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### Physiological Processes

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*CUNY City College*

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## **Physiological Processes Biology 32100**

Fall 2021

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### ***About Biology 32100***

Physiological Processes is designed to introduce fundamental concepts of physiology to biomedical engineering learners. Areas covered include: neural, muscular, cardiovascular, respiratory and renal system function; bioelectrical signals, capillary-level transport, organ-level exchange. Whenever possible, analysis will be quantitative in order to fulfill the course goals and to build the foundation for the subsequent biomedical engineering curriculum. This course is for Biomedical Engineering majors only.

### ***Key Information Information***

**Course Title:** Physiological Processes, Bio 32100; (3 credits) **Pre-requisites:** Bio 10100 & Math 20100

**Text:** We will use Open Education Resources to provide background for topics for zero textbook cost. s

Human Physiology: An Integrated Approach , 8th Edition, by Dee Unglaub Silverthorn. Access to Pearson's Mastering A&P is optional.

**BlackBoard** is the central communication site, resource repository and quiz and testing site. To help you prepare there will be course resources available online via BlackBoard, so it is important that you use it extensively, beginning the first week of the term.

**Mastering A&P** is available on opt in basis.

***Course Learning Outcomes*** by successfully completing this course you will be able to:

- apply fundamental concepts about transport processes to explain specific functions and responses of the nervous, muscular, cardiovascular, respiratory and renal systems.
- apply fundamental concepts about regulation to explain specific functions and responses of the nervous, muscular, cardiovascular, respiratory and renal systems.
- explain the interconnected functioning of the nervous, muscular, cardiovascular, respiratory and renal systems.
- mechanistically describe and predict the responses of the nervous, muscular, cardiovascular, respiratory and renal systems under a range of conditions.
- solve novel problems related to organismic function.

***Assessment*** The evaluation will be of the following kinds with up to 200%:

1. Quizzes/Tests (50-80%) via blackboard based on textbook and at your own pace. Via Blackboard from textbook. 2 attempts.
    - Quizzes (11) = 20%
    - Exams (3) = 30%
      - i. Independent
      - ii. Cooperative/Independent - Design your exam, support your rationale.
  2. Learning Journal (10-50%) via Google Docs providing one page overviewing the essential material for the topics of each module (14).
  3. Design Project (0-50%) - TBD.
- Grading Scale: A>90, B>80, C>70
4. Mastering A&P time (10-20%) opt in basis

### ***Academic Integrity and Plagiarism***

**The academic world, like the scientific and medical communities, has no tolerance for presenting the words of others as your own. This could be simply**

**lifting sections from texts; copying work off the internet, copying answers from previous years' classes or copying your fellow classmate's work. We maintain the following standard: It is plagiarism if you copy more than a phrase or a sentence without having it in quotation marks with the original source indicated, or if you paraphrase a paragraph or more without indicating what the source is. Please do not plagiarize work, for we will be forced to report you to the College disciplinary authorities which could lead to your failing the course and/or other disciplinary consequences.**

### **CUNY Academic Integrity Policy**

The CUNY Policy on plagiarism says the following about plagiarism (it can be found at: [http://www.cuny.cuny.edu/about/upload/academic\\_integrity.pdf](http://www.cuny.cuny.edu/about/upload/academic_integrity.pdf).

Additional information on what constitutes plagiarism can be found at:

<http://www.plagiarism.org>

The procedures in cases of suspected breaches of academic integrity are delineated in the CUNY document referenced above. Where necessary we will follow these procedures without exception, working with the CCNY Academic Integrity Office.

### ***Disability Statement***

In compliance with CCNY policy and equal access laws, appropriate academic accommodations are offered for learners with disabilities. Learners must register with The AccessAbility Center for reasonable academic accommodations. The AccessAbility Center is located in the North Academic Center (NAC), Rm. 1-218. Tel: (212) 650-5913. Under The Americans with Disability Act, an individual with a disability is a person who has a physical or mental impairment that substantially limits one or more major life activities. If you have any such issues, I encourage you to visit the AccessAbility Center to determine which services may be appropriate for you. **If extra time or a special location are needed for examination, a request should be made by email or letter at least five days in advance of the exam.**

### ***Courtesy Policy***

Maintain professional manners.

***Version notice:*** this syllabus is as accurate and up-to-date as possible. However, because it is posted on Blackboard and can be easily modified, it very likely will be during the term. The posted version is the version that is in effect.