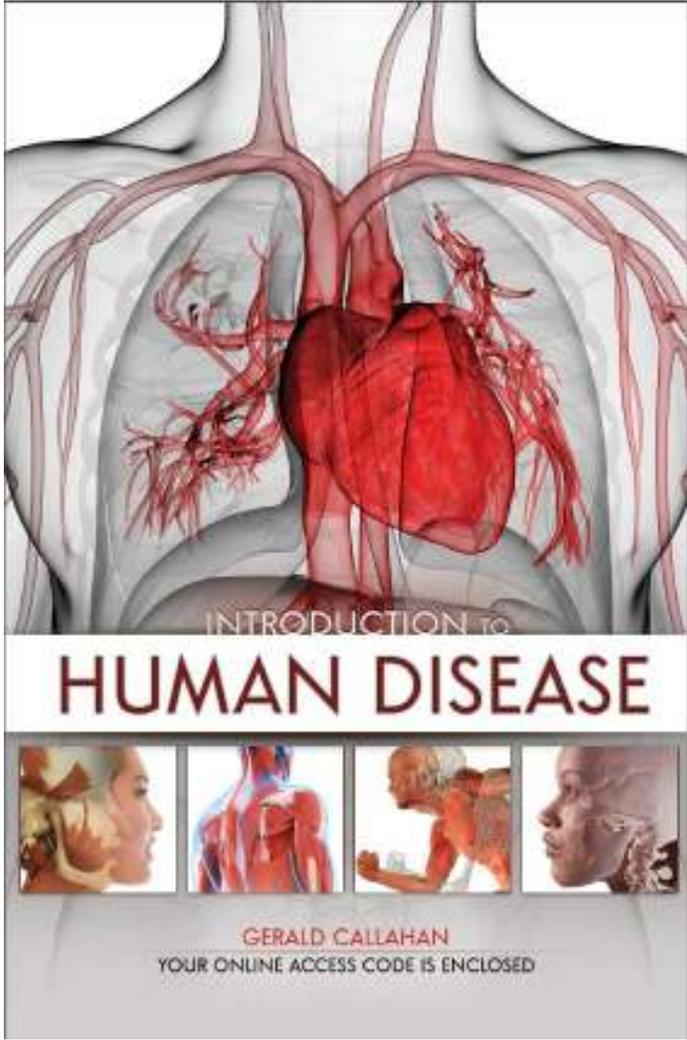


# Course Syllabus Outline: MIP 101 Introduction to Human Disease (GT-SC2)

<b>Instructor Information:</b>	<p>Instructor Name: Gerald Callahan, Ph.D.</p> <p>Office Location: Room 310 Pathology Phone: (970) 491-7086 E-mail: gerald.callahan@colostate.edu Office Hours: Tuesdays 2:00 to 4:00</p>
<b>Required Text:</b>	<p><b>Introduction to Human Disease</b> On Line via Great River Technologies</p> 
<b>Course Description:</b>	<p>This is an introductory consideration of disease offered through the Department of Microbiology, Immunology, and Pathology in the College of Veterinary Medicine and Biomedical Sciences. Emphasis is on general principles with specific, currently relevant examples. My objective is to present a focused (but representative)</p>

