COURSE SPECIFICATION

Elective course II

Faculty of Medicine– Mansoura University

(A) Administrative information

(1) Programme offering the course:	MD of Medical Biochemistry
(2) Department offering the programme:	Medical biochemistry department
(3) Department responsible for teaching the course:	Medical biochemistry department
(4) Part of the programme:	2nd part
(5) Date of approval by the Department`s council	1/11/2015
(6) Date of last approval of programme specification by Faculty council	9/8/2016
(7) Course title:	Nutritional biochemistry
(8) Course code:	BIC 604 NB
(9) Total credit hours:	2hours

(B) Professional information

(1) Course Aims:

Educate the students about the nutritional state & energy -nutrient requirements with a special focusing on the nutritional disorders. Also to allow student to discover the potential diet therapies that cure nutritional & non- nutritional diseases.

(2) Intended Learning Outcomes (ILOs):

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

A- Knowledge and Understanding

A II-26.A	**Discuss definition of:** **A II-26.A.1** define nutritional science **A II-26.A.2** define nutrients
A II-26.B	**Explain classification of nutrients:** **A II-26.B.1** discuss macronutrients: **A II-26.B.1.a** discuss carbohydrates: **A II-26.B.1.a.1** identify dietary source **A II-26.B.1.a.2** identify daily requirements **A II-26.B.1.a.3** discuss functions **A II-26.B.1.a.4** identify dietary fibers **A II-26.B.a.4.1** define dietary fibers **A II-26.B.1.a.4.2** discuss types & sources **A II-26.B.1.a.4.3** discuss biomedical importance **A II-26.B.1.b** discuss lipids: **A II-261.B.1.b.1** identify dietary source **A II-26.B.1.b.2** identify daily requirements **A II-26.B.1.b.3** discuss functions **A II-26.B.1.b.4** discuss essential fatty acids **A II-26.B.1.b.4.1** define essential fatty acids **A II-26.B.1.b.4.2** identify examples **A II-26.B.1.b.4.3** discuss functions **A II-26.B. 1.b.4.4** discuss sources **A II-26.B.1.b.4.5** discuss daily requirements **A II-26.B.61.b.4.6** discuss deficiency **A II-26.B.1.c** discuss proteins:

	A II-26.B.1.c.1 identify dietary source **A II-26.B.1.c.2** identify daily requirements **A II-26.B.1.c.3** discuss functions **A II-26.B.1.c.4** discuss biological value of protein **A II-26.B.1.c.4.1** discuss amino-acid composition of protein **A II-26.B.1.c.4.2** identify assessment of nutritional value of protein **A II-26.B.1.c.5** discuss nitrogen balance **A II-26.B.1.c.5.1** define nitrogen balance **A II-26.B.1.c.5.2** discuss positive nitrogen balance **A II-26.B.1.c.5.3** discuss negative nitrogen balance **A II-26.B.2** discuss micronutrients: **A II-26.B.2.a** discuss vitamins **A II-26.B.2.b** discuss minerals
A II-26.C	**Discuss energy aspects of food:** **A II-26.C.1** discuss caloric value of food **A II-26.C.2** discuss respiratory quotient (RQ) **A II-26.C.3** discuss specific dynamic action (SDA) **A II-26.C.4** discuss basal metabolic rate (BMR)
A II-26.D	**Discuss balanced diet:** **A II-26.D.1** Define balanced diet **A II-26.D.2** Explain recommended daily requirements **A II-26.D.3** Discuss food groups: **A II-26.D.3.a** discuss cereals **A II-26.D.3.b** discuss milk **A II-26.D.3.c** discuss pulses/ legumes **A II-26.D.3.d** discuss vegetables **A II-26.D.3.e** discuss fruits **A II-26.D.3.f** discuss fats, oil & sweets **A II-26.D.4** Explain nutritional requirement for certain groups: **A II-26.D.4.a** discuss nutritional requirement in sedentary person **A II-26.D.4.b** discuss nutritional requirement in children

