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| **Philadelphia University** | PHILADELPHIA UNIVERSITY THE WAY TO THE FUTURE | **Approved Date: 10/2022** |
| **Faculty:** | | **Issue:1** |
| **Department:** | | **Credit Hours:2** |
| **Academic Year:2022\2023** | **Course Syllabus** | **Bachler:** |

## Course Information

| Course No. | Course Title | Prerequisite |
|---|---|---|
| 0521215 | Anatomy and physiology 2 | Anatomy and physiology 1 (05201122) |

| Course Type | Class Time | Room No. |
|---|---|---|
| ☐ Univirsity Requirement ☐ Fuclty Requirement<br>☐ Major Requirement ☐ Elective ■ Compulsory | | |

## Instructure Information

| Name | Office No. | Phone No. | Office Hours | E-mail |
|---|---|---|---|---|
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## Course Delivery Method

| ☐ Blended | ☐ Online | ■ Physical |
|---|---|---|
| **Learning Model** | | |
| **Percentage** | **Synchronous** | **Asynchronous** | **Physical** |
| | | 100% |

## Course Description

The course is designed to provide the students with extended knowledge about histological appearance of various types of tissues and information build on the previous biology course and enable the student to understand future courses as physiology and pathology. These includes the cells and cell altra-structure, tissues types, the skeleton system, skin, lymphatic system, Central nervous system, cardiovascular system, Respiratory system, Gastro-intestinal system, endocrine system, Reproductive system, and eye and ear.

## Course Learning Outcomes

| | | Program Outcomes | Competencies |
|---|---|---|---|
| **Knowledge** | | | |
| **K1** | Develop vocabulary and Information about the functional principles of anatomy and physiology ; and apply knowledge for mechanisms of action of the body systems | KP1 | C1 |
| **K2** | Building further functional anatomical and histological relationship which have been studied previously by students to Make better understanding for anatomy and physiology 2 | KP1 | C1 |
| **Skills** | | | |
| **S1** | The ability to analyze the normal anatomical structures and physiological mechanisms to educate all audiences by determining the most effective and enduring ways to impart information | SP3 | C9 |

## Learning Resources

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| **Course Textbook** | **1. Principles of Anatomy and Physiology, 16th Edition by Gerard J. Tortora, Bryan H. Derrickson, Publisher: Wiley, (2020), ISBN: 978-1-119-66268-6** |
| **Supporting References** | 1.Human Anatomy 6TH edition By Michael McKinley and Valerie O'Loughlin and Ronald Harris and Elizabeth Pennefather-O'Brien Publisher : McGraw Hill; (2020) ISBN-10 : 1260251357.ISBN-13 : 978-1260251357<br>2. Memmler's structure and function of the human body, 12th edition By Cohen, B. J., & Hull, K. L. Jones & Bartlett Learning, publisher : Jones & Bartlett Learning(2019); ISBN-10 : 1975138929;ISBN-13 : 978-1975138929<br>3.Ross and Wilson Anatomy and Physiology in Health and Illness, 10e 10th Edition by Anne Waugh BSc(Hons) MSc CertEd SRN RNT FHEA (Author), Allison Grant BSc PhD RGN (Author), ISBN-13: 978-0443101014 ;ISBN-10: 0443101019<br>4. Clinical Anatomy for Students Problem Solving Approach with DVD - ROM Hardcover – Illustrated, 2008 by Kulkarni (Author)<br>5. Introduction to Human physiology:Laura Sherwood; 9th edition;2016; ISBN-13:978-0134399416 |
| **Supporting Websites** | www.scinecedirect.com, www.youtube.com |
| **Teaching Environment** | ■ **Classroom** ☐ **Laboratory** ☐ **Learning Platform** ☐ **Other** |

## Meetings and Subjects Time Table

| Week | Topic | Learning Method* | Task | Learning Material |
|---|---|---|---|---|
| 1 | **The vision and mission of Pharmacy Faculty**<br>**Course syllabus**<br>Introduction to physiology 2 course | Lecture | | Vision and Mission of faculty of pharmacy |

