جامعة أم القرى

كلية العلوم الطبية التطبيقية

الماجستير في التغذية السريرية

4. Learning and Teaching

4/1 Learning Outcomes and Graduate Specifications

4/1/1 Main tracks or specializations covered by the program:

(a) Clinical Nutrition

4/1/2 Curriculum Study Plan Table

Level	Course Code	Course Title	Required or Elective	Prerequisite Courses	Credit Hours
Level 1	1702611-3 Nut	Regulation of Macronutrients in Human Nutrition	Required	----	3
	1702612-3 Nut	Public Health Nutrition	Required	----	3
	1702613-3 Nut	Micronutrients Metabolism	Required	----	3
Level 2	1702621-3 Nut	Research Methods in Clinical Nutrition	Required	1702612-3 Nut	3
	1702622-3Nut	Advanced Nutritional Assessment	Required	1702611-3 Nut	3
	1702623-3 Nut	Exercise Physiology	Required	1702611-3 Nut	3
	1702624-2 Nut	Nutritional Genomics	Required	1702613-3 Nut	2
Level 3	1702631-2 Nut	Applied Biostatistics	Required	1702621-2 Nut	2
	1702632-1 Nut	Seminar	Required	1702621-2 Nut	1
	1702633-3 Nut	Advanced Clinical Nutrition: Critical Care and Nutrition Support	Required	1702622-3 Nut	3
	1702634-2 Nut	Sports Nutrition	Required	1702623-3 Nut	2
	1702635-3 Nut	Obesity and Weight Management	Required	1702611-3 Nut	3
Level 4	1702641-3 Nut	Endocrine Disorders	Required	1702611-3 Nut	3
	1702642-3 Nut	Oncology Nutrition	Required	1702622-3 Nut	3
	1702643-3 Nut	Advanced Clinical Nutrition: Pediatrics	Required	1702622-3 Nut	3
	1702644-3 Nut	Research Project	Required	1702631-2 Nut	3

4/1/4. Course Specification:

COURSE SPECIFICATION

Form

Course Title: Regulation of Macronutrients in Human Nutrition

Course Code: 1702611-3 Nut

Date: 2018-11-11	**Institution:** Umm Al-Qura University
College: Applied Medical Sciences	**Department:** Clinical Nutrition

A. Course Identification and General Information

1. Course title and code: **Regulation of Macronutrients in Human Nutrition / 1702611-3 Nut**
2. Credit hours: **3 h**
3. Program(s) in which the course is offered: **Master of Clinical Nutrition**
4. Name of faculty member responsible for the course: **Dr. Mazen Ghaith and Dr. Seham Zahran**
5. Level/year at which this course is offered: **Level 1 (1st years / 1st Semester)**
6. Pre-requisites for this course (if any): **None**
7. Co-requisites for this course (if any): **None**
8. Location if not on main campus: **Main Campus**
9. Mode of Instruction (mark all that apply):

a. Traditional classroom	√	percentage?	60%
b. Blended (traditional and online)		percentage?	
c. E-learning		percentage?	
d. Correspondence		percentage?	
f. Other	√	percentage?	40%

Comments:

An academic semester contains 15 weeks of instruction. Students enrolled in this course whose mode of instruction is lectures and discussion sessions based should expect to have 15 hours of class contact over the length of the semester for each hour of credit.

B Objectives

1. The main objective of this course

The objective of this advanced course is to study the regulation of dietary carbohydrate, lipid, and protein metabolism and their relation to health. Recent researches and evidenced-based nutrition recommendations on energy metabolism disorders (obesity, diabetes, and starvation) will be incorporated.

2. Describe briefly any plans for developing and improving the course that are being implemented. (e.g. increased use of the IT or online reference material, changes in content as a result of new research in the field)

1. Increased use of IT or web-based reference material.
2. Changes in content because of new research in the field.

C. Course Description (Note: General description in the form used in the program's bulletin or handbook)

Course Description:

This course will provide students with key concepts of macronutrients metabolic regulation in the context of human nutrition and whole body metabolism. Students will learn how the different nutrients are used by the body to maintain energy homeostasis. The focus will be on biochemical reactions that take place in cells, how these reactions are influenced and regulated by the different nutrients and what the consequences are for the whole body.

The emphasis will be on the systems within the human body which sense the balance of energy coming in and energy required, particularly the endocrine (hormonal) and the nervous systems, and which regulate the distribution and storage of nutrients after meals, and their release from stores and delivery to individual tissues as required.

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
The Underlying Principles of Human Metabolism	1	3
Cellular Mechanisms Involved in Metabolic Regulation	1	3
Digestion and Intestinal Absorption	1	3
Longer-Term Regulation of Metabolism	2	6

Important Endocrine Organs and Hormones	1	3
Integration of Carbohydrate, Fat, and Protein Metabolism in Normal Daily Life	2	6
The Nervous System and Metabolism	1	3
Coping with Some Extreme Situations	2	6
Lipoprotein Metabolism	1	3
Diabetes Mellitus	1	3
Energy Balance and Body Weight Regulation	2	6

2. Course components (total contact and credit hours per semester):

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other	Total
Contact Hours	Planned	45					45
	Actual	45					45
Credit	Planned	3					3
	Actual	3					3

3. Individual study/learning hours expected for students per week. 3

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategies

On the table below are the five NQF Learning Domains, numbered in the left column.

First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and targeted learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy should fit in together with the rest to form an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

Curriculum Map

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	**Knowledge**		
1.1	Describe the principles and advanced of human metabolic regulation.	1. Lectures. 2. Class discussion.	1. Short assays exam.
1.2	Define the human metabolic regulation in the		

	context of over- and under-nutrition in health and disease.	3. Small group discussion. 4. Guided self-learning.	2. Multiple-choice exam. 3. Lecture quizzes. 4. Assignments.
1.3	Recognize the endocrine organs and hormones and their biological value.		
1.4	Determine the role of nervous system in the regulation of nutrients metabolism.		
1.5	Describe a broad and in-depth coverage of lipoprotein metabolism.		
1.6	Determine how the different nutrients are used by the body to maintain energy homeostasis.		
2.0	**Cognitive Skills**		
2.1	Clarify the physiological costs and metabolic health implications of consuming inappropriate diets.	1. Examples of case study which given in the lecture. 2. Problem-based case study. 3. Problem solving. Small group discussion.	1. Problem solving question 2. Multiple-choice exam. 3. Problem solving questions. 4. Assignments.
2.2	Explain the digestion and metabolism of the macronutrients (carbohydrates, lipids, protein).		
2.3	Identify, explain and discuss the main metabolic pathways and how they are regulated.		
2.4	Use the obtained knowledge to examine energy production and metabolic regulation.		
3.0	**Interpersonal Skills & Responsibility**		
3.1	Analyze information from a variety of sources to gain a coherent understanding of the close link between nutrition and health.	1. Students will be assigned into small groups and make free discussions. 2. Class presentation. 3. Group discussion.	Assessment of student through regular assignments, quizzes and final exams.
3.2	Use the obtained information to improve responsibility for their own learning and continuing personal development.		
4.0	**Communication, Information Technology, Numerical**		
4.1	Appraise appropriate information related to nutrition and health from key scientific sources.	Students are required to make report and case study assignments requiring proper style and reference format.	Assessment of student assignments.
4.2	Criticize, assess and perform effective communication with peers and teaching faculty.		

5. Assessment Task Schedule for Students During the Semester

	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	Assignments	All the term	10%
2	Midterm Exam	8th week	30%
4	Presentation	16th week	10%
5	Final written Exam	17th week	50%

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic counseling. (include the time teaching staff are expected to be available per week) • Staff will be available for individual student counseling and advice. • 4 office hours/week/faculty member

E Learning Resources

1. List Required Textbooks • Metabolic Regulation: A Human Perspective, Third Edition, 2010. By Keith N. Frayn. • Advanced Nutrition and Human Metabolism, 7th Edition, 2018. By Sareen S. Gropper, Jack L. Smith, Timothy P. Carr.
2. List Essential References Materials (Journals, Reports, etc.) American Journal of Clinical Nutrition, J. of Human Nutrition and Dietetics, J. of Nutritional Biochemistry, J. of Nutrition and Health.
3. List Electronic Materials, Web Sites, Facebook, Twitter, etc. N/A
4. Other learning material such as computer-based programs/CD, professional standards or regulations and software. N/A

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access, etc.)
1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.) • Classrooms
2. Technology resources (AV, data show, Smart Board, software, etc.) • Data show
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list) N/A

G Course Evaluation and Improvement Procedures

1. Strategies for Obtaining Student's Feedback on Effectiveness of Teaching • Confidential completion of standard course evaluation questionnaire
2. Other Strategies for Evaluation of Teaching by the Instructor or the Department • Observations and assistance from colleagues. • Independent assessment of standards achieved by students.

• Independent advice on assignment tasks
3. Procedures for Teaching Development • Workshops on teaching methods, review of recommended teaching strategies.
4. Procedures for Verifying Standards of Student's Achievement (e.g. check marking by an independent member teaching staff of a sample of student's work, periodic exchange and remarking of tests or a sample of assignments with staff members at another institution) • Check marking by another teaching staff of a sample of student work. • Peer reviewing of tests remarking and sample of student assignments.
5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for developing it. • Regular evaluation of students' feedbacks and other feedbacks from peer reviewers and other independent staff. • Annual improvement and updating of the course based on the outcome of the reviewing process.

Name of Course Instructors: Dr. Mazen Ghaith and Dr. Seham Zahran

Signature: _____ **Date Completed: 11/11/2018**

Program Coordinator: Dr. Firas Azzeh

Signature: _____ **Date Received: 11/11/2018**

COURSE SPECIFICATION

Form

Course Title: Public Health Nutrition

Course Code: 1702612-3 Nut

Date: 2018-11-11	**Institution:** Umm Al-Qura University
College: Applied Medical Sciences	**Department:** Clinical Nutrition

A. Course Identification and General Information

1. Course title and code: **Public Health Nutrition/ 1702612-3 Nut**
2. Credit hours: **3 h**
3. Program(s) in which the course is offered: **Master of Clinical Nutrition**
4. Name of faculty member responsible for the course: **Dr. Alaa Qadi**
5. Level/year at which this course is offered: **Level 1 (1st years / 1st Semester)**
6. Pre-requisites for this course (if any): **None**
7. Co-requisites for this course (if any): **None**
8. Location if not on main campus: **Main Campus**
9. Mode of Instruction (mark all that apply):

a. Traditional classroom	√	percentage?	60%
b. Blended (traditional and online)		percentage?	
c. E-learning		percentage?	
d. Correspondence		percentage?	
f. Other	√	percentage?	40%

Comments:
An academic semester contains 15 weeks of instruction. Students enrolled in this course whose mode of instruction is lectures and discussion sessions based should expect to have 15 hours of class contact over the length of the semester for each hour of credit.

B Objectives

1. The main objective of this course

The main purposes for this course are:

- to provide students with an understanding of the main concepts, principles and contemporary issues used in public health,
- to develop student's ability to evaluate public health strategies, including needs assessment as well as appreciate the ethical and moral implications in the development of public health policies and strategies,
- to provide students with the qualities and transferable skills necessary for employment requiring: the exercise of initiative and personal responsibility; decision making in complex and unpredictable contexts; and, the learning ability needed to undertake appropriate further training of a professional or equivalent nature.

2. Describe briefly any plans for developing and improving the course that are being implemented. (e.g. increased use of the IT or online reference material, changes in content as a result of new research in the field)

- Using audio and video material related to each topic as appropriate
- Encouraging students to collect obesity problems from web-based reference material

C. Course Description (Note: General description in the form used in the program's bulletin or handbook)

Course Description:

This course develops the knowledge and skills of public health nutrition and how the philosophy of public health relates to epidemiology. Students will study the frameworks used to examine public health issues and examine key historical and current public health nutrition challenges and policies.

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
Basics of epidemiology and the application to public health practice	1	3
Needs assessment of communities and populations	1	3
Dietary guidelines, tools for measuring dietary intake	1	3
Public Health Nutrition issues to consider during the life-cycle: Pregnancy, infants, children and adolescents	1	3
Public Health Nutrition issues to consider during the life-cycle: Adults and elderly (nutrition in aging)	1	3
Factors influencing dietary behaviors: focus on environments	1	3

Public Health Nutrition intervention strategies both individual (such as supplementation) and ecological (such as fortification, social marketing) and policies	1	3
Research designs to examine public health nutrition questions	1	3
Public Health Nutrition Cycle: Focus on program evaluation.	1	3
Public Health Nutrition Challenges: Focus on undernutrition and hunger.	1	3
Public Health Nutrition Challenges: Focus on obesity, type-2 diabetes, sickle cell disease and cardiovascular diseases.	1	3
Public health nutrition intervention policies and strategies such as taxation, fortification, labelling, and media campaigns.	2	6
Describe and apply the public health nutrition cycle which include need assessment, setting objectives, creating quantities target, developing nutrition program, and implementation and evaluation (process and outcome).	2	6

2. Course components (total contact and credit hours per semester):

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other	Total
Contact Hours	Planned	45					45
	Actual	45					45
Credit	Planned	3					3
	Actual	3					3

3. Individual study/learning hours expected for students per week. 3

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategies

On the table below are the five NQF Learning Domains, numbered in the left column.

First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and targeted learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy should fit in together with the rest to form an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

Curriculum Map

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	**Knowledge**		
1.1	Describe the fundamental nutritional concepts and contemporary topics used in public health.	Lectures Class discussion Small group discussion. Guided self-learning	Short essays exam Multiple-choice exam Report assignment
1.2	Define important nutritional issues to consider during the life-cycle.		

1.3	Recognize a comprehensive understanding of how to undertake a needs assessment, plan, implement, monitor and evaluate a public health strategy.		
1.4	Determine the benefits and functions of each strategies.		
1.5	Define the tools available to screen dietary intake at a population level.		
1.6	Identify the necessary knowledge to plan, implement and evaluate public health nutrition intervention strategies and policies.		
2.0	**Cognitive Skills**		
2.1	Explain in the design and evaluation of a public health strategy.	Problem solving cases Enhancing the thinking strategies through using brain storming sessions while discussing the topics Small group discussion	Oral discussion Multiple-choice exam and Short essays exam Report assignment
2.2	Assess the benefits of the evaluation of public health nutrition.		
2.3	Appraise current public health policies and strategies in the provision of health and social care and how this relates to the public health model.		
2.4	Develop and evaluate public health approaches, including needs assessment in the development of public health policies and approaches.		
3.0	**Interpersonal Skills & Responsibility**		
3.1	Show positive relation with others.	Team projects Debates Workshops	Instructor's assessment of student's performance
3.2	Work in groups.		
3.3	Show the ability to lead a team.		
3.4	Critical review of the scientific literature related to various topics in nutrition.		
4.0	**Communication, Information Technology, Numerical**		
4.1	Criticize, assess and perform effective communication with peers and teaching faculty.	Requesting the students to prepare oral presentations Use the internet to solve the problem-based learning (PBL)	Assessment of students reports
4.2	Operate technology in analyzing data and information.		
4.3	Evaluate, synthesize and summarize public health nutrition questions critically.		
4.4	Critically appraise epidemiological findings related to main diseases in KSA, regionally and internationally.		

5. Assessment Task Schedule for Students During the Semester

	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	Assignments	All the term	10%
2	Midterm Exam	9th week	30%
4	Presentation	16th week	10%
5	Final written Exam	17th week	50%

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic counseling. (include the time teaching staff are expected to be available per week) • Weekly office hours (8 hours per week) • Feedback for each student • Providing weekly guidelines on students' overall performance

E Learning Resources

1. List Required Textbooks 1- Gibney et al (2004) Public health nutrition Imprint Oxford, UK ; Ames, Iowa : Blackwell Science. 2- Judith L. Buttriss, Ailsa A. Welch. (2017). Public Health Nutrition (The Nutrition Society Textbook), 2nd edition. 3- Claudia Parvanta, David E. Nelson, Richard N. Harner. (2018). Public Health Communication: Critical Tools and Strategies.
2. List Essential References Materials (Journals, Reports, etc.) • Public Health Nutrition Journal.
3. List Electronic Materials, Web Sites, Facebook, Twitter, etc. N/A
4. Other learning material such as computer-based programs/CD, professional standards or regulations and software. N/A

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access, etc.)
1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.) • Lecture room
2. Technology resources (AV, data show, Smart Board, software, etc.) • Computer room containing at least 15 systems • Projector system • Smart board.
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list) N/A

G Course Evaluation and Improvement Procedures

1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching
   - Course evaluation by student
   - Classroom observations to measure Student Behavior through how well the student groups are interacting in-class activity and how well the in-class activity went.
   - Quality of classroom discussions and interactions between students and faculty.
   - Assignment to measure Student Cognitive skills
   - Student surveys
   - One to one contact during office hours
   - Analysis of exam results.

2. Other Strategies for Evaluation of Teaching by the Instructor or by the Department:
   - An evaluation questionnaire sheet is collected from all students and analyzed.
   - Student grading and achievements.

