DEREE COLLEGE SYLLABUS FOR: BI 3215 ENVIRONMENTAL HEALTH	3/0/3
(Updated: Fall 2024)	UK LEVEL: 5 UK CREDITS: 15
PREREQUISITES:	BI 1000 Introduction to Biology I **or** BI 1017 Human Biology: body anatomy and current issues BI 1101 Introduction to Biology II **or** BI 1007 Environmental Ecology
CATALOG DESCRIPTION:	This course examines health issues, the scientific understanding of their causes and possible future approaches to control major environmental health problems in industrialized and developing countries
RATIONALE:	This course explores the relationship of people to their environment. The course is designed to acquaint the student with the scientific and technical foundations of the field, and examines both the practice of environmental health and the problems which are addressed by the practitioners in this career discipline. Emphasis is on providing a general understanding of how environmental factors are involved in the transmission of communicable diseases and on some of the health hazards resulting from exposure to chemical and physical materials in our environment. The course is addressed to Environmental Studies majors and to students who wish to learn about the impact of the environment on human health.
LEARNING OUTCOMES:	*As a result of taking this course, the student should be able to:* 1. Discuss the major sources, types of environmental agents and the transport and fate of these agents in the environment. 2. Identify the carriers or vectors that promote the transfer of these agents from the environment to the human. 3. Explain the mechanisms by which the environmental agents exert adverse effects over human and the prediction of the magnitude of adverse effects in biological systems. 4. Define the regulatory process and the steps in the risk-assessment and risk-management processes. 5. Evaluate an environmental health topic of current interest and demonstrate ability to communicate findings effectively in several forms (e.g. written, graphical and verbal).
METHOD OF TEACHING AND LEARNING:	In congruence with the learning and teaching strategy of the college, the following tools are used: • Class lectures, interactive learning (class discussions, group work) video presentations, and practical problems solved in class. • Exercises and primary source documents are assigned as homework, the solutions of which are reviewed in class • Updating through use of Scientific Journals of the field, such as Journal of Environmental Health, American Journal of Public Health, Environment, EPA Journal, Scientific American, etc.

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Office hours: students are encouraged to make full use of the office hours of their instructor, where they can ask questions, see their exam paper, and/or go over lecture/lab material.
Use of a blackboard site, where instructors post lecture notes, assignment instructions, timely announcements, as well as additional resources.

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<tr><td>ASSESSMENT:</td><td>
Summative:
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<tr><td>1st assessment: Student project: Written Essay (2000 – 2500 Words) – 20%; Oral Presentation – 20%</td><td>40%</td></tr>
<tr><td>2nd assessment: Final Examination (2-hour, comprehensive), Essay questions</td><td>50%</td></tr>
<tr><td>Third assessment: Portfolio: Questions aiming to prepare students for their first and second assessments in terms of content, context and time management</td><td>10%</td></tr>
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Formative:
<table>
<tr><td>Questions (as homework assignments)</td><td>0</td></tr>
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The formative tests aim to prepare students for the examinations. Students are expected to submit feedback on their performance.

The second and third assessment test Learning Outcomes 1-4.
The first assessment tests Learning Outcome 5.
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<tr><td>INDICATIVE READING:</td><td>
REQUIRED READING:
Nadakavukaren, A and Caravanos J 2020. Our Global Environment: A Health Perspective, 8thEd., Waveland Press, Prospect Heights, Illinois.

RECOMMENDED READING:
Friis, R.H. 2012. Essentials of Environmental Health, Jones & Bartlett Learning

Other sources, including journal and newspapers' articles, research papers etc. recommended by the instructor throughout the semester.
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<tr><td>INDICATIVE MATERIAL:
(e.g. audiovisual, digital material, etc.)</td><td>
REQUIRED MATERIAL:
N/A

RECOMMENDED MATERIAL:
N/A
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<tr><td>COMMUNICATION REQUIREMENTS:</td><td>Verbal skills using academic/professional English</td></tr>
<tr><td>SOFTWARE REQUIREMENTS:</td><td>MS Office and Blackboard CMS
Enter any additional s/w requirements.</td></tr>
<tr><td>WWW RESOURCES:</td><td>

http://ghr.nlm.nih.gov/: Genetics Home Reference
https://www.dnalc.org/: DNA Learning Center

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	• http://medtropolis.com/virtual-body/: Home of the virtual body • http://www.niehs.nih.gov/: National Institute of Environmental Health Sciences • http://ntp.niehs.nih.gov/: US National Toxicology Program • http://www.fda.gov/: US Food and Drug Administration • http://www3.epa.gov/: US Environmental Protection Agency • https://www.osha.gov/: Occupational Safety and Health Administration • http://www.eea.europa.eu/: European Environment Agency • https://osha.europa.eu/: European Agency for Safety and Health at Work • http://ehp.niehs.nih.gov/: Environmental Health Perspectives Journal • http://www.ehjournal.net/: Environmental Health Journal • http://www.neha.org/publications/journal-environmental-health: Journal of Environmental Health • http://www.tandfonline.com/toc/cije20/current#.VjIspCx2cSU: International Journal of Environmental Health Research • http://www.cieh.org/jehr/: Journal of Environmental Health Research • http://www.scientificamerican.com/: Scientific American web site
INDICATIVE CONTENT:	CONTENT OUTLINE: 1. Introduction to Ecological Principles 2. Population Dynamics 3. Population Control 4. The People-Food Predicament 5. Impacts of Growth on Ecosystems 6. Environmental Disease 7. Toxic Substances 8. Pests and Pesticides 9. Food Quality 10. Radiation 11. The Atmosphere 12. Clean Energy Alternatives 13. Air Pollution 14. Noise Pollution 15. Water Resources 16. Water Pollution 17. Solid and Hazardous Wastes