DEREE COLLEGE SYLLABUS FOR: BMS 3425 HUMAN NUTRITION 3/0/3	
(Updated: Fall 2023)	**UK LEVEL: 5** **UK CREDITS: 15**
PREREQUISITES:	BI 1000 Introduction to Biology I BI 1101 Introduction to Biology II CH 1002 Principles of Chemistry CH 2115 General Chemistry
CATALOG DESCRIPTION:	An integrated overview of the physiological requirements and functions of major nutrients for humans, the connection between nutrition and disease, the role of nutrients in growth and health through the life cycle and in physical activity, dietary requirements, as well as issues of food safety, food security and contemporary challenges of nutrition and the food system.
RATIONALE:	The course is designed for life sciences majors and students interested in learning more about nutrition and human health. It provides an understanding of the basics of human nutrition and the relationships between nutrition, health, and disease. Our world faces major contemporary challenges in relation to food availability, production and consumption. Poverty and overpopulation in the less-developed countries lead to malnutrition, hunger and deficiency diseases; on the other side, affluence and changing lifestyles in the more developed countries, characterized by a variety of food choices, result in over nutrition, obesity, cardiovascular disease and cancers, as well as large quantities of food waste. Physical exercise is known to be important for maintaining good health and each stage in the life cycle of an individual has different requirements for nutrients. This Human Nutrition course provides essential knowledge and skills that help students better understand the role of nutrition in health promotion and disease prevention, better evaluate its role in different life stages and conditions and make more informed personal health choices. This knowledge is essential for students aiming at careers in the biomedical and health professions. Such students will be expected to integrate what they will learn about nutrition with their knowledge of chemistry and physiology.
LEARNING OUTCOMES:	As a result of taking this course, the student should be able to: 1. Demonstrate knowledge and understanding of the major macro and micronutrients relevant to human health: their structure, properties, dietary sources, intake levels, physiological role, use and requirements by the human body. 2. Explain the role of key nutrients in the prevention of disease, based on current evidence, and discuss major nutrition-related diseases, as well as issues of food safety and food security in a global context. 3. Discuss the role of nutrition in growth and health through the life cycle, as well as its role in physical activity and explain the rationale for defining nutritional requirements with reference to specific conditions such as pregnancy, lactation, older age and physical activity.

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<tr><td></td><td>4. Critically discuss current advances and challenges in food safety, food technology and global food production, and propose sustainable solutions for human health and the environment.
5. Analyze and critically evaluate data and information from scientific research articles on human nutrition, plan and produce a project report and communicate it in writing and orally.</td></tr>
<tr><td>METHOD OF TEACHING AND LEARNING:</td><td>In congruence with the teaching and learning strategy of the college, the following tools are used:
• Lectures and class discussions.
• Homework assignments.
• Office hours held by the instructor to provide further assistance to students.
• Use of library facilities for further study and preparation for the exams
• Use of the Blackboard course management platform to further support communication, by posting lecture notes, assignment instruction, timely announcements, formative quizzes and online submission of assignments.</td></tr>
<tr><td>ASSESSMENT:</td><td>Summative:
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<tr><td>First Assessment:
It includes the following components:
a) Systematic Review on a specific nutrition topic, leading to a written report (1,500 words): 15%
b) Oral Presentation of the Systematic Review (20%)
c) Critical Reflection on a scientific article or report, leading to a written report (1,500 words): (15%)</td><td>50%</td></tr>
<tr><td>Second Assessment:
Final examination (2 hours)
(essay questions)</td><td>50%</td></tr>
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Formative:
<table>
<tr><td>Essay questions/problems (in-class or as homework assignments)</td><td>0</td></tr>
<tr><td>In-class or online quizzes</td><td>0</td></tr>
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The Formative Assessments [essay questions as homework assignments] aim to prepare students for the Summative Assessments.
The First Assessment [Systematic Review, Oral Presentation and Critical Review] tests Learning Outcomes 2, 3, 4 and 5.
The Second Assessment [Final examination] tests Learning Outcomes 1, 2, 3, and 4.

The final grade is calculated as the average between the total grade from the first assessments and the grade from the final examination.
Students need to receive passing grades in all assessments.
If students fail one of the first assessments they get one chance to resubmit.</td></tr>
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	If students fail the final examination they resit the exam.
INDICATIVE READING:	**REQUIRED READING:** **S**izer, F. and Whitney, E. (2023) *Nutrition: Concepts and Controversies.* 16th edition. Cengage Learning. **RECOMMENDED READING:** • *Encyclopedia of Human Nutrition* (2005). 2nd edition. London: Academic Press. • Shils, Olson, Shike, and Ross (Eds.), (1999). *Modern Nutrition in Health and Disease*, 9th edition. Williams and Wilkins. • Linder, Ed. (1991). *Nutritional Biochemistry and Metabolism*, 2nd edition. Elsevier. Other sources, including journal and newspapers' articles, research papers etc. are recommended by the instructor throughout the semester.
INDICATIVE MATERIAL: *(e.g. audiovisual, digital material, etc.)*	**REQUIRED MATERIAL:** N/A **RECOMMENDED MATERIAL:** N/A
COMMUNICATION REQUIREMENTS:	Verbal skills using academic/professional English
SOFTWARE REQUIREMENTS:	MS Office and Blackboard CMS
WWW RESOURCES:	• American Society for Nutrition: http://www.nutrition.org/ • Food and Agricultural Organization: http://www.fao.org • International Food Information Council (IFIC) Foundation: https://foodinsight.org/ • National Institute for Occupational Safety and Health (NIOSH), Pocket Guide to Chemical Hazards: http://www.cdc.gov/niosh/npg/npg.html • Nature (Journal): https://www.nature.com/ • Science (Journal): http://www.sciencemag.org/ • Scientific American (Journal): www.sciam.com • World Health Organization: http://www.who.int/en/
INDICATIVE CONTENT:	• Introduction to Nutrition • Nutrition Tools – Standards and Guidelines • Nutrition and the Human Body • Carbohydrates • Lipids • Proteins and Amino Acids • Vitamins • Minerals and Water • Energy Balance and Healthy Body Weight • Nutrients and Physical Activity

	• Diet & Health • Life Cycle and Nutrition • Consumer Concerns & Food Safety • Hunger and the Global Environment