3. Processes for Improvement of Teaching
   - Conducting workshops given by experts on the teaching, learning methodologies and recommended teaching strategies
   - Periodical departmental revisions of methods of teaching
   - Monitoring of teaching activates by senior faculty members
   - Attending annual seminars and conferences in KSA
   - Taking online professional development programs.
   - Analysis of students' feedback.
   - Analysis of test results.
   - Recommendations from the College.
   - Training sessions
   - Encouragement of faculty members to attend professional development conferences
   - Set goals for achieving excellence in teaching at the beginning of each new semester after reviewing last semester's teaching strategies and results

4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution)
   - Providing samples of all kind of assessment in the departmental course portfolio of each course
   - Assigning group of faculty members teaching the same course to grade same questions for various students. Faculty from other institutions are invited to review the accuracy of the grading policy
   - Conducting standard exams such as the other international universities exams.
   - Exchange and remarking of students' exams can be done in the department.
   - Check marking of a sample of examination papers

5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.
   - The course material and learning outcomes are periodically reviewed and the changes to be taken are approved in the departmental and higher councils.
   - The head of department and faculty take the responsibility of implementing the proposed changes.
   - Students' survey

Name of Course Instructor: Dr. Alaa Qadi

Signature: _____ **Date Completed: 11/11/2018**

Program Coordinator: Dr. Firas Azzeh

Signature: _____ **Date Received: 11/11/2018**

COURSE SPECIFICATION

Form

Course Title: Micronutrients Metabolism

Course Code: 1702613-3 Nut

Date: 2018-11-11	**Institution:** Umm Al-Qura University
College: Applied Medical Sciences	**Department:** Clinical Nutrition

A. Course Identification and General Information

1. Course title and code: **Micronutrients Metabolism / 1702613-3 Nut**
2. Credit hours: **3 h**
3. Program(s) in which the course is offered: **Master of Clinical Nutrition**
4. Name of faculty member responsible for the course: **Dr. Firas Azzeh**
5. Level/year at which this course is offered: **Level 1 (First year/ First semester)**
6. Pre-requisites for this course (if any): **None**
7. Co-requisites for this course (if any): **None**
8. Location if not on main campus: **Main Campus**
9. Mode of Instruction (mark all that apply):

a. Traditional classroom	√	percentage?	60%
b. Blended (traditional and online)		percentage?	
c. E-learning		percentage?	
d. Correspondence		percentage?	
f. Other	√	percentage?	40%

Comments:
An academic semester contains 15 weeks of instruction. Students enrolled in this course whose mode of instruction is lectures and discussion sessions based should expect to have 15 hours of class contact over the length of the semester for each hour of credit.

B Objectives

1. The main objective of this course

At the end of this course, the student must be able:

- To know the prevalence of micronutrients deficiencies locally and internationally,
- To know in-depth the physiological and biochemical aspects of vitamins and minerals,
- To recognize their functions, requirements, deficiency signs and toxicity,
- To understand the nutritional status assessment methodologies for vitamins and minerals,
- To identify the therapeutic uses of the vitamins and minerals supplements.

2. Describe briefly any plans for developing and improving the course that are being implemented. (e.g. increased use of the IT or online reference material, changes in content as a result of new research in the field)

- Using audio and video material related to each topic as appropriate
- Encouraging students to collect obesity problems from web-based reference material

C. Course Description (Note: General description in the form used in the program's bulletin or handbook)

Course Description:

An advanced level study of the physiological and biochemical aspects of vitamins and minerals, emphasizing their nutritional and pharmaceutical interactions and associated effects on their functions, requirements, deficiency signs and toxicity.

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
Vitamins Vitamin A and retinoids Vitamin D	2	6
Vitamin E Vitamin K	1	3
Thiamin Riboflavin Niacin	1	3
Vitamin B_6 Pantothenic acid Biotin	1	3
Folic acid Vitamin B_{12}	2	6
Vitamin C	1	3

Minerals Electrolytes Calcium Phosphorus	2	6
Magnesium Iron Copper	2	6
Zinc Iodine Selenium	2	6
Chromium Ultra-trace minerals	1	3

2. Course components (total contact and credit hours per semester):

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other	Total
Contact Hours	Planned	45					45
	Actual	45					45
Credit	Planned	3					3
	Actual	3					3

3. Individual study/learning hours expected for students per week. 3

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategies

On the table below are the five NQF Learning Domains, numbered in the left column.
First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and targeted learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy should fit in together with the rest to form an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

Curriculum Map

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	**Knowledge**		
1.1	Describe an advanced physiological and biochemical aspects of vitamins and minerals.	Lectures Class discussion Small group discussion. Guided self-learning	Short essays exam Multiple-choice exam Report assignment
1.2	Identify current prevalence of micronutrients deficiencies locally and internationally.		
1.3	Recognize the vitamins and minerals functions, requirements, deficiency signs and toxicity.		
1.4	Describe methods used in determining vitamins and minerals.		
1.5	Identify the therapeutic uses of the vitamins and minerals supplements.		

2.0	**Cognitive Skills**		
2.1	Explain the functions and metabolism of micronutrients and describe their role in the different metabolic pathways.	Problem solving cases Enhancing the thinking strategies through using brain storming sessions while discussing the topics Small group discussion	Oral discussion Multiple-choice exam and Short essays exam Report assignment
2.2	Assess the nutritional requirements of micronutrients for different diseases.		
2.3	Discuss the emerging therapies related to micronutrients deficiencies.		
3.0	**Interpersonal Skills & Responsibility**		
3.1	Show positive relation with others.	Team projects Debates Workshops	Instructor's assessment of student's performance
3.2	Work in a group.		
4.0	**Communication, Information Technology, Numerical**		
4.1	Choose the literatures from the web to present oral presentation	Requesting the students to prepare oral presentations Use the internet to solve the problem-based learning (PBL)	Assessment of students reports
4.2	Operate the internet to cope with the course demand.		

5. Assessment Task Schedule for Students During the Semester

	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	Assignments	All the term	10%
2	Midterm Exam	10th week	30%
4	Presentation	16th week	10%
5	Final written Exam	18th week	50%

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic counseling. (include the time teaching staff are expected to be available per week)

- Weekly office hours (8 hours per week)
- Feedback for each student
- Providing weekly guidelines on students' overall performance

E Learning Resources

1. List Required Textbooks

- The Real Vitamin and Mineral Book: The Definitive Guide to Designing Your Personal Supplement Program. 4th edition, 2007. By Nancy Pauling Bruning.
- Modern Nutrition in Health and Disease, 11th edition, 2012. [Chapters: 7-30]. Author(s): A. Catharine Ross, Benjamin Caballero, Robert J. Cousins, Katherine L. Tucker, Thomas R. Ziegler.
- Advanced Nutrition and Human Metabolism, 7th Edition, 2018. By Sareen S. Gropper, Jack L.

Smith, Timothy P. Carr.
2. List Essential References Materials (Journals, Reports, etc.) • American Journal of Clinical Nutrition • International Journal for Vitamin and Nutrition Research • British Journal of Nutrition. • Reviews in Food Sciences &Nutrition. • Journal of Nutrition & Environmental Medicine. • Nutrition Reviews.
3. List Electronic Materials, Web Sites, Facebook, Twitter, etc. • www.eatright.org (American Dietetic Association) • www.dietitians.ca (Dietitians of Canada) • www.pubmed.com (Research articles)
4. Other learning material such as computer-based programs/CD, professional standards or regulations and software. N/A

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access, etc.)
1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.) • Lecture room
2. Technology resources (AV, data show, Smart Board, software, etc.) • Computers in lecture rooms so that the Internet can be used to help students collect or retrieve information • Projector system • Smart board.
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list) N/A

G Course Evaluation and Improvement Procedures

1. Strategies for Obtaining Student's Feedback on Effectiveness of Teaching • Course evaluation by student • Classroom observations to measure Student Behavior through how well the student groups are interacting in-class activity and how well the in-class activity went. • Quality of classroom discussions and interactions between students and faculty. • Assignment to measure Student Cognitive skills • Student surveys • One to one contact during office hours
2. Other Strategies for Evaluation of Teaching by the Instructor or the Department • Peer consultation on teaching

- Departmental council discussions
- Discussions within the group of faculty teaching the course
- Constant evaluation by program's coordinator
- Semester evaluation by College administrators.

3. Procedures for Teaching Development

- Conducting workshops given by experts on the teaching, learning methodologies and recommended teaching strategies
- Periodical departmental revisions of methods of teaching
- Monitoring of teaching activates by senior faculty members
- Attending annual seminars and conferences in KSA
- Taking online professional development programs.
- Analysis of students' feedback.
- Analysis of test results.
- Recommendations from the College.
- Training sessions
- Encouragement of faculty members to attend professional development conferences

4. Procedures for Verifying Standards of Student's Achievement (e.g. check marking by an independent member teaching staff of a sample of student's work, periodic exchange and remarking of tests or a sample of assignments with staff members at another institution)

- Providing samples of all kind of assessment in the departmental course portfolio of each course
- Assigning group of faculty members teaching the same course to grade same questions for various students. Faculty from other institutions are invited to review the accuracy of the grading policy
- Conducting standard exams such as the other international universities exams.
- Exchange and remarking of students' exams can be done in the department.
- Check marking of a sample of examination papers

5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for developing it.

- The course material and learning outcomes are periodically reviewed and the changes to be taken are approved in the departmental and higher councils.
- The head of department and faculty take the responsibility of implementing the proposed changes.
- Students' survey

Name of Course Instructor: Dr. Firas Azzeh

Signature: _____ **Date Completed: 11/11/2018**

Program Coordinator: Dr. Firas Azzeh

Signature: _____ **Date Received: 11/11/2018**

COURSE SPECIFICATION

Form

Course Title: Research Methods in Clinical Nutrition

Course Code: 1702621-3 Nut

Date: 2018-11-11	**Institution:** Umm Al-Qura University
College: Applied Medical Sciences	**Department:** Clinical Nutrition

A. Course Identification and General Information

1. Course title and code: **Research Methods in Clinical Nutrition/ 1702621-3 Nut**
2. Credit hours: **3 h**
3. Program(s) in which the course is offered: **Master of Clinical Nutrition**
4. Name of faculty member responsible for the course: **Dr. khloud Khafouri and Dr. Emad Tashkandi**
5. Level/year at which this course is offered: **Level 1 (1st year/ 1st Semester)**
6. Pre-requisites for this course (if any): **None**
7. Co-requisites for this course (if any): **None**
8. Location if not on main campus: **Main Campus**
9. Mode of Instruction (mark all that apply):

a. Traditional classroom		percentage?	
b. Blended (traditional and online)	√	percentage?	60%
c. E-learning		percentage?	
d. Correspondence		percentage?	
f. Other	√	percentage?	40%

Comments:
An academic semester contains 15 weeks of instruction. Students enrolled in this course whose mode of instruction is lectures, tutorials, group work and discussion sessions based should expect to have 15 hours of class contact over the length of the semester for each hour of credit.

B Objectives

1. The main objective of this course

At the end of this course, the students are able

- To understand research terminology in clinical nutrition,
- To recognize the ethical principles of research, ethical challenges and approval processes in dietetic practice
- To choose the proper study design and technique for their own research,
- To critically analyze published research in dietetic field.

2. Describe briefly any plans for developing and improving the course that are being implemented. (e.g. increased use of the IT or online reference material, changes in content as a result of new research in the field)

- Increased use of the IT or online reference material, changes in content as a result of new research in the field.

C. Course Description (Note: General description in the form used in the program's bulletin or handbook)

Course Description:

This course will provide an opportunity for participants to establish or advance their understanding of research through critical exploration of research language, ethics, and approaches. The course introduces the language of research, ethical principles and challenges, and the elements of the research process within quantitative, qualitative, and mixed methods approaches. Participants will use these theoretical underpinnings to begin to critically review literature relevant to their field or interests and determine how research findings are useful in forming their understanding of their work, social, local and global environment.

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
1. Introduction to nutrition research (NR) and the research process in nutritional sciences from clinical and public health prospective	1	3
2. Formulating research question and Literature Search, Critical Thinking, Critical reading of a research article and Journal club	1	3
3. Ethical and Safety Considerations • Animal Ethics • Human Ethics • Health and Safety	1	3

4. Types of Research Basic and applied research, Qualitative and Quantitative research (brief review of differences) • Historical research • Descriptive research methods – survey, case study, correlation study, content analysis, causal-comparative research • Analytic studies- pre-experimental, experimental research, quasi experimental research • Qualitative research, ethnography • Evaluative research- general characteristics, use of qualitative methods in enquiry	2	6
5. Mixed methods research (study designs, methods and data interpretation)	1	3
6. Methods to determine dietary intake	1	3
7. Food composition techniques and analysis	1	3
8. Biomarkers of intake	1	3
9. Consideration for including different population groups in NR	1	3
10. Methods for assessing food related behavior	1	3
11. Animals models and nutrition research	1	3
12. Translation of NR	1	3
13. Reporting Results • Oral and Poster Presentations • Writing and Publishing the Paper • Media Reports	1	3
14. Academic writing and Writing a research proposal, plagiarism and citation.	1	3

2. Course components (total contact and credit hours per semester):

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other	Total
Contact Hours	Planned	45					45
	Actual	45					45
Credit	Planned	3					3
	Actual	3					3

3. Individual study/learning hours expected for students per week. 3 H

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategies

On the table below are the five NQF Learning Domains, numbered in the left column.

First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and targeted learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and

teaching strategy should fit in together with the rest to form an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

Curriculum Map

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	**Knowledge**		
1.1	Define the types of research studies in nutrition.	Lecture, activity session, small group discussion, and tutorials	Course work and assignment
1.2	Select the appropriate research design for desired research in nutrition field.		
	Recognize the components of research proposal.		
2.0	**Cognitive Skills**		
2.1	Differentiate between quantitative, qualitative and mixed methods in research.	Lecture, case studies and small group discussion	Course work and assignment
2.2	Analyzing Research Problems.		
2.3	Plan proper study design and technique for their own research.		
3.0	**Interpersonal Skills & Responsibility**		
3.1	Analysis and interpretation of data.	Small group discussion, research activities.	Course work and assignment
3.2	Show the ability to lead a team.		
4.0	**Communication, Information Technology, Numerical**		
4.1	Criticize about scientific problems and their solutions, both orally and in written.	Lectures, individual and group presentation	Writing assessment, presentation and group discussion
4.2	Operate information technology to obtain information		

5. Assessment Task Schedule for Students During the Semester

	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	Designing 3 Studies in a short text (500 words)	6th, 10th and 14th	45%
2	Preparation and participation	During the term	10%
3	In-class exercises	During the term	45%

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic counseling. (include the time teaching staff are expected to be available per week)
- Five hours per week.

E Learning Resources

List Required Textbooks

- Creswell, J. W (2018). *Research design: Qulaitative, quantitative and mixed methods approaches*. 5th edn. Thousand Oaks, CA: Sage publications.
- Nutrition Research: Concepts and Applications, 1st Edition, 2018. Karen E. Drummond and Alison Murphy-Reyes
- Flick, U (2011). *Introducing Research Methodology: A beginner's guide to doing a research*

project. SAGE publications.

- Kumar, R (2010). *Research Methodology: a step-by-step guide for beginners,* 3rd edn, Sage Publications.
- Bell, J (2010) *Doing Your Research Project: a guide for first-time researches in education, health and social science*, 5th edn, Open University Press.
- Dowson, C (2002) *Practical Research Methods: A user friendly guide to mastering research*, Cromwell Press, Trowbridge, Wiltshire.

1. List Essential References Materials (Journals, Reports, etc.)

- Access to digital libraries (e.g., Umm Al Qura University digital library)
- http://services.unimelb.edu.au
- Online journals
- Online books

2. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

- PubMed: www.pubmed.com
- Google scholar: www.google.scholar.com
- www.google.com
- Publishers website (e.g., BioMed Central): www.biomedcentral.com
- Directories of open access journals (e.g., DOAJ, free medical journals) www.doaj.org.
- Free medical journals: www.freemedicaljournals.com
- www.pubmedcentral.nih.gov.
- Websites of scientific/health organizations (e.g. WHO, CDC, NIH)
- www.who.int
- www.cdc.gov
- www.nih.gov
- https://www.monash.edu/
- https://www.monash.edu/rlo/

3. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

- Computer based program for data analysis (e.g., Excel, SPSS, GraphPad Prism, EPI-info etc)
- Reference management program (e.g., Endnote)

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access, etc.)
1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.) • Classrooms • Computer Laboratories
2. Technology resources (AV, data show, Smart Board, software, etc.) • Data show • Software
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list) N/A

G Course Evaluation and Improvement Processes

1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching • Students surveys. • Teacher-student discussions.
2. Other Strategies for Evaluation of Teaching by the Instructor or by the Department • Annual evaluation by departmental chair. • Peer evaluation
3. Processes for Improvement of Teaching • Implementing professional faculty development workshops by experts in sport nutrition education. • Enhancing the use of the available smart boards. • Emphasizing the interactive use of the blackboard e-learning.
4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution) • Check marking by another teaching staff of a sample of student work. • Peer reviewing of tests remarking and sample of student assignments
5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement. • Regular preparation of the course report annually and analysis of the students results to determine the points of weakness and establish suitable plans to avoid such weaknesses in the future.

Name of Course Instructor: Dr. Khloud Ghafouri and Dr. Emad Tashkandi

Signature: _____ **Date Completed: 11/11/2018**

Program Coordinator: __Dr. Firas Azzeh

Signature: _____ **Date Received: 11/11/2018**

COURSE SPECIFICATION

Form

Course Title: Advanced Nutritional Assessment

Course Code: 1702622-3 Nut

Date: 2018-11-11	**Institution:** Umm Al-Qura University
College: Applied Medical Sciences	**Department:** Clinical Nutrition

A. Course Identification and General Information

1. Course title and code: **Advanced Nutritional Assessment/ 1702622-3 Nut**
2. Credit hours: **3 h**
3. Program(s) in which the course is offered: **Master of Clinical Nutrition**
4. Name of faculty member responsible for the course: **Dr. Sayed Hamed and Dr. Abdelelah Jazar**
5. Level/year at which this course is offered: **Level 2 (First year/ Second semester)**
6. Pre-requisites for this course (if any): **Regulation of Macronutrients in Human Nutrition**
7. Co-requisites for this course (if any): **None**
8. Location if not on main campus: **Main Campus**
9. Mode of Instruction (mark all that apply):

a. Traditional classroom	√	percentage?	60%
b. Blended (traditional and online)		percentage?	
c. E-learning		percentage?	
d. Correspondence		percentage?	
f. Other	√	percentage?	40%

Comments:
An academic semester contains 15 weeks of instruction. Students enrolled in this course whose mode of instruction is lectures, practical and discussion sessions based should expect to have 15 hours of class contact over the length of the semester for each hour of credit for theoretical part and 30 hours practices for practical part.

B Objectives

1. The main objective of this course

This course is aiming to study of indicators and criteria used in the assessment of the nutritional status at the individual and community levels, including measurements of anthropometry, biochemical data, dietary intakes, health statistics and socioeconomic data; the interpretation of results and proposing solutions for improving the nutritional status.

2. Describe briefly any plans for developing and improving the course that are being implemented. (e.g. increased use of the IT or online reference material, changes in content as a result of new research in the field)

1- use the most updating paper in this field as a review.

