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Human Diseases Related to Different Body Systems [Biology]

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SCB203 Laboratory Assignment: "Human Diseases Related to Different Body Systems"

This assignment, aligned to LaGuardia Community College's Global Learning Core Competency and Digital Communication Ability, was designed for the laboratory part of Human Anatomy and Physiology I (SCB203) course. The assignment, "Human Diseases Related to Different Body Systems," aims to promote students' learning and preparation towards their future major in STEM and in the Allied Health Programs. SCB203, taught by faculty in the Natural Sciences department, is a program-core course for Liberal Arts-Mathematics and Science majors and a key Pre-Clinical course (prerequisite) for future enrollment of students into several Allied Health majors such as Nursing, Occupational Therapy, Physical Therapy, Radiologic Technology, Dietetics, Veterinary Technology, Therapeutic Recreation and EMT/Paramedic Program. It is crucial then that these programs' goals and the Human Anatomy and Physiology courses (such as SCB203) align well with and promote the scale up of assignments in the curriculum. The dimensions of the Global Learning Core Competency and Digital Communication Ability rubrics reflected in Human Diseases and Healthcare also run across many courses in the Health Sciences programs; for instance, in the SCO101 course in the Occupational Therapy program and in HTR101 Therapeutic Recreation to help build student learning and professional identities. This assignment in SCB203 can offer the first experience to students to practice on these needed skills and will contribute to students' future academic performance in the Health Sciences-related programs.

The assignment entails research by student groups on the etiology, symptoms, treatment/preventive options and global distribution of human diseases related to different body systems, as well as the socio-economic, environmental or genetic factors leading to such distributions. PowerPoint presentations in class (using different digital modalities such as text, images, tables, graphs, citations or hyperlinks), collaborative communication on each other's work via ePortfolio, and submission of simple concept sheets provide an opportunity for students to earn extra credit while revising major concepts pertinent to the final exam. This low-stakes exercise is worth 1% of the total course grade and students have 2 weeks to complete it.

The assignment was initially developed as part of the Provost Learning Space project on "Evidence of Student learning in SCB203" in 2016-17 and has been implemented in all the SCB203 laboratory sections taught by Dr. Gupta since Spring 2017. It was revised in LaGuardia Community College's Center for Teaching and Learning-supported Assignment Charrette Workshops led by Drs. Christopher Schmidt and Karen Miller. It was further revised to include a "Reflection section" after participating in the CTL-led ePortfolio Fall 2018 Mini-seminar on Creating Assignments that Catalyze Creativity and the ePortfolio Spring 2019 Mini-seminar on First Year Seminar to Core: Launching Next Generation ePortfolio Practice. To facilitate the implementation of the assignment in class, an assignment ePortfolio was created, which students use to post their group work and communicate constructively with each other. Links to this assignment ePortfolio and student work samples can be provided upon request.

ASSIGNMENT PRESENTED TO THE STUDENTS

SCB203 Laboratory Assignment on "Human Diseases related to different Body Systems"

**Core Competency: Global Learning
Communication Ability: Digital**

I. Learning Objectives

- By doing this assignment, you will be able to review with your class all the key topics for your Final Exam related to Blood, Heart, Blood vessels and Respiratory system.
- Further hone your skills related to global learning and digital communication for your chosen health-science related major.
- Demonstrate collaborative communication and work like scholars and scientists.

II. Guidelines for the assignment

Choose one of the following topics as a group to:

- 1) Make an oral presentation in class using PowerPoint slides. Each person in the group speaks for 2-4 minutes on a specific sub-topic (part) of the presentation and relays to the next person (each person makes at least 1-2 slides).
- 2) All members of the group submit to the instructor a simple Concept sheet/diagrammatic representation (hard copy) on concepts of the topic taught in class, individually post a brief Reflection on their own core-ePortfolio with their work (slides and audio), and individually post a constructive comment on some other group's presentation.

Topic list:

1. Heart anatomy, coronary circulation and its link to myocardial infarction, and high rate of cardiovascular diseases in certain parts of the world.
2. Blood group typing and how some blood groups or diseases related to blood are more prevalent in certain regions of the world?
3. Respiratory anatomy and high prevalence of certain respiratory diseases in different parts of the world.

Due by: Week 12 of the semester. You will be provided 2 weeks to complete the assignment.

Grading: 1% of your total course grade (extra-credit). Total number of points possible – 10 points (4 points for oral presentation, 2 points for the diagram/concepts sheet handed over to the instructor in class, 2 points for commenting on some other group's presentation on ePortfolio, 2 points for posting a small reflection on your core-ePortfolio with your group's presentation)

III. Instructions on how to address the Core Competency and Communication Ability in the presentation

- **Global Learning component:** After briefly covering the anatomy and physiology concepts on the topic, present on the etiology, treatment/preventive options and global distribution of human diseases related to this topic. Include some ethical aspect in your presentation on these global issues i.e. the effects of environment, sanitation, socioeconomic factors and/or genetics on the prevalence of these diseases/blood groups in different parts of the world.
- **Digital component:** This assignment will also assess your ability to communicate effectively using digital media. Digital Communication is the effective use of a range of digital modalities to create a unified message. These modalities could include (but are not limited to) inclusion of relevant images and text in your slides (not just on the title page), citation in APA format or hyperlinks to the scholarly articles/sources of information, images or videos supporting your presentation, or similar other examples of digital content such as tables and graphs. A guide for citations using APA format can be found here: <https://library.laguardia.edu/research/apa>

IV. Oral Presentation Evaluation Rubric

<u>Criteria</u>	<u>Poor</u>	<u>Moderate</u>	<u>Good</u>	<u>Excellent</u>
Eye contact and enthusiasm	0.25	0.60	0.75	1.0
Concepts covered	0.25	0.60	0.75	1.0
Slide preparation quality	0.25	0.60	0.75	1.0
Volume and Clarity	0.25	0.60	0.75	1.0

V. Prompts for posting your reflection

- How do you think the overall assignment (presentations/concept sheet handout) help you towards the course goals, in terms of understanding the concepts and preparing for exam?
- Do you think the group-assignment was helpful? You could discuss things like burden-share, knowledge-exchange during in-class presentations, etc.
- How was the experience of researching the topics of global-relevance? Do you think you have some new knowledge now of the world and some of its issues?
- Do you think the oral presentation helped boost your confidence and will help you as you pursue the field of health-science? Explain.