جمهورية مصر العربية

وزارة التعليم العالي

الوزير

قـــرار وزاري

رقم (٦٧٦) بتاريخ ٣ / ٤ /٢٠٢٢

بشأن تعديل اللائحة الداخلية لكلية الطب جامعة المنصورة

(مرحلة الدراسات العليا) بنظام الساعات المعتمدة

وزير التعليم العالي والبحث العلمي ورئيس المجلس الأعلى للجامعات

** بعد الاطلاع على القانون رقم ٤٩ لسنة ١٩٧٢ في شأن تنظيم الجامعات والقوانين المعدلة له.

** وعلى قرار رئيس الجمهورية رقم ٨٠٩ لسنة ١٩٧٥ بإصدار اللائحة التنفيذية لقانون تنظيم الجامعات والقرارات المعدلة له.

** وعلى القرار الوزاري (٦٩٤) بتاريخ ٢٠١١/٤/٣ بشأن إصدار اللائحة الداخلية لكلية الطب جامعة المنصورة (مرحلة الدراسات العليا) بنظام الساعات المعتمدة ، والقرارات المعدلة له.

** وعلى موافقة مجلس جامعة المنصورة بجلستيه بتاريخ ٢٠٢٠/٧/٢٧، ٢٠٢١/٨/٢

** وعلى موافقة لجنة قطاع الدراسات الطبية بجلستيها بتاريخ ٢٠٢١/١١/٨ ، ٢٠٢١/١٢/٢٧

** وعلى موافقة المجلس الأعلى للجامعات بجلسته بتاريخ ٢٠٢٢/٢/١٧

قرر

(المادة الأولى)

يضاف مادة جديدة تحت رقم (٣ مكرر) إلي اللائحة الداخلية لكلية الطب جامعة المنصورة مرحلة الدراسات العليا (بنظام الساعات المعتمدة) الصادرة بالقرار الوزاري رقم (٦٩٤) بتاريخ ٢٠١١/٤/٣ علي النحو التالي:

مادة (٣ مكرر) الدبلومات المهنية

تمنح جامعة المنصورة بناء علي طلب كلية الطب البشري الدبلومات المهنية الأتية:-

١- .....

٢- .....

٣- مكافحة العدوي

٤- أمراض الأوعية الدموية المخية والسكته الدماغية

٥- التغذية الإكلينيكية

٦- زراعة نخاع العظام

٧- مجال طب الشبكية

(المادة الثانية)

يلحق باللائحة الداخلية المشار إليها بعالية الخطة الدراسية والإمتحانية المرفقة والخاصة بالدبلومات المهنية الآتية (مكافحة العدوي - أمراض الأوعية الدموية المخية والسكته الدماغية -التغذية الإكلينيكية زراعة نخاع العظام - مجال طب الشبكية)

(المادة الثالثة)

على جميع الجهات المختصة تنفيذ هذا القرار.

وزير التعليم العالي والبحث العلمي

ورئيس المجلس الأعلى للجامعات

(أ.د/ خالد عبد الغفار)

7- لائحة الدبلومة المهنية في التغذية الاكلينيكية

Clinical nutrition professional diploma (CNMED400)

