



PEKING UNIVERSITY HEALTH CENTER-MACAO POLYTECHNIC UNIVERSITY NURSING ACADEMY
BACHELOR OF SCIENCE IN NURSING
LEARNING MODULE OUTLINE

Academic Year	2023-2024	Semester	2
Module Code	NNUT2102		
Learning Module	Clinical Nutrition		
Pre-requisite(s)	Nil		
Medium of Instruction	Chinese & English		
Credits	2	Contact Hours	30
Instructor	Lang Bin	Email	blang@mpu.edu.mo
Office	AE-LG105	Office Phone	88936952

MODULE DESCRIPTION

This 30-hour subject is one of the foundation subjects of the nursing program. It will introduce basic concepts of human nutrition and relate these concepts to health and illness. It also includes the knowledge of the major functions and metabolism of macronutrients and micronutrients in order to help students understand the association among nutrition, health and illness, as well as assessment of nutritional status.

MODULE INTENDED LEARNING OUTCOMES (ILOS)

On completion of this learning module, students will be able to:

M1.	Master terminology used in nutrition.
M2.	Describe the major nutritional status assessments.
M3.	Explain the major nutrients physiological functions, absorption, utilization and deficiency.
M4.	Explain the process of nutritional assessment for identifying people at risk of becoming malnourished.
M5.	Describe the therapeutic diets commonly used in hospitals.



These ILOs aims to enable students to attain the following Programme Intended Learning Outcomes (PILOs):

PILOs	M1	M2	M3	M4	M5
P1. Demonstrate an understanding of the holistic nature of the clients' health status involving individual, family, and community aspects.	✓	✓	✓	✓	
P2. Demonstrate effective communication skills and the ability to establish and maintain a therapeutic relationship with clients.					✓
P3. Demonstrate a mastery and an application of knowledge and skills for nursing practice, including biological sciences, social sciences and humanities, by making appropriate clinical reasoning and performing safe and therapeutic practice.	✓		✓		✓
P4. Demonstrate the ability to maintain legal and ethical standards of nursing practice.					✓
P5. Demonstrate the ability to carry out relevant research and contribute to the health of the community.			✓		✓
P6. Work effectively and efficiently alone or in teams.				✓	✓
P7. Demonstrate the ability to identify and evaluate health care issues.	✓	✓	✓	✓	✓
P8. Demonstrate a critical understanding and apply the principles of evidence-based practice to the delivery of nursing care.					✓

MODULE SCHEDULE, COVERAGE AND STUDY LOAD

1A 1B 1C

Week	Content Coverage	Contact Hours
1	1. Introduction to nutrition (2 class hours) 1.1 The Science of Nutrition 1.2 Terminology in Nutrition 1.3 The Nutrients 1.4 Dietary Reference Intakes 1.5 Food Guide Pyramid 1.6 Nutrition Assessment	2
2	2. Carbohydrates (2 class hours) 2.1 Definition of carbohydrates 2.2 Classification of carbohydrates 2.3 Digestion & absorption of carbohydrates 2.4 Functions of carbohydrates	2



	<ul style="list-style-type: none"> 2.5 Disorders related to carbohydrates metabolism 2.6 Dietary reference intakes of carbohydrates 	
3	<ul style="list-style-type: none"> 3. Protein (2 class hours) <ul style="list-style-type: none"> 3.1 History of protein 3.2 Essential Amino Acid 3.3 Protein's function 3.4 Digestion, absorption and metabolism of protein 3.5 Evaluation the nutrition value of food protein 3.6 Dietary protein deficiency 3.7 Assessment of nutritional status 3.8 Dietary reference intakes and food source of protein 	2
3	<ul style="list-style-type: none"> 4. Vitamins (2 class hours) <ul style="list-style-type: none"> 4.1 Introduction of Vitamins <ul style="list-style-type: none"> 4.11 History of Vitamins 4.12 Characteristics 4.13 Name 4.14 Classification 4.2 The Fat Soluble Vitamins: A, D, E, and K <ul style="list-style-type: none"> 4.21 Functions 4.22 Digestion, absorption and metabolism 4.23 Deficiency and Toxicity 4.24 Estimation of nutritional level 4.25 Dietary reference intakes and food source 4.3 The Water Soluble Vitamins: B Vitamins and Vitamin C <ul style="list-style-type: none"> 4.31 Functions 4.32 Digestion, absorption and metabolism 4.33 Deficiency and Toxicity 4.34 Estimation of nutritional level 4.35 Dietary reference intakes and food source 	2
4	<ul style="list-style-type: none"> 5. Lipids (2 class hours) <ul style="list-style-type: none"> 5.1 Introduction of lipids 5.2 Classification of triglycerides 5.3 ω-3 and ω-6 fatty acids 5.4 Lipids digestion and absorption 5.5 Functions of lipids 5.6 Disadvantages of lipids 5.7 Nutritional assessment of dietary lipids 5.8 Dietary reference intakes and food source of lipids 	2
4	<ul style="list-style-type: none"> 6. Minerals (2 class hours) <ul style="list-style-type: none"> 6.1 Introduction of minerals: Calcium, Iron, Zinc, Iodine, Selenium, other 6.2 Roles and Functions in the Body 6.3 Absorption and Metabolism 6.4 Deficiency and Toxicity 6.5 Nutritional evaluation 6.6 Dietary reference intakes and food source 6.7 Supplementation 	2
5	<ul style="list-style-type: none"> 7. Nutrition and dietary requirements for specific populations (4 class hours) <ul style="list-style-type: none"> 7.1 Life Cycle Nutrition: Pregnancy and Lactation <ul style="list-style-type: none"> 7.11 Physiological changes in pregnancy and lactation 7.12 Nutrient requirements of pregnancy and lactation 	4



