



King Saud University

College of Applied Medical Sciences

Community Health Sciences Department

Clinical Nutrition Program

NUTRITIONAL ASSESSMENT

CHS 435

**Course Instructors: Ohoud AlMusined, Ghada
ALMudaimeegh, Wa'ad Al-Fawaz**

Second Semester 1432-1433



*Kingdom of Saudi Arabia
Applied Medical Science College
Community Health Sciences Department
Clinical Nutrition*

COURSE SPECIFICATION TEMPLATE

Course Title:

Nutritional Assessment

Code: CHS 435, (CHS 461 in the old plan)

2nd Semester – 1432-1433H

Course Specification

Institution : **KSU**

College/Department : **College of Applied Medical Sciences**

A Course Identification and General Information

1. Course title and code : **Nutritional Assessment**

2. Credit hours: **3hrs (2hrs theory+ 1hr practical)**

3. Program(s) in which the course is offered.

Clinical Nutrition Program (Bachelor)

4. Name of faculty member responsible for the course

Ghada AlMudimeegh , Ohoud AlMusined, Wa'ad AlFawaz

Phone :**4355010 ex.130**

E mail: walfawaz@ksu.edu.sa , Galmedaimeegh@ksu.edu.sa,
Oalmusiened@ksu.edu.sa

Office hours: **Sunday: 9:00 - 10:00 am, Tuesday: 9:00 - 10:00 am**
,Monday: 9:00am -1:00 pm

5. Level/year at which this course is offered : **level 8**

6. Pre-requisites for this course (if any) :

CHS 343, Nutrition Therapy for Chronic Diseases, Level: 7

7. Co-requisites for this course (if any):

None

8. Location: CHS 2

B Objectives

1. Summary of the main learning outcomes for students enrolled in the course.

By the end of the course the students would be able to:

- ✓ **Identify the different methods for assessing the nutritional status, which covers dietary, anthropometric, biochemical and clinical assessment of the nutrition status.**
- ✓ **Demonstrate and practice most available, used assessment tools.**
- ✓ **Describe the strengths and and limitations of different nutrition assessment tools.**
- ✓ **Apply the appropriate method for specific application.**
- ✓ **Practice the usage of new technology including dietary analysis softwares.**

2. Briefly describe any plans for developing and improving the course that are being implemented. (E.g. 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 to be used for the Bulletin or Handbook should be attached)

Date (weeks)	Topic	Lecture (hours)	Tutorial/ Practical (hours)	Other Activities (hours)	Assessment Method
1 st week	Introduction	2hr			
2 nd week	Dietary Assessment: 1. Dietary Standards & Recommendations. 2. Recommended Dietary Allowance. 3. Dietary Guidelines.	2hr	3hr	Group discussion	Asking questions+ quiz+ debate
3 rd week	Dietary Assessment: 4. Food guides. 5. Composition table. 6. Reason for measuring diet.	2hr	3hr	Group discussion	Asking questions+ quiz+ debate
4 th week	Dietary Assessment: 7. Techniques in measuring diet (24hr Recall, Food Record, Food Frequency Questionnaire, Dietary History, Food Inventory, Food Balance Sheet, and Vital Statistics). 8. Computerized dietary measurements.	2hr	3hr	Role play + Workshop + Practicing in the nutrition clinic	assignments practical exam+ assignment+ quiz
5 th week	1 st Midterm Exam				
6 th week	Anthropometric Measurements: 1. Measuring Length, stature & head circumference. 2. Measuring Weight for infants, children, and adults.	2hr	3hr	Video CD+ Practicing in the nutrition clinic	assignments + practical exam+ quiz
7 th week	Anthropometric Measurements: 3. Growth Chart, weight standards, height-weight indices. 4. Measuring frame size. 5. Body fat distribution, body fat composition. 6. Skin folds Measurements.	2hr	3hr	Workshop + Video CD+ Practicing in the nutrition clinic	assignments + practical exam+quiz
8 th week	Assessment of the hospitalized patients: <ul style="list-style-type: none"> Assessing nutritional status. Determining energy & protein requirements -Nutrition Screening 	2hr	3hr	Lecture	Asking questions+ quiz