2- use IT and computerized program in calculating for dietary analysis system on the internet.

C. Course Description (Note: General description in the form used in the program's bulletin or handbook)

Course Description:

This advanced course covers the nutritional assessment for healthy individuals and in different chronic diseases, with emphasizing on computerized dietary analysis systems, assessment of the hospitalized patients, and learning how to interpret the biochemical tests with their relationship to nutrition diagnosis.

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours	Practical Part
Nutritional assessment Overview Nutritional assessment methods, importance of nutritional assessment, opportunities in nutritional assessment in health and disease.	1	3	Nutrition Care Process (NCP)
Measuring diet techniques in measuring diet.	2	6	Dietary Intake Methodologies
Computerized dietary analysis system Using computer software programs in nutritional assessment, factors to consider in selecting a computerized dietary analysis system, program operation, system output, dietary analysis on the internet.	1	3	Dietary Assessment by computer software program

Biochemical assessment of nutritional status Protein status, immunocompetence and iron statues.	1	3	Interpretation of physical examination and lab parameters
Biochemical assessment of nutritional status Menials and vitamin status and blood chemistry	1	3	Interpretation of physical examination and lab parameters
Anthropometric Assessment Assessment of Growth, Fat-Free Mass and Body Fat	1	3	Body composition and muscle wasting determination by DEXA
Maternal Nutritional Assessment Clinical and anthropometric evaluation, dietary evaluation, laboratory studies, clinical implications, assessment for nutritional status – related disorders in women during pregnancy	1	3	Case study
Nutritional assessment of the hospitalized patients Assessing nutritional status, determining energy requirements, estimating energy needs, determining protein requirements, nutrition screening initiative	1	3	Subjective Global Assessment (SGA) for Hospitalized patients
Nutritional assessment in diseases management Hypertension and Coronary heart disease	1	3	Case study
Nutritional assessment in diseases management Gastrointestinal Tract Disorders	1	3	Case study
Nutritional assessment in diseases management Hepatobiliary and Pancreatic Disorders	1	3	Case study
Nutritional assessment in diseases management Diabetes Mellitus	1	3	Case study
Nutritional assessment in diseases management Endocrine Disorders	1	3	Case study
Nutritional assessment in diseases management Osteoporosis and kidney diseases	1	3	Case study

2. Course components (total contact and credit hours per semester):

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other	Total
Contact Hours	Planned	30			15		45
	Actual	30			30		60
Credit	Planned	2			1		3
	Actual	2			2		3

3. Individual study/learning hours expected for students per week. 3

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategies

On the table below are the five NQF Learning Domains, numbered in the left column.
First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and targeted learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy should fit in together with the rest to form an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

Curriculum Map

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	**Knowledge**		
1.1	Recognize the knowledge of fundamental concepts in nutritional assessment at the individual and community levels.	1- Lectures. 2- Conduct scientific research and the follow-up of all new topics. 3- Seminars. 4- Class work and in class discussions.	1-Short tests and quizzes. 2-Homework. 3-Research. 4-Exams.
1.2	Define the theoretical basis of different dietary intake methodologies.		
1.3	Describe the methods used to assess body composition.		
1.4	List the biochemical measures used for nutritional assessment.		
1.5	Name the suitable method in assessing the nutritional status during pregnancy.		
1.6	Outline the importance of nutritional assessment in hospitalized patient and for different diseases.		
2.0	**Cognitive Skills**		
2.1	Describe and use the appropriate method for measuring dietary intake and how to use it professionally.	• Homework. • Dialogues and discussions. • Lectures • Using computers and software's to understand and analyze data and using simulation programs.	• Oral and written tests • Seminars • Discussions. • Lab. Reports • Presentation
2.2	Write suitable diagnosis in different diseases.		
2.3	Discuss the most common biochemical measurements related to nutritional status.		
2.4	Describe solutions for improving the nutritional status related to health status and disease.		
3.0	**Interpersonal Skills & Responsibility**		
3.1	Interpret of most common laboratory diagnostic tests.	• Awareness of time management in completing their reports. • Encourage students to help each other • Group assignments • Small group work.	• Discussions. • Oral exams.
3.2	Work effectively in groups as well as individually.		
4.0	**Communication, Information Technology, Numerical**		
4.1	Criticize about scientific problems and their solutions, both orally and in written.	• By direct lecturing	• Surveys

4.2	Research the required topics using internet communication tools.	• Smart Boards. • PowerPoint.	• E – learning home work
5.0	**Psychomotor**		
5.1	Applying computer software programs in determining nutrient intake.	Computer programs Software.	• Practical exams. Seminars • Discussions. • Lab. Reports • Presentation
5.2	Using DEXA instrument for determining the body composition.		
5.3	Examine the nutritional status for different chronic diseases.		

5. Assessment Task Schedule for Students During the Semester

	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	Assignments	All the term	10%
2	Midterm Theoretical Exam	8th week	20%
3	Presentation	15th week	10%
4	Lab work	All the term	10%
5	Final Practical Exam	14th week	20%
6	Final Theoretical Exam	17th week	30%

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic counseling. (include the time teaching staff are expected to be available per week)
   - Weekly office hours (4 hours per week)
   - Feedback for each student
   - Providing weekly guidelines on students' overall performance

E Learning Resources

1. List Required Textbooks
   - Nutrition Assessment: Clinical and Research Applications, 1st Edition, 2018. By Nancy Munoz, Melissa Bernstein.
   - Nutritional Assessment, 7th Edition, 2019. By David Nieman.

2. List Essential References Materials (Journals, Reports, etc.)
   - The American Journal of Clinical Nutrition
   - Clinical Nutrition Journal
   - Nutrition Research Journal

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

www.ncbi.nlm.nih.gov www.who.int
4. Other learning material such as computer-based programs/CD, professional standards or regulations and software. Computer software program for dietary assessment (Ex: WinDiet).

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access, etc.)
1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.) • Regular class periods will be in a lecture and discussion format. Laboratory sessions for anthropometric assessment will provide hands-on experience with basic anthropometric measurements and concepts. Students are expected to attend class and labs, complete all assignments, and to participate in discussions.
2. Technology resources (AV, data show, Smart Board, software, etc.) • AV, Software, Computer programs and internet
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list) • Bored blade caliber, digital caliper, measuring tap, and DEXA. All equipments are available at the department.

G Course Evaluation and Improvement Procedures

1. Strategies for Obtaining Student's Feedback on Effectiveness of Teaching • Assessment Questioner at the end of every lecture.
2. Other Strategies for Evaluation of Teaching by the Instructor or the Department • Assessment Questioner at the end of semester.
3. Procedures for Teaching Development • Updating the lectures every semester by the latest searches in this field.
4. Procedures for Verifying Standards of Student's Achievement (e.g. check marking by an independent member teaching staff of a sample of student's work, periodic exchange and remarking of tests or a sample of assignments with staff members at another institution) • Check marking by an independent member teaching staff of a sample of student work thought the exam and revision committee.
5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for developing it. • Benchmark with the other universities.

Name of Course Instructor: Dr. Sayed Hamed and Dr. Abdelelah Jazar

Signature: _____ **Date Completed: 11/11/2018**

Program Coordinator: Dr. Firas Azzeh

Signature: _____ **Date Received: 11/11/2018**

COURSE SPECIFICATION

Form

Course Title: Exercise Physiology

Course Code: 1702623-3 Nut

Date: 2018-11-11	**Institution:** Umm Al-Qura University
College: Applied Medical Sciences	**Department:** Clinical Nutrition

A. Course Identification and General Information

1. Course title and code: **Exercise Physiology/ 1702623-3 Nut**
2. Credit hours: **3 h**
3. Program(s) in which the course is offered: **Master of Clinical Nutrition**
4. Name of faculty member responsible for the course: **Dr. Khloud Ghafouri**
5. Level/year at which this course is offered: **Level 2 (First year/ Second semester)**
6. Pre-requisites for this course (if any): **Regulation of Macronutrients in Human Nutrition**
7. Co-requisites for this course (if any): **None**
8. Location if not on main campus: **Main Campus**
9. Mode of Instruction (mark all that apply):

a. Traditional classroom		percentage?	
b. Blended (traditional and online)	√	percentage?	60% and 20%
c. E-learning		percentage?	
d. Correspondence		percentage?	
f. Other		percentage?	20%

Comments:
An academic semester contains 15 weeks of instruction. Students enrolled in this course whose mode of instruction is blended lectures (traditional and online) and discussion sessions based should expect to have 15 hours of class contact over the length of the semester for each hour of credit.

B Objectives

1. The main objective of this course

The objectives of this course require students to:

- Apply scientific aspects of physiology, psychology and human movement to sport and exercise, and
- Describe and differentiate between the 3 major energy systems for physical activity and exercise.

2. Describe briefly any plans for developing and improving the course that are being implemented. (e.g. increased use of the IT or online reference material, changes in content as a result of new research in the field)

1. Increased use of IT or web-based reference material.
2. Changes in content as a result of new research in the field.

C. Course Description (Note: General description in the form used in the program's bulletin or handbook)

Course Description:

This course focuses on providing insights, foundational knowledge and skills specific to sport and exercise courses and programs. This course presents fundamental information essential to understanding sport and exercise concepts and constructs in order to introduce commencing students to specialized levels of professional expertise in sport and exercise. This module aims to provide students with the scientific basis of different types of training.

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
Sports psychology (Introduction & Muscle)	1	3
Cardiorespiratory	2	6
Cardiovascular system: blood pressure and exercise	1	3
Skeletal and muscular Considerations for Movement (biomechanics)	2	6
Respiratory system: pulmonary component and exercise	2	6
Respiratory system: gas exchange and transport and exercise	2	6
Respiratory system: regulation and integration and exercise	1	3

Neuromuscular system	2	6
Classification of sports activities and intensity and volume	2	6

2. Course components (total contact and credit hours per semester):

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other	Total
Contact Hours	Planned	45					45
	Actual	45					45
Credit	Planned	3					3
	Actual	3					3

3. Individual study/learning hours expected for students per week. 3

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategies

On the table below are the five NQF Learning Domains, numbered in the left column.

First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and targeted learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy should fit in together with the rest to form an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

Curriculum Map

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	**Knowledge**		
1.1	Recall the appropriate information about metabolism and anatomy.	• Lectures. • Class discussion. • Small group discussion. • Guided self-learning.	• Short assays exam. • Multiple-choice exam. • Lecture quizzes. • Report assignment.
1.2	Recognize a theoretical knowledge and practical skills relevant to sport and exercise science.		
1.3	Determine the differences between aerobic and anaerobic energy systems in training.		
2.0	**Cognitive Skills**		
2.1	Discuss the considerations for human movement and apply the movements of the human body to a sport.	• Examples of case study which given in	• Problem solving question

2.2	Explain the effect of some body systems in training and sports performance.	the lecture. • Problem-based case study. • Role playing. • Problem solving. • Small group discussion.	implemented in the regular quizzes and final exams. • Multiple-choice exam. • Problem solving questions. • Assignment.
3.0	**Interpersonal Skills & Responsibility**		
3.1	Show the academic potential and enhance student's employment and career opportunities.	• Students will be assigned into small groups and make free discussions. • Class presentation. • Group discussion.	• Assessment of student through regular assignments, quizzes and final exams.
3.2	Develop the skill for analyzing/solving the physics-based problems.		
4.0	**Communication, Information Technology, Numerical**		
4.1	Criticize about scientific problems and their solutions, both orally and in written.	Students are required to make report and case study assignments requiring proper style and reference format.	• Assessment of student assignments.
4.2	Research the required topics using internet communication tools.		

5. Assessment Task Schedule for Students During the Semester

	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	Assignments	All the term	10%
2	Midterm Exam	9th week	30%
4	Presentation	16th week	10%
5	Final written Exam	17th week	50%

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic counseling. (include the time teaching staff are expected to be available per week)

- Each faculty member sharing in providing this course is available for 4 office hours / week for students' consultation and academic advice. The departmental chair approves these office hours at the beginning of the semester.

E Learning Resources

1. List Required Textbooks

- Clinical sports nutrition. Burke Louise, Deakin Vicki. McGraw-Hill Australia: 2015
- Sport nutrition: an introduction to energy production and performance. Jeukendrup Asker E., Gleeson Michael 2nd ed.: Champaign, IL: Human Kinetics: 2010.
- Introduction to Exercise Physiology; Tommy Boone. The College of St. Scholastica, Duluth, Minnesota. 2014
- Nordic Nutrition Recommendations 2012 [Elektronisk resurs]: integrating nutrition and physical activity. 5th edition: Copenhagen: Nordic Council of Ministers: 2014: 627 s: Fritt tillgänglig via Nordiska ministerrådet.
- Biomechanical Basis of Human Movement Joseph Hamill, Kathleen Knutzen :2009.

2. List Essential References Materials (Journals, Reports, etc.)

- Journal of the Saudi Sports Medicine.
- Health and Fitness Journal
- Human Kinetics
- International Journal of Behavioral Nutrition and Physical Activity
- International Journal of Exercise Science
- International Society of Biomechanics
- Journal of Applied Biomechanics
- Journal of Applied Physiology
- Journal of Biomechanics
- Journal of Exercise Physiology
- Journal of Exercise Science and Fitness
- Journal of Sports Science and Medicine
- Journal of the International Society of Sports Nutrition
- Medicine and Science in Sports and Exercise

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

www.eatright.com

4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

- Articles and websites suggested by participating faculty members.

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access, etc.)

1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)

- Lecture rooms supplied with data shows.

2. Technology resources (AV, data show, Smart Board, software, etc.)

- Black-board access.
- E-Library.
- Videos.

3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or

attach list)
N/A

G Course Evaluation and Improvement Procedures

1. Strategies for Obtaining Student's Feedback on Effectiveness of Teaching
   - Students surveys.
   - Teacher-student discussions.

2. Other Strategies for Evaluation of Teaching by the Instructor or the Department
   - Annual evaluation by departmental chair.
   - Peer evaluation.

3. Procedures for Teaching Development
   - Implementing professional faculty development workshops by experts in Sport nutrition education.
   - Enhancing the use of the available smart boards.
   - Emphasizing the interactive use of the blackboard e-learning.

4. Procedures for Verifying Standards of Student's Achievement (e.g. check marking by an independent member teaching staff of a sample of student's work, periodic exchange and remarking of tests or a sample of assignments with staff members at another institution)
   - To check that the standards applied for assessment of the students are valid and appropriate, a faculty member of the same division will be responsible for re-evaluation of the student's answers.

5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for developing it.
   - Regular preparation of the course report annually and analysis of the students results to determine the points of weakness and establish suitable plans to avoid such weaknesses in the future.

Name of Course Instructor: Dr. Khloud Ghafouri

Signature: _____ **Date Completed: 11/11/2018**

Program Coordinator: Dr. Firas Azzeh

Signature: _____ **Date Received: 11/11/2018**

COURSE SPECIFICATION

Form

Course Title: Nutritional Genomics

Course Code: 1702624-2 Nut

Date: 2018-11-11	**Institution:** Umm Al-Qura University
College: Applied Medical Sciences	**Department:** Clinical Nutrition

A. Course Identification and General Information

1. Course title and code: **Nutritional Genomics/ 1702624-2 Nut**
2. Credit hours: **2 h**
3. Program(s) in which the course is offered: **Master of Clinical Nutrition**
4. Name of faculty member responsible for the course: **Dr. Afnan Salaka and Dr. Reham Mustafa**
5. Level/year at which this course is offered: **Level 2 (First year/ Second semester)**
6. Pre-requisites for this course (if any): **Regulation of Macronutrients in Human Nutrition**
7. Co-requisites for this course (if any): **None**
8. Location if not on main campus: **Faculty of Applied Medical Sciences - Main Campus in Al Abdiyah**
9. Mode of Instruction (mark all that apply):

a. Traditional classroom	√	percentage?	60%
b. Blended (traditional and online)		percentage?	
c. E-learning		percentage?	
d. Correspondence		percentage?	
f. Other	√	percentage?	40%

Comments:
The course will be a combination of lectures and tutorials of case studies.

B Objectives

1. The main objective of this course

- This course will aim to:
  1) Educate the student in molecular biology principles.
  2) Explain the interactions between human DNA and nutrition.
  3) Provide the student the knowledge and understanding of the progress, advantages and limitations of personalized nutrition.
  4) Provide the student with some molecular nutrition techniques used in research.
  5) Illustrate how to analyze the concepts of Nutrigenomics in the context of dietary signatures, micronutrients and epigenetics regulation, identification and validation of biomarkers.
  6) Correlate Nutrigenetics and Nutrigenomics with health and disease.
  7) Apply knowledge of molecular biology techniques to study molecular nutrition and nutrigenomics.

2. Describe briefly any plans for developing and improving the course that are being implemented. (e.g. increased use of the IT or online reference material, changes in content as a result of new research in the field)

- Engaging nutritionists and geneticists in clinical cases tutorials.
- Increase the IT for updating the contents through the new researches.

C. Course Description (Note: General description in the form used in the program's bulletin or handbook)

Course Description:

This course is designed to provide the student with an understanding of the fundamental concepts involved in how nutrients regulate gene expression (nutrigenomics) and how an individual's genotype influences their nutrient requirements (nutrigenetics). In addition, it is designed to provide the student with an understanding of unique roles of diet on the relevant examples of complex diseases relating to nutrition such as obesity, Crohn's disease, diabetes or cardiovascular, and its effect on progression of ageing.