القسم المانح للدرجة: الأمراض الباطنة

المقررات الدراسية وتوزيع الساعات المعتمدة

	المقرر	Course	الكود	الساعات المعتمدة: المقرر	الساعات المعتمدة: الإجمالي
الفصل الدراسي الأول	مقرر العلوم الاساسية المرتبطة بالتغذية	Basic science course			6
	1-الكيمياء الحيوية	Nutritional Biochemistry	CNMED410bc CNMED404	2	
	2 فسيولوجيا الايض والغدد الصماء	Physiology of metabolism, endocrine, renal and GIT physiology	CNMED410ps CNMED403	1	
	3 الصحة العامة فيما يتعلق بالتغذية وسلامة الغذاء واسس البحث العلمي	Public health-related to nutrition, nutrition epidemiology, Community nutrition, and food safety	CNMED410ph CNMED418	2	
	4-الفارماكولوجيا الاكلينيكية وعلاقة الغذاء بالدواء وعلم نفس السلوك الغذائي	Pharmaco-nutrition, Food as drugs and drug food interaction Psychology of eating behavior	CNMED410cp CNMED406 CNMED413	1	
الفصل الدراسي الثاني والثالث والرابع	مقرر التغذية الاكلينيكية: أساسيات التغذية الاكلينيكية التغذية العلاجية في الامراض الباطنة I التغذية العلاجية في الامراض الباطنة II	**Clinical nutrition course:** -Fundamentals of clinical nutrition module -Medical nutrition therapy I - Medical nutrition therapy II	**CNMED410** **CNM410 F** **CNM410 T1** **CNM410 T2**	 9 9 9	27
كراسة الأنشطة	أنشطة علمية متعلقة بالتغذية تشمل التدريب الإكلينيكي والميداني وورش العمل	**Logbook activities including clinical and field training, assignments, and workshops**	**CNMED410Pr**		7
	إجمالي الساعات المعتمدة				40

جامعة المنصورة
كلية الطب

نظام الامتحان وتوزيع الدرجات: (شهادة الدبلوم المهنية في التغذية الاكلينيكية)

امتحان الفصل الدراسي الأول:

المقرر	الاختبار	الدرجة تحريري	إجمالي
مقررالعلوم الاساسية الخاصة بالتغذية	اختبار تحريري مدته ساعتين ورقة اولي	90	300
	اختبار تحريري مدته ساعتين ورقة ثانية	90	
	اختبار MCQ بعد انتهاء كل موديول	120	

الامتحان النهائي الشامل:

المقرر	الاختبار	الدرجة تحريري	MCQ	شفوي	إكلينيكي	إجمالي
مقرر التغذية الاكلينيكية	ورقة أولي + ورقة ثانية (اختبار تحريري مدته ثلاث ساعات – أسئلة قصيرة وحالات) + اختبار شفوي + اختبار إكلينيكي.	+180 180 =360	240	100	200	900

ملحوظة: يعقد امتحان MCQفي نهاية كل فصل دراسي 80 درجة لكل فصل والدرجة الكلية240 درجة

❖ **شروط القيد في الدبلومة المهنية في التغذية الاكلينيكية:**

5- خريجوا كليات الطب من مختلف الجامعات

PROGRAMME SPECIFICATION

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme Title & Code	Clinial Nutrition Medicine CNMED400
(2) Final award/degree	Professional Diploma
(3) Department (s)	Internal medicine dept, Faculty of Medicine, Mansoura University (in collaboration with Nutrition medicine dept, University of Lubeck , Germany)
(4) Coordinators	Head of internal medicine dept , and program director **Prof Tarek Gouda** **Prof Omayma Saleh,** Prof internal medicine and endocrinology , faculty of medicine , Mansoura University. **Prof Maha Maher,** Prof internal medicine and gastroenterology,faculty of medicine, Mansoura University. **Dr Noha Abdel salam, Assist** Prof of internal medicine, rheumatology and immunology, faculty of medicine, Mansoura University
(5) External evaluator (s)	**Prof Chritian Sina,** Head of nutrition medicine institute, University of Lubeck, Germany **Dr Martin Smolich ,** University of Lubeck, Germany
(6) Date of approval by the Department`s council	11 / 2021

(7) Date of last approval of programme specification by Faculty council	2021

(B) Professional information

(1) Programme Aims:

The broad aims of the Programme are as follows:

- To acquire sufficient knowledge of the practice of clinical nutrition including basic science, fundamentals of nutrition practice in health and disease as well as advanced medical nutrition therapy in different conditions.
- To gain intellectual and practical skills for competent, safe and evidence based practice of clinical nutrition including diagnosis, prevention and treatment of diseases.
- To acquire the attitude of self integrity, ethics and proper communication with colleagues and patients as well as life long learning.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the programme, the candidate will be able to:

A- Knowledge and Understanding:

A1. describe types , chemistry and metabolism of nutrients.

A2. recall the phyiology of digestion and absorption and metablism of nutrirents.

A3. describe psychology of food intake.

A4. mention the relation between immunology and pharmacology and nutrition.

