

Syllabus: Health and Disease in Today's Society

Course number: BIO 371

Number of credits: 3

Course instructor: Josef Kren, e-mail: josef.kren@doane.edu

Description:

BIO (371) Health and Disease in Today's Society brings together insight from various scientific disciplines on current topics commonly discussed by healthcare professionals, clinicians, scientists, lawmakers, nutritionists, biologists and lay people alike. This course will assure that students gain a greater understanding of interconnections of various scientific disciplines in today's world. Students will address questions about foundations of health and disease and new discoveries in biomedical field in order to understand multiple perspectives they face in daily life. Students will work to:

1. Understand the philosophy of health and disease we are facing in changing society.
2. Interpret experiences from the perspectives of biomedical impact on health and disease of every individual.
3. Outline the impact of health and disease on individuals and human society as a whole.

Health and Disease in Today's Society will seek to accomplish all of these outcomes, with the greatest emphasis on Learning Outcome # 1.

The instructor will present the 'scientific background' for each of the covered topics and will expect all students, the community of active learners, to get involved in discussing the topics. The instructor expects and greatly values critical thinking and discussion. Various movies dealing with current issues in health and disease will be shown and discussed.

The information provided in this course is intended for students' general knowledge only and is not a substitute for professional medical advice or treatment for specific medical conditions.

Textbook: No textbook. All lectures (PPT) and additional readings (scientific articles) will be provided at the beginning of the term.

Course description:

A course in biomedical sciences utilizing the scientific method in the study of human health and disease. This course serves to foster the integration of basic science material with clinical science

issues and is designed to explore the relationships between lifestyle and health and disease in today's changing society. The problems set for further supplemental reading and investigation will provide students with opportunities to interact with content of various fields across the biomedical science disciplines.

Learning outcomes, learning outcomes specific to this course:

1. Provide students with a strong foundation for addressing issues related to health and disease in terms of the broad underlying themes in the biomedical sciences.
2. Second, to encourage students to consider the biomedical basis of health and disease as it relates to:

Health maintenance and disease prevention.

Etiology, pathophysiology, diagnosis and treatment of specific clinical entities.

Medical/scientific horizons, i.e., what the future likely holds concerning specific clinical entities in today's society.

Topics for lecture, discussion, video and readings:

1. What is health? Homeostasis and health. Lifestyle and disease.
2. Chronic diseases on the rise. Is chronic inflammation the deadliest disease? Epidemics then and now.
3. Nutrition – basic component of good health. Is salt and sugar in our diet the deadly combination? Endocrine disruptors - a great medical challenge.
4. Forgotten alternatives to modern medicine? Are spices of any good?
5. Can we lower the cost of health care? Selling sickness. Too much medicine? Medicalization.

Student Projects:

Your presentations will include your own research of various biomedical topics on health and disease. We will discuss how the research will be accomplished during the first class. Your research papers will be presented at the end of the term.

Areas for research and presentations:

1. Aspects of health and disease in changing society.
2. Biology and etiology of common human diseases. Possible non-traditional approaches to cure.
3. Proper nutrition and fast food.
4. The burden of health care cost.
5. Is chronic disease a major medical challenge?
6. What to do to stay healthy (maintain homeostasis)?

ASSESSMENT**Attendance and participation:**

Each class will include lecture, class discussion, question-answer interaction, hands on experience and watching movies. Each movie will be followed by a student generated and led discussion. Because of the importance of student interaction, no class can be successfully replicated. You are strongly encouraged to attend each class. **Your active class participation will account for your grade.**

Class presentation:

You will give one 5-minute presentations to the class that reflects your own research of a selected topic. **Your class presentations will account for your grade.**

Research paper:

You are given a choice concerning your research papers as follows:

1. You will write two 4-5 page papers on two different topics.
2. You will write a single, 8 -10 page, in-depth paper on one topic.

Grading scale:

100 – 95 = A

94 – 90 = A-

89 – 87 = B+

86 – 84 = B

83 – 80 = B-

79 – 77 = C+

76 – 74 = C

73 – 70 = C-

69 – 67 = D+

66 – 64 = D

63 – 60 = D-

59 & below = F

Doane College Academic Integrity Policy:

The Doane College Academic Integrity Policy will be adhered to in this class. All projects and tests will represent your own work. Any use of others' ideas and words without proper citation of sources is plagiarism and will result in penalties to be determined by the instructor and/or the dean of undergraduate studies.

Attendance:

Students are expected to attend every lecture/field trip during the course. Each class meeting is highly interactive and the learning is impossible to recreate in a make-up assignment. But we understand that, sometimes, life interrupts our plans. In the case of an illness, work requirement, or family emergency, you must contact the teacher or a designated college official to explain your absence. You will be required to complete an additional assignment due the week following the missed class. In the event that you are forced to miss two or more class meetings, special arrangements must be made with the teacher to determine if the requirements for the course can be met.

