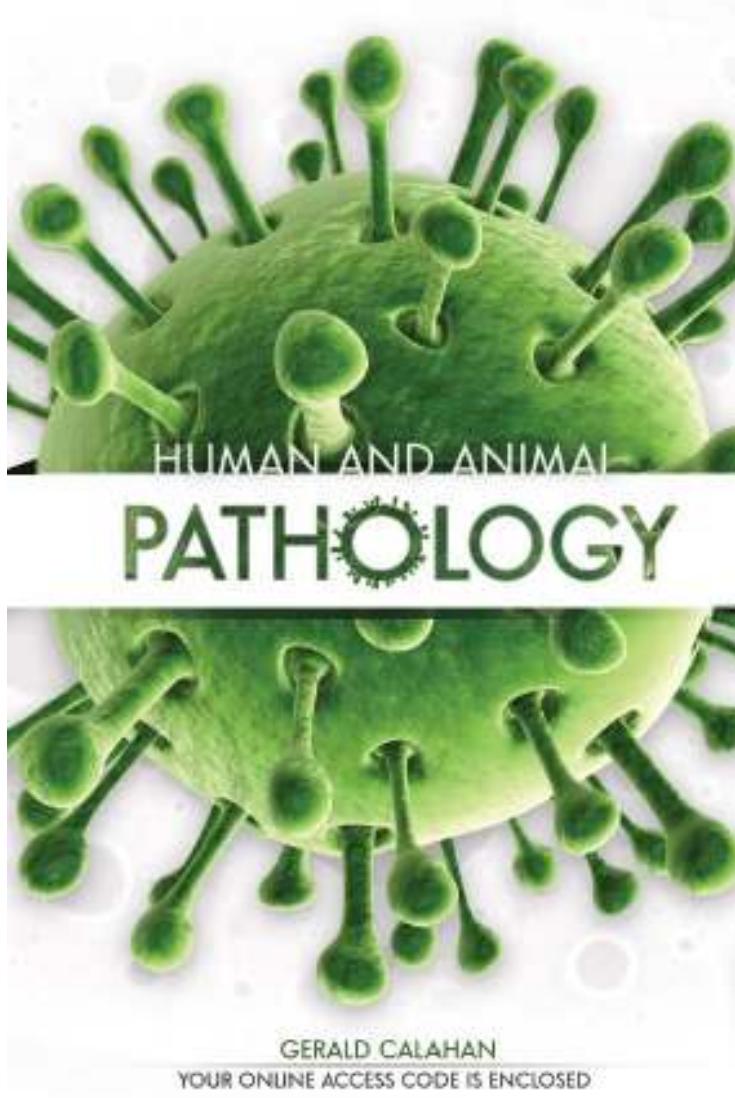


Course Syllabus Outline: MIP 315A – Human and Animal Disease

Instructor Information:	<p>Instructor: Gerald Callahan, Ph.D.</p> <p>Office Location: Pathology Room 310</p> <p>Phone: (970) 491-7086</p> <p>E-mail: gerald.callahan@colostate.edu</p> <p>Office Hours: Tuesdays 2:00 to 4:00 and by appointment</p>
Required Text: Human and Animal Pathology, Great River Technologies, 2013 Available from CSU Bookstore	
Course Description:	<p>Course Description: This course is offered through the Department of Microbiology, Immunology, and Pathology in the College of Veterinary Medicine and Biomedical Sciences. The primary</p>

	<p>objective of this course is to provide students with a broadly based understanding of the nature of human and animal diseases, including: causes of disease, the physiological course of these diseases, epidemiology, diagnosis, and therapy of human diseases. Specifically, we will begin with a consideration of the nature of infectious diseases, mammalian defense systems, and cancer. We will then consider individual systems, their basic physiology, and diseases that affect these systems. We will finish with congenital diseases and the nature, effects, and origins of genetic mutations. This will be achieved through a series of lectures. Examinations will be directly related to the material presented and will be designed to reinforce the basic concepts described in class.</p>
Course Objectives or Course Learning Outcomes:	<p><u>Course Objectives:</u></p> <p>Specifically, after completing this course, students should be able to:</p> <ul style="list-style-type: none"> • list the characteristics of the transmissible agents of disease and describe the pathogenesis of prion-, virus-, bacteria-, fungus-, and parasite-mediated diseases. • describe the basic functions of mammalian innate and adaptive immune systems and the pathogenesis of immune deficiencies and immune-mediated diseases. • explain the process of malignant transformation, invasion and metastases as well as the pathogenesis of cancer. • explain the basic functions of most of the basic systems of mammals and describe the pathogenesis of at least one disease that affects each of these systems. • describe the processes that underlie the development of genetic and hereditary diseases • explain the relevance of the study of pathology to the understanding of human and other animal development and wellbeing.
Course Prerequisite	Recommended – Principles of human and/or animal anatomy and physiology
Credit Hours	3
Class Breakdown	Lecture Hours: 3 <u>Lab Hours:</u> 0 Total Hours: 3
Teaching	Teaching strategies for this course will be lecture, class discussions,