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
1. Principles of molecular biology 1 – Fundamental aspects of molecular biology. – DNA, RNA, and protein synthesis (Central Dogma). – The process of transcription and translation.	1	2

2. Principles of molecular biology 2 – Genetic changes (polymorphisms and mutations). – DNA damage and repair mechanisms. – Basics of human genome.	1	2
3. Identifying candidate genes – Methods for whole genome studies including: mapping, sequencing, genome-wide association studies, whole gene expression studies. – Evaluation of genetic variation in the region of genes that are physiologically suggested to be involved in disease pathogenesis (candidate genes).	2	4
4. Nutrient-gene interactions – Complex interactions between genes and nutrients. – The effect of genetic variation on dietary response (Nutrigenetics). – The role of nutrients and bioactive food compounds in gene expression (Nutrigenomics).	2	4
5. Genetics in health and disease. – The association between genetic predisposition to certain health traits and disease risk. – The involvement of genetics in chronic diseases as a risk or a protective factor. – Investigation of genetic-environmental interactions in nutrition related diseases.	1	2
6. Genetics and personalized nutrition. – The theory behind the different levels of personalized nutrition, with more focus on the involvement of genetics at the top level.	1	2
7. Gut Microbiome	1	2
8. Nutrigenomics and Obesity (Case Study)	1	2
9. Nutrigenomic and Type 2 diabetes mellitus (Case Study)	1	2
10. Nutrigenomics and Cardiovascular Disease (Case Study)	1	2
11. Nutrigenomics and aging (Alzheimer, Parkinson's disease) (Case Study)	1	2
12. Nutrigenomics and Cancer (Case Study)	1	2
13. Nutrigenomics and Crohn's disease (Case Study)	1	2

2. Course components (total contact and credit hours per semester):

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other	Total
Contact Hours	Planned	15	15				30
	Actual	15	15				30
Credit	Planned	1	1				2
	Actual	1	1				2

3. Individual study/learning hours expected for students per week. 4

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategies

On the table below are the five NQF Learning Domains, numbered in the left column.

First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and targeted learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy should fit in together with the rest to form an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

Curriculum Map

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	**Knowledge**		
1.1	Recognize the concept of nutrigenomics and nutrigenetics.	1-Lectures. 2-Conduct scientific research and the follow-up of all new topics. 3-Seminars 4-Class work and in class discussions. 5- Active learning	1-Short tests and quizzes. 2-Homework. 3-Research 4-Exams
1.2	Define technologies related with nutrigenomics and nutrigenetics.		
1.3	Describe how nutrients affect gene expression, and how genetic variants are associated with a dietary response.		
1.4	Define nutrient and gene interactions as they relate to disease prevention and intervention. The diseases include cancer, obesity, type 2 diabetes, Crohn's disease, cardiovascular disease, and ageing.		
1.5	Recognize the applications of nutrigenetics and nutrigenomics in future nutrition research.		
2.0	**Cognitive Skills**		
2.1	Develop the skill for analyzing/solving the gene-based problems.	-Homework. -Dialogues and discussions. -Lectures -Looking in the internet.	-Oral and written tests -Seminars -Discussions. -Presentation
2.2	Explain to general correlation between the Gene expressions and the type of diet.		
3.0	**Interpersonal Skills & Responsibility**		
3.1	Work effectively in groups as well as individually.	-Group assignments - Small group work. -Whole group discussion.	-Respecting deadlines. -Helping each other in doing them searching.
3.2	Show in applications of nutrigenetics and nutrigenomics in future nutrition research.		
4.0	**Communication, Information Technology, Numerical**		
4.1	Criticize about scientific problems and their solutions, both orally and in written.	-By direct lecturing. -Computer labs. -Smart Boards. -PowerPoint	-Surveys -E –learning home work.
4.2	Research required topics using internet communication tools.		
4.3	Locate and retrieve scientific information, using modern computer tools		

5. Assessment Task Schedule for Students During the Semester			
	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	**Week Due**	**Proportion of Total Assessment**
1	Assignments	All the term	10%
2	Midterm Exam	10th week	30%
4	Presentation	16th week	10%
5	Final written Exam	18th week	50%

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic counseling. (include the time teaching staff are expected to be available per week)

- Four hours per week.

E Learning Resources

1. List Required Textbooks

- Introduction to Genomics, Third Edition, 2017. Arthur Lesk.
- Nutrigenomics and nutrigenetics in functional foods and personalized nutrition, by Editor: Lynnette R. Ferguson, CRC Press, 2016. 1st Edition, Kindle Edition.
- Nutritional Genomics: The Impact of Dietary Regulation of Gene Function on Human Disease, 2011. Wayne R. Bidlack, Raymond L. Rodriguez
- Nutrigenetics and Nutrigenomics, 2004 Simopoulos A.P. Ordovas J.M.
- Nutrigenetics: Applying the Science of Personal Nutrition, First Edition, 2012. Martin Kohlmeier.

2. List Essential References Materials (Journals, Reports, etc.)

- Camp KM, Trujillo E. Position of the Academy of Nutrition and Dietetics: nutritional genomics. J Acad Nutr Diet. 2014; 114:299-312.
http://www.eatright.org/About/Content.aspx?id=6442479881

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

Mutch, D. M., Wahli, W., Williamson, G. Nutrigenomics and nutrigenetics: the emerging faces of nutrition. FASEB J. 19, 1602–1616 (2005).
https://www.fasebj.org/doi/abs/10.1096/fj.05-3911rev?url_ver=Z39.88-2003&rfr_id=ori%3Arid%3Acrossref.org&rfr_dat=cr_pub%3Dpubmed

Catherine M. Phillips. Nutrigenetics and Metabolic Disease: Current Status and Implications for Personalised Nutrition. Nutrients. 2013, 5, 32-57.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3571637/

Fenech M, et al. Nutrigenetics and Nutrigenomics: Viewpoints on the Current Status and Applications in Nutrition Research and Practice. In: Journal of Nutrigenetics and Nutrigenomics. J

Nutrigenet Nutrigenomics. 2011;4(2):69-89.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3121546/

DeBusk RM, Fogarty, CP, Ordovas JM, Kornman KS. Nutritional genomics in practice: where do we begin?. J Am Diet Assoc. 2005; 105:589-98.
http://web.udl.es/usuaris/e4650869/Morella06/BB/Debusk_Nutrigenomics%20in%20practice.pdf
Enmark E, Gustafsson JA. Nutrients and environmental factors as regulators of gene expression. Scand J Nutr. 2002; 46:13-19. http://journals.co-action.net/index.php/fnr/article/view/1428/0
Minihane AM, Jofre-Monseny L, Olano-Martin E, Rimback G. ApoE genotype, cardiovascular risk and responsiveness to dietary fat manipulation. Proc Nutr Soc. 2007; 66:183-97.
http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=1002044
Phillips CM. Nutrigenetics and Metabolic Disease: Current Status and Implications for Personalised Nutrition. Nutrients. 2013; 5:32-57.
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3571637/
Herder C, Roden M. Genetics of type 2 diabetes: pathophysiologic and clinical relevance. Eur J Clin Invest. 2011; 41:679-92. http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2362.2010.02454.x/abstract
Kaput J, Noble J, Hatipoglu B, Kohrs K, Dawson K, Bartholomew A. Application of nutrigenomic concepts to Type 2 diabetes mellitus. Nutr Metab Cardiovasc Dis. 2007; 17:89-103. http://www.nmcd-journal.com/article/S0939-4753(06)00255-9/fulltext
Lampe J. Interindividual differences in response to plant-based diets: implications for cancer risk. Am J Clin Nutr. 2009; 89:1553S-1557S. http://ajcn.nutrition.org/content/89/5/1553S.long
Ross SA Evidence for the relationship between diet and cancer. Exp Oncol. 2010; 32:137-42.
http://exp-oncology.com.ua/wp-content/uploads/magazine/857.pdf?upload=
Gibney MJ, Gibney ER. Diet, genes and disease: implications for nutrition policy. Proc Nutr Soc. 2004; 63:491-500.
http://journals.cambridge.org/download.php?file=%2FPNS%2FPNS63_03%2FS0029665104000679a.pdf&code=0e487c9580cd0ea9b38b329bcd41b762
Nielsen DE, El-Sohemy A. Applying genomics to nutrition and lifestyle modification. Personalized Medicine. 2012; 9:739-749. http://www.medscape.com/viewarticle/771376_1
Görman U, Mathers JC, Grimaldi KA, Nordström K. Do we know enough? A scientific and ethical analysis of the basis for genetic-based personalized nutrition. Genes Nutr. 2013; 8:373-81.
http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3689893/pdf/12263_2013_Article_338.pdf
Kutz, G. United States Government Accountability Office Testimony before the special committee on aging, US senate: Nutrigenetic testing. Tests purchased from four web sites mislead consumers. 7-26-2006. http://www.gao.gov/assets/130/125079.pdf
Su, P. Direct-to-consumer genetic testing: a comprehensive view. Yale J Biol Med. 2013;86:359-65. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3767220/
McKay JA, Mathers JC. Diet induced epigenetic changes and their implications for health. Acta Physiol. 2011; 202:103-118. http://www.grochbiology.org/flyepigeneticsdiet.pdf
Capozzi F, Bordoni A. Foodomics: a new comprehensive approach to food and nutrition. Genes Nutr. 2013. 8:1-4. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3535000/
The gut microbiome in health and in disease. 2015.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4290017/pdf/nihms-649791.pdf
Part 1: The Human Gut Microbiome in Health and Disease. 2014.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4566439/pdf/17-22.pdf

4. Other learning material such as computer-based programs/CD, professional standards or

regulations and software. • Computer-based programs/CD

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access, etc.)
1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.) • Classrooms
2. Technology resources (AV, data show, Smart Board, software, etc.) • Smart board, data show, Access to Internet, AV.
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list) • Multimedia software (Adobe, Dream weaver, Video Studio, InDesign, Photoshop, 3D Home or Expression Web or Front Page.

G Course Evaluation and Improvement Procedures

1. Strategies for Obtaining Student's Feedback on Effectiveness of Teaching -Students questioner once during semester. -Students Faculty meeting (once during semester). -Faculty-students periodical meeting (during office hours).
2. Other Strategies for Evaluation of Teaching by the Instructor or the Department -Faculty evaluation, by the department head and the University staff member.
3. Procedures for Teaching Development -Conduct orientation sessions, training and workshops for faculty members by experienced or senior teachers in the Department. -Periodical revision of the method of teaching and the course outcomes. -Review of annual course assessment.
4. Procedures for Verifying Standards of Student's Achievement (e.g. check marking by an independent member teaching staff of a sample of student's work, periodic exchange and remarking of tests or a sample of assignments with staff members at another institution) -Periodical check by Coordinators and Supervisors of the department.
5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for developing it. - Department curriculum committee meets on regular basis and recommends amendments for improvement.

Name of Course Instructor: Dr. Afnan Salaka and Dr. Reham Mustafa

Signature: _____ **Date Completed: 11/11/2018**

Program Coordinator: Dr. Firas Azzeh

Signature: _____ **Date Received: 11/11/2018**

COURSE SPECIFICATIONS

Form

Course Title: Applied Biostatistics

Course Code: 1702631-2 Nut

Date: 2018-10-30	**Institution:** Umm Al-Qura University
College: Applied Medical Sciences	**Department:** Clinical Nutrition

A. Course Identification and General Information

1. Course title and code: **Applied Biostatistics / 1702631-2 Nut**
2. Credit hours: **2 h**
3. Program(s) in which the course is offered: **Master of Clinical Nutrition**
4. Name of faculty member responsible for the course: **Dr. Hamza Assaggaf**
5. Level/year at which this course is offered: **Level 3 (Master's Level/ 2nd Year 2/ 1st semester)**
6. Pre-requisites for this course (if any): **Research Methods in Clinical Nutrition**
7. Co-requisites for this course (if any): **None**
8. Location if not on main campus: **Main Campus**
9. Mode of Instruction (mark all that apply):

a. Traditional classroom	√	percentage?	50%
b. Blended (traditional and online)		percentage?	
c. E-learning		percentage?	
d. Correspondence		percentage?	
f. Other	√	percentage?	50%

Comments:
Computer Lab is required for statistical software applications. The course is based on 1 credit hour of traditional lectures and 1 credit hour of tutorials.

B Objectives

The main objective of this course:

To provide non-biostatistics students with the ability to understand and utilize basic biostatistical concepts and tools and to facilitate their capability to seek and utilize biostatistical expertise as may be required when conducting their own research or reviewing that done by others.

2. Describe briefly any plans for developing and improving the course that are being implemented. (e.g. increased use of the IT or online reference material, changes in content as a result of new research in the field)

- The course will be introduced for first time.

C. Course Description (Note: General description in the form used in the program's bulletin or handbook)

The course does not assume previous biostatistics or statistics courses and begins with the basic concepts and tools. Covered are types of data, tables and graphs, types of summarizing numbers, confidence intervals, testing hypotheses, including α-levels, p-values, β-values, statistical power; normal tests; t-tests, regression, correlation, chi-square and basic analysis of variance techniques. All these tests will be applied in the latest version of SPSS software.

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
• Introduction to Biostatistics	1	2
• Types of Data, Tables • Graphs Pie Charts Component Band Charts • Graphs Bar Charts • Graphs Line Graphs • Graphs Geographical Graphs	2	4
• Frequency Distributions • Summarizing Numbers • Central Tendency • Summarizing Numbers • Standard Deviations and the Like	2	4
• Populations and Samples and Sampling Distributions • Normal Distribution • Confidence Intervals	2	4

• Hypothesis Testing • One sample t-test and Confidence Intervals • Two sample t-test with equal variances for the two populations • One Way ANOVA	2	4
• Data Management Issues • Simple Linear Regression • Correlation • Chi-Square for Contingency Tables • Proportions for one sample • Proportions Confidence Intervals and Hypothesis Tests, Two Samples • One-sided or One-tailed Tests	3	6
• Confidence Intervals and Hypothesis Tests for Variances for One-Sample • Confidence Intervals and Hypothesis Tests for Variances for Two-Samples • Two-Sample t-tests With Unequal Variances • Sample Size Determination	3	6

2. Course components (total contact and credit hours per semester):

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other	Total
Contact Hours	Planned	15	15				30
	Actual	15	15				30
Credit	Planned	1	1				2
	Actual	1	1				2

3. Individual study/learning hours expected for students per week. 4

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategies

On the table below are the five NQF Learning Domains, numbered in the left column.
First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and targeted learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy should fit in together with the rest to form an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

Curriculum Map

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods

1.0	**Knowledge**		
1.1	Define the basic concepts of biostatistics.	group discussion, quizzes	Practical exam and final exam as well as regular group discussions
1.2	Recognize the benefits and limitations of different types of biostatistics.		
	Describe hypothesis testing, α level, p-values, statistical power.		
2.0	**Cognitive Skills**		
2.1	Calculate, use and interpret the different summarizing numbers for a dataset.	Lectures, group discussion, quizzes	Exams as well as regular group discussions
2.2	Use and interpret results from basic statistical tests.		
2.3	Decide which type of table or graph is best for a given situation.		
3.0	**Interpersonal Skills & Responsibility**		
3.1	Work effectively with a professional biostatistician on problems requiring more advanced concepts and tools.	By setting an example to students, by correct nonverbal messages, by related examples and by encouraging team spirits	By observation of their attitude and behaviour in the classroom, by asking them to prepare and submit team works showing the role of each group member in these works
3.2	Read, understand and judge the appropriateness of the use of biostatistical concepts and tools in the basic health related literature.		
3.3	Use technology in determining the sample size required for a specific situation and to calculate this sample size for some of the basic statistical tests		
4.0	**Communication, Information Technology, Numerical**		
4.1	Criticize, assess and perform effective communication with peers and teaching faculty.	By encouraging the use of analytic statistical programs as SPSS and excel for analysis and presentation of data collected by students about common problems	By asking students to present their analysed data together with effective group discussion for the results
4.2	Operate technology in analyzing data and information		

5. Assessment Task Schedule for Students During the Semester

	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	Midterm Practical Exam (by statistical analysis software)	8th week	20%
2	Classroom activities	During semester	10%
3	Assignments	During semester	40%
4	Final practical exam (by statistical analysis software)	16th week	30%

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic counseling. (include the time teaching staff are expected to be available per week)

Five office hours/week

E Learning Resources

1. List Required Textbooks • OpenIntro Statistics, Third Edition by DM Diez, CD Barr. and M Cetinkaya-Rundel. • A handbook of statistical analyses using SPSS / Sabine, Landau, Brian S. Everitt. 2004. • Nutrition Research: Concepts and Applications, 1st Edition, 2018. Karen E. Drummond and Alison Murphy-Reyes
2. List Essential References Materials (Journals, Reports, etc.) http://www.uvm.edu/~dhowell/fundamentals/SPSSManual/SPSSLongerManual/DataForSPSS/
3. List Electronic Materials, Web Sites, Facebook, Twitter, etc. N/A
4. Other learning material such as computer-based programs/CD, professional standards or regulations and software. N/A

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access, etc.)
1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.) • Classroom and Computer Lab
2. Technology resources (AV, data show, Smart Board, software, etc.) • AV and Datashow
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list) • A well-established computer lab with any statistical software (SPSS and /or SAS).

G. Course Evaluation and Improvement Procedures

1. Strategies for Obtaining Student's Feedback on Effectiveness of Teaching • Questionnaire for getting student feedback about teaching process. The questionnaire includes items about teaching location, teaching methods and materials, teaching syllabus and its relevance to students, teacher and students active participation.
2. Other Strategies for Evaluation of Teaching by the Instructor or the Department • Weekly quizzes, group discussions, and final exam.
3. Procedures for Teaching Development • Implementing professional faculty development workshops by experts in sport nutrition education. • Enhancing the use of the available smart boards. • Emphasizing the interactive use of the blackboard e-learning.

4. Procedures for Verifying Standards of Student's Achievement (e.g. check marking by an independent member teaching staff of a sample of student's work, periodic exchange and remarking of tests or a sample of assignments with staff members at another institution) • Periodic reviewing of the students' research by the research monitoring team and cross-checking of marking by peer reviewers and the members of the research monitoring committee of the department.
5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for developing it. 1. Biannual meeting of head of the department and dean of the faculty with the students. 2. Monthly meeting with teaching staff of the module and the members of curriculum meeting in the department to discuss effective teaching process. 3. Regular evaluation of students' feedbacks and feedbacks from peer reviewers and other independent staff. 4. Submit a course report to the curriculum committee in the department to discuss the action plan. 5. Annual improvement and updating of the course based on the outcome of the reviewing process.

