the significance of a comatose patient not responding to the caloric test and Doll's eye phenomenon.
10. List the components of the auditory pathway and its divisions into peripheral (conductive and sensorineural) and central portions.
11. Compare and contrast conductive, sensorineural and central hearing deficits in terms of causes and symptoms.
12. Describe the features of Weber's and Rinne's hearing tests and how these tests are used to distinguish between conductive and sensorineural hearing deficits.
13. Compare and contrast all the cranial nerves, location, damage, and syndromes.

Lecture Objectives: 20-24

Visual System

1. Understand the basic structure and development of the of the eye, retina, and optic nerve
2. Describe the basic retinal layers in terms of content, circuitry and order of light versus electrical transmission.
3. Describe the structure and function of the fovea centralis, optic disc, ora serrata and optic nerve.
4. Describe papilledema and list its causes.
5. Explain what occurs when the retina detaches.
6. List the areas of the eye, retina, and optic nerve that are avascular.
7. Describe the visual pathway from the retina to the visual cortex of the occipital lobe and relate it to visual fields.
8. Describe the visual field defects in terms of location in the pathway, chromatolysis and fiber degeneration, visual field loss including blackened circles and visual field terminology (ex. bitemporal hemianopia).
9. Identify the location of macular vision in the primary visual cortex
10. Identify the blood supply to the primary visual cortex and relate it to macular sparing.system.

Diencephalon, Thalamus

1. Define the forebrain and describe how its development leads to different axis of orientation from the brainstem and the development of C-shaped structures.
2. List the major components of the diencephalon and telencephalon.
3. Describe the basic location, function, and circuitry of the thalamus.
4. Organize the thalamic nuclei into functional groups and list the function, inputs, outputs, and deficits associated with each nucleus.
5. Describe the relationship of the reticular formation to the diffuse thalamic nuclei and coma.
6. Describe the thalamic syndrome and central pain syndromes.
7. Explain what happens in a prefrontal leucotomy and Korsakoff's syndrome.

Internal capsule

1. Understand the function of the internal capsule and relate it to the cerebral cortex, corona radiata and crus cerebri of the midbrain.
2. Define the limbs of the internal capsule and identify their main components.
3. Compare lesions in the different limbs of the internal capsule, relating the deficits to pathway damage.

4. Describe lacunar strokes and relate it to internal capsule damage.

Lecture Objectives: 25 – 28 Motor systems

Upper motor neurons

1. Compare pyramidal and extrapyramidal systems of upper motor neurons.
2. List the cortical regions that give rise to UMNs and relate it to the motor homunculus.
3. Identify the blood supply to the lateral or medial portions of the primary motor cortex and describe the area of the body damaged with vessel occlusion.
4. Describe the pathways of the corticospinal and corticobulbar tracts and list the deficits associated with damage at different points of the pathway.
5. Correlate corticobulbar damage to increased mortality and dysphagia.
6. Describe the different alternating hemiplegias and relate it to damage in the spinal cord.
7. Organize the descending UMN pathways into lateral and ventromedial groups.
8. Explain the relationship of the lateral corticospinal tract to fine hand movements and how that relationship is reflected in recovery after damage.
9. Compare upper and lower motor neuron symptoms.
10. Describe how to determine the location of an UMN lesion based upon symptoms and signs.

Basal ganglia

1. Identify the components and anatomy of the basal ganglia and their relationship to the lateral ventricle and internal capsule.
2. Define lenticular or lentiform nuclei and striatum.
3. Learn the general circuitry of the basal ganglia.
4. Compare and contrast the basal ganglia loops including the motor loops (direct and indirect), eye movement, prefrontal and limbic loops.
5. Explain the relationship of the basal ganglia to UMNs and muscle control.
6. List the basic symptoms associated with damage to the basal ganglia.
7. Describe the different basal ganglia diseases, causes and symptoms.
8. Match the different types of dyskinesia with diseases or disorders.
9. Describe the motor and non-motor symptoms of Parkinson's disease.