	A II-26.D.4.c discuss nutritional requirement in adolescent **A II-26.D.4.d** discuss nutritional requirement in pregnant **A II-26.D.4.e** discuss nutritional requirement in lactating **A II-26.D.5** Explain values in calories in common foods **A II-26.D.6** Explain nutritional value of food
A II-26.E	**Discuss disorders of nutrition (applied nutrition I):** **A II-26.E.1** discuss under nutrition **A II-26.E.1.a** discuss protein calorie malnutrition (marasmus, kwashiorkor & marasmic kwashiorkor) **A II-26.E.1.b** discuss starvation **A II-26.E.1.c** discuss eating disorders **A II-26.E.2** discuss over nutrition: **A II-26.E.2.a** discuss obesity
A II-26.F	**Discuss diet therapy (applied nutrition II):** **A II-26.F.1** discuss types of diet **A II-26.F.2** discuss dietary guidelines in certain disorders **A II-26.F.2.a** discuss dietary guidelines in diabetic patient **A II-26.F.2.b** discuss dietary guidelines in cardiac patient **A II-26.F.2.c** discuss dietary guidelines in hepatic patient **A II-26.F.2.d** discuss dietary guidelines in renal patient **A II-26.F.2.e** discuss dietary guidelines in anemia **A II-26.F.2.f** discuss dietary guidelines in nervous disorders **A II-26.F.2.g** discuss dietary guidelines in patients with rheumatoid arthritis **A II-26.F.2.h** discuss dietary guidelines in patients with allergy **A II-26.F.3** discuss nutritional support **A II-26.F.3.a** define nutritional support **A II-26.F.3.b** discuss nutritional needs **A II-26.F.3.c** identify types including: **A II-26.F.3.c.1** entral **A II-26.F.3.c.2** parentral

B- Intellectual skills

B1	Formulate a systematic approach for laboratory diagnosis of nutritional diseases

(3) Course content:

Subjects	No. of Teaching Hours
	Lectures
1- definition	2
2- classification of nutrients	12
3- energy aspects of food	4
4- balanced diet	4
5- disorders of nutrition (applied nutrition I)	4
6- diet therapy (applied nutrition II)	4
Total Teaching hours	30

(4) Teaching methods:

4.1: Lecture

4.2: Tutorial

4.3: Seminars

(5) Assessment methods:

5.1 :Written Examination for assessment of ILOs number knowledge and intellectual ILOs

MCQ for assessment of ILOs number knowledge and intellectual ILOs

5.2 seminars: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Assessment schedule:

Assessment 1: after 6 semesters from MD registration (written exam with marks)

Assessment 2 : MCQ exams at the end of each semester (4 semesters)

Assessment 3: the candidate should prepare and present at least one seminar in atopic related to the course and determined by the supervisors in front of the department staff (without marks).

Percentage of each Assessment to the total mark:

Written exam: 80%

MCQ exam: 20%

Other assessment without marks:, seminars and log book assessment are requirement of the 2nd part exam.

Written exam	MCQ	total
48	12	60

(5) References of the course:

6.1: Text books:

- Medical Biochemistry, 1st edition, by AR Aroor, JAYPEE BROTHERS, 2011.
- Fundementals of Biochemistry, 10th edition, by Dr A C Deb, New Central Book Agency (P) Ltd, LONDON, 2011.

6.2: Websites:

- http://www.medlib.iupui.edu/ref/biochem.htm
- The Biology Project (from the University of Arizona): http://www.biology.arizona.edu/default.html
- Harvard Department of Molecular & Cellular Biology Links: http://mcb.harvard.edu/BioLinks.html

(7)Facilities and resources mandatory for course completion:

- Lecture rooms: available in the department

Course coordinator: Stuff members of credit committee of the department.

Head of the department: Prof. DrFgr bazid

Date: 1/11/2015.