A5. describe community nutrition food safety, and applied research in the field of nutrition.

A6. describe food drug interactions.

A7. describe community nutrition food safety, and applied research in the field of nutrition.

A8, illustrate the nutrition care process including nutritional assessment.

A9. describe the energy balance and meal planning

A10. search, outline and adapt clinical practice guidelines related to clinical nutrition.

A11. recognize nutrition misinformation and misperception.

A12. describe nutrients cycle in the body system.

A13. outline the process of anabolism and catabolism.

A14. describe the relation between nutrition and disease prevention.

A15. discuss normal reproductive physiology.

A16.. recognize importance of food safety and Hygiene.

A17.. recall the nutrition in different age groups as well as pregnancy and lactation.

A18. describe food groups, dietary pyramid as well as exchange lists.

A19. explain nutrition and dietetics in practice

A20..describe indications, contra indications and complications of enteral and parenteral nutrition.

A21. explain the concept of medical nutrition therapy.

A22. describe medical nutrition therapy goals and application.

A23. mention dietary reference intake and guidelines.

A24.mention basis of medical nutrition therapy in gastrointestinal , hepatic , renal , pulmonary, neurologic and psychiatric states.

A25.describe dietary recommendations in diabetes, obesity, dyslipidemia, metabolic syndrome, hypertension and cancer.

A26. define malnutrition problems.

A27. define Dietary guidelines and food pyramid.

A28. explain the concept of nutrigenomics and personalized nutrition.

B. Intellectual skills :

B1. differentiate levels of interventions for disease prevention.

B2..complete and present problem solving skills for correct unhealthy dietary habits.

B3. explain nutrition surveillance program delivered by MOHP.

B4. differentiate between survey and surveillance.

B5. relate physiologic changes of aging to nutrient and energy requirements.

B6. estimate and manage diet and drug interactions.

B7. calculate the energy requirements at different age groups

B8. apply history taking skills to assess the nutritional status of the subjects

B9 assess the need for nutritional support for patients in acute and chronic conditions

B10. integrate the knowledge of basic science to formulate a nutrition plan in health and disease conditions

B11. use exchange lists to formulate a diet plan for patients

B12.. estimate Recommended Daily Allowance (RDA)

B13. calculate the formulas needed for enteral and parenteral nutrition

B14. interpret the lab and radiology reports for patients to assess their condition.

B15. analyze results of patients' investigations

B16. integrate the findings of the history taking, examination and investigations to prescribe a nutrition plan.
B17.explain methods of assessment of nutritional status.
B18.explain Timing of meals during, pre & post competitive sports.

C. Professional/practical skills:

C1. write a detailed history for the patients.
C1. examine patients for assessment of their state of nutrition.
C2. measure the anthropometric values needed for nutrtional assessment of patients.
C3. prescribe a meal plan for the paients according to their medical conditions.
C4.order needed investigations for the patients
C5, write a medical report or referral letter when required

D- Communication & Transferable skills

1.master communication, consultation and counselling skills

2. appreciate partnership between doctor and patient.

3. be able to work effectively as a team leader , and be willing to consult colleagues when appropriate.

4.be able to conduct self-audit and respond to positively to criticism .

5. demonstrate appropriate professional values and attitudes with healthy individuals and patients. including empathy; trust worthiness; respect for the dignity, privacy and rights of patients; and equity of care provision.

6. use information technology as a tool for audit & quality control
7. identify his own strengths, weakness and learning needs and be prepared to continuous medical education and life long learning.
8- manage time and workload effectively

c. Academic standards:

a- External reference points/benchmarks are selected to confirm the appropriateness of the objectives, ILOs and structure of assessment of the programme: **University of Lubeck , Germany**

https://www.uni-luebeck.de/studium/studiengaenge/medizinische-ernaehrungswissenschaft.html

https://www.uksh.de/Ernaehrungsmedizin_Luebeck/

d. Curriculum structure and contents:

4.a- Duration of the programme : 4 semesters

4.b- programme structure:

Candidates should fulfill a total of **40** credit hours

●4.b.1: Number of credit hours:

