

SUBJECT: NUTRITION

SUBJECT: Nutrition

MODULE: Medicine and Pharmacology

STUDIES: Pharmacy Degree

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GENERAL CHARACTERISTICS *

Types: Basic formation, Obligatory, Optional
 End-of-degree project Tutored practice activities
 Specialised practical activities

Duration: Semester

Semester/s: S6

ECTS credits: 3

Language in which it is given: Catalan/Castellano

DESCRIPTION

SUBJECT DESCRIPTION

Currently, the relationship between food and health is more than evident. Establishing good eating habits from childhood and to knowing the nutritional needs at each stage of life, will help us to prevent some of the most prevalent diseases in our society, such as obesity, cardiovascular diseases, diabetes, etc.

The pharmacist can have different professional prospects involving Community Pharmacy and Hospital Pharmacy.

At the community pharmacy level, the pharmacist, through the dispensing of drugs, plays an important role as a health adviser. In addition, the increase in the consumption of nutritional supplements means that the pharmacist must be trained as a professional regarding subjects of nutrition.

At the hospital level, following a healthy and balanced diet is essential to achieve an optimal state of health. Nutritional intervention of hospitalized patients will not only facilitate recovery but will also play a role in prevention. Another important area is artificial nutrition, especially at the hospital level, but also increasingly at the community one.

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SKILLS*

General skills:

- G-5 Provide therapeutic advice on pharmacotherapy and diet therapy, as well as on the nutritional and food-related field in establishments which provide a service.
- G-9 Take part in activities aimed at promotion of health and disease prevention, at the individual, family and community level; with a comprehensive and multi-professional view of the health-sickness process.
- G-13 Develop information and communication skills, both oral and written, to deal with patients and users of the centre where their professional activity is carried out. Promote teamwork and collaboration skills with multidisciplinary teams and other healthcare professionals.
- G-18 Be able to adopt a holistic approach to the person keeping in mind his / her dimensions (physiology, human, social, psychology or transcendence); to apply it to different fields of action applicable to the professional pharmacist

Specific skills:

- E-MF8 Acquire the necessary skills to give therapeutic advice on pharmacotherapy and diet therapy as well as nutrition and food advice to the users of the establishment where they work
- E-MF9 Understand the existing relationship between nutrition and healthcare, and the importance of diet in the treatment and prevention of sickness.

PREVIOUS KNOWLEDGE*

It is recommended to have knowledge of Bromatology

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CONTENTS

1. **Nutrition concept:** Concept of food, nutrition and dietetics. Relationship with other sciences. Relationship with health
2. **Energy:** energy expenditure components and evaluation methods (basal metabolic rate, physical activity and thermic effects)
3. **Macronutrients:** Digestion, absorption and elimination
4. **Vitamins and minerals:** Classification, functions, food sources.
5. **Fibre:** Classification, functions, food sources
6. **Recommended energy and nutrient intake:** Dietary Reference Intakes (IDR), Nutritional objectives, Food guide.
7. **Eating habits during pregnancy:** Physical changes in pregnancy and nutritional needs
8. **Feeding the baby:** nutritional needs, breastfeeding and artificial breastfeeding, supplementary feeding
9. **Nutrition for the elderly:** Aging process and physiological and nutritional needs
10. **Introduction to dietary treatment in the most prevalent diseases:**
 - 10.1. **Overweight and obesity:** etiology of obesity, obesity as a risk factor of diseases, dietary recommendations
 - 10.2. **High blood pressure:** dietary recommendations
 - 10.3. **Cardiovascular diseases:** dietary recommendations
 - 10.4. **Mellitus diabetes:** dietary recommendations

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METHODOLOGY

ACTIVIDADES FORMATIVAS

Learning activities* Degree description (PD)	Learning activities (Sigma)	Credits* ECTS	Competences
Theory-based sessions	Sessions aimed at presenting concepts	0,7	G-5, G-9, G-13, G-18, E-MF8, E-MF9
Resolution of exercises and problems	Sessions to resolve exercises, problems and cases (1)	0,2	G-5, G-9, G-13, G-18, E-MF8, E-MF9
Activities to integrate knowledge: case, directed projects and cooperative learning	Seminars	0,2	G-5, G-9, G-13, G-18, E-MF8, E-MF9
Practical Sessions: laboratory or simulations	Practical Project/laboratory	-	-
-	Presentations (3)	-	-
Self-directed study	Self-directed learning activities	1,8	G-5, G-9, G-13, G-18, E-MF8, E-MF9
Assessment activities	Assessment activities (examinations, follow-up tasks)	0,1	G-5, G-9, G-13, G-18, E-MF8, E-MF9
	TOTAL	3,0	

GF: Pharmacist Degree

(1) The heading "cas estudies" of the file on Sigma is included in "Integrating learning activities"

(2) For the degree, activities to resolve Student doubts are included in the section "student's personal study"

(3) Under the heading, "presentations" of the subject file on Sigma there are integrating learning activities.