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| | | | | Course syllabus<br><br>Text Book |
| **2** | **Anatomy of cardiovascular system** | Lecture | | Text Book |
| **3**<br><br>**4** | **Physiology of cardiovascular system**<br>Physiology of CVS: Heart, Blood vessels, pulmonary circuit, Main functions of the cvs, Cardiac conducting system,<br>Physiology of CVS: Electrocardiogram, Electrical activity of the heart pacemaker, potential Anode, cardiac output, stroke volume, control of cardiac output of action potential of cardiac cell, Blood flow and velocity, Heart sounds, control of heart rate, Blood pressure its control. | Lecture | Quiz | Text Book |
| **5** | **Anatomy of respiratory system** | Lecture | | Text Book |
| **6**<br><br>**7** | **Physiology of respiratory system**:<br>External respiration , internal respiration, Mechanism of breathing, conducting airways, Respiratory zone, Alveoli, Surfactant.<br>Boyles low, Pulmonary function tests, Gas exchange in the lungs , Regulation of respiration.<br>Physiology of blood gases : chemical control of breathing, hypercapnia, Respiratory acidosis, Hypocapnia, Haemoglobin and O2 transport, types of haemaglobin,oxygen binding ability of haemoglobin,Co2 transport in blood. | Lecture<br><br>Collaborative learning | Video assisssgment | Text Book |
| **8** | **Anatomy of CNS** | Lecture | Quiz | Text Book |
| **9**<br><br>**10** | **Physiology of CNS**<br>Organization of the CNS and its role in homeostasis, cranial nerves,<br>Meninges,Ventricular system of brain and CSF, Forebrain, cerebrum, cerebral, cortex, Basal nuclei. | Lecture | | Text Book |
| **11** | **Physiology of CNS:**<br>Diencephalon, Thalamus, Hypothalamus, Epithalamus, Brainstem, Medulla oblongata, pons, Midbroin.<br>Cerebral cortex, Motor area, Sensory area, Motor and sensory association areas Gross structure of the Urinary system<br>Basal ganglia cerebellum, language (speech areas), Reticular Formation, Spinal cord and its tracts. | Lecture<br><br>Collaborative learning | | Text Book |
| **12** | **Anatomy of special senses** | Lecture | Home work | Text Book |
| **13** | **Physiology of special senses:**<br>the eye and vision Refraction, Accommodation visual acuity, Myopia, hypermetropia, Astigmatism<br>Retina: Effect of light on rods, Electrical activity of the retinal, cells conscolour vision. | Lecture | | Text Book |

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| | The ear and hearing Outer ear, muddle ear, cochlea, spiral organ ”organ of corti” neural pathways of hearing Hearing impairment vestibular apparatus equilibrium. Sensory hair cells of the vestibular apparatus. Utricle and saccule, semi circular canals utricle (neural pathway) nystagmus vvertigo physiology of taste and smell. | | | |
| **14** | **Anatomy Of endocrine system** | Lecture | | Text Book |
| **15** | **Physiology Of endocrine system**<br><br>Classification of hormones, Polarity of the hormones, Hormones, Mechanisms of hormone actions.<br><br>posterior pituitary, Hypothalamic control of posterior pituitary oxytocin and ADH, Anterior pituitary hormones, Hypothalamic- pituitary Gonad axis.<br><br>Adrenal cortex hormones, Adrenal medulla hormones , stress, and adrenal glands , Thyroid gland hormones , Parathyroid hormones , islet of langerhan , insulin, Glucagon, Pineal gland, sex hormones. | Lecture | | Text Book |
| **16** | **Final Exam** | | | |

*Includes: lecture, flipped Class, project based learning, problem solving based learning, collaboration learning.

*Includes: lecture, flipped Class, project based learning, problem solving based learning, collaboration learning.