First part (First semester): Basic science course including 4 modules (6 credit hours)

Second part (second, third and fourth semesters): Clinical nutrition course

3 main modules (34 credit hours)

Theoretical and clinical teaching: 27 credit hours

Clinical and field training- logbook activities : 7 credit hours

●Programme courses:

First part: a- Compulsory courses: 6 credit hours

Course Title	Course Code	Credit hours 6
Basic Science course related to clinical nutrition	CNMED410bs (1)CNMED404, (2)CNMED403, (3)CNMED418, (4) CNMED406;CNMED422	
Module (1) Biochemistry (Chemistry and metabolism of macro and micronutrients)		2
Module (2)Physiology of metabolism, endocrinology , renal and GIT physiology .		1
Module (3)Public health related to nutrition and community nutrition. Nutrition epidemiology ,		2
Module (4) Pharmaco-nutrition, Drug- food interactions Foods as drugs, Psychology of eating behavior		1

Second part:

a- Compulsory courses :

Course Title	Course Code	Credit hours			
		Theoretical	Clinical	Self directed learning	Total
Clinical nutrition course	**CNMED410**				
Module (A) **Fundamentals of clinical nutrition**	**CNMED410 (A)**				**9**
A1: Nutrition care process Nutritional assessment					**2**
A2: Nutritional planning, tools of a healthy diet Food groups- food pyramid -Energy balance Exchange lists					**2**
A3: Nutrition and life cycle and in geriatrics					**1**
A4: Nutrition interventions: Enteral nutrition in a clinical setting					**2**
A 5: Nutrition interventions: Parenteral nutrition in a clinical setting					**2**
Module (B): **Medical nutritional therapy I:**	**CNMED410 (B)**				**9**
B1: Nutrition in ICU (Critical care nutrition) Nutrition in pulmonary disease (COPD) Nutrition in cardiovascular disease(HTN,IHD,CHF)					**2**
B2: Nutrition support in GIT , liver and pancreatic diseases					**3**
B3: Nutrition in renal diseaseBB					**2**
B4: Nutrition in neurologic and rheumatologic diseases					**1**
B5:Nutrition in sports					**1**
Module C: **Medical nutritional therapy II**	**CNMED410 (C)**				**9**
C1: Nutrition in diabetes, metabolic syndrome Dyslipidemia					**3**
C2: Nutrition in obesity					**3**
C3: Immune nutrition &Nutrition in hematological & oncologic conditions					**1**
C4: Malnutrition and eating disorders					**1**
C5: Nutrigenomics & personalized nutrition					**1**

e. Programme admission requirements:

- **General requirements:**

According to Bylaws of the faculty .

The applicant must be a medical graduate.

f. Regulations for progression and programme completion:

Formative assessment throuout the program is carried out through the logbook activities, assignments and quiz (without marks)

The summative assessment includes :

First part Assessment: (At the end of the first semester,)

End of semester exams. MCQ exam for each module and represent 40% of written exam. A written exam for the whole course in 2 papers.

Second part assessment:

Semester exams : (MCQs) after completion of the modules at the second , third and fourth semesters and the cumulative marks will represent 40% of the marks of the Final exam.

Final exam: (written and clinical) 24 months after registration , after fulfillment of the training (attendance and fulfilment of at least 70 % of course).

g. Evaluation of Programme's intended learning outcomes (ILOs):

Evaluator	Tools*	Sample size
Internal evaluator **(s)**	COMMUNICATION, E_MAIL	
External Evaluator **(s)** **Christian Sina** Prof and head of nutrition medicine dept	COMMUNICATION, E_MAIL	
Senior student **(s)**	QUESTIONNAIRE, INTERVIEW	
Alumni		
Stakeholder **(s)**		
Others		

We certify that all information required to deliver this programme is contained in the above specification and will be implemented. All course specification for this programme are in place.	
Program director: Head of internal medicine dept : Prof Tarek Gouda Programme coordinators: **Prof Omayma Saleh** **Prof Maha Maher** **Dr Noha Abdel Salam**	Signature & date:
Dean: Name: Prof **Ashraf Shouma**	Signature & date:

COURSE SPECIFICATION

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate Professional Diploma program of clinical nutrition
(2) Department offering the programme:	**Internal medicine dept, Faculty of Medicine, Mansoura University.** in collaboration with nutrition medicine dept , Lubeck University , Germany.
(3) Department responsible for teaching the course:	Public health and community medicine, Medical Biochemistry , Medical Physiology , Clinical Pharmacology .,and psychiatry departments in collaboration with internal medicine dept., Faculty of medicine , Mansoura University.
(4) Part of the programme:	First part (First semester)
(5) Date of approval by the Department`s council	11/ 2021
(6) Date of last approval of specification by Faculty council	
(7) Course title:	**Basic science course for clinical nutrition diploma**
(8) Course code:	**Course code: CNMED410bs**
(9) Total teaching hours:	

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

Acquire scientific basis in nutrition,including:
Chemistry and metabolism of nutrients, Public health and community nutrition,
Physiology of digestion, absorption, metabolism and renal physiology,
Psychology of eating behaviour, and pharmaconutrition.

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

At the end of the course students will be able to:

1. describe types , chemistry and metabolism of nutrients.

A2. recall the phyiology of digestion and absorption and metablism of nutrirents.

A3. describe psychology of food intake.

A4. mention the relation between immunology and pharmacology and nutrition.

A5. describe community nutrition food safety, and applied research in the field of nutrition.

A6. describe food drug interactions.

A7. search, outline and adapt clinical practice guidelines related to clinical nutrition.

A8. recognize nutrition misinformation and misperception.

A9. describe nutrients cycle in the body system.

A10. outline the process of anabolism and catabolism.

A11. describe the relation between nutrition and disease prevention.

A12. discuss normal reproductive physiology.

A13. recognize importance of food safety and Hygiene.

B- Intellectual skills:

At the end of the course students will be able to:

B1. integrate the knowledge of basic science to formulate a nutrition plan in health and disease conditions.
B2. differentiate levels of interventions for disease prevention.
B3, estimate Recommended Daily Allowance (RDA).
B4..complete and present problem solving skills for correct unhealthy dietary habits.
B5. explain nutrition surveillance program delivered by MOHP.
B6. differentiate between survey and surveillance.
B7. complete and present problem solving skills for correct unhealthy dietary habits
B8. relate physiologic changes of aging to nutrient and energy requirements.
B9.estimate and manage diet and drug interactions.

(3) Course content:

The course fulfils 6 credit hours for 1 semester

The course comprises 4 modules, Course code: CNMED410bs,

(1)CNMED404, (2)CNMED403, (3)CNMED418, (4) CNMED406;CNMED422

Subjects	Lectures /week	Clinical / Practical /week	seminar	Total teaching hours /week	**Credit Hours**
Basic science course for clinical nutrition diploma		-			**6**
Module 1: Biochemistry: (Chemistry and metabolism of macro and micronutrients) Carbohydrates (chemistry and metabolism) Proteins(chemistry and metabolism) Lipids (chemistry and metabolism) Vitamins Minerals (including trace elements) Water Fibres	**2**	-			**2**

Module 2: Physiology: Metabolism, Endocrine physiology , Renal physiology GIT physiology(digestion and absorption)	**1**				**1**
Module3:Public health and community nutrition: Nutrition epidemiology , Nutrition surviellllence, Dietary surveys Nutrition research & basic statistics Nutrition interventions Egyptian Dietary Guidelines Evidence based medicine Nutrition throughout life cycle Risky Eating Behavior Lifestyle and Eating Habits as Determinants of Health Role of diet in health promotion and disease prevention Food hygiene Food safety Medical records School nutrition	**2**				**2**
Module 4: Pharmaco-nutrition,Psychology of eating behaviour Drug- food interactions , Foods as drugs, -Ca channel blockers and nutrition -Digoxin and nutrition - Impact of Ca supplements on patients on Digoxin – anticoagulants and nutrition	**1**				**1**

(4) Teaching methods:

1:Interactive Lectures with case studies (online lectures can be used when needed).

2: Problem solving case scenarios and group discussion.