Name of Course Instructor: Dr. Hamza Assaggaf

Signature: _____ Date Completed: 30.10.2018

Program Coordinator: Dr. Firas Azzeh

Signature: _____ Date Received: 31.10.2018

COURSE SPECIFICATION

Form

Course Title: Seminar

Course Code: 1702632-1 Nut

Date: 2018-11-11	**Institution:** Umm Al-Qura University
College: Applied Medical Sciences	**Department:** Clinical Nutrition

A. Course Identification and General Information

1. Course title and code: **Seminar / 1702632-1 Nut**
2. Credit hours: **1 h**
3. Program(s) in which the course is offered: **Master of Clinical Nutrition**
4. Name of faculty member responsible for the course: **Dr. Hassan Bukhari**
5. Level/year at which this course is offered: **Level 3 (2nd years / 1st Semester)**
6. Pre-requisites for this course (if any): **None**
7. Co-requisites for this course (if any): **None**
8. Location if not on main campus: **Main Campus**
9. Mode of Instruction (mark all that apply):

a. Traditional classroom	√	percentage?	20%
b. Blended (traditional and online)		percentage?	
c. E-learning		percentage?	
d. Correspondence		percentage?	
f. Other	√	percentage?	80%

Comments:

An academic semester contains 15 weeks of instruction. Students enrolled in this course whose mode of instruction is oral presentation and discussion sessions based should expect to have 15 hours of class contact over the length of the semester for each hour of credit.

B Objectives

1. The main objective of this course

The aim of this course is to complement the disciplinary knowledge that can form the basis of action and disciplinary intellectual skills that remain the most important aspects of any students. By skills we mean behaviors that can be learned, that can be improved with practice, that requires reflection, and that benefit from ongoing coaching.

2. Describe briefly any plans for developing and improving the course that are being implemented. (e.g. increased use of the IT or online reference material, changes in content as a result of new research in the field)

1. Increased use of IT or web-based reference material.
2. Changes in content because of new research in the field.

C. Course Description (Note: General description in the form used in the program's bulletin or handbook)

Course Description:

Presentations and discussions by post-graduate students on current topics in the areas of clinical nutrition. In this course, each student will participate in many activities that will hone the oral presentation skills: observation, question, critique, research, and presentation.

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
Introduction: Communication and interpersonal skills	1	1
Oral presentation skill: Observation	1	1
Oral presentation skill: question	1	1
Oral presentation skill: critique	1	1
Oral presentation skill: research	1	1
Oral presentation skill: presentation	1	1
Professionalism	1	1
First departmental seminar presentation	2	2
Second departmental seminar presentation	2	2

Third seminar: student's dissertation research proposal	4	4

2. Course components (total contact and credit hours per semester):

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other	Total
Contact Hours	Planned	15					15
	Actual	15					15
Credit	Planned	1					1
	Actual	1					1

3. Individual study/learning hours expected for students per week.	1

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategies

On the table below are the five NQF Learning Domains, numbered in the left column.

First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and targeted learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy should fit in together with the rest to form an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

Curriculum Map

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	**Knowledge**		
1.1	Identify how to communicate professionally	1. Lectures. 2. Class discussion. 3. Guided self-learning.	Assignments.
1.2	Determine the skills needed for the oral presentation: observation, question, critique, research, and presentation		
2.0	**Cognitive Skills**		
2.1	Communicate effectively and professionally	1. Problem solving. 2. Small group discussion.	5. Problem solving question 6. Assignments. 7. Oral Presentation.
2.2	Apply activities that can be used to acquire the oral presentation skills		
3.0	**Interpersonal Skills & Responsibility**		
3.1	Show positive relation with others.	1. Students will be assigned into small	Assessment of student through regular assignments
3.2	Work in a group.		

		groups and make free discussions. 2. Class presentation. 3. Group discussion.	and oral presentation.
4.0	**Communication, Information Technology, Numerical**		
4.1	Choose the literatures from the web to present oral presentation	Students are required to make report and case study assignments requiring proper style and reference format.	Assessment of student assignments and oral presentation.
4.2	Operate the internet to cope with the course demand.		

5. Assessment Task Schedule for Students During the Semester			
	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	**Started Week**	**Proportion of Total Assessment**
1	Assignments	All the term	10%
2	First departmental seminar presentation	4th week	20%
4	Second departmental seminar presentation	7th week	20%
5	Third seminar: student's dissertation research proposal	11th week	50%

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic counseling. (include the time teaching staff are expected to be available per week)
   - Staff will be available for individual student counseling and advice.
   - 4 office hours/week/faculty member

E Learning Resources

1. List Required Textbooks
   Excellence in Business Communications, 7th Ed., by John V. Thill and Courtland L. Bovée (Publisher: Prentice Hall)

2. List Essential References Materials (Journals, Reports, etc.)
   N/A

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.
   N/A

4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.
   N/A

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access, etc.)

1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.) • Classrooms
2. Technology resources (AV, data show, Smart Board, software, etc.) • Data show
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list) N/A

G Course Evaluation and Improvement Procedures

1. Strategies for Obtaining Student's Feedback on Effectiveness of Teaching • Confidential completion of standard course evaluation questionnaire
2. Other Strategies for Evaluation of Teaching by the Instructor or the Department • Observations and assistance from colleagues. • Independent assessment of standards achieved by students. • Independent advice on assignment tasks
3. Procedures for Teaching Development • Workshops on teaching methods, review of recommended teaching strategies.
4. Procedures for Verifying Standards of Student's Achievement (e.g. check marking by an independent member teaching staff of a sample of student's work, periodic exchange and remarking of tests or a sample of assignments with staff members at another institution) • Check marking by another teaching staff of a sample of student work. • Peer reviewing of tests remarking and sample of student assignments.
5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for developing it. • Regular evaluation of students' feedbacks and other feedbacks from peer reviewers and other independent staff. • Annual improvement and updating of the course based on the outcome of the reviewing process.

Name of Course Instructors: Dr. Hassan Bukhari

Signature: _____ **Date Completed: 11/11/2018**

Program Coordinator: Dr. Firas Azzeh

Signature: _____ **Date Received: 11/11/2018**

COURSE SPECIFICATION

Form

Course Title: Advanced Clinical Nutrition: Critical Care and Nutrition Support

Course Code: 1702633-3 Nut

Date: 2018-10-30	**Institution:** Umm Al-Qura University
College: Applied Medical Sciences	**Department:** Clinical Nutrition

A. Course Identification and General Information

1. Course title and code: **Advanced Clinical Nutrition: Critical Care and Nutrition Support/ 1702633-3 Nut**
2. Credit hours: **3 h**
3. Program(s) in which the course is offered: **Master of Clinical Nutrition**
4. Name of faculty member responsible for the course: **Dr. Samaa Saied Elsoada'aa**
5. Level/year at which this course is offered: **Level 3 (Second year/ First semester)**
6. Pre-requisites for this course (if any): **Regulation of macronutrients in Human Nutrition and Advanced Nutritional Assessment**
7. Co-requisites for this course (if any): **None**
8. Location if not on main campus: **Main Campus**
9. Mode of Instruction (mark all that apply):

a. Traditional classroom		percentage?	
b. Blended (traditional and online)	√	percentage?	60%
c. E-learning		percentage?	
d. Correspondence		percentage?	
f. Other	√	percentage?	40%

Comments:
An academic semester contains 15 weeks of instruction. Students enrolled in this course whose mode of instruction is lectures, tutorials and discussion sessions based should expect to have 15 hours of class contact over the length of the semester for each hour of credit.

B Objectives

1. The main objective of this course

At the end of this course, the students are able to:

1. Use an evidenced-based medical approaches to better assess nutrient requirements in various disease states.
2. Determine the best method of delivering enteral or parenteral feeding in different diseases.
3. Know the indications and contraindications for using enteral or parenteral feeding tubes in many diseases.
4. Review the complications associated with enteral and parenteral feeding.
5. Review core nutrition support topics including Pulmonary Disease, Liver Disease, Pancreatitis, Short Bowel Syndrome, … etc.
6. Enhance student's skills in practical aspects of choosing a commercial nutrition support formula and administering it to a patient according to the patient's case.

2. Describe briefly any plans for developing and improving the course that are being implemented. (e.g. increased use of the IT or online reference material, changes in content as a result of new research in the field)

- Update the course depending on the developments in this field

C. Course Description (Note: General description in the form used in the program's bulletin or handbook)

Course Description:

Students will understand and explore nutrition support strategies and gain the skills and knowledge to design, assess and monitor routine enteral and parenteral feeding regimens in the prevention and treatment of malnutrition and many different diseases. Students will learn techniques of data collection and interpretation related to nutrition support therapies. Lectures and discussions will be supplemented with cases study.

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
Overview of enteral and parenteral nutrition	1	3

The recent guidelines on clinical nutrition in the intensive care unit	1	3
Short Bowel Syndrome (Etiology and Epidemiology, Relevant Anatomy and Physiology; Small Bowel/ Colon/ Stomach and Pancreaticobiliary, Intestinal Adaptation, Determining Remaining Bowel Anatomy, Complications; Oxalate Nephropathy/ Metabolic Bone Disease/ Liver Dysfunction, Small Bowel Bacterial Overgrowth, Nutritional Assessment, Oral Diet, Diet Specifics, Special Consideration, Enteral Nutrition Support, Parenteral Nutrition)	2	6
Pancreatitis (malnutrition in patients with pancreatitis, Laboratory parameters and nutritional status, nutritional support in pancreatitis, when is parenteral nutrition indicated?)	1	3
Liver Disease (Etiologies of malnutrition in chronic liver disease, nutrition assessment, nutrition requirements, nutrition support)	1	3
chronic obstructive pulmonary disease (COPD) (etiologies of malnutrition, and physiological stress in COPD, nutrition status, nutrition requirements, Nutritional intervention, appropriate type of formulation to select for nutritional intervention)	1	3
Oncology (Cancer cachexia, Nutritional requirements, Clinical approach; Role of the oncologist/ Nutritional screening, Planning nutritional support)	1	3
Neurologic Impairment (feeding difficulties and limitations of Neurologic Impairment patient, etiologies of malnutrition, estimated energy and macronutrient requirements, characteristics of Enteral formulas for Neurologic impairment patient)	2	6
Gastroparesis (GP) (Etiology of GP, signs and symptoms, diagnosis, treatment of GP, gastric electrical stimulation, nutritional assessment and intervention, nutrition support, enteral feeding challenges)	1	3
Metabolic Stress (Sepsis, Trauma, Surgery) (definition of sepsis, Starvation vs. Stress, Hormonal Stress Response, nutritional assessment, Determination of Nutrient Requirements, Specialized Nutrients in Critical Care, EN vs PN in Critical Care)	2	6
Bariatric surgery patient (Indications for Nutrition Support Therapy, Determining Energy and Nutrient Requirements, Enteral Nutrition, Enteral Nutrition Monitoring and Complications, Parenteral Nutrition, Parenteral Nutrition Monitoring and Complications, Assessing Response to Nutrition Support Therapy)	2	6

2. Course components (total contact and credit hours per semester):

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other	Total
Contact Hours	Planned	30	15				45
	Actual	30	15				45
Credit	Planned	2	1				3
	Actual	2	1				3

3. Individual study/learning hours expected for students per week. 4

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategies

On the table below are the five NQF Learning Domains, numbered in the left column.

First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and targeted learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy should fit in together with the rest to form an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

Curriculum Map

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	**Knowledge**		
1.1	Describe the best method of delivering enteral or parenteral feeding in different diseases.	• Lectures • Demonstrations • case studies, • internet work	• Quizzes • tests
1.2	Identify the indications and contraindications for using enteral feeding tubes.		
1.3	Recognize the formulas for enteral and parenteral feeding in different diseases.		
1.4	Recognize the complications of using enteral and parenteral nutrition.		
2.0	**Cognitive Skills**		
2.1	Discuss the indications for enteral and parenteral therapy	• Lectures • Demonstrations • case studies, • internet work	Tests, case studies, demonstrations
2.2	Assess the suitable formula to be used for sever patients.		
3.0	**Interpersonal Skills & Responsibility**		
3.1	Evaluate student's skills in practical aspects of choosing a commercial nutrition support formula.	Small group discussion, research activities.	Course work and assignment
3.2	Show positive relation with others.		
3.3	Critical review of the updated scientific literature related to critically ill patient's nutrition requirement and management.		

4.0	**Communication, Information Technology, Numerical**		
4.1	Criticize, assess and perform effective communication with peers and teaching faculty.	Students are required to make report and case study assignments requiring proper style and reference format.	• Assessment of student assignment • Assessment of student professional and behavior.
4.2	Operate technology in analyzing data and information		

5. Assessment Task Schedule for Students During the Semester			
	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	**Week Due**	**Proportion of Total Assessment**
1	Assignments	All the term	10%
2	Midterm Exam	9th week	30%
4	Presentation	16th week	10%
5	Final written Exam	17th week	50%

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic counseling. (include the time teaching staff are expected to be available per week)
   - 4 office hours weekly.

E Learning Resources

1. List Required Textbooks
   - ASPEN Adult Nutrition Support Core Curriculum, 3rd Edition, 2018.
   - Food and nutrition care process. Edition 13 (2017) (Krause's) Mahan K. L. and Stump S.E.
   - Nutrition Therapy and Pathophysiology, 3rd Edition, 2016. Marcia Nelms, Kathryn Sucher, Karen Lacey and Sara Roth. Wadsworth, Cengage Learning.
   - Medical Nutrition Therapy, 5th Edition, 2017 (Case Studies). Marcia Nelms and Sara Roth. Wadsworth, Cengage Learning.
   - Nutrition Diagnosis and Related Care, 8th Edition, 2015. Sylvia Escott-Stump. Wolters Kluwer.
   - International Dietetics and Nutrition Terminology, 4th Edition, 2012. Academy of Nutrition and Dietetics, USA.
   - Advanced Nutrition and Human Metabolism, 7th Edition, 2018. By Sareen S. Gropper, Jack L. Smith, Timothy P. Carr.

2. List Essential References Materials (Journals, Reports, etc.)
ESPEN guideline on clinical nutrition in the intensive care unit (2018).
https://www.clinicalnutritionjournal.com/article/S0261-5614(18)32432-4/fulltext

Marion J O'Connor and Julie I Dehavillande. (2016). Perioperative nutritional support. Surgery, 34:8. https://www.surgeryjournal.co.uk/article/S0263-9319(16)30031-X/abstract
3. List Electronic Materials, Web Sites, Facebook, Twitter, etc. • American Society for Parenteral and Enteral Nutrition https://www.nutritioncare.org/Publications/Journals/
4. Other learning material such as computer-based programs/CD, professional standards or regulations and software. N/A

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access, etc.)
1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.) ○ Class room with 20 seats
2. Technology resources (AV, data show, Smart Board, software, etc.) ○ Data show ○ White board.
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list) N/A

G Course Evaluation and Improvement Procedures

1. Strategies for Obtaining Student's Feedback on Effectiveness of Teaching 1. Student feedback report to be analyzed by the course instructor and submit the results to the department head. 2. Observations and assistance from colleagues. 3. Independent advice on assignment tasks.
2. Other Strategies for Evaluation of Teaching by the Instructor or the Department 1. Review the student's feedback and work on the weak points. 2. Workshops on teaching methods, review of recommended teaching strategies 3. Attend educational courses of teaching methodology. 4. Appoint percentage of department budget for educational resources as text books, audio-visual materials (LCD, CDs, computers, scanner, printer, flash memory), models, nutritional therapy equipment & financial support to attend courses and conferences
3. Procedures for Teaching Development - staff development courses in education technology and higher education administration

4. Procedures for Verifying Standards of Student's Achievement (e.g. check marking by an independent member teaching staff of a sample of student's work, periodic exchange and remarking of tests or a sample of assignments with staff members at another institution) - peer evaluation -external examiners
5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for developing it. 1. Design graduate survey and employee surveys. 2. Analyze the results of the two surveys and detect the weakness & strengthens in the course. 3. Regular evaluation of students' feedbacks and other feedbacks from peer reviewers and other independent staff. 4. Recognize action plane regarding the course credits, content, depth, breadth, teaching methodology. 5. Submit a course report to the curriculum committee in the department to discuss the action plane. 6. Submit the final action plane to the department councils for approval. 7. Annual improvement and updating of the course based on the outcome of the reviewing process.

Name of Course Instructor: Dr. Sama Elsoadaa
Signature: _____ **Date Completed: 11/11/2018**

Program Coordinator: Dr. Firas Azzeh

Signature: _____ **Date Received: 11/11/2018**

COURSE SPECIFICATION

Form

Course Title: Sports Nutrition

Course Code: 1702634-2 Nut

Date: 2018-11-11	**Institution:** Umm Al-Qura University
College: Applied Medical Sciences	**Department:** Clinical Nutrition

A. Course Identification and General Information

1. Course title and code: **Sports Nutrition / 1702634-2 Nut**
2. Credit hours: **2 h**
3. Program(s) in which the course is offered: **Master of Clinical Nutrition**
4. Name of faculty member responsible for the course: **Dr. khloud Ghfouri**
5. Level/year at which this course is offered: **Level 3 (Second year/ First semester)**
6. Pre-requisites for this course (if any): **Exercise Physiology**
7. Co-requisites for this course (if any): **None**
8. Location if not on main campus: **Main Campus**
9. Mode of Instruction (mark all that apply):

a. Traditional classroom		percentage?	
b. Blended (traditional and online)	√	percentage?	60% & 20%
c. E-learning		percentage?	
d. Correspondence		percentage?	
f. Other	√	percentage?	20%

Comments:
An academic semester contains 15 weeks of instruction. Students enrolled in this course whose mode of instruction is lectures, tutorials and discussion sessions based should expect to have 15 hours of class contact over the length of the semester for each hour of credit.

B Objectives

1. The main objective of this course

The main objective of this course is to develop advanced skills essential for understanding the nutritional requirements of the human body in order to maximize exercise performance and promote health and wellbeing.

2. Describe briefly any plans for developing and improving the course that are being implemented. (e.g. increased use of the IT or online reference material, changes in content as a result of new research in the field)

1. Increased use of IT or web-based reference material.
2. Changes in content as a result of new research in the field.

C. Course Description (Note: General description in the form used in the program's bulletin or handbook)

Course Description:

This course has been designed to provide students with a basic and advanced understanding of sports nutrition concepts. It explores the macronutrients metabolism and energy needs for athletes, discusses at pre-event nutrition, nutrition for recovery, key vitamins and minerals for athletes and popular dietary supplements.