Strategies	demonstrations, student presentations, Website (RamCT, videos, and lecture recordings (Echo 360)
Course Policies and Procedures:	<p>Attendance: While regular attendance is strongly encouraged, attendance will not be a factor in determining final grades.</p> <p>Outside of Classroom Work: This course will require a minimum of six hours per week for every student beyond his/her/other time in class. This time investment will be necessary to read related text materials and view supplementary materials as well as to, prepare for examinations and oral presentations.</p> <p>Academic Honesty: Examinations must be completed using one's own knowledge. No materials beyond one's own memory may be used to complete examinations. For student presentations, any resources available may be used.</p> <p>Special Needs Students: Students who find that standard accommodations for exams are not appropriate for their needs are encouraged to contact the (the poorly named) Resources for Disabled Student's office to arrange for support services.</p> <p>Examinations: Three in-semester and one final examination will be given as indicated in the course outline. There will be 3 to 4 multiple choice questions allocated to each lecture. In-semester exams will cover the material indicated in the course outline. The final examination will be comprehensive. Each examination will make up 22.2% of the final grade. Make-up examinations will not be routinely given. If an examination is missed, the final exam will be counted as 44.4% of the final grade. Similarly, if the grade on the final examination is higher than the grade on any one of the in-semester exams, the final exam score will be substituted for that exam and counted as 44.4% of the final grade. Any student who misses more than 1 exam must present evidence within 1 week following the second missed examination that his or her absence meets university criteria for excused absences. A makeup examination will then be arranged. This exam may differ from the exam administered to the class as a whole.</p> <p>Oral Presentation: For these projects, students will assemble themselves into groups of from 4 to 6 students. Each group will then select an incurable disease of known or unknown etiology (see, but not limited to, list below) and present a 10 minute oral presentation that includes a brief overview of the disease and a detailed approach to treatment and cure for that disease. I do not expect that proposals will be flawless. What I am looking for is creativity and depth of thought. These presentations will be worth 50 points and 11% of your final grade. Grading will be as follows Creativity of your proposed cure = 25 points, Quality of the Presentation = 12.5 points, and thoroughness = 12.5 points. I will be happy to help at any point during your preparation. Remember, prevention is not a cure</p>

Groups will sign up for available times no later than Thursday April 3. Presentation times and subjects will be assigned on a first-come, first-served basis. Oral presentations will be delivered during the last 2 weeks of regularly scheduled class periods. Each project must include a list of references, and these references must be authoritative. If you have any doubts or questions, contact Dr. Callahan.

Oral presentations be graded on the content of the presentation and the character if the presentation. That means, that the content must meet the requirements listed here and the material must be professionally presented – high quality informative A/V materials, extemporaneous and well prepared presentations, no slide reading.

Creativity means not simply looking on the web for what is currently being explored as therapy, but novel ideas about treatment based solidly on current scientific knowledge.

