

# COURSE SYLLABUS

## PATHOPHYSIOLOGY

BIOLOGY228

TAKOMA PARK/SILVER SPRING CAMPUS OF MONTGOMERY COLLEGE

Biology Department

Professor

### General Course Information and Specific Outcomes

**Course Description:** Presents the underlying concepts and biological basis for common pathological disorders of all body systems.

**Course Objectives:** This course examines the mechanisms of the initiation and progression of disease. While many diseases and disorders share a multitude of characteristics and types, there are of course those that are unique in their own ways. We will study some of the common characteristics and manifestations of all or most disease, but also look at a representative group of disorders that are unique to themselves. We will examine not only symptoms and treatments, but also onset, and progression patterns as well. **This course requires a written research paper (about 5-7 pages).**

**Course Outcomes:** Upon completion of the course, the student will be able to:

Demonstrate group work skills.

Describe common characteristics of all disease.

Describe the process of disease onset and progression

Describe specific disease states and associated symptoms

Apply previous knowledge in physiology to specific pathologies in order to better understand patterns of progression in each of the following sub-disciplines:

Genetics, Tissue Biology, Immunity, Cancer, Neurology, Endocrine System, Hematology, Cardiovascular, Pulmonary, Renal and Urinary, Reproductive, Digestive, Musculoskeletal, Integument.

### BIOL 228 topics

1. Genes and Genetic Disease
2. Altered Cellular and Tissue Biology
3. Fluids and Electrolytes, Acids and Bases
4. Innate Defenses: Inflammation
5. Adaptive Immunity
6. Hypersensitivities, Infection, and Immune Deficiencies
7. Biology of Cancer and Tumor Spread
8. Alterations of Neurologic Function
9. Alterations of hormonal Regulation
10. Alterations of hematologic Function

11. Alterations of Cardiovascular Function
12. Alterations of Pulmonary Function
13. Alterations of Renal and Urinary Tract Function
14. Alterations of Reproductive Systems
15. Alterations of Digestive Function

Alterations of Musculoskeletal Function

**REQUIRED BOOKS**

**Course access to EVOLVE Understanding Pathophysiology, 5th edition.**

**Optional Book:** *Understanding Pathophysiology*, by Huether, S<sup>11</sup> ed.: Elsevier

Note: Do not let the level of detail in the book concern you. You are expected to develop a strong basic working knowledge of pathophysiology, but not to memorize each detail from the book.

**Attendance:** This is a fully online class and therefore there will be no on-campus participation. All work will be done online, including discussions and exams. Since you will not be in a traditional classroom, this does not mean that you will be able to relax. There is a lot of work to be done, and there will be a lot of interaction among students and teacher.

**Classwork/Homework:** ALL WORK WILL BE DONE ON IBE COURSE SITE OF BLACKBOARD. IT IS CALLED "EVOLVE". PRIOR TO DOING ANYTHING, YOU WILL NEED TO FOLLOW INSTRUCTIONS LISTED ON THE "START HERE" TAB ON BLACKBOARD. WHEN CLICKING "START HERE", YOU WILL SEE ANOTHER TAB WITH INSTRUCTIONS ON HOW TO ACCESS THE COURSE SITE. ALL GRADES THROUGHOUT THE COURSE WILL ALSO BE AVAILABLE ON THE COURSE SITE. FINAL GRADES WILL BE POSTED ON YOUR MYM ACCOUNT.

ADDITIONALLY, YOU SHOULD ACCESS YOUR BLACKBOARD ACCOUNT FOR ANNOUNCEMENTS. I WILL POST ANNOUNCEMENTS PERIODICALLY, EITHER ON THE ANNOUNCEMENTS TAB OR VIA COURSE MAIL. PLEASE CHECK REGULARLY.

**Auditing Class:** The instructor of the class section will provide students auditing the course specific course responsibilities.

**Support Services:** The Science Learning Center, located in SN1 01, and the Student Technology Center, located at 8561 Fenton Street, suite 210 in Silver Spring, have reinforcement materials to support this course including videos and computer programs. All computer activities assigned in class can also be found in these Centers. The phone number for the Math-Science Learning Center is 301-650-1427 and for the Student Technology Center is 301-650-1657.

**Student Disability:** Any student who may need an accommodation due to a disability, please make an appointment to see me during my office hour. A letter from Disability Support Services (R-CB122; G-SA175; or TP-ST1 20) authorizing your accommodations will be needed. Any student who may need assistance in the event of an emergency evacuation must identify to the Disability Support Services Office; guidelines for emergency evacuations for individuals with disabilities are found at [www.montgomerycollege.edu/dss/evacprocedures.htm](http://www.montgomerycollege.edu/dss/evacprocedures.htm)

**Class Behavior:** Each and every student is expected to behave in ways that promote a teaching and learning atmosphere here. Students have the right to learn; however, they do not have the right to interfere with the freedom of the faculty to teach or the rights of other students to learn. Students will be treated respectfully and be expected to exhibit respectful behavior. All discussions

should be carried out in a way that keeps the learning environment respectful of the rights of others. Students are also expected to conduct themselves in ways that create a safe learning and teaching environment that is free from such things as violence, intimidation, and harassment, including sexual harassment. Please make sure that you obtain and read a copy of the current Montgomery College Student Handbook, which contains the Student Code of Conduct, described above. Students are expected to abide by the Code of Conduct.