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METHODOLOGY

- 1. Lecture-style classes** and workshops through the expositions of different theoretical-practical contents and involving the student in the activities and doing exercises in the classroom. Encouraging the student to ask questions that involve personal reasoning. Explanation and demonstration of skills, and knowledge in the classroom or through audio-visual media
- 4. Resolution of exercises or problems, which is usually,** used as a complement to the master lesson. The resolution of exercises will be carried out in the seminar sessions that will be of obligatory assistance and in them will work
- 7. Evaluation activities.** Exercises to evaluate the degree of assumption of competences (knowledge, skills, values) by students. Continuously or occasionally.

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EVALUATION

EVALUATION METHODS

Evaluation methods * Degree description (PD)	Evaluation methods (Sigma)	Peso* (2)	Competences
Final exam	Final exam	60%	G-5, G-9, G-13, G-18, E-MF8, E-MF9
-	Partial exam/s (1)	-	-
Follow-up of the learning process (includes tests, case, exercises, problems, participation, on-line assessment, self-assessment)	Follow-up activities	40%	G-5, G-9, G-13, G-18, E-MF8, E-MF9
Projects and presentations	Projects and presentations	-	-
Practical or experimental project	Practical or experimental project	-	-
Assessment TFG	Project	-	-
External placements (tutored practice activities)	Assessment of the company or institution	-	-
-	Participation (1)	-	-
		100%	

GF: Pharmacy Degree

(1) In the GF the headings "examinations/ partials" and "Participation" in the Sigma subject file are included in "Follow-up of the learning process?"

(2) Assessment criteria may vary $\pm 5\%$ with relation to the criteria stated in GF description (final summation 100%)

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CRITERIA OF EVALUATION OF RESULTS

- The student must understand the relationship between food and health, and the importance of diet in the treatment and prevention of diseases
- The student must know the functions and needs of energy and nutrients of a person according to the stage of life, physiological state and activity developed.
- The student must know how to interpret the biochemical, immunological and hematological parameters of the nutritional situation
- The student must be able to choose the most appropriate food combination, depending on its composition and the characteristics of the individual or group, to achieve a correct diet.

EVALUATION

First examination:

Assessment of the subject will bear in mind marks given for exercises (E), those which are follow-up exercises, and the final examination (FE). Therefore, the final subject mark is based on:

- Follow-up activities (FA):
 - Individual exercise E1 (15%)
 - Individual exercise E2 (15%)
 - Individual exercise E3 (10%)
- A final examination (FE) which covers all subject material. This will include test-type and questions. (60% de la final subject mark)

The final mark (FM) is based on following formula.

$$NF = 0,15 * E1 + 0,15 * E2 + 0,10 * E3 + 0,60 * FE$$

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Conditions for the application of the aforementioned formula:

1. All exercises must be at least a 5
2. The final examination mark must be at least a 5

If one of this condition is not met, the final mark will be the lowest of the 5 marks. (E1, E2, E3, FE). The subject can only be passed whit a mark of 5 or more.

Repeat examination:

If the first examination is not passed with at least a 5, the subject can only be passed if at least a 5 is archived

$$FM = 1 * FE$$

The subject will be passed if the mark is 5 or more

The following examinations:

Practical and theory-based content must be tested again in one. The final mark will be:

$$FM = 1 * FE$$

The subject will be passed if the mark is 5 or more

Marks from previous courses are not considered.

ASSESSMENT OF COMPETENCES

For the assessment of competences G-5, G-9, G-13, G-18, E-MF8, E-MF9 the final mark of the subject will be considered an indicator

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BIBLIOGRAFÍA

De Luis R, Bellido D. Dietoterapia, nutrición clínica y metabolismo. Madrid: Díaz de Santos; 2010.

Gil A. Tratado de Nutrición. Tomo IV Nutrición Clínica. 2ªed. Madrid: Acción Medica; 2010.

Mahan LK, Escott-Stump. 12ª ed. Nutrición y dietoterapia de Krause. Barcelona: Elsevier Masson; 2009.

Mataix J. Alimentación Humana. Tomo II Situaciones Fisiológicas y Patológicas. Majadahonda: Ergon; 2009.

Salas-Salvadó J, coordinador. Nutrición y Dietética Clínica. 3ª ed. Barcelona: Elsevier Masson; 2014.

Páginas web recomendadas:

Food and Drug Administration (FDA). Department of Health and Human Services.
<http://www.fda.gov>

Federation of European Nutrition Societies (FENS). <http://www.fensnutrition.eu/>

Federación Española de Nutrición, Alimentación y Dietética (FESNAD).
<http://www.fesnad.org/>

Nutrition Society (NS). <http://www.nutsoc.org.uk>

World Health Organization (WHO). <http://www.who.int/en/>

Sociedad Española de Nutrición (SEN). <http://www.sennutricion.org>

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DOCUMENT ARCHIVE

PREVIOUS MODIFICATIONS

Eulàlia Vidal 15/05/2017

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