

**Course Syllabus**  
BIO 336: Essentials of Pathophysiology  
Department of Natural Sciences, Oregon Institute of Technology  
Dr. Molly O'Shaughnessy

“Don't practice (study) until you get it right. Practice (study) until you can't get it wrong” - author unknown

Welcome to BIO 336! I'm looking forward to having an exciting and productive quarter with you!

**Credit Hours:** 3 credit hours

**Instructor:** Dr. Molly O'Shaughnessy  
The best way to contact me is through the 'Class Messages' tab on the left-hand side of the page.  
alternate email: [molly.oshaughnessy@oit.edu](mailto:molly.oshaughnessy@oit.edu)

**Course Description:**

A study of the dynamic aspects of the disease process with emphasis on abnormal physiology. Systems interactions are discussed regularly throughout the course.

**Pre-requisites:**

BIO 200 Medical Terminology  
BIO 233 Human Anatomy & Physiology III  
Both with a grade of “C” or better.

**Course Objectives:** Upon completion of this course, the student should be able to...

1. Understand the concept of disease as an alteration of homeostasis and the general adaptative response
2. Describe the types of cellular adaptation, injury, and necrosis at the microscopic level
3. Discuss the general topic of neoplasia, including cell transformation; the role of oncogenes; the difference between benign and malignant tumors *in vivo* and *in vitro*; gradations of malignancy; grading systems of tumors; clinical experiences common to many types of cancer patients, including paraneoplastic syndromes
4. Understand fundamental concepts of normal immunology, including the structure and function of the immunoglobulins; concepts of antigenic drift; compare and contrast first and second exposures

5. Identify the hydrostatic and oncotic balances which drive hemodynamics; to understand the mechanisms of the six types of edema formation; explain the pathogenesis of the inflammatory response, and the physiology of wound healing
6. Understand the alterations of normal physiology that lead to various non-specific signs and symptoms of illness associated with disorders of the cardiovascular, respiratory, and skeletal systems
7. Characterize, describe, and understand some of the most common diseases and disorders of the respiratory, cardiovascular, and skeletal systems; be able to group disorders as sub-categories of basic etiological types
8. Understand the basis behind diagnostic strategies to distinguish between similar disorders
9. Appreciate the possible outcomes and common complications for the natural course of various diseases and disorders, including systems interactions, as well as how different characteristics of the patient will influence the outcome of a disease process
10. Understand the rationale behind treatment options and how these interventions impact and change the pathophysiological mechanisms that are occurring to bring the body back into homeostasis

### **Keys to Success**

- If it has been some time since you have studied Human Anatomy & Physiology, you may want to read and brush up on the appropriate section before listening to the lectures on that topic. Your textbook contains a chapter with a nice review of normal before the chapters containing the pathophysiology, or use your old anatomy & physiology textbook.
- Ask questions! If you have a question about the material, chances are that someone else in the class has the same question. Feel free to contact me through the class messages, or use the discussion board to ask other students.
- When you prepare for an exam, remember that you want to really MASTER the material, not just understand it. Reading through your notes a couple of times is a good start, but too many people stop there. You also need to read ACROSS your notes, that is, connect the material at the beginning with the material in the middle and at the end. Compare and contrast a group of diseases side by side, have a feeling of which problems or factors are more important or less important, and be able to put the steps of a process in their correct chronological order. Always strive to understand the logic of WHY something happens, don't just memorize it.

**Recommended Materials:**

Huether and McCance, *Understanding Pathophysiology*, fifth edition, Elsevier

An anatomy and physiology college textbook of your choice.

**Optional Materials:**

Parkinson, *Study Guide and Workbook for Understanding Pathophysiology*, fifth edition, Elsevier

There are many anatomy, physiology, and pathophysiology study aids available at the book store and online. Think about your personal learning style and buy accordingly.

**Exams:**

Exams are expected to be taken at their scheduled times!! You have a fairly large window of availability for each exam, so this shouldn't be a problem. Scheduling during the first part of the availability period will give you some "wiggle room" in case something unexpected comes up.

12.5 penalty points or more will be deducted from your score if you have an unacceptable excuse for missing an exam deadline.

All exams must be proctored – please see additional information under the 'Proctor Info.' tab on the left-hand side of the page.

Abbreviations are not acceptable on exams; please write out all acronyms.

**Academic Integrity:**

"While cooperation and discussion among students is good for learning, I do expect each student to do their own written work on all exams, quizzes and lab assignments, and not to cheat or plagiarize from each other or from outside sources. Plagiarism is defined as copying from a written source without putting the material in quotes and citing the source. Academic dishonesty will be punished by a grade of zero on the assignment in question. Please act with integrity."\*

\*Ken Usher, 2003

**My availability:**

I read the class messages in the course at least once a day, and once per weekend. Please note that this is more often than I check my OIT email, so contacting me through the course is preferable.

**Disability:**

If you have, or believe you have, a physical, learning, sensory or psychological disability and require accommodations, please contact Disability Services at 541-851-5179.

**Grading:**

450 points total for course:

1 <sup>st</sup> lecture exam	125 points
2 <sup>nd</sup> lecture exam	125 points
3 <sup>rd</sup> lecture exam	125 points
Final accumulative	75 points
Total	450 points

**95% policy:** I want to encourage you to do the very best that you possibly can, not “What is the least I have to do to get an A?” To put my money where my mouth is, if you have a 95% average or better on the first two exams, I will excuse you from taking the accumulative final (you will still need to take exam #3). I hope that you will rise to this challenge!

**Your final grade will be based on the following scale:**

405-450 points or 90% = A
360-404 points or 80% = B
315-359 points or 70% = C
270-314 points or 60% = D
< 270 points or 60% = F

**Note:** Even though I am not part of the Radiology or Respiratory Care faculty, this is considered as a core class in those programs. Therefore, receiving a D or F in this class will put you out of sequence for those majors.

I consult regularly with the radiology and respiratory faculty. If you notice any discrepancy between what I am teaching you, and what they have taught you, please bring it to my attention immediately.

Thank you!