

ACB9561 Course Outline and Schedule 2020-2921

Overview:

This course is a detailed study of the cellular and microscopic structure of the various tissues and organ systems of the body, with emphasis on humans, and other mammals used in medical research. Systems are examined stressing the relations of structure to function. The course expects and highly encourages student participation and uses microscopic exploration of histologically sectioned material and demonstrations. The course is being delivered entirely online and is designed with the following components:





- 1) **Lectures and Labs:** Students will be enrolled and participate in the 3rd year Undergraduate Histology Course **ANATCELL 3309**. Course materials such as lectures, lecture notes, labs, and the laboratory manual are posted on the ANATCELL 3309 OWL site and on ECHO360 (lectures and labs).
 - 2) **Tutorials:** Every Friday we will meet using Zoom for Q&A, student presentations, and to explore some additional concepts. Materials are posted on the ACB9561 OWL site.
- **Before each Tutorial on Fridays, students are expected to have:**
 - a) viewed the relevant lectures on ECHO360.
 - b) completed the associated lab (by exploring the sections to be studied that week using the Histology Guide Virtual Slide Box, and by completing the lab assignment).

Learning Outcomes:

By the end of the course students will be able to:

- a) explain structure/function relationships of tissues, organs, and their parts at the microscopic level.
- b) navigate histological sections using a virtual microscope.
- c) identify and name tissues, organs and their parts in microscopic images.
- d) Discuss clinical scenarios and their histological manifestations.

Technical Requirements:

	Stable internet connection		Laptop or computer
	Working microphone		Working webcam

Instructor Information:

Martin Sandig, PhD, MSB472, martin.sandig@schulich.uwo.ca.

Times and Location:

Lectures ANATCELL 3309: Tuesdays, Thursdays, 11:30 AM-12:30 PM, or archived, ECHO360.

Labs ANATCELL 3309: Mondays, 3:30-4:30 PM, or archived, ECHO360

Tutorials: Fridays, 9-11 AM, live Zoom

Recommended Texts:

- Histology: A Text and Atlas, Pawlina, W. 8th Edition
- A Photographic Atlas of Histology, Leboffe, M.J., 2nd Edition
- Netter's Histology, Ovalle and Nahirney

These texts have online student consult sites that may be useful for studying.

Note: If you already have a histology text there is no need to purchase the recommended texts. Any other histology text is acceptable as well.

Online Virtual Slide Boxes:

<http://histologyguide.org/index.html>

<http://www.mbfbioscience.com/iowavirtualslidebox>

<http://histology.medicine.umich.edu/full-slide-list>

These sites are also linked to the homepage of the OWL course site.

Assessments and Mark Breakdown:

6 Quizzes: 5% each

Quizzes are administered through OWL and test recognition, proper identification, and naming of histological structures.

Term 1 (Fall term) and Term 2 (Winter term) Assignments: 10% each

Each student (assignment by lottery) will present two 15-minute short PowerPoint presentations on the cell biological, histological and clinical application of a particular tissue or organ system (see "Assignment Outline and Rubrik").

Mid-Year and Final Exams: 25% each

The online exams are multiple choice and short answer questions and are administered through gradescope software. They test recognition, proper identification, and naming of histological structures, as well as knowledge regarding structure/function relationships.

Assessment	Format	% of Final Mark	Date
3309 Quiz 1	Online via OWL	5	Oct. 9
3309 Quiz 2	Online via OWL	5	Nov. 13
3309 Quiz 3	Online via OWL	5	Dec. 9
Term 1 Assignment	Online via Zoom	10	Fridays
3309 Mid-Year Exam	Online via Gradescope	25	TBA
3309 Quiz 4	Online via OWL	5	Jan. 29
3309 Quiz 5	Online via OWL	5	March 5
3309 Quiz 6	Online via OWL	5	April 2
Term 2 Assignment	Online via Zoom	10	Fridays
3309 Final Exam	Online via Gradescope	25	TBA

Course Schedule:

Please see the following pages.