4:Seminars and presentation of an essay by the postgraduate students.

5. Assignments and quizzes

(5) Assessment methods:

Assessment schedule:

I. Continous assessment after completion of each module :

An MCQ exam is done at the end of each module which comprise 40% of the written final exam.

II. Final exam :

Assessment 1: Written exam at the end of the semester for each module (For assessment of knowledge and intellectual skills)

Other assessment without marks:

Log book for assessment of the attendance and activities throughout the course.

Formative assessments: Assignments and quizzes.(without marks).

(6) References of the course:

Lecture notes

Krause's Food & the Nutrition Care Process,

Food composition tables for Egypt

Internet based resources (, websites e.g. Pubmed, MDconsult , emedicine , Medscape ; Journals ……)

(7) Facilities and resources mandatory for course completion:

Candidates and their learning are supported in a number of ways:
Presence of data show and computer facilities

Course coordinators: Professor Omayma Saleh
Prof Maha Maher
Ass Prof Dr Noha Abdel-Salam

Head of the department and program director: Professor Tarek Gouda

Date: 11/2021

COURSE SPECIFICATION

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	Postgraduate Professional Diploma program of clinical nutrition
(2) Department offering the programme:	**Internal medicine, in collaboration with nutrition medicine dept , Lubeck University , Germany**.
(3) Department responsible for teaching the course:	Internal medicine department, Mansoura University With contribution of Nutrition medicine dept ,Lubeck university, Germany, anesthesia and chest departments, faculty of Medicine, Mansoura University
(4) Part of the programme:	Second part (second, third and fourth semesters)
(5) Date of approval by the Department`s council	11/ 2021
(6) Date of last approval of specification by Faculty council	
(7) Course title:	**Clinical nutrition course for nutrition diploma**
(8) Course code:	**CNMED410**
(9) Total teaching hours:	

(B) Professional information

(1) Course Aims:

The broad aims of the course are as follows:

To acquire Knowledge and skills of clinical nutrition for physicians including nutrition care process and nutrition interventions as will as advanced medical nutrition therapy in various conditions in acute and chronic settings. Also, the principles of nutrigenetics and personalized nutrition will be offered in this course .

(2) Intended Learning Outcomes (ILOs):

On successful completion of the course, the candidate will be able to:

A- Knowledge and Understanding

At the end of the course, students will be able to:

A1, illustrate the nutrition care process including nutritional assessment.

A2. describe food drug interactions.

A3. describe the energy balance and meal planning

A4. recall the nutrition in different age groups as well as pregnancy and lactation.

A5. . identify the nutritional needs of elderly including macro and micronutrients

A5. describe food groups, dietary pyramid as well as exchange lists.

A6. explain nutrition and dietetics in practice

A7.describe indications, contra indications and complications of enteral and parenteral nutrition.

A8. explain the concept of medical nutrition therapy.

A9. describe medical nutrition therapy goals and application.

A10. mention dietary reference intake and guidelines.

A11.mention basis of medical nutrition therapy in gastrointestinal , hepatic , renal , pulmonary, neurologic and psychiatric states.

A12.describe dietary recommendations in diabetes, obesity, dyslipidemia, metabolic syndrome, Hypertension and cancer.

A13. identify energy measurements and the individualized caloric needs

A14.describe management of malnourished and those having eating disrders

A15. outine the principles of personalised nutrition.

B- Intellectual skills:

At the end of the course, students will be able to:

B1. calculate the energy requirements at different age groups
B2. apply history taking skills to assess the nutritional status of the subjects
B3. assess the need for nutritional support for patients in acute and chronic conditions
B4. use exchange lists to formulate a diet plan for patients
B5. calculate the formulas needed for enteral and parenteral nutrition
B6. interpret the lab and radiology reports for patients to assess their condition.
B7. analyze results of patients' investigations
B8. integrate the findings of the history taking, examination and investigations to prescribe a nutrition plan.
B9.. Recognize the Food Drug Interaction spectrum especially in the elderly community, mostly with chronic disease and on many medication.