***Communication:***

You may contact me either at the Blackboard course site email or on my college email account (alex.micich@montgomerycollege.edu). Over the course of the semester, I will regularly send general emails to the class or post items under announcements. Please check regularly for these communications. Likewise, I will be checking regularly for communications from you.

***References:***

Please take a look at the following links which outline college guidelines.

**Montgomery College Policies and Procedures**

<http://www.montgomerycollege.edu/verified/pnp>

**IT Acceptable Use Policy**

<http://www.montgomerycollege.edu/verified/pnp/6600I.doc>

**Student Resource and Code of Conduct**

<http://cms.montgomerycollege.edu/edu/secondary5.aspx?urlid=55>

**Family Education and Rights Privacy Act**

<http://www.montgomerycollege.edu/verified/pnp/41003.doc>

***Academic Honesty:*** According to the policies and Procedures of the college, "cheating" or "plagiarism" in connection with an academic program is prohibited and the student may be disciplined. In the rare instance that a student in this course cheats or plagiarizes material, that student will receive a grade of F and dismissal from the course.

***Exam Coverage, Format and Scheduling:***

There will be a series of exams and one research paper assigned. Please see course schedule for dates. In addition to this, students will be responsible for answering assigned questions given throughout the semester that are pertinent to the subject matter. These assignments will help you prepare for exams, and written answers may even be incorporated into your term papers if you so choose. Exam questions could be in any form.

***Exam Make-ups:*** You are expected to take each exam at the scheduled time. You will be provided with a window of opportunity to complete the exams on the EVOLVE site. When you miss an exam due to a serious and unavoidable circumstance, you may, at Professor Micich's discretion, be permitted to take another exam. However, I do not foresee that this will be a problem as you can access your course from anywhere there is a reliable internet connection. If missing an

exam is unavoidable, make-up exams will be **available later in the semester**. The make-up exam will be of equivalent point value to the missed exam. If you provide Professor Micich with sufficient advance notice that you will unavoidably miss an exam, arrangements can possibly be made to give you the same exam that your classmates took. If you have not made prior arrangements, you must contact Professor Micich immediately upon your return following the missed exam to discuss the possibility of a make-up exam. You will NOT be permitted to make-up more than one exam.

**Research Papers:** A research paper will be required of students. There will be a great flexibility for students to choose a topic of interest. Papers should be academic in nature, using appropriate sources (more information on this will be forthcoming). Please understand that plagiarism will not be tolerated, and will result in severe penalties. Please refer to the Montgomery College policy on plagiarism. The college libraries have plenty of resources to aid in these matters.

**Discussion:** In an online learning environment, we cannot have spontaneous face to face discussions as we would in a traditional classroom. However, the system does allow us to use a discussion board in which we can post comments, questions, or anything else that might interest us. I encourage you to participate in this, as it is a forum in which our understanding of a particular topic could be broadened through interaction with classmates. Here we will be able to share personal experiences that are pertinent to the topic at hand, or just to ask and answer questions that might come up. This is also the place to discuss topics that are beyond the scope of the course, as progress in the understanding of various problems and concerns occur every day. Please share news articles, latest research, etc. Anything you feel may contribute to the overall learning of the class. I understand that not everyone is comfortable in the sphere, but please make every effort to join in.

**Homework:** Homework will be in the form of discussion board questions. As stated previously, these assignments will contribute to your mastery of the subject material and help to prepare you for exams and the writing of research papers.

**Course Grade:** Your course letter grade will be computed based on the following:

Approximately:

70%--Exams  
20%--Research paper  
10%-- Discussion

Based on the progression of the course, these percentages may change, though not by much.

A = 90% to 100% of all possible points  
B = 80% to 89% of all possible points  
C = 70% to 79% of all possible points  
D = 60% to 69% of all possible points  
F = 59% or less of all possible points

## TOPICS AND SCHEDULES

We will follow the course modules outlined under the COURSE tab upon entering the EVOLVE course site. These modules roughly correspond to the chapters in the book. Using the course site, you will see many exercises and tutorials to help you learn.

Schedule of exam availability will be posted as an announcement on BLACKBOARD, and on the EVOLVE calendar tab.

Likewise, you will participate in discussion board, and you can find them on the EVOLVE site.

Finally, a research paper will be due at the end of the semester. Again, there will be more information on the Blackboard site.

Please keep in mind that it is not advisable to fall behind. Try to keep up with your studies the best you can. I believe the discussions and tutorials will keep you engaged enough to keep you moving forward.

Finally, at certain points throughout the semester, I will communicate with you regarding details for research projects and exams.