## Course Contributing to Learner Skill Development

| **Using Technology** |
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| -Use powerpoint or any other relevant programs for prepairing presentations<br>-Use varity of Electronic databases in searching for published data. |
| **Communication Skills** |
| -Report writing<br>-Oral presentation of selected topics |
| **Application of Concept Learnt** |
| - Students will apply most of the acquired knowledge from the theoretical lectures in the physiology<br>- The theoretical information also allows them to be able to perform a research & experimental work |

## Assessment Methods and Grade Distribution

| Assessment Methods | Grade | Assessment Time (Week No.) | Course Outcomes to be Assessed |
|---|---|---|---|
| Mid Term Exam | 30% | 11 | K1,K2 |
| Term Works* | 30% | Continous | S1 |
| Final Exam | 40% | 16 | K1,K2 |
| Total | 100% | | |

* Include: quizzes, in-class and out of class assignment, presentations, reports, videotaped assignment, group or individual project.

## Alignment of Course Outcomes with Learning and Assessment Methods

| Number | Learning Outcomes | Corresponding competencies | Learning Method* | Assessment Method** |
|---|---|---|---|---|
| **Knowledge** | | | | |
| K1 | Develop vocabulary and Information about the functional principles of anatomy and physiology ; and apply knowledge for mechanisms of action of the body systems | C1 | Lecture | Subjective Quiz<br><br>Exam/subjective Questions |
| K2 | Building further functional anatomical and histological relationship which have been studied previously by students to Make better understanding for anatomy and physiology 2 | C1 | Lecture | Subjective Quiz<br><br>Exam/subjective Questions |
| **Skills** | | | | |
| S1 | The ability to analyze the normal anatomical structures and physiological mechanisms to educate all audiences by determining the most effective and enduring ways to impart information | C9 | Problem-solving based learning | Subjective Quiz<br><br>Exam/subjective Questions |

*Include: lecture, flipped class, project based learning, problem solving based learning, collaboration learning.
** Include: quizzes, in-class and out of class assignments, presentations, reports, videotaped assignments, group or individual projects.

## Course Polices

| Policy | Policy Requirements |
|---|---|
| Passing Grade | The minimum pass for the course is (50%) and the minimum final mark is (35%). |
| Missing Exams | • Anyone absent from a declared semester exam without a sick or compulsive excuse accepted by the dean of the college that proposes the course, a zero mark shall be placed on that exam and calculated in his final mark.<br>• Anyone absent from a declared semester exam with a sick or compulsive excuse accepted by the dean of the college that proposes the course must submit proof of his excuse within a week from the date of the excuse's disappearance, and in this case, the subject teacher must hold a compensation exam for the student. |

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| | • Anyone absent from a final exam with a sick excuse or a compulsive excuse accepted by the dean of the college that proposes the material must submit proof of his excuse within three days from the date of holding that exam. |
| **Attendance** | The student is not allowed to be absent more than (15%) of the total hours prescribed for the course, which equates to six lecture days (n t) and seven lectures (days). If the student misses more than (15%) of the total hours prescribed for the course without a satisfactory or compulsive excuse accepted by the dean of the faculty, he is prohibited from taking the final exam and his result in that subject is considered (zero), but if the absence is due to illness or a compulsive excuse accepted by the dean of the college that The article is introduced, it is considered withdrawn from that article, and the provisions of withdrawal shall apply to it. |
| **Academic Integrity** | Philadelphia University pays special attention to the issue of academic integrity, and the penalties stipulated in the university's instructions are applied to those who are proven to have committed an act that violates academic integrity, such as cheating, plagiarism (academic theft), collusion, intellectual property rights. |

## Program Learning Outcomes to be Assessed in this Course

| Number | Learning Outcome | Course Title | Assessment Method | Targeted Performance level |
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## Description of Program learning Outcomes Assessment Method

| Number | Detailed Description of Assessment |
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## Assessment Rubric of the Program Learning Outcomes

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