

Nutrition

Code: 106099
ECTS Credits: 6

Degree	Type	Year	Semester
2500891 Nursing	FB	1	2

The proposed teaching and assessment methodology that appear in the guide may be subject to changes as a result of the restrictions to face-to-face class attendance imposed by the health authorities.

Contact

Name: Nina Granel Gimenez
Email: Nina.Granel@uab.cat

Use of Languages

Principal working language: catalan (cat)
Some groups entirely in English: No
Some groups entirely in Catalan: Yes
Some groups entirely in Spanish: No

Teachers

José Rodríguez Álvarez
Miguel Jiménez Pera
Jorge Casino Antón
Victor Jose Yuste Mateos
Jose Ramon Bayascas Ramirez
Olga Mestres Soler
Maria Antonia Baltrons Soler

Prerequisites

Non applicable

Objectives and Contextualisation

This course aims to provide the necessary knowledge of biochemistry and nutrition in order to help people manage the need to eat by consensus and agree on a balanced diet or therapeutic diet that they need according to the health situation, age, gender, social and cultural factors.

The knowledge of this subject is built on the bases provided by the Structure of the Human Body, Function of the Human Body, Ethical and Methodological Bases of Nursing and Culture, Society and Health. The theoretical contents of this subject are taught during the second semester of the first academic year.

At the same time, this subject serves as a theoretical basis for other subjects of higher courses such as: Pharmacology, Nursing Care in Adults I and II, Nursing Care in the Process of Aging, Nursing Care in Childhood, Adolescence and Women and Nursing Care in Complex Situations.

Competences

- Generate innovative and competitive proposals for research and professional activities.
- Offer technical and professional health care and that this adequate for the health needs of the person being attended, in accordance with the current state of scientific knowledge at any time and levels of quality and safety established under the applicable legal and deontological rules.
- Protect the health and welfare of people or groups attended guaranteeing their safety.
- Students must be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.

Learning Outcomes

1. Analyse differences by sex and gender inequality in ethiology, anatomy, physiology. Pathologies, differential diagnosis, therapeutic options, pharmacological response, prognosis and nursing care.
2. Describe safety rules to consider before clinical situations caused by problems related to drug administration.
3. Describe the nutritional needs of healthy people and those with health problems throughout the life cycle, to promote and reinforce the steps to take for healthy eating behaviour.
4. Explain the physiological functioning of the human body and the homeostatic mechanisms that regulate it.
5. Identify the most frequent problems that occur when people with health problems do not follow the planned therapeutic diet, proposing effective interventions to get them to do so.
6. Identify the physiological functioning of the human body, and health problems resulting from functional disturbances.
7. Students must be capable of collecting and interpreting relevant data (usually within their area of study) in order to make statements that reflect social, scientific or ethical relevant issues.

Content

The content of the subject is taught by teachers from the nursing and biochemistry departments of the Faculty of Medicine. The subject is coordinated by Nina Granel from the Nursing Department and María Antonia Baltrons from the department of Biochemistry.

Unit I. Energy and nutrients

- Structure and properties of nutrients. General requirements and recommendations
 - Simple and complex carbohydrates
 - Lipids: saturated and unsaturated fats; essential lipids
 - Proteins and amino acids
 - vitamins
 - Minerals and trace elements
 - Water
 - Vegetable fiber
- Homeostasis of energy
 - Biochemistry of energy transfers
 - Energy expenditure
 - Individual energy requirements
 - Caloric value of nutrients

Unit II. Digestion, absorption and metabolism of nutrients

- Carbohydrates
- Lipids. Transport of lipids in the blood
- Proteins and other nitrogenous compounds. Nitrogen balance
- Metabolic interrelationships between tissues in the feeding-fasting cycle

Unit III. Assessment of nutritional status

- Anthropometry. Body mass index, waist and hip circumferences, skinfolds

Unit IV. Food groups: composition, characteristics and importance for health

- Foods rich in proteins and lipids: Group of milk and derivatives. Group of meats, fish and eggs.
- Foods rich in carbohydrates and fiber: Group of cereals, tubers and legumes. Group of fruits, vegetables and greens.
- Other foods: Miscellaneous group: alcohol, additives, contaminants.