C- Professional/practical skills

By the end of the course , the candidate will be able to:

At the end of the course, students will be able to:

C1.write a detailed history for the patients.
c2. examine patients for assessment of their state of nutrition.
C3. measure the anthropometric values needed for nutrtional assessment of patients.
C4. prescribe a meal plan for the paients according to their medical conditions.
C5order needed investigations for the patients
C6, write a medical report or referral letter when required

D- Communication & Transferable skills

1.Master communication, consultation and counselling skills

2. Appreciate partnership between doctor and patient.

3. Be able to conduct self-audit and respond to positively to criticism .

4- . Use information technology as a tool for audit & quality control

5. Identify his own strengths, weakness and learning needs and be prepared to continuous medical education and life long learning.
6- Manage time and workload effectively

(3) Course content:

The course fulfils 27 credit hours for 3 semesters , 9 credit hours each

The course comprises 3 modules within 3 semesters , 5 chapters each module.

Second semester: Module A: Fundamentals of clinical nutrition(CNMED410 A)

Third semester :Module B: Medical nutrition therapy I (CNMED410 B)

Fourth semester: Module C: Medical nutrition therapy II (CNMED410C)

Subjects	Lectures /week	Clinical / Practical /week	Seminar	Total teaching hours /week	**Credit Hours**
Module A: Fundamentals of clinical nutrition:	**CNMED410(A)**				**9**
A1: Nutrition care process Nutritional assessment: *Nutrition Screening and Assessment in adults: SGA/MUST/Tools and Materials *ASSESSMENT OF CLINICAL DATA . *ASSESSMENT OF ANTHROPOMETRIC DATA. *ASSESSMENT OF DIETARY DATA	**1**	**2**			**2**
A2: Diet planning and nutrition calculation at a glance Nutritional planning, tools of a healthy diet. Food groups- food pyramid -Energy balance . Exchange lists	**1**	**2**			**2**
A3: **Nutrition and life cycle** (infants ,children , adults , pregnant . lactating , menopausal elderly) Nutrition in geriatrics	**1**				**1**
A4: Nutrition interventions: ***Enteral nutrition in a clinical setting**: Techniques and Indications; Formulations-Naso-Gastric/ Gastrostomy-Jejonostomy- Transition Feeding . *Modified diets *Adverse reactions to food	**1**	**2**			**2**

A5: Nutrition interventions: ***Parenteral nutrition in a clinical setting** Indications Preparation Access Complications Home nutrition Fluid and electrolyte disorders and significance of balance for good nutrition	**1**	**2**			**2**
ModuleB: **Medical nutritional therapy I:**	**CNMED410 (B)**				**9**
B6: Nutrition in ICU (Critical care nutrition) Nutrition in pulmonary disease (COPD) Nutrition in cardiovascular disease (HTN , IHD , CHF)	**1**	**2**			**2**
B 7: Nutrition support in GIT , liver and pancreatic diseases *Nutrition in upper and lower GIT diseases\ Peptic ulcer , diarhea , constipation , IBD, IBS *Nutrition in hepatobiliary diseases GB, liver cirrhosis, hepatitis , liver transplanation *Acute and chronic pancreatic diseases *Malabsorption & Celiac disease	**1**	**2**			**2**
8 :Nutrition in renal disease Nutrition in AKI Nutrition in CKD Nutrition and renal transplantation Renal stones , hyperuricemia	**1**	**2**			**2**
Module 9: Nutrition in neurologic, rheumatologic diseases: Diet, Bone Metabolism and Osteoporosis RA ,SLE Stroke Epilepsy (ketogenic diet) Alzheimer' Parkinsonism	**1**	**1**	**1**		**2**
B10: **Nutrition in sports**	**1**				**1**