9 th week	Assessment of Pediatrics: <ul style="list-style-type: none"> • using growth chart • calculating requirements • catch-up growth 	2hr	3hr	Lecture	Asking questions+ assignment
10 th week	2 nd Midterm Exam				
11 th week	Biochemical Assessment of Nutritional Status: <ol style="list-style-type: none"> 1. Use of Biochemical Measurements. 2. Measuring Protein status. 3. Measuring Iron status. 	2hr	3hr	Lecture+ Case Studies	(Case Studies) + assignments + quiz
12 th week	Biochemical Assessment of Nutritional Status: <ol style="list-style-type: none"> 4. Measuring Calcium status. 5. Measuring Vitamins status. 6. Blood Chemistry. 	2hr	3hr	Lecture+ Case Studies	(Case Studies) + assignments +quiz
13th week	Clinical Assessment of Nutritional Status: <ol style="list-style-type: none"> 1. Medical History. 2. Dietary History. 3. Clinical Signs of PEM. 4. Eating Disorders. Counseling Technique: <ul style="list-style-type: none"> • Communication with the client. • Interviewing skills. Counseling theories.	2hr	3hr	Lecture+ Case Studies+ Role play	(Case Studies) + assignments+ Asking questions+ quiz

**2 Course components (total contact hours per semester):
72hrs/section/semester**

Lecture: 30hrs/semester	Tutorial: -- ----	Practical/Fieldwork/Internship: --- 42hrs/semester	Other:
-----------------------------------	----------------------	--	--------

3. Additional private study/learning hours expected for students per week. (This should be an average: for the semester not a specific requirement in each week)

4. Development of Learning Outcomes in Domains of Learning

For each of the domains of learning shown below indicate:

- A brief summary of the knowledge or skill the course is intended to develop;
- A description of the teaching strategies to be used in the course to develop that knowledge or skill;
- The methods of student assessment to be used in the course to evaluate learning outcomes in the domain concerned.

a. Knowledge

(i) Description of the knowledge to be acquired

By the end of the semester the students should be able to :

- **a.1) Describe the importance of Nutrition Assessment and its role in the nutrition care process.**
- **a.2) List the nutritional assessment component.**
- **A.3) Identify the different tools used in the anthropometric method of assessment**
- **A.4) Identify different techniques to measure the body composition (fat & muscle).**
- **a.5) Identify the different tools used in the dietary method of assessment (food records, 24 hr-recall methods, FFQ, etc.)**
- **a.6) List the merits and limitations of different nutrition assessment methods.**
- **a.7) Enumerate the different components of biochemical and clinical assessment (Labs, Medications, Diagnosis and Medical history)**

(ii) Teaching strategies to be used to develop that knowledge

Lectures ,role play ,group discussions, debates and video CD

(iii) Methods of assessment of knowledge acquired

Written exams, quizzes and written assignments

b. Cognitive Skills

(i) Cognitive skills to be developed

By the end of the semester the students should be able to :

- **b.1) Summarize the nutrition assessment role in patient care process.**
- **b.2) Determine nutrition problems and set priorities.**
- **b.3) Analyze the anthropometric, dietary, biochemical and clinical**

methods of assessment.

- **b.4) Formulate goals and objectives to establish criteria for nutrition intervention.**
- **b.5) Assess the merits and limitations of different nutrition assessment methods.**
- **b.6) Integrate suitable method according to case and situation.**
- **b.7) Plan the steps of nutrition intervention**

(ii) Teaching strategies to be used to develop these cognitive skills

Lectures, written assignments, discussions and role play

(iii) Methods of assessment of students cognitive skills

Written assignments, exams and quizzes and observational checklist.

c. Interpersonal Skills and Responsibility

(i) Description of the interpersonal skills and capacity to carry responsibility to be developed

By the end of the semester the students should be able to:

- **c.1) Express the importance of nutritional assessment.**
- **c.2) Participate in the course (ask & answer).**
- **c.3) Show confidence and mastery in interviewing the client ex. (24hr-recall, diet history).**
- **c.4) Show confidence in selecting the proper method relying on the case.**
- **c.5) Justify the selected method.**

(iii) Teaching strategies to be used to develop these skills and abilities

Group work, role play , debates , clinical work and discussions.