### STUDENT SERVICES:

**Computer Access:** Information on all campus locations where students can use computers can be found at

<http://cms.montgomerycollege.edu/learningcenters/computersTPSS/>

**General Support Services:** A summary of campus services offered to students to support your success can be found at <http://cms.montgomerycollege.edu/learningcenters/servicesTPSS/>.

**Instructional Support Services:** The Science Learning Center, located in Science North Room 101 (240-567-1594), has reinforcement materials to support this course including all assigned course software, videos, and some anatomical models. All assigned course software is also available at the Student Technology Center located in Student Services Center Room 304 (240-567-1657) and the Medical Learning Center located in Health Sciences Center Room 221 (240-567-5591). Information on Learning Centers at all campuses of the College can be found at <http://cms.montgomerycollege.edu/learningcenters/>.

**Student Disability:** A student needing special accommodations due to a disability should let the instructor know as soon as possible. A letter from Disability Support Services (Germantown-SAI75, Rockville-CB122, or Takoma Park/Silver Spring-ST120) authorizing your accommodations is required. Any students who may need assistance in the event of an emergency evacuation should identify themselves to the Disability Support Services Office.

**Veteran's Services:** If you are a veteran or on active or reserve status and you are interested in information regarding opportunities, programs, and/or services, please visit the Combat2College Website at <http://www.montgomerycollege.edu/combat2college> and/or contact Joanna Starling at 240-567-7103 or [Joanna.starling@montgomerycollege.edu](mailto:Joanna.starling@montgomerycollege.edu).

### MC Syllabus - Important information: <http://cms.montgomerycollege.edu/Incs111labtls/>

In addition to course requirements and objectives that are in this syllabus, Montgomery College has information on its web site (see link above) to assist you in having a successful experience both inside and outside of the classroom. It is important that you read and understand this information. The link below provides information and other resources to areas that pertain to the following: student behavior (student code of conduct), student e-mail, the tobacco free policy, withdraw and refund dates, disability support services, veteran services, how to access information on delayed openings and closings, how to register for the Montgomery College alert System, and finally, how closings and delays can impact your classes. If you have any questions please bring them to your professor. As rules and regulations change they will be updated and you will be

able to access them through the link. If any student would like a written copy of these policies and procedures, the professor would be happy to provide them. By registering for this class and staying in this class, you are indicating that you acknowledge and accept these policies.

## WHAT IS PLAGIARISM?

Plagiarism is a serious ethical violation that occurs when you copy exact words from your references without paraphrasing or re-writing the idea in your own words. Allied health professionals and research scientists affect patients' lives, requiring that honesty and reliability are paramount. All students are expected to achieve their academic goals honestly. Montgomery College and your instructor are committed to imposing appropriate sanctions for breaches of academic honesty. Plagiarism is not tolerated and your submissions will be checked for plagiarism. Copying and pasting from an internet source on any assignment without citing the source is plagiarism, and will result in a score of 0 for that assignment.

All written materials submitted in this class MUST be written in your own words. This is called paraphrasing. Lack of paraphrasing is plagiarism. What is paraphrasing and how do you do it? Paraphrasing is using information from a source but re-writing it into your own words. As a hypothetical example, let's suppose you read the following sentence in your reference and you want to use this information in your own writing: *Caesarean sections are chosen over vaginal delivery twice as frequently by multiparous women who delivered by c-section in their first birth (Smith, 2003)*. An example of acceptable paraphrasing means that you re-write this information using your own words, such as *Women who give birth via caesarean section are twice as likely to choose a c-section than vaginal delivery for subsequent births (Smith, 2003)*.

You MAY NOT copy and paste text from Internet sources, *even* if you properly quote the material and identify the source. If you properly paraphrase your sources, you will not need to use quotation marks. Quotation marks and bulleted lists are not acceptable. End notes or footnotes, which you may have learned to use in your English class, are not acceptable in your submissions. Your submissions must include citations located WITHIN THE TEXT. What is a citation? This means that if you use an idea from another source, you must "cite" that source's name and year of its publication in parentheses following the sentence. Therefore, a citation is when you give credit to your source for the idea(s) in your sentence or paragraph.

Reminder: You MAY NOT copy and paste text from Internet sources, even if you properly quote the material and identify the source. All information included in any assignment must be paraphrased. You are responsible for understanding what paraphrasing is. If you are unclear, further information on paraphrasing can be found at Montgomery College's website: <http://www.montgomerycollege.edu/library/paraphrasing.htm>.

Plagiarism is not tolerated and your assignments will be checked for plagiarism. "Students who engage in any act adjudged by the instructor to constitute academic dishonesty or misconduct are subject to any and all sanctions deemed appropriate by the instructor. Grade sanctions may range from an "F" on the assignment in which the dishonesty occurred to the maximum sanction of an "F" in the course. The instructor also has the prerogative of referring a case to the campus

Dean of Student Development with the specific request that the Dean consider imposing additional sanctions."

To better understand these topics, the Montgomery College libraries have developed an online tutorial on avoiding plagiarism available at: <http://www.montgomerycollege.edu/library/plagiarismintro.htm>.