VIRGINIA STATE UNIVERSITY
DEPARTMENT OF BIOLOGY
SCHOOL OF ENGINEERING, SCIENCE & TECHNOLOGY

BIOL 415-01/10 Vertebrate Histology
Lecture and Laboratory
COURSE SYLLABUS Spring 2004

Lecture 3 credit hours, MWF, 10:00 AM, 208 Lockett Hall
Laboratory-1 credit hour, Wednesday from 1-2:50 PM, 203 Lockett Hall

Instructor: ***Regina M. Knight-Mason, Ph.D.***
Associate Professor

Office hours:
Monday—1-3:00
Tuesday---9:30-11:30, 2-3:00
Wednesday--- NONE
Thursday---9:30-11:30
Friday--- 1-3:00

Office: 202 Lockett Hall
Phone: (804) 524-6867
E-mail: rknight@vsu.edu
Fax: (804) 524-5732

Course Description
Vertebrate Histology is an intensive study of the cell and the cellular organization of various tissues of the body. Staining techniques and light microscopy slide preparation will be stressed. The laboratory section involves identifying characteristics of animal tissues. The laboratory complements the course and should not be taken without the lecture.

Text Book: **Basic Histology: Text and Atlas**. 10th ed, by Luiz Carlos Junqueira and Jose' Carneiroo, 2003; Laboratory: **A Learning System in Histology** by Deborah W. Vaughn, 2002. Books are available in the VSU Bookstore.

All students are required to read each chapter before class discussion. An outline of chapter sequences will be given each student. Students will be assigned questions, problems and or various internet activities throughout the semester. Students will also be required to write one formal term paper on a histological technique used in current research literature and orally present this information to the class. This paper will be considered as a test grade. Exams will be announced one week in advance. Students are required to maintain all laboratory records in a formal laboratory notebook. The lab should be typed in standard scientific method format when specified. Write ups are due February 18, March 3, and April 21.

Grades (lecture)	**Midterm**	**Final**
Exams	85%	70%
Term paper	----	15%
Quizzes, Seminars	15%	15%

Lab Grades will be based on

Lab notebook	60%	60%
Participation*	20%	20%
Midterm exam	20%	10%
Final Exam	0 %	10%

*Participation is attendance and contribution to labs.

KSAs

Knowledge

1. *Students will know how to prepare tissue for microscopic analysis.*
2. *Students will understand the operation and use of the microtome.*
3. *Students will know how to name and identify the four types of connective tissue microscopically.*
4. *Students will identify microscopically the anatomy of the tissues and organs of the human body.*
5. *Students will know histological terms and concepts for the purpose of identification of pieces of animal tissue.*

***Skills** Derived From Histology Knowledge*

1. *Students will apply various staining procedures on animal tissue.*
2. *Students will prepare permanent slides from various animal organs.*
3. *Students will know how to operate a microtome.*
4. *Students will be proficient in the operation of the light microscope.*
5. *Students will understand how the preparation procedures in histology affect visual identification.*

***Abilities** Resulting From Acquired Skill*

1. *Students will be able to determine what dehydration and staining procedures to use based on tissue type and properties to be identified.*
2. *Students will develop a systematic thinking process to identify histological preparations accurately.*
3. *Students will be able to identify the types of stains used by observing basic properties of preserved specimen.*

BIOL 320 Lecture and Lab Schedule (Tentative)

Week of	**Lecture**	**Lab**
Jan 12	Chapter 1 **Introduction**	Introduction,
Jan 19	Chapter 2, 3 Cytoplasm, Nucleus	Investigation
Jan 26	Test, Chapter 4 Epithelial Tissue	Investigation
Feb 2	Chapters 5,6 Connective Tissue, Adipose	Investigations
Feb 9	Chapter 7, Test	Investigation

	Cartilage	
Feb 16	Chapter 8 Bone	Investigation
Feb 23	Chapter 9, 10 Nervous System, Muscle	Investigations
Mar 1	Chapter 11, ***Midterm*** Circulatory System	Midterm Exam
March 8-14	Spring Break	
Mar 15	Chapter 12,13 Blood, Hematopioesis	Investigation
Mar 22	Chapters 14, 15 Test Immune System, Lymphoid Organs	Investigation
Mar 29	Chapters 17 Respiratory System	Investigations
Apr 12	Chapters 18, 19 Skin, Urinary System	Investigations
Apr 19	Chapters 22, 23 Test Male and Female Reproductive System	Lab Final
Apr 26	Review, Makeup Lectures, **Final Exam Week**	

Final Exam **May 3, 10:30-12:30**