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
Protein - digestion and absorption, requirements for exercise	1	2
Fats- digestion and absorption, requirements for exercise	1	2
Carbohydrate - digestion and absorption, requirements for exercise	1	2
Role of carbohydrate, fat and protein during different exercise intensities.	1	2
Selected vitamins and minerals – role in recovery, injury and health	1	2
fluid and electrolyte balance	1	2
Nutrient and fluid timing	1	2
Nutritional ergogenic aids	1	2

Factors affecting nutritional need and energy expenditure (travel, altitude, gender, age and body composition))	1	2
Counselling, dietary planning & nutritional assessment	1	2
Diet planning for athletes	2	4
Role of exercise in the prevention and management of chronic degenerative diseases	1	2
Introduction to laboratory procedure, validity and reliability in laboratory techniques	1	2

2. Course components (total contact and credit hours per semester):

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other	Total
Contact Hours	Planned	30	15	None	None	None	45
	Actual	30	15	None	None	None	45
Credit	Planned	2	1	None	None	None	3
	Actual	2	1	None	None	None	3

3. Individual study/learning hours expected for students per week. 4

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategies

On the table below are the five NQF Learning Domains, numbered in the left column.

First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and targeted learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy should fit in together with the rest to form an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

Curriculum Map

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	**Knowledge**		
1.1	Define the appropriate information about sports nutrition.	• Lectures. • Class discussion. • Small group discussion.	• Short assays exam. • Multiple-choice exam.
1.2	Recognize the theoretical knowledge and practical skills relevant to sport and exercise science.		

1.3	Describe the importance of exercise and sport for health and human metabolism.	• Guided self-learning.	• Lecture quizzes. • Report assignment.
2.0	**Cognitive Skills**		
2.1	Write the principle reasons why nutrition is important for training and sports performance.	1. Examples of case study which given in the lecture. 2. Problem-based case study. 3. Role playing. 4. Problem solving. Small group discussion.	1. Problem solving question implemented in the regular quizzes and final exams. 2. Multiple-choice exam. 3. Problem solving questions.
2.2	Prepare the steps involved in calculation of an athlete's energy and macronutrient needs for different sports and training goals e.g. strength, endurance, weight category … etc.,		
2.3	Discuss the principle functions of water in the human body, factors related to fluid loss and the importance of hydration in sports performance.		
2.4	Explain the importance of different ergogenic aids for athletes.		
3.0	**Interpersonal Skills & Responsibility**		
3.1	Demonstrate excellence in grasping key concepts; critiques work of others; stimulates discussion; provides sample citations for support of opinions; readily offers new interpretations of discussion material. Ideas are expressed clearly, concisely; uses appropriate vocabulary.	1. Students will be assigned into small groups and make free discussions. 2. Class presentation. 3. Group discussion.	Assessment of student through regular assignments, quizzes and final exams.
3.2	Show evidence of understanding most major concepts; will offer an occasional divergent viewpoint or challenge; shows some skill in support for opinions. Some signs of disorganization with expression; transition wording may be faulty.		
3.3	Recognize that making mistake is part of learning process.		
3.4	Collect laboratory data independently and as part of a group in tutorial sessions.		
4.0	**Communication, Information Technology, Numerical**		
4.1	Critical review of the scientific literature related to various topics in sports nutrition.	Students are required to make report and case study assignments requiring proper style and reference format.	1. Assessment of student assignments and behaviour.
4.2	Research the required topics using internet communication tools.		

5. Assessment Task Schedule for Students During the Semester			
	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	**Week Due**	**Proportion of Total Assessment**
1	Assignments	All the term	10%
2	Midterm Exam	10th week	30%
4	Presentation	16th week	10%
5	Final written Exam	18th week	50%

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic counseling. (include the time teaching staff are expected to be available per week)

- Each faculty member sharing in providing this course is available for 4 office hours / week for students' consultation and academic advice. The departmental chair approves these office hours at the beginning of the semester.

E Learning Resources

1. List Required Textbooks

- Sport Nutrition - 2nd Edition, 2010.by Asker Jeukendrup and Michael Gleeson .
- ACSM's Guidelines for Exercise Testing and Prescription, Tenth Edition, 2018.

  by American College of Sports Medicine.

2. List Essential References Materials (Journals, Reports, etc.)

- Journal of the International Society of Sports Nutrition
- International Journal of Sport Nutrition and Exercise Metabolism
- The Journal of the International Society of Sports Nutrition (JISSN)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

N/A

4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

N/A

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access, etc.)

1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)

- Classrooms

2. Technology resources (AV, data show, Smart Board, software, etc.)

- Data show

3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list) N/A

G Course Evaluation and Improvement Procedures

1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching • Students surveys. • Teacher-student discussions.
2. Other Strategies for Evaluation of Teaching by the Instructor or by the Department • Annual evaluation by departmental chair. • Peer evaluation.
3. Processes for Improvement of Teaching • Implementing professional faculty development workshops by experts in sport nutrition education. • Enhancing the use of the available smart boards. • Emphasizing the interactive use of the blackboard e-learning.
4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution) • Check marking by another teaching staff of a sample of student work. • Peer reviewing of tests remarking and sample of student assignments.
5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement. • Regular preparation of the course report annually and analysis of the students results to determine the points of weakness and establish suitable plans to avoid such weaknesses in the future.

Name of Course Instructor: Dr. Khloud Ghafouri

Signature: _____ **Date Completed: 11/11/2018**

Program Coordinator: Dr. Firas Azzeh

Signature: _____ **Date Received: 11/11/2018**

COURSE SPECIFICATION

Form

Course Title: Obesity and Weight Management

Course Code: 1702635-3 Nut

Date: 2018-11-11	**Institution:** Umm Al-Qura University
College: Applied Medical Sciences	**Department:** Clinical Nutrition

A. Course Identification and General Information

1. Course title and code: **Obesity and Weight Management / 1702635-3 Nut**
2. Credit hours: **3 h**
3. Program(s) in which the course is offered: **Master of Clinical Nutrition**
4. Name of faculty member responsible for the course: **Dr. Hassan Bukhari Dr. and Abdelelah Jazar**
5. Level/year at which this course is offered: **Level 3 (Second Year/ First Semester)**
6. Pre-requisites for this course (if any): **Regulation of Macronutrients in Human Nutrition**
7. Co-requisites for this course (if any): **None**
8. Location if not on main campus: **Main Campus**
9. Mode of Instruction (mark all that apply):

a. Traditional classroom	√	percentage?	60%
b. Blended (traditional and online)		percentage?	
c. E-learning		percentage?	
d. Correspondence		percentage?	
f. Other	√	percentage?	40%

Comments:
An academic semester contains 15 weeks of instruction. Students enrolled in this course whose mode of instruction is lectures, cases and discussion sessions based should expect to have 15 hours of class contact over the length of the semester for each hour of credit.

B Objectives

1. The main objective of this course

At the end of this course the student must be able to:

- Identify the components of Metabolic Syndrome (Syndrome X) and its relation to obesity.
- Identify genetic, biologic, and environmental contributors to weight status.
- Understand basic endocrinology and biological factors regulating energy intake and body weight (eg, leptin, insulin, gut peptides, ghrelin, and brain neurotransmitters).
- Identify the current FDA approved medications prescribed for weight loss and be able to describe the "off label' use of medications for weight loss.
- Be aware of emerging research, issues and non-traditional approaches to weight management.
- Identify short and long-term health related risks and benefits associated with bariatric surgery procedures.
- Assess patient/client eligibility criteria and indications for surgical treatment intervention.
- Determine the recent approaches of weight management in children.

2. Describe briefly any plans for developing and improving the course that are being implemented. (e.g. increased use of the IT or online reference material, changes in content as a result of new research in the field)

- Using audio and video material related to each topic as appropriate
- Encouraging students to collect obesity problems from web-based reference material

C. Course Description (Note: General description in the form used in the program's bulletin or handbook)

Course Description:

Obesity and Weight Management course is designed to provide the opportunity for in-depth study of the nutritional aspects and implementation of dietary therapy and weight management in obesity for children and adults. This course helps students to develop problem-solving and clinical skills whilst preparing them for a successful leadership role in weight and obesity management, which is still an emerging area. This course covers current research and future possibilities in overweight and obesity, nutrition management of overweight and obesity, role of physical activity in weight loss and maintenance**,** behavior management of obesity**,** medical complications and pharmacotherapy in overweight and obesity, nutritional care of the bariatric surgery patients, and over-the-counter (OTC) dietary supplements in weight management**.**

1. Topics to be Covered		
List of Topics	**No. of Weeks**	**Contact hours**
Current Prevalence of Overweight and Obesity	1	3
Childhood Obesity	1	3
Components of Metabolic Syndrome (Syndrome X) and its Relation to Obesity. • International Diabetes Federation • World Health Organization • European Group for the Study of Insulin Resistance • National Cholesterol Education Program • American Heart Association	2	6
Genetic, Biological, and Environmental Contributors to Weight Status: • Heritability of Obesity (Parental weight status) • Monogenic Obesity • Genome-Wide Linkage Studies (Evidence for the presence of linkage with body mass index) • Obesity Candidate Gene Associations (Candidate genes associated with obesity and body composition) • Genetic Syndrome (Prader-Willi syndrome, Bardet-Biedl syndrome, Cohen syndrome, Ayazi syndrome, and MOMO syndrome)	1	3
Genetic, Biological, and Environmental Contributors to Weight Status (cont): • Gene-Environment Interaction in Obesity • Genes and Diet Interaction • Genes and Physical Activity Interaction • Social- Environmental Influences on Obesity and Obesity Promoting Behaviors. • Macroenvironmental Influences ➢ Socioeconomic Status ➢ Exposure to the “Toxic Environment” • Microenvironmental Influences ➢ Social Facilitation of Eating ➢ Parental Feeding Practices: Breast-Feeding vs. Bottle-Feeding ➢ Parental Feeding Practices: Restrictive Feeding Practices	1	3

The Adipocyte, Regulation of Appetite and Nutrition: • The physiology of the Adipocyte and Adipose tissue • The Role of Adipose Tissue as an Endocrine Organ as well as its Role in Health and Disease • The Regulation of Adipose Tissue and Energy Balance • Appetite Regulation and the Role of Adipose Tissue, the Brain and GI Tract in the Complex Neuroendocrine Regulation of Appetite • Other Conditions Predisposing to Weight Gain and Obesity such as Cushing Syndrome, Hypothyroidism and Pregnancy. • Drugs and their Association with Weight Gain such as Glucocorticoids, Oral Contraceptives and Psychotropic Agents	1	3
Weight Management-Diet, Exercise and Changing Behavior: • Key Methods Used to Measure Body Composition • Current Evidence-Based Recommendations for Assessment and Treatment of Weight Management • The Techniques (and their limitations) Used to Assess Dietary Intake in Overweight and Obesity. • Validated Methods for Determining Energy Requirements in Determining Nutrition Prescription for Weight Loss/Management. • Theories on Behavioral Changes, such as Prochaska's Model of Change. • The Evaluation of the Patient to Understand the Obstacles to Changes in Behavior. • Psychological Strategies to Promote Change such as Cognitive Behavioral Therapy and Motivational Interviewing.	2	6
Weight Management - Diet, Exercise and Changing Behavior (cont): • The Implementation of Specific Strategies of Lifestyle Modification Including Diet and Exercise. • List at the Current Public Health Guidelines for Moderate and Vigorous Physical Activity for Adults. • Distinguish Between the Amount and Type of Physical Activity Recommended for General Health Benefits and for Weight Management. • Current Research Evaluating the Efficacy of Leading Popular Diets and Diet Approaches for Weight Management.	2	6

Weight Management - Medical Treatments and Emerging Therapies: • The Role and Clinical Applicability of Medical Therapies in Weight Management. • The Pharmacological Effects, Mechanism of Action, Efficacy and Adverse Events Associated with Licensed Medical Therapies (FDA approved medications) Used in Weight Management. • Unlicensed Therapies Used in Weight Management, their Pharmacological Properties, Evidence Regarding Surrounding their Use, Controversies and Legalities of Use and the Associated Adverse Effects. • Previously Licensed/Used Medical Therapies, their Pharmacology and Reasons for Withdrawal with an Emphasis upon Pharmacovigilance and Post Marketing Surveillance. • The Role of Emerging Therapies in Weight Management with Emphasis upon the Physiological Basis for Potential Therapies. • Natural Substances Commonly Used in Dietary Supplements for Weight Management	2	6
Surgical Approaches to Weight Management: • The Variety of Surgical Approaches Involved in the Management of Weight Related Disorders. • Short and Long-Term Health Related Risks and Benefits Associated with Bariatric Surgery Procedures • Assess Patient/Client Eligibility Criteria and Indications for Surgical Treatment Intervention • An Appreciation of the Critical Role of the Multi-disciplinary Team in the Management of the Obese and Overweight Patient prior to and after Bariatric Surgery including the Management of Post-operative Nutrition. • An Appreciation of the Health Economics of Bariatric Procedures as well as Medical Therapies. • An Understanding and Appreciation of Need for the Reversal of Certain Bariatric Procedures.	1	3
Weight Management Approaches in Children	1	3

2. Course components (total contact and credit hours per semester):

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other	Total
Contact Hours	Planned	45					45
	Actual	45					45
Credit	Planned	3					3

	Actual	3					3

3. Individual study/learning hours expected for students per week. 3

Students are asked to make some pre-reading before each lecture and they need to do some extra reading after the lecture in order to bring the answers for some questions and points raised in the lecture.

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategies

On the table below are the five NQF Learning Domains, numbered in the left column.
First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and targeted learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy should fit in together with the rest to form an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

Curriculum Map

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	**Knowledge**		
1.1	Recognize basic knowledge of obesity and its relation to metabolic syndrome and chronic diseases.	Lectures Class discussion Small group discussion. Lectures	Multiple-choice exam Report assignment Multiple-choice exam Short essays exam
1.2	Identify current prevalence of overweight and obesity.		
1.3	Define the genetic, biological, and environmental contributors to weight status.		
1.4	Describe medical treatments and emerging therapies for obesity in children and adults.		
2.0	**Cognitive Skills**		
2.1	Assess the nutritional requirements for obese and overweight clients.	Problem solving cases Enhancing the thinking strategies through using brain storming sessions while discussing the topics Small group discussion	Oral discussion Multiple-choice exam and Short essays exam Report assignment
2.2	Discuss the importance of diet, exercise and changing behavior for weight management.		
2.3	Explain the emerging therapies and surgical approaches to weight management.		
3.0	**Interpersonal Skills & Responsibility**		
3.1	Show positive relation with others.	Team projects Debates Workshops Assignments	Instructor's assessment of student's performance Assessment by peer
3.2	Work in groups.		
3.3	Critical review of the scientific literature related to various topics in obesity and weight management.		
4.0	**Communication, Information Technology, Numerical**		
4.1	Present oral presentation using literatures from the web	Requesting the students to prepare oral presentations Use the internet to solve	Oral examination Assessment of students reports
4.2	Operate the internet to cope with the course		

	demand	the problem-based learning (PBL)	

5. Assessment Task Schedule for Students During the Semester			
	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	**Week Due**	**Proportion of Total Assessment**
1	Assignments	All the term	10%
2	Midterm Exam	10th week	30%
4	Presentation	16th week	10%
5	Final written Exam	18th week	50%

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic counseling. (include the time teaching staff are expected to be available per week)

- Weekly office hours (8 hours per week)
- Feedback for each student
- Providing weekly guidelines on students' overall performance

E Learning Resources

1. List Required Textbooks

- Murayama K. M and Kothari S. N. (2016), Obesity Care and Bariatric Surgery. Pub: by World Scientific Publishing Company.
- Palanivelu et al., (2017), Bariatric Surgical Practice Guide Recommendations, 1st edition, Pub: by Springer.
- Agrawal and Sanjay. (2015), Obesity, Bariatric and Metabolic Surgery,A Practical Guide, 1st edition, Pub: by Springer.
- Pearson D and Grace C. (2012), Weight Management: A Practitioner's Guide. Pub: by Wiley-Blackwell.
- Summerfield L. M. (2011), Nutrition, Exercise, and Behavior: An Integrated Approach to Weight Management. Pub: by Brooks Cole.
- Nutrition Therapy and Pathophysiology, 3rd Edition, 2016. Marcia Nelms, Kathryn Sucher, Karen Lacey and Sara Roth. Wadsworth, Cengage Learning.
- Medical Nutrition Therapy, 5th Edition, 2017 (Case Studies). Marcia Nelms and Sara Roth. Wadsworth, Cengage Learning.
- Nutrition Diagnosis and Related Care, 8th Edition, 2015. Sylvia Escott-Stump. Wolters Kluwer.
- International Dietetics and Nutrition Terminology, 4th Edition, 2012. Academy of Nutrition and Dietetics, USA.

2. List Essential References Materials (Journals, Reports, etc.)

- British Journal of Nutrition.

- Reviews in Food Sciences &Nutrition.
- Ecology of Food &Nutrition.
- Journal of Nutrition & Environmental Medicine.
- Nutrition Reviews.
- Journal of the Saudi Society for Food & Nutrition.
- The American Journal of Epidemiology
- WHO publications
- CDC publications

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

- www.eatright.org (American Dietetic Association)
- www.dietitians.ca (Dietitians of Canada)
- Saudi Digital Library (SDL)

4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access, etc.)

1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)
   - Lecture room

2. Technology resources (AV, data show, Smart Board, software, etc.)
   - Smart Board
   - Data show
   - Projector system

3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list)

N/A

G Course Evaluation and Improvement Procedures

1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching
   - Course evaluation by student
   - Classroom observations to measure student behavior through how well the student groups are interacting with in-class activity and how well the in-class activity went
   - Quality of classroom discussions and interactions between students and faculty
   - Assignment to measure student cognitive skills
   - Student surveys
   - One to one contact during office hours
   - Analysis of exam results

2. Other Strategies for Evaluation of Teaching by the Instructor or by the Department
   - Peer consultation on teaching
   - Departmental council discussions
   - Discussions within the group of faculty teaching the course

- Constant evaluation by program's coordinator
- Semester evaluation by college administrators
- Online surveys
- Questionnaires

3. Processes for Improvement of Teaching

- Conducting workshops given by experts on the teaching, learning methodologies and recommended teaching strategies
- Periodical departmental revisions of methods of teaching
- Monitoring of teaching activates by senior faculty members
- Attending annual seminars and conferences in KSA
- Taking online professional development programs
- Analysis of students' feedback
- Analysis of test results
- Recommendations from the college
- Training sessions
- Encouragement of faculty members to attend professional development conferences
- Set goals for achieving excellence in teaching at the beginning of each new semester after reviewing last semester's teaching strategies and results

4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution)

- Providing samples of all kind of assessment in the departmental course portfolio of each course
- Assigning a group of faculty members teaching the same course to grade the same questions for various students.
- Faculty from other institutions are invited to review the accuracy of the grading policy
- Conducting standard exams such as the other international universities exams.
- Exchange and remarking of students' exams can be done in the department.
- Check marking of a sample of examination papers

5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement.