Cerebellum

1. Divide the cerebellum into vermis and hemispheres and into lobes.
2. Describe the organization of the gray and white matter of the cerebellum.
3. Learn the functional divisions of the cerebellum.
4. List the general inputs and outputs of the cerebellum.
5. Describe the cerebellar components, function and connections in relation to the vestibular function.
6. Describe the cerebellar components, function, and connections during unskilled movements.
7. Describe the cerebellar components, function, and connections when learning, programming and performing complex skilled hand movements.
8. List the side relationships of the cerebellum, brainstem, spinal cord and cerebral cortex.
9. Describe the contents of the cerebellar peduncles.
10. Review the blood supply of the brainstem and cerebellum.
11. Describe the different types of brain herniation and describe Arnold Chiari syndromes.
12. List the general signs and symptoms of cerebellar damage.
13. Describe the different disorders associated with damage to the different parts of the cerebellum.
14. Compare and contrast location, function, and lesions of LMN, UMN, basal ganglion, and cerebellum.

Lecture Objectives: 30 - 34

Cerebrum

1. Define and give examples of association, commissural and projections fibers of the cerebral hemisphere.
2. Describe the histology of the cerebral cortex.
3. Define allocortex, neocortex, homotypical, granular and agranular heterotypical cortex and list their function and locations.
4. Describe Brodmann's areas.
5. Describe the primary cortical areas, association cortex and multimodal association cortical areas.
6. Define agnosia, apraxia and aphasia.

7. Define dominant and non-dominant hemispheres and list the location and function of the lateralized functions within each hemisphere.
8. Describe the important areas of the cerebral cortex including location, the function, inputs and outputs, interaction with nearby areas and what happens when damaged.
9. Describe the WADA test to determine the dominant hemisphere.
10. Describe how language is processed and list the important structures involved.
11. Describe Broca's, Wernicke's, conduction, and global aphasia in terms of location of damage and deficits both in understanding and expression.
12. Know the alternate terms for Broca's and Wernicke's aphasia
13. Describe the role of the non-dominant hemisphere in language and define aprosodia.
14. List the important roles of the dominant and non-dominant hemisphere and indicate the deficits associated with damage to the important areas.
15. Outline the flow of blood through the vertebral basilar line, internal carotid and how they are connected at the circle of Willis.
16. List the different type of strokes and describe transient ischemic attacks.
17. List the regions supplied with blood from each vessel and indicate the results of infarction.
18. Describe lenticulostriate vessels and small vessel disease, lacunar strokes, and capsular strokes.
19. Describe watershed or border zone infarcts.
20. List the important cortical regions, their blood supply, and resulting deficits when damaged

Olfactory system, Hypothalamus and Limbic

1. Describe the pathway of the olfactory system and how it differs from the other sensory pathways.
2. Describe how the olfactory system is tested.
3. List the main causes of damage and diseases associated with dysfunction of the olfactory Know the location, nuclei and functions of the hypothalamus
4. Understand the general inputs and outputs of the hypothalamus
5. List the findings and disorders associated with damage to the hypothalamus
6. List the parts and connections of the limbic system.
7. Describe the hippocampus in terms of structure, function and deficits when damaged
8. Explain the pathway of the fornix.
9. Understand the components and circuitry of the Papez circuit and its functional significance
10. Describe Korsakoff's syndrome
11. Describe the function and deficits associated with damage to the amygdala.
12. Describe the Klüver-Bucy syndrome
13. Explain the anatomical basis of the symptoms associated with temporal lobe epilepsy.
14. Describe Alzheimer's disease and Lewy body dementia.

LABORATORY OBJECTIVES

Detailed lists of structures to learn are in the individual laboratory guides.

“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. Assignments

Description of Assignments, Point Value and Rubrics

All points in the course will be earned from the Midterm and Final examinations. Each exam will contain information from the both the lectures and laboratories.

Some of the laboratories will be assigned as self-study.

IX. 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:

Examinations format: multi choice questions administered on Examssoft. Examinations will include lecture and laboratory material.

1. Midterm Examination: 50%

2. Final Examination: 50%

Total points in course: 100% Pass = 70% to 100% (C or better)

Exam Attendance Policy

Should a student arrive late to or miss an examination, he/she must contact the Course Director immediately. Students who enter the room after the announcement of the start of an exam may not be allowed to take the test. Students who have an un-excused absence from an exam will not be given a make-up test but will be given a zero for the test. Students who have an excused absence will be allowed a make-up test to be given within 10 business days following the date of the missed exam on a date to be determined by the course director. Eligible students are to be available at the scheduled date and time of the Make-up exam.

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:

Letter grade

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

X. 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=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 clinicweeks. • 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

XI. 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.