BMS5012: NUTRITION SCIENCE AND STRESS MANAGEMENT

Effective Term
Semester B 2025/26

Part I Course Overview

Course Title
Nutrition Science and Stress Management

Subject Code
BMS - Biomedical Sciences
Course Number
5012

Academic Unit
Biomedical Sciences (BMS)

College/School
College of Biomedicine (BD)

Course Duration
One Semester

Credit Units
3

Level
P5, P6 - Postgraduate Degree

Medium of Instruction
English

Medium of Assessment
English

Prerequisites
Nil

Precursors
Nil

Equivalent Courses
Nil

Exclusive Courses
Nil

Additional Information
Nil

Part II Course Details

Abstract

The course aims to provide students the principles and practice on the fundamentals of nutrition science and its interactions with stresses in modern society. Topics including (1) Types of nutrients; (2) how different nutrients constitute the metabolism; (3) principles of metabolism regulation; (4) malnutrition, metabolic disorders and diseases; (5) types of stresses and their impacts on human health; (6) the interactions between nutrients and stresses (7) principles of stress management, and (8) proper nutrition in stress management. Throughout these topics, special attention will be paid on how to achieve balanced nutrition and metabolism, as well as how nutrition science facilitates stress management in modern society locally, nationally and internationally.

Course Intended Learning Outcomes (CILOs)

	CILOs	Weighting (if app.)	DEC-A1	DEC-A2	DEC-A3
1	Understand biological concepts that are relevant to nutrients, and basic principles of metabolism such as the turnovers of carbohydrates, fatty acid, proteins, etc.	40	x	x	
2	Understand the homeostasis of metabolism and how malnutrition leads to different kinds of metabolic disorders. Various modes of metabolic regulation, recognize the properties of different types of malnutrition and the mechanisms of pathogenesis, and the principles of healthcare management in metabolic disorders	30	x	x	x
3	Understand the different types of stresses and management strategies for stresses. Develop skills of stress management with proper nutrition and social responsibility, apply specialized knowledge in the care of malnutrition and stress via critical thinking	30		x	x

A1: Attitude
Develop an attitude of discovery/innovation/creativity, as demonstrated by students possessing a strong sense of curiosity, asking questions actively, challenging assumptions or engaging in inquiry together with teachers.

A2: Ability
Develop the ability/skill needed to discover/innovate/create, as demonstrated by students possessing critical thinking skills to assess ideas, acquiring research skills, synthesizing knowledge across disciplines or applying academic knowledge to real-life problems.

A3: Accomplishments
Demonstrate accomplishment of discovery/innovation/creativity through producing /constructing creative works/new artefacts, effective solutions to real-life problems or new processes.

Learning and Teaching Activities (LTAs)

	LTAs	Brief Description	CILO No.	Hours/week (if applicable)
1	Lecture	Lecture introduction on course content	1, 2, 3	

2	Tutorial	To give oral presentation on a certain topic for case study	1, 2, 3	

Assessment Tasks / Activities (ATs)

	ATs	CILO No.	Weighting (%)	Remarks ("-" for nil entry)	Allow Use of GenAI?
1	Group presentation	1, 2, 3	35	Assigned topics on nutrition and stress management: Quality of contents 40%, Communication skills 30%, organization 10%, methods of presentation 10%, question handling 10%	No
2	Research essays	1, 2, 3	65	Title/Topic 5%; Abstract 10%, Quality of content 60%, Writing skill 15%, Reference 10%	No

Continuous Assessment (%)

100

Assessment Rubrics (AR)

Assessment Task

1. Group presentation (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Ability to analyse and criticise a special issue on nutrition and disease management, Self-motivated learning; Skills to design and address a policy through multiple aspects.

Excellent

(A+, A, A-) Outstanding performance on all CILOs. Strong evidence of original thinking; good organization, capacity to analyse and synthesize; superior grasp of subject matter; evidence of extensive knowledge base.

Good

(B+, B, B-) Substantial performance on all CILOS. Evidence of grasp of subject, some evidence of critical capacity and analytic ability; reasonable understanding of issues; evidence of familiarity with literature.

Fair

(C+, C, C-) Satisfactory performance on the majority of CILOS possibly with a few weaknesses. Being able to profit from the course experience; understanding of the subject; ability to develop solutions to simple problems in the material.

Marginal

(D) Barely satisfactory performance on a number of CILOS. Sufficient familiarity with the subject matter to enable the student to progress without repeating the course.

Failure

(F) Unsatisfactory performance on a number of CILOS. Failure to meet specified assessment requirements, little evidence of familiarity with the subject matter; weakness in critical and analytic skills; limited or irrelevant use of literature.

Assessment Task

2. Research essay (for students admitted before Semester A 2022/23 and in Semester A 2024/25 & thereafter)

Criterion

Ability to identify important topics/issues to be solved in malnutrition and related disease management; Ability of critical thinking as well as obtaining, organising important data to address the topics and writing skills.

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Good

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Failure

(F) Unsatisfactory performance on a number of CILOS. Failure to meet specified assessment requirements, little evidence of familiarity with the subject matter; weakness in critical and analytic skills; limited or irrelevant use of literature.

Assessment Task

1. Group presentation (for students admitted from Semester A 2022/23 to Summer Term 2024)

Criterion

Ability to analyse and criticise a special issue on nutrition and disease management, Self-motivated learning; Skills to design and address a policy through multiple aspects.

Excellent

(A+, A, A-) Outstanding performance on all CILOs. Strong evidence of original thinking; good organization, capacity to analyse and synthesize; superior grasp of subject matter; evidence of extensive knowledge base.

Good

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Part III Other Information

Keyword Syllabus

- Principles of nutrients and metabolism,
- Biosynthesis,
- Bioenergy and ATP,
- Carbohydrates,
- Fat,
- Proteins,
- Vitamins and trace elements,
- Starvation and exercise,
- Malnutrition and diseases,
- Acute and chronic stresses,
- Stress management,
- Nutrition and stress management.

Reading List

Compulsory Readings

	Title
1	Nil

Additional Readings

	Title
1	"Biochemistry: Free For All", by Kevin Ahern et al, 2018. https://open.umn.edu/opentextbooks/textbooks/866
2	"Lehninger Principles of Biochemistry", 6th edition. Nelson, D. and Cox, M. (2013). (Run Run Shaw Library Circulation Collection QD415 .L43 2013).