Diseases to choose from for project

(Other diseases may be used but may not include diseases already covered in class)

Cervical Cancer	Pancreatic cancer
Feline leukemia virus	Sickle Cell Disease
Systemic Lupus Erythematosus	Dengue virus
Blue Tongue	Lung Cancer
MERS	SARS
Glaucoma	Hanta Virus
Interstitial Cystitis	Chronic Fatigue Syndrome
Osteoporosis	Fibromyalgia
Malignant Melanoma	OCD
Phenylketonuria	Schizophrenia
Fatal Familial Insomnia	Bipolar Disorder
Unipolar Depression	Polio
Equine Infectious Anemia	Canine Parvovirus
DJD in Horses	AIHA in dogs
Chronic Wasting Disease	CAE in goats
Ebola	Amyotrophic Lateral Sclerosis
Tuberculosis	Polio
Colon Cancer	Marfans syndrome
Epilepsy	Autism
Influenza	Rabies
Brucellosis	Allergies
Glomerular nephritis	Progyria
PKD in cats	Leukemia
Foot-and-mouth Disease	Hip Dysplasia

Possible choices are not limited to this list. You may choose any animal or human disease (except for those already discussed in class) for presentation. If you have any doubts about appropriateness or

availability of resources check with Dr. Callahan

Extra Credit: Each week there will be three questions available in our online textbook (*Human and Animal Pathology*). Each of these questions will be worth one point of extra credit. These points will be added directly to your final point total

Etiquette (Classroom and/or Online): A majority of class time is spent sharing opinions and sharing information. Therefore, it is of utmost importance to communicate with courtesy and professionalism. Professional Courtesy includes respecting others' opinions, being courteous and respectful, and working together in the spirit of cooperation. Sexist, heterosexist, and racist language should not be used when communicating in the course. Discussions and assignments will be graded on quality and professionalism.

Gradebook: Grades will be posted within one week after the scheduled due date.

E-mail Procedure: All e-mail sent to the instructor for this course should be sent to gerald.callahan@colostate.edu and should contain the following in the subject line: Course Name and Number, Your Name, Short Description of your question. Also note that the same rules for etiquette in the classroom (as mentioned above) apply to content in an e-mail. Sending e-mail that violates the rules mentioned above can result in disciplinary action taken by the school.

Academic Policies

Grading Policy

Midterm Examination 1 – 22.2% of final grade

Midterm Examination 2 – 22.2% of final grade

Midterm Examination 3 – 22.2% of final grade

Final Examination – 22.2% of final grade

Oral Presentation – 11.2% of final grade

The final examination will be comprehensive. Because of that, if you score higher on the final exam than on any of your midterm exams, I will drop your lowest score and count your final exam score as 40% of your final grade.

Grading Scale

Grade	Course Credit	Numerical Equivalent	Indicates
A	4.0	88.5-100	Excellent
B	3.0	78.5 - 88.4	Above Average
C	2.0	68.5 - 78.4	Average
D	1.0	58.5 - 68.4	Below Average
F	0.0	0 – 58.4	Failure

Academic Honesty: Learning requires commitment and honesty. To achieve the best possible learning experience, students must complete all of the assignments in the course on their own. If students fail to complete their own work, they are cheating themselves out of their education and are committing plagiarism. Plagiarism or failing to meet the academic honesty policy will result in the following actions.

First Recorded Offense: The student receives zero credit for the entire paper, exam, quiz, homework, lab, etc, in which the incident of academic dishonesty occurred. No partial credit may be given. Where the incident involves a graded assignment normally subject to a drop option, the student may not exercise that option.

Second Recorded Offense: The student receives a failing grade for the class, lab etc, in which the second offense occurs. The second offense need not be in the same class, program, or term as the first offense to invoke this action.

Third Recorded Offense: The student is permanently expelled. The third offense need not be in the same class, program, or term as either the first or second offense to invoke this sanction.

Classroom Technology Policies: This class will use a variety of supporting technologies within the classroom (virtual and face to face). Etiquette and professional courtesy (as defined above) should be displayed when using these technologies as they are an extension of the classroom.

Student Help:

For Technical Questions: Contact Professor Callahan

	For Guidance on personal or educational issues: Contact Professor Callahan
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Important Dates:

Aug. 24		Last day to cancel Fall 2014 Registration with no assessed tuition or fees
Aug. 25	Fall 2014 Classes Begin	
Aug. 29		Restricted Drop Deadline
Aug. 31		Add Without Override Ends
Sep. 1		Add With Override Begins
Sep. 1		University Holiday - No Classes
Sep. 10		Census
Sep. 10		Registration Closes for Most Courses
Sep. 10		Student Option Pass/Fail/Audit Grading Forms Due
Oct. 3		Spring 2015 Class Schedule Available on Web
Oct. 20	Monday	End Course Withdrawal ("W") Period
Oct. 20		Repeat/Delete Requests for Fall 2014 due
Oct. 27		Spring 2015 Registration Access begins for Continuing Students
Nov. 22	Saturday	Fall Recess Begins, No Classes
Nov. 24		Spring 2015 Registration Access begins for New Students
Dec. 12		Classes End
Dec. 12	Friday	University Withdrawal Deadline