		Lecture Schedule	Instructor	Laboratory Schedule
September	10	Introduction and Techniques	Dr. Sandig	
F	11	Tutorial 1: Course Introduction		
M	14			Lab 1: Microscopy & Histology Techniques
Tu	15	Cell Membrane, Organelles		
Th	17	Nucleus, Nucleolus		
F	18	Histology techniques		
M	21			Lab 2: Cytology
Tu	22	Epithelia & Glands		
Th	24	Epithelial Junctions & Surface		
F	25	Tutorial 2: Cells	Martin	
M	28			Lab 3: Epithelia & Glands
Tu	29	Loose Connective Tissue		
October	1	Dense Connective Tissue		
F	2	Tutorial 3: Epithelia, Junctions, Glands	Jenna	
M	5			Lab 4: Connective Tissue
Tu	6	Cartilage		
Th	8	Bone		
F	9	Tutorial 4: Connective Tissue	Miranda	Quiz 1
M	12	Thanksgiving Day, NO CLASS		
Tu	13	Bone Formation		
Wednesday	14			Lab 5: Cartilage
Th	15	Skeletal Muscle	P. Eansor	
F	16	Tutorial 5: Cartilage		
M	19			Lab 6: Bone & Bone Formation
Tu	20	Cardiac & Smooth Muscle		
Th	22	Heart	Dr. Sandig	
F	23	Tutorial 6: Bone		Kody
M	26			Lab 7: Muscle
Tu	27	Vessels		
Th	29	Cells of the Nervous System	Dr. Schmid	
F	30	Tutorial 7: Muscle		Kayla
November	2	Fall Reading Week (November 2-8), NO CLASS		
M	9			Lab 8: Heart & Circulatory System
Tu	10	Cerebrum & Cerebellum		
TH	12	Spinal Cord & Ganglia		
F	13	Tutorial 8: Cardiovascular System	Ruth	Quiz 2
M	16			Lab 9: Central Nervous System
Tu	17	Peripheral Nerves		
Th	19	Blood Cells	P. Eansor	
F	20	Tutorial 9: Central Nervous System		Michelle
M	23			Lab 10: Peripheral Nervous System
Tu	24	Erythropoiesis & Granulopoiesis		
Th	26	Cells of the Immune System	Dr. Sandig	
F	27	Tutorial 10: Peripheral Nervous System		Nicole
M	30			Lab 11: Blood & Blood Formation
December	1	Lymph Nodes		
Th	3	Spleen & Thymus		
F	4	Tutorial 11: Blood & Blood Formation		
M	7			Lab 12: Lymphoid Tissue & Organs
Tu	8	Lab Review	P. Eansor	
F	9	Tutorial 12: Lymphoid System	Michael	Quiz 3

		Lecture Schedule	Instructor	Laboratory Schedule	
January	5	Skin	Dr. Sandig		
Th	7	Skin Derivatives, Hair, Nails			
F	8	No Class			
M	11			Lab 13: Integument	
Tu	12	Respiratory Passages			
TH	14	Lung			
F	15	Tutorial 13: Integument		Jenna	
M	18			Lab 14: Respiratory System	
Tu	19	Tongue & Salivary Glands			
Th	20	Esophagus & Stomach			
F	21	Tutorial 14: Respiratory System		Miranda	
M	25			Lab 15: Digestive System 1	
Tu	26	Intestines			
Th	28	Liver			
F	29	Tutorial 15: Tongue Salivary Glands			Quiz 4
February	1			Lab 16: Digestive System 2	
Tu	2	Gall Bladder & Exocrine Pancreas			
Th	4	Kidney			
F	5	Tutorial 16: Esophagus, Stomach, Intestines		Kody	
M	8			Lab 17: Digestive System 3	
Tu	9	Urinary Passages			
Th	11	Adrenal, Thyroid, Parathyroid Glands			
F	12	Tutorial 17: Liver, Gall Bladder, Pancreas		Kayla	
February	15	Spring Reading Week (February 15-21), No Class			
M	22			Lab 18: Urinary System	
Tu	23	Pineal Gland & Endocrine Pancreas			
Th	25	Pituitary Gland			
F	26	Tutorial 18: Urinary System		Ruth	
March	1			Lab 19: Adrenal, Thyroid, Parathyroid	
Tu	2	Testis			
Th	4	Male Ducts			
F	5	Tutorial 19: Adrenal, Thyroid, Parathyroid			Quiz 5
M	8			Lab 20: Endocrine Pancreas, Pineal & Pituitary	
Tu	9	Ovary			
Th	11	Oviduct & Uterus			
F	12	Tutorial 20: Pineal, Islets, Pituitary		Michelle	
M	15			Lab 21: Male Reproductive System	
Tu	16	Mammary Gland			
Th	18	Eye 1		Dr. Schmid	
F	19	Tutorial 21: Male Reproductive System		Nicole	
M	22			Lab 22: Female Reproductive System	
Tu	23	Eye 2			
Th	25	Ear 1			
F	26	Tutorial 22: Female Reproductive System		Michael	
M	29			Lab 23: Eye	
Tu	30	Ear 2			
April	1	Lab Review		P. Eansor	
F	2	Tutorial 23: Eye			Quiz 6
M	5			Lab 24: Ear	
F	9	Tutorial 24: Ear			

Statement on Absence:

In case of absence from **tutorial sessions** due to illness or non-medical reasons the instructor must be notified by email. Any missed assignments during this time will be rescheduled.

In case of absence from the **Fall or Winter Assessment** due to illness or non-medical reasons the instructor must be notified by email. The assessments will be rescheduled on an individual basis.

The Policy on Accommodation for Illness can be found here:

http://www.uwo.ca/univsec/pdf/academic_policies/appeals/accommodation_illness.pdf.

Statement on Academic Offenses:

Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following site:

http://www.uwo.ca/univsec/pdf/academic_policies/appeals/scholastic_discipline_undergrad.pdf