(iii) Methods of assessment of students interpersonal skills and capacity to carry responsibility

Observational check list, oral debates and discussions.

d. Communication, Information Technology and Numerical Skills

(ii) Teaching strategies to be used to develop these skills

Group work, role play and discussions.

(iii) Methods of assessment of students numerical and communication skills

Observational check list , oral debates and discussions .

e. Psychomotor Skills (if applicable)

(i) Description of the psychomotor skills to be developed and the level of performance required

By the end of the semester the students should be able to :

- **e.1) Apply correctly nutritional care process.**
- **e.2) practice the use of food balance sheet, vital statistics.**
- **e.3) Apply the food record, food inventory.**
- **e.4) Design the food frequency questionnaire.**
- **e.5) master the skills of measuring diet (food models,scales and food composition tables)**
- **e.5) Develop the skill to use and choose the anthropometric tools.**
- **e.6) Apply the different types of scales, caliper, and bioelectrical impedance analyzer.**
- **e.7) show efficiency in applying the different components of nutrition assessment .**

(ii) Teaching strategies to be used to develop these skills

Practice in nutritional Clinic, written assignments, discussions and role play

(iii) Methods of assessment of students psychomotor skills

Written assignments, practical exam ,quizzes and observational checklist

5. Schedule of Assessment Tasks for Students During the Semester

Date (weeks)	Topic	Assessment method	Proportion of final assessment
1 st week	Introduction		
2 nd week	Dietary Assessment: 4. Dietary Standards & Recommendations. 5. Recommended Dietary Allowance. 6. Dietary Guidelines.	Asking questions and quiz	15%
3 rd week	Dietary Assessment: 7. Food guides. 8. Composition table. 9. Reason for measuring diet.	Asking questions and quiz	15%
4 th week	Dietary Assessment: 9. Techniques in measuring diet (24hr Recall, Food Record, Food Frequency Questionnaire, Dietary History, Food Inventory, Food Balance Sheet, and Vital Statistics). 10. Computerized dietary measurements.	assignments practical exam and quiz	(45% of practical part)
5 th week	1 st Midterm Exam		15%
6 th week	Anthropometric Measurements: 3. Measuring Length, stature & head circumference. 4. Measuring Weight for infants, children, and adults.	assignments + practical exam and quiz	(45% of practical part)+ 15% (practical exam)
7 th week	Anthropometric Measurements: 3. Growth Chart, weight standards, height-weight indices. 4. Measuring frame size. 5. Body fat distribution, body fat composition. 6. Skin folds Measurements.	assignments + practical exam and quiz	(45% of practical part)+ 15% (practical exam)
8 th week	Assessment of the hospitalized patients: • Assessing nutritional status. • Determining energy & protein requirements	Asking questions and quiz	15%
9 th week	Assessment of the hospitalized patients: • Assessing nutritional status. • Determining energy & protein requirements	Asking questions and quiz	15%

	<ul style="list-style-type: none"> Nutrition Screening. 		
10 th week	2 nd Midterm Exam		15%
11 th week	Biochemical Assessment of Nutritional Status: <ol style="list-style-type: none"> Use of Biochemical Measurements. Measuring Protein status. Measuring Iron status. 	(Case Studies) + assignments and quiz	15% + (45% of practical part)
12 th week	Biochemical Assessment of Nutritional Status: <ol style="list-style-type: none"> Measuring Calcium status. Measuring Vitamins status. Blood Chemistry. 	(Case Studies) + assignments and quiz	15% + (45% of practical part)
13 th week	Clinical Assessment of Nutritional Status: <ol style="list-style-type: none"> Medical History. Dietary History. Clinical Signs of PEM. Eating Disorders. Counseling Technique: <ul style="list-style-type: none"> Communication with the client. Interviewing skills. Counseling theories.	(Case Studies) + assignments and quiz	25%