		Thur. Sep 25 Thur. Oct 16 Thur. Nov 20	EXAM1 EXAM 2 EXAM 3
	Oct. 30	Thursday	Last Day to submit proposals for disease and cure presentations.
	Dec 20		Final Examination Tuesday, December 16 9:40 to 11:40 a.m. Clark A 206

Class Schedule:

Infectious Disease

Reading: Human and Animal Pathology: Chapter 1

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|-------|---------------|---|
| 1. | Tues. Aug 26 | Overview and introduction to infectious disease |
| 2, 3. | Thurs. Aug 28 | Infectious disease: Bacteria, Viruses, and Prions |
| 3, 4. | Tue. Sep 2 | Infectious disease: fungi and Parasites |

Host Response

Reading: Human and Animal Pathology: Chapter 2 and Chapter 3

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|----|-------------|---|
| 5. | Thur. Sep 4 | Innate Immunity, Inflammation, |
| 6 | Tue. Sep 9 | Adaptive Immunity, Humoral and Cellular |

Immune-Mediated Diseases

Reading: Human and Animal Pathology: Chapter 4

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|----|--------------|--|
| 7. | Thur. Sep 11 | Immunodeficiencies |
| 8. | Tue. Sep 16 | Hypersensitivities, autoimmunity, rheumatoid arthritis |

Neoplastic Diseases

Reading: Human and Animal Pathology: Chapter 5

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|-----|--------------|--|
| 9. | Thur. Sep 18 | Cancer and Metastases |
| 10. | Tue. Sep 23 | Cancer and Metastases, Review for exam 1 |
| | Thur. Sep 25 | EXAM1 |

Circulatory System

Reading: Human and Animal Pathology: Chapter 6

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|---------|-------------|---|
| 11, 12. | Tue. Sep 30 | Hematopoiesis, Coagulation, DIC, Lymphomas, |
| 13, 14 | Thur. Oct 2 | Circulation, Atherosclerosis, and Heart Attacks |
| 15. | Tue. Oct 7 | Congestive Heart Failure, Review of Exam 1 |

Respiratory System

Reading: Human and Animal Pathology: Chapter 7

16, 17 Thur. Oct 9 Respiratory system, Pneumonia, and Tuberculosis,
Chronic Obstructive Pulmonary Diseases, Review

Gastrointestinal System

Reading: Human and Animal Pathology: Chapter 8

18, 19. Tues. Oct 14 Gastrointestinal System and Diseases

Thur. Oct 16 **EXAM 2**

Endocrine System

Reading: Human and Animal Pathology: Chapter 9

20 Tue. Oct 21 Endocrine System,
21 Thur. Oct 23 Pituitary and Thyroid Disorders

Nervous System

Reading: Human and Animal Pathology: Chapter 10

22 Tue. Oct 28 Traumatic Head Injury
23 Thur. Oct 30 Stroke, Alzheimer's and Parkinson's Disease

Proposals for Presentations Due

Musculoskeletal Systems

Reading: Human and Animal Pathology: Chapter 11

24 Tue. Nov 4 Musculoskeletal System, Soft Tissues Injuries and
Fractures, Metabolic Diseases:

25, 26 Thur. Nov 6 Osteoporosis Rheumatic Diseases

Skin

Reading: Human and Animal Pathology: Chapter 12

27 Tue. Nov 11 Structure of the Skin, Acne , and Eczema

Genetic and Developmental Diseases

Reading: Human and Animal Pathology: Chapter 13

28	Thur. Nov 13	Genetics and genetic diseases
29	Tue . Nov 18	Genetics and genetic diseases, Review
28, 29	Thur. Nov 20	EXAM 3

Student Presentations

Tue. Dec 2

Thur. Dec 4

Tue. Dec 9

Thur. Dec 11

Final Examination Tuesday, December 16, 9:40 to 11:40 a.m.
Clark A 206