	7.13 Influence of maternal nutritional status on fetus and infants 7.14 Rational diet during pregnancy and lactation 7.2 Nutrition and dietary of Infancy, Childhood, and Adolescence 7.3 Nutrition and dietary of Adulthood and the Later Years	
5	8. Nutrition and Diet-related disease (6 class hours) 8.1 Nutrition and obesity 8.11 Definition, diagnosis and categorization of obesity 8.12 Causal mechanism and influential factor of obesity 8.13 Health Risks of obesity 8.14 Prevention and treatment of obesity 8.2 Nutrition and coronary atherosclerosis 8.3 Nutrition and hypertension 8.4 Nutrition and diabetes mellitus 8.5 Nutrition and gout 8.6 Nutrition and immune system disease 8.7 Nutrition and Cancer	6
6	9. Nutritional Care (2 class hours) 9.1 Goals of Nutritional Care 9.2 Nutritional assessment and hospital diets 9.3 Nutritional support 9.4 Enteral nutrition 9.5 Parenteral nutrition	2
7	10. Presentation (3 class hours) Review (1 class hours)	4
8	11. Examination (2 class hours)	2

TEACHING AND LEARNING ACTIVITIES

In this learning module, students will work towards attaining the ILOs through the following teaching and learning activities:

Teaching and Learning Activities	M1	M2	M3	M4	M5
T1. Lecture	✓	✓	✓	✓	✓
T2. Discussion		✓		✓	✓
T3. Writing assignment				✓	✓
T4. Multimedia resources (videos, podcasts, or online resources)		✓		✓	✓
T5. Oral Presentation					✓

ATTENDANCE

Attendance requirements are governed by the Academic Regulations Governing Bachelor's Degree Programmes of the Macao Polytechnic University. Students who do not meet the attendance requirements for the learning module shall be awarded an 'F' grade.



ASSESSMENT

In this learning module, students are required to complete the following assessment activities:

Assessment Activities	Weighting (%)	ILOs to be Assessed
A1. Presentations and individual assignment	40	M1, M2, M4, M5
A2. Final Examination	60	M3, M4, M5

CLASS PRACTICE (3 class hours)

Date & Time	Practice Item	Title	Students / Group	Mode of Practice	Requirement
2024/04/17 2024/04/18 (class A)	Presentation and discuss	Diet-related disease	5-6 students per group	Oral presentation	Power-point of the subject issue should be submitted before the presentation for assessment.
2024/02/22 2024/02/26 (class B)		Diet-related disease	5-6 students per group	Oral presentation	
2024/02/20 2024/02/22 (class C)		Diet-related disease	5-6 students per group	Oral presentation	

The assessment will be conducted following the University's Assessment Strategy (see www.mpu.edu.mo/teaching_learning/en/assessment_strategy.php). Passing this learning module indicates that students will have attained the ILOs of this learning module and thus acquired its credits.

This learning module is graded on a 100-point scale, with 100 being the highest possible score and 50 being the passing score.

Any student from Faculty of Health Sciences and Sports (FCSD) scoring less than 35% of the total mark in the final examination will be given an "F" grade for the module even if the overall grade is 50% or higher.



MARKING SCHEME

High grades will be awarded to work that demonstrates exceptional understanding and mastery of the subject matter and consistently exceeding expectations. The followings are the general assessment criteria for the assessment activities.

Assessment Activities	Assessment Criteria	Mark Ranges				
		88-100	73-87	58-72	50-57	<50
A1. Group assignment	Describe clearly the background of the assignment; Rational analysis and explanation; Deep reflection; Complete and clear data;	Excellent	Good/ Very Good	Satisfactory	Marginal Pass	Fail; not reaching marginal levels
A2. Test	Demonstrate the ability to identify and apply appropriate concepts, methods, and techniques	Excellent	Good/ Very Good	Satisfactory	Marginal Pass	Fail; not reaching marginal levels
A3. Final Examination		Excellent	Good/ Very Good	Satisfactory	Marginal Pass	Fail; not reaching marginal levels

Please refer to the 'Essay Rubric.pdf' and 'Group Presentation Evaluation Form.pdf' for the grading criteria of the writing assignment and oral presentation.

REQUIRED READINGS

周芸（2022）*臨床營養學*（第5版）。北京：人民衛生。

REFERENCES

郭順堂（2020）*現代營養學*（第九版）。北京：中國輕工業出版社。

Maban, L. K., & Escott-Stump, S. (2011). *Krause's food, nutrition & diet therapy* (9th ed.). Philadelphia: Saunders.

Stanfield, P. S. & Hui, Y. H. (2009). *Nutrition and diet therapy* (5th ed.). London: Jones & Barlett.

STUDENT FEEDBACK

At the end of every semester, students are invited to provide feedback on the learning module and the teaching arrangement through questionnaires. Your feedback is valuable for instructors to enhance the module and its delivery for future students. The instructor and programme coordinators will consider all feedback and respond with actions formally in the annual programme review.



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ACADEMIC INTEGRITY

The Macao Polytechnic University requires students to have full commitment to academic integrity when engaging in research and academic activities. Violations of academic integrity, which include but are not limited to plagiarism, collusion, fabrication or falsification, repeated use of assignments and cheating in examinations, are considered as serious academic offenses and may lead to disciplinary actions. Students should read the relevant regulations and guidelines in the Student Handbook which is distributed upon the admission into the University, a copy of which can also be found at www.mpu.edu.mo/student_handbook/.