1. Grading system

1st Midterm (15 marks)

2nd Midterm (15 marks)

Quizzes (5 marks)

Lab (Practical)..... (25 marks)

Final (40 marks)

Practical Grades:

1st assignment(10 marks)

2nd assignment (5 marks)

3rd assignment(10 marks)

1st Quiz (5 marks)

Lab Final (20 marks)

Total= 50 /2 = (25 marks)

D. Student Support

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

Office hours 5hrs/week (Sunday: 9:00 - 10:00 am, Tuesday: 9:00 - 10:00 am ,Monday: 9:00am -1:00 pm)

Contacts are provided to students for assistance (web site, phone and e mail)

E. Learning Resources

1. Required Text(s)

Nutritional Assessment. by Robert Lee & David Nieman. Publisher: McGraw-Hill; 4th edition 2006.

2. Essential References

3- Recommended Books and Reference Material (Journals, Reports, etc) (Attach List)

Manual of Clinical Dietetics by American Dietetic Association. Mosby's Pocket Guide Series Nutritional Care, 4th ed, Moore M, 2001.

4-.Electronic Materials, Web Sites etc

<http://fac.ksu.edu.sa/walfawaz>

This web site is exclusive for the course tutors and students which allows:

- **Contacting the course instructor,**

- **Downloading of the course notes, assignments.**

Also it acts as announcements (memo board), midterm and assignments grades.

5- Other learning material such as computer-based programs/CD, professional standards/regulation

- **Mosby's NutriTrac – Nutrition Analysis Software**

"NHANES III – Anthropometric Procedures" by National Center of Health Statistics - CDC (Center of Disease Control and prevention)

Meal Pattern and diary & Menu –Nutrition analysis program

Nutrigene –Nutrition analysis program

F. Facilities Required

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

1. Accommodation (Lecture rooms, laboratories,clinic, etc.)

Lecture room equipped with projector , LCD screen and a computer

2. Computing resources

Projector ,LCD screen , computer and a screen

3. Other resources (specify --eg. If specific laboratory equipment is required, list requirements or attach list)

Nutritional Clinic fully equipped with :

scales measuring height , weight & body composition) ,food models , food records,24hr-recall and food frequency questionnaire forms , nutritional assessment progress notes ,instruments to measure

hemoglobin, lipid profile ,Glucometer, pen injector, disposables (alcohol swabs,band aid,gloves & face masks), office ,table and filing system.

G Course Evaluation and Improvement Processes

1 Strategies for Obtaining Student Feedback on Effectiveness of Teaching

- ✓ **Continuous observation of student's enthusiasm.**
- ✓ **By the end of the semester , The students are provided by an evaluation of the effectiveness of teaching and instructor (available upon demand)**

2 Other Strategies for Evaluation of Teaching by the Instructor or by the Department

- ✓ **Compare the evaluations of each semester and the progress is evaluated.**

3 Processes for Improvement of Teaching

Suggestion to improve the teaching through the application of the information obtained (getting trainings at hospital and clinics to be accredited as part of the educational program).

Encourage the students to apply the information obtained in the college through the arrangements of exhibitions where students can master the skills obtained in assessing ,interpreting and planning the appropriate nutritional intervention .

4. Processes for Verifying Standards of Student Achievement (eg. check marking by an independent faculty member of a sample of student work, periodic exchange and remarking of a sample of assignments with a faculty member in another institution)

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

Course can be evaluated periodically through the rotation of different faculty member teaching the course.

Course outcome can be evaluated through the thorough assessment of the students level of effectiveness which can be measured in subsequent levels followed the level at which the course had been proposed, which allow the identification of the course drawbacks.

Course can be evaluated periodically through its comparison to a similar course provided by national or international educational institutes (e.g. foreign colleges)