	consideration of the causes and mechanics of human illness and death (etiology, pathology, sociology). To this end, we will consider each of the major systems of the human body and the general character of diseases of these systems. In addition, we will consider in detail one or more relevant disease(s) in detail including etiology, pathogenesis, epidemiology, sociology, and therapy.
Course Objectives or Course Learning Outcomes:	Specifically, after completing this course, students should be able to: <ul style="list-style-type: none"> <li>describe the character of modern pathology and its link to societies in the developed and underdeveloped nations</li> <li>draw upon basic knowledge of biology and chemistry to describe the nature and impacts of human disease</li> <li>describe the role of scientific method in biomedical science</li> <li>list the characteristics of the transmissible agents of disease and describe the basic mechanisms of pathogenesis in prion-, virus-, bacteria-, fungus-, and parasite-mediated diseases.</li> <li>describe the basic functions of inflammation and the pathogenesis of immune deficiencies and allergies.</li> <li>explain the process of malignant transformation, invasion and metastases as well as the pathogenesis of cancer.</li> <li>explain the basic functions of most of the systems of humans and describe the pathogenesis of at least one disease that affects each of these systems.</li> <li>describe the processes that underlie the development of genetic and hereditary diseases</li> <li>explain the relevance of the study of pathology to the understanding of human development and wellbeing.</li> </ul>
Course Prerequisite	<ul style="list-style-type: none"> <li>None</li> </ul>
Credit Hours	3
Class Breakdown	Lecture Hours: 3 <u>Lab Hours: 0</u> Total Hours: 3
Teaching Strategies	Teaching strategies for this course will be lecture, class discussions, demonstrations, student presentations, Website (RamCT, videos, and lecture recordings (Echo 360).
Course Policies and Procedures:	<p><b>Attendance:</b> While regular attendance is strongly encouraged, attendance will not be a factor in determining final grades</p> <p><b>Academic Honesty:</b> 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><b>Special Needs Students:</b> Students who find that standard accommodations for exams are not appropriate for their needs are encouraged to contact the (the</p>

poorly named) Resources for Disabled Student's office to arrange for support services.

**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 25% of the final grade. Make-up examinations will not be routinely given. If an examination is missed, the final exam will be counted as 50% 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 50% 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.

**Extra Credit (Optional)**

Each week there will be three questions available in our online textbook (Introduction to Human disease – Great River Technology). Each of these questions will be worth one point of extra credit. These points will be added directly to your final point total

Also there will be two written assignments. The first assignment, worth 20 points (added to your final point total) is to read the essay titled "New Yorker Article, on RamCT and provide to me (by e-mail) 7 to 10 pages including a brief review of the essay and your thoughts about how much the U.S. government should be involved in health care policy. **This assignment is due by Wednesday March 12 at 2:00 p.m.** The second assignment is to read the essay titled "The opposite of Sex" on RamCT and provide and provide to me (by e-mail) 7 to 10 pages including a brief review of the essay and your thoughts about how we have been taught to think about biological sex compared to the reality of biological sex. **This assignment is due by Wednesday May 7 at 2:00 p.m.**

**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](mailto: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.

**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 writing assignments.

**Grading Policy**

Midterm Examination 1 – 25% of final grade

Midterm Examination 2 – 25% of final grade

Midterm Examination 3 – 25% of final grade

Final Examination – 25% 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.

due by the final class period before spring break

**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	3.0	58.5 - 68.4	Below Average
F	2.7	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

	<p>actions.</p> <p><b>First Recorded Offense:</b> 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.</p> <p><b>Second Recorded Offense:</b> 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.</p> <p><b>Third Recorded Offense:</b> 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.</p> <p><b>Classroom Technology Policies:</b> 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</p>
<p>Student Help:</p>	<p><b>For Technical Questions:</b> Contact Professor Callahan</p> <p><b>For Guidance on personal or educational issues:</b> Contact Professor Callahan</p>

# Class Schedule

## Important Dates

Jan. 21		Spring 2014 Classes Begin	
	Jan. 24		Restricted Drop Deadline 11:59 p.m.
	Jan. 26		Add Without Override Ends 11:59 p.m.
	Jan. 27		Add With Override Begins
	Feb. 5		Census
	Feb. 5		Last Day for a COF Stipend to be Applied
	Feb. 5		Registration Closes for Most Classes
	Feb. 5		Student Option Pass/Fail/Audit Grading Form Due
Mar. 15	Saturday	<u>Spring Break begins</u>	
	Mar. 24		<u>Classes Resume</u>
	Mar. 24		<u>Course Withdrawal Period Ends</u>
	Mar. 24		<u>Repeat/Delete Requests Due</u>

**Final Examination: Thursday, May 15 4:10 to 6:10 p.m.**

## **Concepts of disease**

Reading: Text Chapter 1

- 1 Wed, Jan 22: That makes me sick: Course overview, illness and death in the U.S. and the world
2. Mon, Jan 27: Where diseases come from: Pathogenesis – historical and modern perspectives