Module C: **Medical nutritional therapy II:**	**CNMED410(C)**				**9**
C11: **Nutrition in diabetes, metabolic syndrome and Dyslipidemia** *****Goal of MNT in diabetes *Type 1 DM (The exchange lists Glycemic control and vascular complications Carbohydrate counting) *Type2 DM (Weight loss ,increased activity & weight management ,How to design a dietary prescription How to promote compliance ,Carbohydrate counting) * Definition , pathogenesis and Diagnostic criteria of metabolic syndrome. Life style modification , Mediteranean diet. * Types and diagnosis of dyslipidemia * Dietary recommendations	**1**	**2**	**1**		**3**
C12 :**Nutrition in obesity** *Introduction to obesity: (etiology and natural history, age at which overweight develops, drug –induced weight gain, neuro endocrine obesity, lifestyle modification, psychological management , genetic and congenital disorders, socioeconomic factors, viral agents and obesity) *Pathogenesis of obesity * Screening and clinical evaluation of obesity, dietary therapy for obesity. *Drug therapy for obesity *Surgical therapy for obesity *Medical management for patient after bariatric surgery *Role of exercise in obesity *Types of Diets& popular diets (Fad diets , low carb, high protein , keto diets debate)	**1**	**2**			**2**
C13: Immune nutrition &Nutrition in hematological & oncologic conditions: Nutrition and immunity Nutrition in immunocompromised Emerging issues in cancer MNT for Nutritional Anemia and Other Blood Diseases	**1**	**1**	**1**		**2**
C14: **Malnutrition and eating disorders.** Anorexia nervosa Bulemia & Binge eating disorders Undernutrition Cachexia & Sarcopenia	**1**	**1**			**1**

C15: Nutrigenomics & personalized nutrition. Genetic factors that modulate the relationships between diet, health, and disease risks, including the effects of differences in our genetic makeup (Nutrigenetics), the regulation of gene expression by nutrients and dietary patterns (Nutrigenomics), and the interactions between diet, gut microbiome, and human hosts (Metagenomics)	**1**				**1**
Total teaching hours					**27 credit hours**

(4) Teaching methods:

4.1:Interactive Lectures with case studies (online lectures can be used when needed especially with teaching staff abroad).

4.2: Interactive bedside teaching with clinical case presentations of difficult and interesting cases and group discussions

4.3: Problem solving case scenarios .

4.4:Seminars and presentation of assignments by the students(group study)

4.5. Workshops including international workshops (in collaboration with the Nutrition medicine department, Lubeck University , Germany).

4.6. Clinical rotation within inpatient departments including diabetes, gastroenterology ,hepatology , nephrology and dialysis units and critical care units , surgical ICUs , rheumatology , haematology and oncology units.. Also , attendance of outpatient clinics including obesity, DM , nutrition , dialysis ,GIT and hepatology clinics.

(5) Assessment methods:

Assessment schedule:

I. Continous assessment after completion of each module :

An MCQ exam is done each semester at the end of each module and the sum of the 3 exams equal 40% of the written final exam.

II. Final exam :

Assessment 1: Written exam , 2 papers (short essay questions and case scenarios=). (For assessment of knowledge and intellectual skills)

Assessment 2: Clinical exam (an OSCE exam = 200 marks) + oral exam 100 marks (for assessment of practical and communication skills)

Other assessment without marks:

Log book for assessment of the attendance and activities throughout the course.

Assignments and quizzes (without marks).

(6) References of the course:

- Lecture *n*otes given by tutors.
- Krause's Food &Mahan,s:Food& the Nutrition Care Process, 15th edition. L. Kathleen Mahan MS RD CDE (Author), Janice L Raymond MS RD CD (Author), Sylvia Escott-Stump MA RD LDN (Author) disease. 3. Oxford textbook of Nutrition,2021.
- ASPEN Nutrition support core curriculum.In MM Gottschlich (ed)., 2007.
- Basics of clinical nutrition , Fouth edition,ESPEN,2011.
- Manual of nutritional therapeutics, Sixth edition,2015
- Oxford handbook of nutrition and dietetics, latest edition
- Food composition tables for Egypt,NNI.
- Internet based resources (, websites e.g. Pubmed, MDconsult , emedicine , medscape…

(7) Facilities and resources mandatory for course completion:

Candidates and their learning are supported in a number of ways:
Presence of data show and computer facilities, clinical placements , tutors ----

Course coordinators: Professor Omayma Saleh
Prof Maha Maher
Dr Noha Abdel Salam

Head of the department and program director Professor Tarek Gouda

Date: 11/2021