Unit V. Healthy eating

- Characteristics of nutritional balance.
- The qualitative and quantitative food balance. Food composition tables. Food rations. Eating behavior. Feeding assessment.
- The need for healthy eating at every stage of life. Biological, psychological, social and cultural factors that influence eating behavior. Assessment and recommendations.

Unit VI. Therapeutic diets

- Introduction to diet therapy.
- Each diet is structured as follows: Diet characteristics. Needs assessment, identification of problems. Formulation of objectives. Propose and justify educational interventions for the assisted person and the family. Prepare the diet with the person. Carrying out a diet. Problems of the performance of therapeutic diets. Evaluation. Continuity of care of the person served to maintain adherence to the diet.
- The need for food for people with more prevalent and/or high impact health problems
- Food handling and regulation: most prevalent problems
- Food preservation: objectives, treatments, food packaging. Sustainable environment: strategies.

Methodology

THEORY AND SEMINARS

The content of module I, II and III and IV is taught by professors from the Biochemistry department through participative theoretical classes and, in parallel, case discussion seminars are held in order to mobilize the necessary knowledge according to each case.

The content of modules V and VI is taught by the Nursing Department through participatory theory classes and seminars that work on balanced diets and therapeutic diets.

TUTORIES

Individualized tutorials can be arranged by previously contacting the teachers through the Virtual Campus.

Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
SEMINARIES (SEM)	25	1	
THEORY (TH)	24.5	0.98	
Type: Supervised			
TUTORIES	1	0.04	
Type: Autonomous			
COURSEWORKS/PERSONAL STUDY/ RESEARCH REVIEWS	95	3.8	

Assessment

The overall grade for the course will consist of the average of the grades obtained from 2 small continuous assessment written tests (18%), a final written test (42%) and the evaluation of practical cases corresponding to module V and VI (40 %).

Evaluation criteria:

To pass the course through continuous assessment: Obtain at least 5 in the average mark of the written tests, and a minimum of 5 in the evaluation of practical cases of modules V and VI, in order to calculate the Final note. The final grade will be the weighted average of the three modules. To pass the course there is a minimum grade of 5. Attendance at the seminars corresponding to modules V and VI will be compulsory. Students presenting a total of more than 2 absences will not be evaluated and will not be able to take the final exam.

Students with particular situations: In the event of particular cases, an evaluation commission will be established configured for this purpose.

Students who have not passed the course through continuous assessment may take a final recovery test.

Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
EVALUATION THROUGH CASES RESOLUTION	40%	1.5	0.06	1, 3, 2, 5, 4, 6, 7
EVALUATION THROUGH OBJECTIVE TESTS	18%	1.5	0.06	1, 3, 2, 5, 4, 6, 7
EVALUATION THROUGH OBJECTIVE TESTS	42%	1.5	0.06	1, 3, 2, 5, 4, 6, 7

Bibliography

- ORTEGA ANTA RM. *Nutriguía: Manual de Nutrición Clínica*. Editorial Médica Panamericana; 2015.
<http://search.ebscohost.com/are.uab.cat/login.aspx?direct=true&db=edsmep&AN=edsmep.978.8.49.835957.2&Accessed July 10, 2020>.
- FEDUCHI. *Bioquímica. Conceptos esenciales*. 2015. 2ª edición. *Editorial Médica Panamericana*
- DENISE R. FERRIER. *Bioquímica*. 2017. 7ª edición. *Lippincott Williams & Wilkins*
- ANGEL GIL. *Tratado de Nutrición Tomo 1. Bases fisiológicas y bioquímicas de la nutrición*. 2017. 2ª edición. *Editorial Médica Panamericana*
- BAYNES J, DOMINICZAK MH. *Bioquímica Médica*. 2015. *Editorial Elsevier*.
- BIESALSKI HK, GRIMM P. *Nutrición. Texto y atlas*. 2016. *Editorial Elsevier*