- The course material and learning outcomes are periodically reviewed and the changes to be taken are approved in the departmental and higher councils.
- The head of department and faculty take the responsibility of implementing the proposed changes.
- Students' survey

Name of Course Instructor: Dr. Hassan Bukhari and Dr. Abdelelah Jazar

Signature: _____ **Date Completed: 11/11/2018**

Program Coordinator: Dr. Firas Azzeh

Signature: _____ **Date Received: 11/11/2018**

COURSE SPECIFICATIONS

Form

Course Title: Endocrine Disorders

Course Code: 1702641-3 Nut

Date: 2019-10-30	**Institution:** Umm Al-Qura University
College: Faculty of Applied Medical Sciences	**Department:** Clinical Nutrition

A. Course Identification and General Information

1. Course title and code: **Endocrine Disorders / 1702641-3 Nut**
2. Credit hours: **3 Credit hours**
3. Program(s) in which the course is offered: **Master of Clinical Nutrition**
4. Name of faculty member responsible for the course: **Dr. Basem Refaat**
5. Level/year at which this course is offered: **Level 4 (2nd Term of second year of the MSc program)**
6. Pre-requisites for this course (if any): **Regulation of macronutrients in Human Nutrition and Advanced Nutritional Assessment**
7. Co-requisites for this course (if any): **None**
8. Location if not on main campus: **Main Campus**
9. Mode of Instruction (mark all that apply):

a. Traditional classroom	X	percentage?	67%
b. Blended (traditional and online)		percentage?	
c. E-learning		percentage?	
d. Correspondence		percentage?	
f. Other	X	percentage?	33%

Comments:
The course is based on 2 credit hours of 1 credit hour of traditional lectures and 1 credit hour of tutorials.

B Objectives

1. The main objective of this course

At the completion of this course, students are expected to be able to:

a. Recognize the role and basic underlying principles of the different regulation mechanisms of endocrine glands and the roles of hormones in regulating the internal environment.

b. Explain how different endocrine glands and hormones achieve their functions and how these functions are regulated and interrelated.

c. Explain the metabolic effects of the different hormones.

d. Understand the pathophysiology of hormones on the body composition and development.

e. Explain and describe the effects of sex hormones on body development and metabolism.

f. Explain the endocrine regulation of glucose homeostasis and the pathophysiology of obesity, metabolic syndrome and diabetes mellitus.

g. Illustrate and describe the hormonal regulations of calcium homeostasis and bone health.

h. List the normal values of important hormones and interpret the clinical relevance of such values when given.

2. Describe briefly any plans for developing and improving the course that are being implemented. (e.g. increased use of the IT or online reference material, changes in content as a result of new research in the field)

a. Updating the course contents with the recent concepts of medical physiology according to evidences and improving the future career specialty of Laboratory Medicine specialists.

b. To develop the program and teaching methods based on problem-based learning (PBL) and small group teaching

c. Add assignments and activities in teaching/assessment methods.

C. Course Description (Note: General description in the form used in the program's bulletin or handbook)

Course Description: This course is intended for the students of Clinical Nutrition during the fourth level of the MSc program. The course aims to provide essential and advanced information related to the endocrine system and the different hormones physiology and pathology in human together with their clinical manifestations in relation to body development, metabolism and the functions of major systems in relation to the profession of Clinical Nutritionist.

1. Topics to be Covered		
List of Topics	**No. of Weeks**	**Contact hours**
The pituitary gland and its hormones	1	3
Physiology and clinical importance of growth hormone	1	3
The physiology of thyroid gland	1	3
Thyroid diseases in children, adults and pregnancy	2	6
The endocrine regulation of calcium homeostasis	1	3
Dysregulation of parathyroid hormone and vitamin D in relation to bone health and renal diseases	2	6
Endocrine regulation of glucose homeostasis	2	6
Physiology of male and female reproductive endocrinology	2	6
Endocrinology of pregnancy, lactation and menopause	2	6
Endocrinology of and metabolic factors in female infertility	1	3

2. Course components (total contact and credit hours per semester):

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other	Total
Contact Hours	Planned	30	15	None	None	None	45
	Actual	30	15	None	None	None	45
Credit	Planned	2	1	None	None	None	3
	Actual	2	1	None	None	None	3

3. Individual study/learning hours expected for students per week. 4 hours/weeks

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategies

On the table below are the five NQF Learning Domains, numbered in the left column.

First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and targeted learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy should fit in together with the rest to form an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

Curriculum Map

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	**Knowledge**		
1.1	List the different endocrine glands, their secreted hormones and physiological functions, regulatory mechanisms of endocrine system, list the major endocrine diseases and their metabolic effects,	Lectures	MCQs, assignment and short essays

	describe the effects of gender and age in the context on endocrine functions.		
1.2	Recognize the normal values of hormones in relation to gender and/or age.	Lectures	MCQs and short essays
2.0	**Cognitive Skills**		
2.1	Summarize the major dysfunctions of endocrine glands and hormones	Group discussion and case studies	MCQs and short essays
2.2	Interpret the biochemical endocrine results in relation to the functions and diseases of endocrine glands and/or metabolic disorders	Lectures and tutorials	Case scenarios
3.0	**Interpersonal Skills & Responsibility**		
3.1	Choose correct and appropriate answers among several	Lectures	MCQs
3.2	Illustrate the physiological functions and clinical manifestations of major endocrine glands and hormones.	Lectures and tutorials	MCQs and short essays
3.3	Critical review of the scientific literature related to various topics in endocrine disorder.		
4.0	**Communication, Information Technology, Numerical**		
4.1	Research on pre-defined topics related to endocrinology	Brainstorming and group discussion	Voluntary brief demonstration/presentation by students at the beginning of each lecture & MCQs
4.2	Assess and interpret given information related to normal and abnormal functions hormones	Case scenario and open discussion	Sharing in open discussion during lectures

5. Assessment Task Schedule for Students During the Semester

	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	Assignments	All the term	10%
2	Midterm Exam	8th week	30%
4	Presentation	16th week	10%
5	Final written Exam	17th week	50%

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic counseling. (include the time teaching staff are expected to be available per week)
- Dr. Bassem Refaat is available in his office for 20 hours/week.
- Course organizer and lecturers of the course are happy to answer all students' quires during or after the lectures, and they can be reached by personal meeting, phones or e-mails.
- Student representative usually have the mobile number of the course organizer to contact him in

case of any queries. - All students have the e-mail of the course organizer. - Office hours for the course organizer and lecturer of the course are given to students.

E Learning Resources

1. List Required Textbooks Williams Textbook of Endocrinology - 13th Edition Metabolic regulations A human perspective Diet, Nutrition and Fetal Programming Pediatric Endocrinology
2. List Essential References Materials (Journals, Reports, etc.) i) The Journal of Clinical Endocrinology & Metabolism ii) American Physiology Society http://physiologyonline.physiology.org/ iii) International Journal of Endocrinology and Metabolism http://jp.physoc.org/ iv) Trends in Endocrinology and Metabolism https://www.journals.elsevier.com/trends-in-endocrinology-and-metabolism/
3. List Electronic Materials, Web Sites, Facebook, Twitter, etc. www.Pubmed.com www.physoc.org/ https://www.endocrine.org/
4. Other learning material such as computer-based programs/CD, professional standards or regulations and software. CD-ROM containing illustrated topics in human physiology.

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access, etc.)
1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.) Class rooms: 20 seats/class accommodating 20 students.
2. Technology resources (AV, data show, Smart Board, software, etc.) data show
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list) Audio/visual and data show equipment.

G Course Evaluation and Improvement Procedures

1. Strategies for Obtaining Student's Feedback on Effectiveness of Teaching Feedback will be obtained from the students at the end of the semester to evaluate the effectiveness of teaching and the students are required by the University to evaluate each Academic staff member by the end of each academic year.
2. Other Strategies for Evaluation of Teaching by the Instructor or the Department Weekly Departmental meeting and inter-academic staff evaluation of teaching. Additionally, any complain from students about quality of teaching and/or course contents are always treated confidentially and considered and discussed well to find the solutions for it.
3. Procedures for Teaching Development

Department teaching staff are always encouraged to update their knowledge in the field of work by attending national and international conferences and self-development courses held inside or outside the university campus and a record of that is kept for each academic staff.
4. Procedures for Verifying Standards of Student's Achievement (e.g. check marking by an independent member teaching staff of a sample of student's work, periodic exchange and remarking of tests or a sample of assignments with staff members at another institution) 1. check marking by an independent member teaching staff of a sample of student work 2. periodic exchange and remarking of tests or a sample of assignments with staff from another institution.
5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for developing it. The course contents are reviewed and updated annually at the beginning of each academic year by the department curriculum committee and any major changes are reported to the college curriculum committee.

Name of Course Instructor: Dr. Bassem Refaat

Signature: _____ **Date Completed: 29/10/2018**

Program Coordinator: Dr. Firas Azzeh

Signature: _____ **Date Received: 30/10/2018**

COURSE SPECIFICATION

Form

Course Title: Oncology Nutrition

Course Code: 1702642-3 Nut

Date: 2018-11-11	**Institution:** Umm Al-Qura University
College: Applied Medical Sciences	**Department:** Clinical Nutrition

A. Course Identification and General Information

1. Course title and code: **Oncology Nutrition/ 1702642-3 Nut**
2. Credit hours: **3 Credit hours**
3. Program(s) in which the course is offered: **Master of Clinical Nutrition**
4. Name of faculty member responsible for the course: **Dr. Doaa Negm**
5. Level/year at which this course is offered: **Level 4 (2nd Term of second year of the MSc program)**
6. Pre-requisites for this course (if any): **Regulation of macronutrients in Human Nutrition and Advanced Nutritional Assessment**
7. Co-requisites for this course (if any): **None**
8. Location if not on main campus: **Main Campus**
9. Mode of Instruction (mark all that apply):

a. Traditional classroom	√	percentage?	60%
b. Blended (traditional and online)		percentage?	
c. E-learning		percentage?	
d. Correspondence		percentage?	
f. Other	√	percentage?	40%

Comments:
An academic semester contains 15 weeks of instruction. Students enrolled in this course whose mode of instruction is lectures and discussion sessions based should expect to have 15 hours of class contact over the length of the semester for each hour of credit.

B Objectives

1. The main objective of this course

The course will cover the basic cancer biology including cancer genetics, tumor metabolism, and then discuss how to prevent it; the nutritional management and the most important dietary supplement for different types of cancer.

2. Describe briefly any plans for developing and improving the course that are being implemented. (e.g. increased use of the IT or online reference material, changes in content as a result of new research in the field)

- Changes in content as a result of new research in the field.

C. Course Description (Note: General description in the form used in the program's bulletin or handbook)

Course Description:

This course provides an intensive and evidence-based learning with the latest information on implementing nutrition care for oncology patients. Recognize the nutritional requirements and nutritional care for different oncology diseases, an overview of critical illness, its consequences on organ function, treatments, and effects on nutrient metabolism, as well as determine the possible dietary supplements that could be used in cancer prevention and treatment all will be explored in this advanced course.

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
Biology of Nutrition and Cancer	1	3
Epidemiology of Nutrition and Cancer	1	3
Biological Approaches to Investigating Nutrition and Cancer	1	3

Nutrition Assessment and Management for Cancer Patient 1. Prostate cancer 2. Breast cancer 3. Skin Cancer 4. Colon cancer 5. Gastric cancer 6. Pancreatic cancer 7. Bladder cancer 8. Leukemia and lymphoma 9. Lung cancer 10. Head and neck cancer	10	30
Dietary Supplements in Cancer Prevention and Therapy	2	6

2. Course components (total contact and credit hours per semester):

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other	Total
Contact Hours	Planned	45					45
	Actual	45					45
Credit	Planned	3					3
	Actual	3					3

3. Individual study/learning hours expected for students per week. 3

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategies

On the table below are the five NQF Learning Domains, numbered in the left column.

First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and targeted learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy should fit in together with the rest to form an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

Curriculum Map

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	**Knowledge**		
1.1	Recognize the basics of cancer etiology.	Understand the basics of cancer etiology Understand the types	Understand the basics of cancer etiology
1.2	Define the types of research tools used to study cancer and diet relationships.		

	Describe the dietary supplement in cancer prevention and treatment.	of research tools used to study cancer and diet relationships Recognized the dietary supplement in cancer prevention and treatment	Understand the types of research tools used to study cancer and diet relationships Recognized the dietary supplement in cancer prevention and treatment
2.0	**Cognitive Skills**		
2.1	Discuss the importance of nutrition care in oncology diseases.	• Examples of case study which given in the lecture. • Problem solving. • Small group discussion.	• Regular quizzes and final exams. • Multiple-choice exam. • Assignment.
2.2	Assess the nutritional requirements for cancer patients.		
3.0	**Interpersonal Skills & Responsibility**		
3.1	Assess the patient's condition and diagnose related to the health needs.	• Students will be assigned into small groups and make free discussions. • Class presentation. • Group discussion.	Assessment of student through regular assignments, quizzes and final exams.
3.2	Show the team work ability.		
3.3	Critical review of the scientific literature related to various topics in oncology nutrition.		
4.0	**Communication, Information Technology, Numerical**		
4.1	Criticize, assess and perform effective communication with peers and teaching faculty.	Students are required to make report and case study assignments requiring proper style and reference format	•Assessment of student assignments and behaviour.
4.2	Operate technology in analyzing data and information.		

5. Assessment Task Schedule for Students During the Semester

	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	Assignments	All the term	10%
2	Midterm Exam	9th week	30%
4	Presentation	16th week	10%
5	Final written Exam	17th week	50%

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic counseling. (include the time teaching staff are expected to be available per week)

- Staff will be available for individual student counseling and advice.
- 4 office hours/week/faculty member

E Learning Resources

1. List Required Textbooks
   - Nutritional Oncology, 2nd edition, 2006. By: David Heber, George Blackburn Vay Go John Milner
   - Oncology Nutrition for Clinical Practice, 1st edition. 2018. By: Oncology Nutrition Dietetic Practice Group, Maureen Leser, Natalie Ledesma, Sara Bergerson, Elaine Trujillo.
   - Nutrition Therapy and Pathophysiology, 3rd Edition, 2016. Marcia Nelms, Kathryn Sucher, Karen Lacey and Sara Roth. Wadsworth, Cengage Learning.
   - Medical Nutrition Therapy, 5th Edition, 2017 (Case Studies). Marcia Nelms and Sara Roth. Wadsworth, Cengage Learning.
   - Nutrition Diagnosis and Related Care, 8th Edition, 2015. Sylvia Escott-Stump. Wolters Kluwer.
   - International Dietetics and Nutrition Terminology, 4th Edition, 2012. Academy of Nutrition and Dietetics, USA.

2. List Essential References Materials (Journals, Reports, etc.)
   - Arends J, et al., ESPEN guidelines on nutrition in cancer patients, Clinical Nutrition (2016), http://dx.doi.org/ 10.1016/j.clnu.2016.07.015

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.
N/A

4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.
N/A

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access, etc.)

1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)
   - Classrooms
   - Demonstration rooms

2. Technology resources (AV, data show, Smart Board, software, etc.)
   - Data Show
   - Smart Board

3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list)
N/A

G Course Evaluation and Improvement Procedures

1. Strategies for Obtaining Student's Feedback on Effectiveness of Teaching
   - Confidential completion of standard course evaluation questionnaire

2. Other Strategies for Evaluation of Teaching by the Instructor or by the Department
   - Observations and assistance from colleagues.
   - Independent assessment of standards achieved by students.
   - Independent advice on assignment tasks

3. Processes for Improvement of Teaching • Workshops on teaching methods, review of recommended teaching strategies.
4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution) • Check marking by another teaching staff of a sample of student work. • Peer reviewing of tests remarking and sample of student assignments
5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement. • Regular evaluation of students' feedbacks and other feedbacks from peer reviewers and other independent staff. • Annual improvement and updating of the course based on the outcome of the reviewing process

Name of Course Instructor: Dr. Doaa Negm

Signature: _____ **Date Completed: 11/11/2018**

Program Coordinator: Dr. Firas Azzeh

Signature: _____ **Date Received: 11/11/2018**

COURSE SPECIFICATION

Form

Course Title: Advanced Clinical Nutrition: Pediatrics

Course Code: 1702643-3 Nut

Date: 2018-11-11	**Institution:** Umm Al-Qura University
College: Applied Medical Sciences	**Department:** Clinical Nutrition

A. Course Identification and General Information

1. Course title and code: **Advanced Clinical Nutrition: Pediatrics / 1702643-3 Nut**
2. Credit hours: **3 h**
3. Program(s) in which the course is offered: **Master of Clinical Nutrition**
4. Name of faculty member responsible for the course: **Dr. Firas Azzeh and Dr. Mai Labani**
5. Level/year at which this course is offered: **Level 4 (2nd Term of second year of the MSc program)**
6. Pre-requisites for this course (if any): **Regulation of macronutrients in Human Nutrition and Advanced Nutritional Assessment**
7. Co-requisites for this course (if any): **None**
8. Location if not on main campus: **Main Campus**
9. Mode of Instruction (mark all that apply):

a. Traditional classroom	√	percentage?	60%
b. Blended (traditional and online)		percentage?	
c. E-learning		percentage?	
d. Correspondence		percentage?	
f. Other	√	percentage?	40%

Comments:
An academic semester contains 15 weeks of instruction. Students enrolled in this course whose mode of instruction is lectures and discussion sessions based should expect to have 15 hours of class contact over the length of the semester for each hour of credit.

