DEREE COLLEGE SYLLABUS FOR:

BI 1016 LE HUMAN BIOLOGY: GENETIC AND EVOLUTIONARY ASPECTS OF LIFE

US CREDITS: 3/0/3

PREREQUISITES:	None
CATALOG DESCRIPTION:	An issues-based course designed for non-science majors that takes a fresh approach to the field of biology. Emphasis is put on human genetics, inheritance and human development, molecular biology, evolution, and ecology.
RATIONALE:	An issues based 3cr course without labs suitable for non-science majors the approach of which helps students experience the relationships between the various fields of biology, the interdisciplinary nature of today's biology, and the intimate connection between biology and social issues. The aim is to make students aware that biology is both interesting and relevant to their lives. Facts are taught in a context that emphasizes how these facts are produced, organized, and used to solve problems.
LEARNING OUTCOMES:	As a result of taking this course, the student should be able to: 1. Demonstrate knowledge of the scientific method, core biology concepts and principles. 2. Develop basic knowledge on the cell division process, cancer and cancer therapy, human genetics and inheritance, especially focusing on the relationship between genetics and human health. 3. Explain how genes and chromosomes control human traits, including inherited diseases. Describe the new ways of dealing with hereditary risks and other medical conditions. 4. Evaluate the new reproductive technologies, human development and what is genetic engineering. Analyse how the Human Genome Project and the new Proteome Project will greatly advance our knowledge. 5. Explain the various aspects of the modern theory of evolution and the theories on the origin of life. 6. Evaluate the effects of population explosion, human impacts, biodiversity, and environmental issues.
METHOD OF TEACHING AND LEARNING:	In congruence with the teaching and learning 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 ➢ CD-ROMS (The Dynamic Human, Explorations in Human Biology. Virtual Biology Laboratory, Explorations in Cell Biology & Genetics). ➢ 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. ➢ Use of blackboard, where instructors post lecture notes, assignment instructions, timely announcements, as well as additional resources.
ASSESSMENT:	**Summative:** In-class midterm examination (2-hour) Multiple choice/short answers/matching /essay questions combination/problem solving — **40%** In-class final examination (2-hour) Multiple choice/short answers/matching /essay questions combination/problem solving — **60%** **Formative:** Multiple "diagnostic on-line" tests Multiple choice/short answers/ — **0** essay questions — 0 The **formative MC (on-line) and written essays** aim to prepare students for the examination. Students are expected to submit feedback on their performance. The midterm examination tests Learning Outcomes 1-3 The final examination tests Learning Outcomes 4-6 The final grade for this module will be determined by averaging all summative assessment grades,

	based on the predetermined weights for each assessment. Students are not required to resit failed assessments in this module. Failure to pass the module results in module repeat.
INDICATIVE READING:	**REQUIRED READING:** **Textbook:** Michael D. Johnson, Human Biology: Concepts and Current Issues. Pearson, latest edition. ISBN 08053550969 **RECOMMENDED READING:**
INDICATIVE MATERIAL: *(e.g. audiovisual, digital material, etc.)*	**REQUIRED MATERIAL:N/A** **RECOMMENDED MATERIAL:**
COMMUNICATION REQUIREMENTS:	
SOFTWARE REQUIREMENTS:	Microsoft Word, Microsoft PowerPoint, Blackboard CMS
WWW RESOURCES:	http://highered.mheducation.com/sites/0072347325/information_center_view0/index.html http://www.mhhe.com/biosci/genbio/mader http://www.mhhe.com/maderinquiry14 http://www.dnalc.org http://www.medtropolis.com/VBody.asp http://www.whitman.edu/biology/vpd/ http://www.cellsalive.com/ http://multimedia.mcb.harvard.edu/media.html http://www.mcb.harvard.edu/BioLinks.html http://www.mhhe.com/biosci/esp/2002_general/Esp/default.htm http://nhscience.lonestar.edu/biol/bio1int.htm http://biology.uco.edu/AnimalBiology/Tissues/Tissuhome.html http://www.sciam.com
INDICATIVE CONTENT	1. Human Biology, Science, and Society 2. The Chemistry of Living Things 3. Cell Reproduction and Differentiation 4. Cancer: Uncontrolled Cell Division and Differentiation 5. Genetics and Inheritance 6. DNA Technology and Genetic Engineering 7. Development and Aging 8. Evolution and the Origins of Life 9. Ecosystems and Populations 10. Human Impacts, Biodiversity, and Environmental Issues