Science or Computer Science Courses – Associate of General Studies and Associate of Science Outcomes

Department/Discipline: Health Professions Course: Human Body Systems II (H0152)

1. Science Discipline Studies Outcomes

As a result of taking Science Discipline Studies courses, a student should be able to:	Course Outcome(s) related to the Science Outcome	Under what conditions and criteria will the course outcome be assessed? (i.e., a menu of suggested assessment options)
1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions.	Students taking H0 152 will have a comprehensive knowledge base of the form and function of the remaining body systems in this two part course. The systems include the respiratory, digestive, urinary and reproductive	Class discussions, CD ROMs, films, study groups and exams.
2. Apply scientific and technical modes of inquiry, individually and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner.	An emphasis on critical thinking is integrated throughout text and during lecture. Course lectures also look at the history of medicine and how empirically driven data have shaped that history. Diseases which affect discussed body systems are analyzed as well as treatment plans.	Class discussions, end of chapter critical thinking exercises and exams.
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.	Course lectures delve into history of microbiology and the different treatment (many not effective, others harmful) modalities traditionally used to combat pathogenic diseases. Other areas explored include global warming and how it is affected by the positive feedback loop.	Course lecture, powerpoint slides, microbiology packet.

2. Science Discipline Studies Course Criteria

A General Education course in Science should:	How course meets criterion	Related Course Outline statements

A General Education course in Science should:	**How course meets criterion**	**Related Course Outline statements**
1. Analyze the development, scope, and limitations of fundamental scientific concepts, models, theories, and methods.	Western based critical thinking is introduced in course. Analyzing history of medicine details how scientific concepts evolve and are eventually replaced with empirically tested and peer reviewed analysis.	Students will have a basic understanding of microbiology and diseases and knowledge of how antibiotics treat diseases and the problem of resistant strains of disease-causing pathogens.
2. Engage students in problem-solving and investigation, through the application of scientific and mathematical methods and concepts, and by using evidence to create and test models and draw conclusions. The goal should be to develop analytical thinking that includes evaluation, synthesis, and creative insight.	Lectures detail how body systems work and also how they fail. Analytical thinking is encouraged on why systems fail and what measures might be taken to prevent their failure. An example would be various diets to combat diseases such as CAD and diabetes mellitus II. Also discussed are various diets to lose weight and how these diets affect certain body systems.	Students will have a basic understanding of nutrition and recommended daily requirements of calories and nutrients. Students will have a basic understanding of the relationship between a poor diet and various health related diseases.
3. Examine relationships with other subject areas, including the ethical application of science in human society, and the relevance of science to everyday life.	Lectures detail how basic chemistry and physics apply to the dynamic interplay of the body systems and how chemistry and physics help maintain homeostasis.	The student will have a basic understanding of an element, atom and subatomic particles of the atom. The student will also understand ionic and covalent bonding and how these processes affect the human body.
In addition, a General Education course in Science should:	**How course meets criterion**	**Related Course Outline statements**
• Engage students in collaborative, hands-on and/or real-life activities that develop scientific reasoning and the capacity to apply mathematics, and that allow students to experience the exhilaration of discovery.	Films, "melt away" layers of dissection via CD ROM, access to microscopes and A & P models of the human body help develop the students' curiosity of the subject matter and help foster a Western based model of critical thinking and reasoning while studying the human body.	Students will correctly describe anatomy and physiology, homeostasis, the negative-feedback system and explain why they are important.

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Instructor	**Date**	**Academic Dean**	**Date**