



North Central State College
MASTER SYLLABUS
2020-2021

- A. Academic Division: Health Sciences
- B. Discipline: Bioscience Technology
- C. Course Number and Title: BIOS1210 Histology
- D. Course Coordinator: Jason Tucker, M.S.
Assistant Dean: Melinda Roepke, MSN, RN

Instructor Information:

- Name: Click here to enter text.
- Office Location: Click here to enter text.
- Office Hours: Click here to enter text.
- Phone Number: Click here to enter text.
- E-Mail Address: Click here to enter text.

- E. Credit Hours: 4
Lecture: 2 hours
Laboratory: 4 hours
- F. Prerequisites: BIOS1010
Co-requisite(s):
- G. Syllabus Effective Date: Fall, 2020
- H. Textbook(s) Title:

Basic Histology / Text and Atlas

- Author(s): Luiz Carolos Junqueira and Jose Carneiro
- Copyright Year: 2015
- Edition: 14th
- ISBN: 9780071842709

- I. Workbook(s) and/or Lab Manual: None
- J. Course Description: This course is designed for students who are interested in medicine and animal biology. The goal of this course is to introduce students to tissues that make up organs and the basic design of each of the major organs in selected animals. Students will identify tissues using photographs, microscope slides, photographic slides, videos, and the internet (histology sites). In addition, fundamental histological techniques important to the preparation of microscope slides will be included in this course. Students will learn how to prepare tissues, embed tissues, use a microtome, and stain differentially as an aid in the identification of tissues. Finally, students will prepare slides of various tissues.

K. College-Wide Learning Outcomes

College-Wide Learning Outcomes	Assessments - - How it is met & When it is met
Communication – Written	
Communication – Speech	
Intercultural Knowledge and Competence	
Critical Thinking	
Information Literacy	
Quantitative Literacy	

L. Course Outcomes and Assessment Methods:

Upon successful completion of this course, the student shall:

Outcomes	Assessments – How it is met & When it is met
1. Define histology.	1 st week quiz, midterm (Week 8) and final examination.
2. Demonstrate the proper procedure for mixing solutions & stains.	Lab experiments and demonstrations early in the term, midterm (Week 8) and final examination
3. Demonstrate slide preparation.	Weekly lab experiments and demonstrations, midterm (Week 8) and final examination.
4. Identify the cytoplasm of a cell and explain the importance of it and its contents.	Weekly lab check-offs and presentations midterm (Week 8) and final examination.
5. Identify the cell nucleus.	Weekly performance check-offs, midterm (Week 8) and final examination.
6. Identify adipose tissue.	Weekly lab check-offs and presentations, midterm (Week 8) and final examination.
7. Identify, compare & contrast cartilage and bone.	Weekly lab check-offs and presentations, midterm (Week 8) and final examination.
8. Identify nerve tissue and explain the workings of the nervous system.	Weekly lab check-offs and presentations, midterm (Week 8) and final examination
9. Identify, compare & contrast the three types of muscle tissue.	Weekly lab check-offs and presentations, midterm (Week 8) and final examination.
10. Identify the major tissues present in the circulatory system & explain the function of this system.	Weekly lab check-offs and presentations, midterm (Week 8) and final examination.
11. Identify blood cells and compare & contrast their components.	Weekly lab check-offs and presentations, midterm (Week 8) and final examination.
12. Identify tissues and specific cells of the digestive tract.	Weekly lab check-offs and presentations midterm and final examination.
13. Identify tissues and specific cells of the respiratory system.	Weekly lab check-offs and presentations, midterm (Week 8) and final examination.
14. Identify tissues and specific cells of the urinary system.	Weekly lab check-offs and presentations, and final examination
15. Identify the structure and function of the adrenal, thyroid and parathyroid glands.	Weekly lab check-offs and presentations, and final examination.
16. Identify cells from the male and female reproductive system.	Weekly lab check-offs and presentations, and final examination.
17. Identify Photoreceptor and Audio Receptor Cells.	Weekly lab check-offs and presentations, and final examination.
18. Describe the purpose & process of the sample collection protocol and perform this protocol.	Weekly direct lab check-off and performance check-offs during that portion of the course, and final examination.

Outcomes	Assessments – How it is met & When it is met
19. Describe the purpose & process of the sample fixation protocol and perform this protocol.	Weekly direct lab demos and performance check-offs during that portion of the course, and final examination.
20. Describe the purpose & process of the dehydration and clearing protocol and perform this protocol.	Weekly direct lab demos and performance check-offs during that portion of the course, and final examination.
21. Describe the purpose & process of the Paraffin embedding protocol and perform this protocol.	Weekly direct lab demos and performance check-offs during that portion of the course, and final examination.
22. Describe the purpose & process of the Microtome sectioning protocol and perform this protocol.	Weekly direct lab demos and performance check-offs during that portion of the course, and final examination.
23. Describe the purpose & process of the Staining protocol and perform this protocol.	Weekly direct lab demos and performance check-offs during that portion of the course, and final examination.
24. Describe the purpose & process of the Microscopic examination protocol and perform this protocol.	Weekly direct lab demos and performance check-offs during that portion of the course, and final examination.

M. Topical Timeline (Subject to Change):

Week	Topical Timeline
1 and 2	<ul style="list-style-type: none"> • Histology & Method of Study. • Mixing Stains. • Slide preparation.
3 and 4	<ul style="list-style-type: none"> • Cytoplasm. • Cell nucleus. • Adipose Tissue. • Cartilage and bone.
5 and 6	<ul style="list-style-type: none"> • Nerve Tissue & the Nervous System • Muscle Tissue
7	<ul style="list-style-type: none"> • The Circulatory System • DNA and Blood Cells
8 and 9	<ul style="list-style-type: none"> • Digestive tract. • Respiratory System • Urinary System
10 and 11	<ul style="list-style-type: none"> • Adrenal, Thyroid and parathyroid system. • Male and female reproductive system • Photoreceptor and audio receptor cells.
12 and 13	<ul style="list-style-type: none"> • Sample collection protocol. • Fixation protocol. • Dehydration and clearing protocol.
14 and 15	<ul style="list-style-type: none"> • Paraffin embedding protocol. • Microtome sectioning protocol. • Staining protocol. • Microscopic examination protocol

N. Course Assignments:

1. Research for oral presentations of on-line research topic (Week 12)
2. Group presentation (Week 8)
3. Lab demonstrations (Weekly)
4. Maintain a lab journal (Weekly)
5. Student hands on lab techniques (Weekly)
6. Student Lab Skill performance check-offs (Weekly)
7. Midterm exam (Week 8)
8. Final Exam (Week 16)

O. Recommended Grading Scale:

NUMERIC	GRADE	POINTS	DEFINITION
93-100	A	4.00	Superior
90-92	A-	3.67	Superior
87-89	B+	3.33	Above Average
83-86	B	3.00	Above Average
80-82	B-	2.67	Above Average
77-79	C+	2.33	Average
73-76	C	2.00	Average
70-72	C-	1.67	Below Average
67-69	D+	1.33	Below Average
63-66	D	1.00	Below Average
60-62	D-	0.67	Poor
00-59	F	0.00	Failure

P. Grading and Testing Guidelines:

Click here to enter text.

Q. Examination Policy:

Click here to enter text.

R. Class Attendance and Homework Make-Up Policy:

Click here to enter text.

S. Classroom Expectations:

Click here to enter text.

T. College Procedures/Policies:

Important information regarding College Procedures and Policies can be found on the [syllabus supplement](#) located at

<http://catalog.ncstatecollege.edu/mime/download.pdf?catoid=5&ftype=2&foid=3>