B Objectives

1. The main objective of this course

- Appraise the current nutritional requirements and dietary reference values for both the healthy and sick infant and child.
- Defend the role of diet in the nutritional management of disease in infants and children including critical care, diabetes, celiac disease, allergy, faltering growth, cystic fibrosis, cancers, and others.
- Interpret the evidence for the effectiveness of nutrition and dietetic interventions in a range of clinical settings, when working with children.
- Design care pathways and treatment plans suitable for service users with a wide range of disease conditions.
- Evaluate the use of appropriate monitoring tools in nutritional paediatric care.

2. Describe briefly any plans for developing and improving the course that are being implemented. (e.g. increased use of the IT or online reference material, changes in content as a result of new research in the field)

- Increased use of IT or web-based reference material.
- Changes in content as a result of new research in the field.

C. Course Description (Note: General description in the form used in the program's bulletin or handbook)

Course Description:

This course examines pediatric nutrition in both health and disease including different formulas. The physiological, biochemical and nutritional aspects of disease processes relevant to infants and children will be studied. Neonatal Nutrition of preterm and sick term infants and management of high risk infants in ICU, epilepsy, neonatal surgery, burns and trauma will be considered. The use of all forms of nutrition support in disease management will be focused. This course will also critically examine the etiology, nutritional and dietetic management of pediatric diabetes, cystic fibrosis, faltering growth, cancer, allergy, anemia, congenital diseases, gastrointestinal and major organ systems problems.

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours

1. **Development of Gastrointestinal Function:** Dietary fat, dietary carbohydrate, dietary protein, vitamin and minerals, and human milk.	1	3
2. **Breastfeeding:** Milk, duration of breast feeding, and growth of breastfeed infants.	1	3
3. **Formula feeding of term infants:** Rates of breast feeding and formula feeding, indications for the use of infant formula, available forms of infant formula, safe preparation, handling, and storage of infant formula.	1	3
4. Feeding and nutritional support of pediatric with swallowing disorder and acute and chronic diarrheal disease.	1	3
5. **Failure to thrive:** Medical issues in evaluation and treatment, physical examination and laboratory evaluation, medical management, and nutrition evaluation and treatment.	1	3
6. Nutrition therapy for pediatric with type 1 and type 2 diabetes mellitus and hypoglycemia.	1	3
7. **Nutrition of children who are critically ill:** Malnutrition and Metabolic Reserves, Protein Metabolism, Carbohydrate and Lipid Metabolism, Energy Requirement During Critical Illness, Micronutrients, and Nutrient Delivery in the PICU – Challenges.	1	3
8. Nutrition for Children with Sickle Cell Disease and Thalassemia.	1	3
9. Nutritional Management of Children with Kidney Disease.	1	3
10. Nutritional Management of Children with Cancer.	1	3
11. The Nutritional Aspects of Inflammatory Bowel Disease in Pediatric Patients.	1	3
12. The Nutritional Aspects of Liver disease in Pediatric Patients.	1	3
13. The Nutritional Aspects of Cardiac disease in Pediatric Patients.	1	3
14. The Nutritional Aspects of Nutrition in Cystic fibrosis in Pediatric Patients.	1	3
15. The Nutritional Aspects of Congenital diseases in Pediatric Patients.	1	3

2. Course components (total contact and credit hours per semester):

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other	Total
Contact Hours	Planned	45					45
	Actual	45					45
Credit	Planned	3					3
	Actual	3					3

3. Individual study/learning hours expected for students per week.	3

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategies

On the table below are the five NQF Learning Domains, numbered in the left column.

First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and targeted learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy should fit in together with the rest to form an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

Curriculum Map

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	**Knowledge**		
1.1	Define nutrient required for infant depend on development of gastrointestinal function.	1. Lectures. 2. Class discussion. 3. Small group discussion. 4. Guided self-learning.	1. Short assays exam. 2. Multiple-choice exam. 3. Lecture quizzes. 4. Report
1.2	Identify the optimal nutrition for infants.		
1.3	Recognize the different pediatrics diseases and the required nutrition.		
2.0	**Cognitive Skills**		
2.1	Evaluate the nutrient benefit of carbohydrates, lipids and proteins and how they can utilize in infants and children.	1. Examples of case study which given in the lecture. 2. Problem-based case study. 3. Role playing. 4. Problem solving. Small group discussion	1. Problem solving question implemented in the regular quizzes and final exams. 2. Multiple-choice exam. 3. Problem solving questions. 4. Clinical case study questions.
2.2	Explain the pathophysiology of different pediatric disorders and the suitable nutrition intake.		
2.3	Differentiate the information and requirements about different pediatric disorders.		
3.0	**Interpersonal Skills & Responsibility**		
3.1	Use the obtained information to improve responsibility for their own learning and continuing personal development.	• Students will be assigned into small groups and make free discussions. • Class presentation. Group discussion.	Assessment of student through regular assignments, quizzes and final exams.
3.2	Show the required skills in carrying out the professional responsibilities of clinical nutrition services effectively and efficiently based on the basic medical biochemistry knowledge.		
3.3	Evaluate the nutrition plan of care based on the evaluation of different nutrient metabolism.		
3.4	Critical review of the scientific literature related		

	to various topics in Pediatric clinical nutrition.		
4.0	**Communication, Information Technology, Numerical**		
4.1	Criticize, assess and perform effective communication with peers and teaching faculty.	Students are required to make report and case study assignments requiring proper style and reference format.	• Assessment of student assignments
4.2	Evaluate, synthesize and summarize pediatric clinical nutrition questions critically.		
4.3	Operate technology in communication with others.		

5. Assessment Task Schedule for Students During the Semester			
	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	**Week Due**	**Proportion of Total Assessment**
1	Assignments	All the term	10%
2	Midterm Exam	10th week	30%
4	Presentation	16th week	10%
5	Final written Exam	18th week	50%

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic counseling. (include the time teaching staff are expected to be available per week)

- Staff will be available for individual student counseling and advice.
- 4 office hours/week/faculty member

E Learning Resources

1. List Required Textbooks

- Pediatric Nutrition, 7th Edition, 2014. By AAP Committee on Nutrition
- Pediatric Nutrition Handbook 6th Edition, 2009. by AAP Committee on Nutrition, Ronald E. Kleinman MD FAAP.
- Eating Behaviors of the Young Child: Prenatal and Postnatal Influences for Healthy Eating 1st Edition, 2008. by William Dietz, Leann Birch.
- Essentials of Pediatric Nutrition, 1st Edition, 2012. Patricia Queen Samour and Kathy King. Jones and Bartlett
- Nutrition Therapy and Pathophysiology, 3rd Edition, 2016. Marcia Nelms, Kathryn Sucher, Karen Lacey and Sara Roth. Wadsworth, Cengage Learning.
- Medical Nutrition Therapy, 5th Edition, 2017 (Case Studies). Marcia Nelms and Sara Roth. Wadsworth, Cengage Learning.
- Nutrition Diagnosis and Related Care, 8th Edition, 2015. Sylvia Escott-Stump. Wolters Kluwer.
- International Dietetics and Nutrition Terminology, 4th Edition, 2012. Academy of Nutrition and Dietetics, USA.
- Advanced Nutrition and Human Metabolism, 7th Edition, 2018. By Sareen S. Gropper, Jack L.

Smith, Timothy P. Carr.
2. List Essential References Materials (Journals, Reports, etc.) The American Academy of Pediatrics https://www.aap.org/en-us/Pages/Default.aspx
3. List Electronic Materials, Web Sites, Facebook, Twitter, etc. N/A
4. Other learning material such as computer-based programs/CD, professional standards or regulations and software. N/A

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access, etc.)
1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.) • Classrooms
2. Technology resources (AV, data show, Smart Board, software, etc.) • Data show
3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list) N/A

G Course Evaluation and Improvement Procedures

1. Strategies for Obtaining Student's Feedback on Effectiveness of Teaching • Confidential completion of standard course evaluation questionnaire
2. Other Strategies for Evaluation of Teaching by the Instructor or the Department • Observations and assistance from colleagues. • Independent assessment of standards achieved by students. • Independent advice on assignment tasks
3. Procedures for Teaching Development • Workshops on teaching methods, review of recommended teaching strategies
4. Procedures for Verifying Standards of Student's Achievement (e.g. check marking by an independent member teaching staff of a sample of student's work, periodic exchange and remarking of tests or a sample of assignments with staff members at another institution) • Check marking by another teaching staff of a sample of student work. • Peer reviewing of tests remarking and sample of student assignments
5. Describe the planning arrangements for periodically reviewing course effectiveness and planning for developing it. • Regular evaluation of students' feedbacks and other feedbacks from peer reviewers and other independent staff. • Annual improvement and updating of the course based on the outcome of the reviewing process

Name of Course Instructor: Dr. Firas Azzeh and Dr. Mai Labani

Signature: _____ **Date Completed: 11/11/2018**

Program Coordinator: Dr. Firas Azzeh

Signature: _____ **Date Received: 11/11/2018**

COURSE SPECIFICATIONS

Form

Course Title: Research Project

Course Code: 1702644-3 Nut

Date: 2018-11-11	**Institution:** Umm Al-Qura University...
College: Applied Medical Sciences	**Department:** Clinical Nutrition Department

A. Course Identification and General Information

1. Course title and code: **Research Project/ 1702644-3 Nut**
2. Credit hours: **3 h**
3. Program(s) in which the course is offered: **Master of Clinical Nutrition**
4. Name of faculty member responsible for the course: **Dr. Khloud Ghafouri**
5. Level/year at which this course is offered: **Level 4 (2nd year of 2nd Semester of MSc of Clinical nutrition)**
6. Pre-requisites for this course (if any): **Applied Biostatistics**
7. Co-requisites for this course (if any): **None**
8. Location if not on main campus: **Main Campus**
9. Mode of Instruction (mark all that apply):

a. Traditional classroom		percentage?	
b. Blended (traditional and online)	√	percentage?	60%
c. E-learning		percentage?	
d. Correspondence		percentage?	
f. Other	√	percentage?	40%

Comments:
An academic semester contains 15 weeks of instruction. Students enrolled in this course whose mode of instruction is discussions, tutorials, practical work, dissertation writing, and presentation based should expect to have 15 hours of class contact over the length of the semester for each hour of credit.

B Objectives

1. The main objective of this course

The aim of this module is to prepare postgraduate students for the research project that they are required to complete as part of their MSc programme according to an individual study plan with guidance from supervisor; to summarize the results in a research report and present the results of the project.

2. Describe briefly any plans for developing and improving the course that are being implemented. (e.g. increased use of the IT or online reference material, changes in content as a result of new research in the field)

- Using audio and video material related to each topic as appropriate

- Encouraging students to collect clinical nutrition problems and management from web-based reference material and supervise classroom discussions

C. Course Description (Note: General description in the form used in the program's bulletin or handbook)

Course Description:

This course will provide students with the learning opportunity of performing multidisciplinary research within the Clinical Nutrition field. Students will initiate, plan and execute an individually constructed piece of research project and are expected to report on their findings. Students will identify issues within their program, and specifically within their optional subjects, to investigate with the use of appropriate research methods, either theoretical or applied, and participate in research activities which will include a literature search, the collection and analysis of data, (either primary or secondary data) and the preparation of a research project.

1. Topics to be Covered

List of Topics	No. of Weeks	Contact hours
1. Explains project purposes, importance and contexts; Contains a substantive, conceptual framework based on a recent and relevant literature.	2	6
2. An individual study plan will be commonly written by the supervisor and the student which serves as a project description.	2	6
3. Report writing under supervision.	3	9
4. Presentation based on the research results will be designed, presented and discussed.	7	21

	These will include some (and often many) of the following: further literature research and evaluation; further analysis of consequences; further planning and management; feasibility assessment; experimental work and trialing; fieldwork; data analysis… etc.		
5.	Research project submission.	1	3

2. Course components (total contact and credit hours per semester):

		Lecture	Tutorial	Laboratory/ Studio	Practical	Other	Total
Contact Hours	Planned					45	45
	Actual					45	45
Credit	Planned					3	3
	Actual					3	3

3. Individual study/learning hours expected for students per week. 5 h

4. Course Learning Outcomes in NQF Domains of Learning and Alignment with Assessment Methods and Teaching Strategies

On the table below are the five NQF Learning Domains, numbered in the left column.
First, insert the suitable and measurable course learning outcomes required in the appropriate learning domains (see suggestions below the table). **Second**, insert supporting teaching strategies that fit and align with the assessment methods and targeted learning outcomes. **Third**, insert appropriate assessment methods that accurately measure and evaluate the learning outcome. Each course learning outcomes, assessment method, and teaching strategy should fit in together with the rest to form an integrated learning and teaching process. (Courses are not required to include learning outcomes from each domain.)

Curriculum Map

Code #	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	**Knowledge**		
1.1	Describe knowledge that covers and integrates most, if not all, of the main subject areas of the discipline of Clinical Nutrition.	Lecture, Individual and group experimental research work	Course work and assignment
1.2	A critical understanding, through observation, of the intellectual and aesthetic content of selected topics to substantiate clinical judgments	small group discussion, and tutorials	Report
	Outline research, critical and detailed evaluation of the briefing and performance applied to the self-directed design project.		
2.0	**Cognitive Skills**		
2.1	Write in a proper scientific way.	small group discussion, and tutorials	Writing up 800 words report
2.2	Evaluate outcomes and accurately assess/report on own/others work with justification and relate them to existing knowledge structures and methodologies		

2.3	Synthesize information to arrive at a coherent conclusion.		
2.4	Critically evaluate the implications for the recommendations presented.		
3.0	**Interpersonal Skills & Responsibility**		
3.1	Show effective communication and positive relation with supervisor.	Lecture, case study, small group work and discussion.	Course work and assignment
4.0	**Communication, Information Technology, Numerical**		
4.1		Lectures, individual and group presentation Lectures and tutorials	Writing assessment, presentation and group discussion Course work: presentation
4.2	Evaluate the ethical dilemmas likely to arise in research and professional practice and formulate solutions in dialogue with peers, clients and other		
4.3	Demonstrate the ability for innovative and autonomous learning, normative and ethical reflection, self-evaluation and engagement with disciplinary benchmarks		
5.0	**Psychomotor (if any)**		
5.1	Demonstrate analytical skills, computing skills, critical reasoning, organization and planning, report and essay writing skills, and research skills	Lecture and small group discussion.	Course work and assignment
5.2	Perform modifications to existing knowledge structures and theoretical frameworks.	Lecture and small group discussion.	Course work and assignment
5.3	Develop and utilize theory and methodology appropriate to inquiry of an empirical subject area related to Clinical nutrition		
5.4	Select, define and focus upon an issue at an appropriate level; develop recommendations and logical conclusions; and be aware of the limitations of the research work.		

5. Assessment Task Schedule for Students During the Semester

	Assessment task (i.e., essay, test, quizzes, group project, examination, speech, oral presentation, etc.)	Week Due	Proportion of Total Assessment
1	Tutorials	All the term	10%
2	Practical Work	All the term	40%
3	Written Report (500 words)	7th week	10%
4	Written Submission (3000 words) [included writing follow-up and corrections].	14th week	15%
5	Presentation and viva	15th week	25%

D. Student Academic Counseling and Support

1. Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice. (include amount of time teaching staff are expected to be available each week)	

- Supervisor will be available for individual student counseling and advice.
- 8 office hours/week/faculty member

E Learning Resources

1. List Required Textbooks

- Bookmarks: Guide to Research and Writing - 3rd edition. 2006. by John Ruszkiewicz, Janice R. Walkerand Michael Pemberton
- Willis, P. Dissertation Handbook: A Guide to Research and Writing. London: RIBA.

2. List Essential References Materials (Journals, Reports, etc.)

3. List Electronic Materials, Web Sites, Facebook, Twitter, etc.

1. Access to digital libraries (e.g., Umm Al Qura University digital library)
2. http://services.unimelb.edu.au
3. Online journals
4. Online books

- Various websites such as:
- PubMed: www.pubmed.com
- Google scholar: www.google.scholar.com

4. Other learning material such as computer-based programs/CD, professional standards or regulations and software.

- Reference management program (e.g., Endnote)

F. Facilities Required

Indicate requirements for the course including size of classrooms and laboratories (i.e. number of seats in classrooms and laboratories, extent of computer access, etc.)

1. Accommodation (Classrooms, laboratories, demonstration rooms/labs, etc.)
   1. Class rooms: Male 30 seats/class room; Female 30 seats/class room
   2. Computers laboratory: 30 students

2. Technology resources (AV, data show, Smart Board, software, etc.)
   1. Computers laboratory
   2. Audiovisual and data show facilities
   3. Wireless and internet connections
   4. Data analysis software (SPSS, EPI-info, etc.)
   5. Reference management software (e.g. Endnote)

3. Other resources (specify, e.g. if specific laboratory equipment is required, list requirements or attach list)
N/A

G Course Evaluation and Improvement Procedures

1. Strategies for Obtaining Student Feedback on Effectiveness of Teaching

- Confidential completion of standard course evaluation questionnaire

2. Other Strategies for Evaluation of Teaching by the Instructor or by the Department • Observations and assistance from colleagues. • Independent assessment of standards achieved by students. • Independent advice on assignment tasks
3. Processes for Improvement of Teaching • Workshops on teaching methods, review of recommended teaching strategies
4. Processes for Verifying Standards of Student Achievement (e.g. check marking by an independent member teaching staff of a sample of student work, periodic exchange and remarking of tests or a sample of assignments with staff at another institution) • Check marking by another teaching staff of a sample of student work. • Peer reviewing of tests remarking and sample of student assignments.
5 Describe the planning arrangements for periodically reviewing course effectiveness and planning for improvement. • Regular evaluation of students' feedbacks and other feedbacks from peer reviewers and other independent staff. • Annual improvement and updating of the course based on the outcome of the reviewing process

Name of Instructor: Dr.Khloud Ghafouri

Signature:_ **Date Report Completed: 11/11/2018**

Program Coordinator: Dr. Firas Azzeh

Signature: _____ **Date Received: 11/11/2018**