## **Infectious disease**

Reading: Text Chapters 2 - 4

- 3, 4. Wed, Jan 29: The baddest bugs of them all: bacteria biowarfare: anthrax, plague, – history, politics, art, literature.
- 5,6. Mon, Feb 3: Holes in our heads: viral and prion diseases: Herpes Simplex; CJD, Infectious madness: fungal and parasitic diseases – Candida and malaria

## **Human defense systems and their failures – immune-mediated diseases**

Reading: Text Chapters 5 and 6

7. Wed, Feb 5: The Good News: Innate and acquired defenses
- 8, 9. Mon, Feb 10: When sex is death: Immune deficiencies – HIV When the enemy is us: Autoimmune diseases – rheumatoid arthritis.

## **Cancer**

Reading: Text Chapter 7

10. Wed, Feb 12: When good cells go bad: Cancer and malignant transformation
11. Mon, Feb 17: The traffic of cancer: Metastatic disease: breast cancer, women, and society. Review
- Wed, Feb 19: **EXAM 1**
- 12 Mon, Feb 24: The nervous system; ischemic diseases – stroke Sanity, aging, and dementia: Degenerative diseases of the nervous system – Alzheimer's

## **Diseases of the nervous system**

Reading: Text Chapter 8

- 13 Wed, Feb 26: The nervous system; ischemic diseases – stroke Sanity, aging, and dementia: Degenerative diseases of the nervous system – Alzheimer's

## **Disease of the gastrointestinal system**

Reading: Text Chapters 9

- 14, 15 Mon, Mar 3: The G.I System: peptic ulcers, diseases of the accessory organs, and alcoholic cirrhosis
- 16. Wed, Mar 5: The last of the red-hot livers: Infectious diseases – hepatitis. Review of Exam 1
- Mon, Mar 10: Final issues and review
- Wed, Mar 12: **Second Midterm Examination**

Week 9 – Spring Break Mar 15 - 23

## **Metabolic Disease (Genetic Disease)**

Reading: Text Chapter 10

- 17. Mon, Mar 24 It's all in your jeans: Genetics.
- 18. Wed, Mar 26 The good, the bad, and the truly rotten – Lesch/Nyhan disease, sickle cell anemia; biogeography and disease

## **Cardiovascular Disease**

Reading: Text Chapter 11

- 19, 20. Mon, Mar 31 Heartache and the circulatory system concepts of metabolism and oxygen/carbon dioxide exchange Heart failure Plus
- 21. Wed, Apr 2 Atherosclerosis

## **Pulmonary Diseases**

Reading: Text Chapter 12

- 22. Mon, Apr 7 I can't breath: chronic obstructive pulmonary disease – emphysema
- 23. Wed, Apr 9 It only hurts when I cough: pneumonia, The warmth of human kindness

## **Endocrine Disorders**

Reading: Text Chapter 13

**24,25** Mon, Apr 14: Endocrine glands and their function Diabetes mellitus – Types I and II Final issues and review

**26** Wed, Apr 16 Too much or too little: Hyper- and hypothyroidism

Mon, Apr 21: Review

Wed, Apr 23: **EXAM 3**

### **Diseases of the skin, bones, and muscles**

Reading: Text Chapter 14

**27, 28.** Mon. Apr 28 Skin and acne Soft tissue injuries: Sprains, strains, and ruptures

**29, 30.** Wed, April 30 Metabolic diseases of the bones, osteoporosis and osteoarthritis

### **Disease of the genito-urinary system, the Reproductive system and sexually transmitted diseases**

Reading: Text Chapter 15 and 16

**31-33.** Mon. May 5 Kidneys, bladders, and urinary tract infections, beyond AIDS: Sexually transmitted diseases

**33, 34.** Wed, May 7: Disorders of Sex Development and review

### Finals Week

**Final Examination:** Thursday, May 15, 4:10 to 6:10 p.m.