

MÓDULO	CONTENT	COURSE	SEMESTER	CREDITS	TYPE
Nutrition and Health Sciences	NUTRITION I	2º	1º	6	<b>Compulsory core subject</b>
<b>TEACHERS</b>			<b>COMPLETE CONTACT ADDRESS FOR TUTORIES (Postal address, telephone, email, etc.)</b>		
<ul style="list-style-type: none"> <li>• Herminia Lopez Garcia de la Serrana g.C</li> <li>• Javier Montilla Gomez g.E</li> </ul>			Dpto. Nutricion y Bromatología, 3ª planta, Facultad de Farmacia. Office nº 316 y 317. Correo electrónico: <a href="mailto:herminia@ugr.es">herminia@ugr.es</a> y <a href="mailto:jmont@ugr.es">jmont@ugr.es</a>		
			<b>TUTORIAL SCHEDULE</b>		
			Monday y wednesday 9h.30min. to 12h.30min. (Prof. Garcia de la Serrana). Tuesday 8h 30min to 14h 30min. (Profesor Montilla).		
<b>DEGREE IN WHICH IT IS IMPARTED</b>			<b>OTROS GRADOS A LOS QUE SE PODRÍA OFERTAR</b>		
Degree in Human Nutrition and Dietetics.					
<b>PREREQUISITES AND / OR RECOMMENDATIONS (if applicable)</b>					
Have taken the subjects Chemistry, Biochemistry, Physiology, Bromatology.					
<b>BRIEF DESCRIPTION OF CONTENTS (ACCORDING TO THE DEGREE VERIFICATION MEMORY)</b>					
<p>With this discipline the student will approach and know important contents of the field of Nutrition such as:</p> <p>The nutritional needs of the human body, its energy expenditure, the relationship between food and nutrient, process of transformation and destiny of the nutrients. The different Nutrients, their functions, their metabolic utilization, their nutritional interest in the field of nutrition.</p> <p>Will study the bases of the energetic and nutritional balance and its regulation. It will have the capacity to evaluate and calculate the nutritional requirements in health situation at any stage of the life cycle</p>					



## GENERAL AND AND SPECIFIC COMPETENCES

### GENERAL

- Know the nutrients, their function in the organism, their bioavailability, the needs and recommendations, and the bases of the energy and nutritional balance.
- Integrate and evaluate the relationship between food and nutrition in a state of health and in situations pathological

### SPECIFIC

- Know the foundations and foundations of human nutrition and nutrition.
- Identify and classify food, food products and food ingredients
- Interpret and manage databases and tables of food composition
- Know the nutrients, their functions and their metabolic utilization. Know the basics of nutritional balance and its regulation
- Evaluate and calculate nutritional requirements in health situation and disease at any stage of the life cycle
- Identify the bases of a healthy diet (sufficient, balanced, varied and adapted)
- Know, detect early and evaluate the deviations due to excess or defect, quantitative and qualitative, of the nutritional balance

## OBJECTIVES (EXPRESSED AS EXPECTED RESULTS OF THE TEACHING)

Know the nutrients, their functions and their metabolic utilization.  
Know the bases of the energetic and nutritional balance and its regulation.  
Evaluate and calculate the nutritional requirements in health situation at any stage of the cycle vital.  
Know, detect early and evaluate quantitative and qualitative deviations, from the balance energy and nutrition.

## DETAILED SUBJECTS

### Theoretical program

Topic 1. Nutrition. Goals. Current situation and perspectives. Food and nutrient concept. Spanish food legislation. Role of the Graduate in N and D as a nutrition professional

Topic 2. Energy requirements of the human organism. Basal metabolism Determining factors of energy expenditure. Caloric value of food.

Topic 3. Classification of nutrients. Function of nutrients in the body. Nutritional recommendations Recommended dietary rations. Dietary reference intakes. Tables of food composition.

Topic 4. Utilization and destination of nutrients.

Topic 5. Organs and tissues involved in nutrition.

Item 6. Carbohydrates. Nutrition classification, Functions. Utilization. Sources of nutritional interest and dietary recommendations.

Topic 7. Food Fiber. Nutritional classification Functions Sources of nutritional interest and dietary recommendations.

Topic 8. Lipids Nutritional classification, Functions. Utilization. Sources of nutritional interest, AGE and dietary recommendations.

Topic 9. Proteins Nutritional classification. Functions Utilization. Sources of nutritional interest and dietary recommendations.

Topic 10. Integration of the metabolism of the three nutrients, main organs and hormones involved.

Topic 11. Water soluble vitamins Nutritional classification. Functions Utilization. Sources of nutritional interest and dietary recommendations.

Topic 12. Vitamins. Liposoluble Nutritional classification. Functions Utilization. Sources of nutritional interest and dietary



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recommendations.

Topic 13. Minerals. Classification. Macro and microminerals. Functions Utilization. Sources of nutritional interest and dietary recommendations.

Topic 14. Water. Body fluids, electrolyte balance and acid-base. Nutritional importance of water. Needs and Sources.

#### Seminars

Nutritional education.

Importance of Nutrition in the prevention of the disease.

Vitamins, minerals and bioactive compounds of food: Subjects prepared and exposed by the student.

Other seminars proposed by the students.

Laboratory practices

Practice

1- Calculation Basal Metabolism.

2- Calculation of Energy Expenditure.

3- Use of food composition tables Preparation of dishes.

4- Practical Cases. Development and Discussion.

#### BIBLIOGRAPHY:

##### FUNDAMENTAL BIBLIOGRAPHY:

- **Astiasaran I, Laceras B, Ariño A, Martínez A (2003)**. Alimentos y nutrición en la práctica sanitaria. Díaz de Santos. Madrid.
- **Cameron ME, Van Staveren WA (1988)** Manual on Methodology for food consumption studies, Oxford Medical Publications
- **Cervera P, Clapés J, Rigolfas R (2004)**. Alimentación y dietoterapia (Nutrición aplicada en la salud y la enfermedad). 4ª edición, Ed. Interamericana McGraw-Hill. México.
- **CESNID (2008)**. Tablas de composición de alimentos por medidas caseras de consumo habitual en España. Ed McGraw-Hill, Madrid.
- **Frayn KN (1998)**. Regulación del metabolismo, Una perspectiva humana Ed. Omega
- **Gil A (2010)**. Tratado de Nutrición (4 tomos). Ed. Panamericana. Madrid.
- **Groff JL, Gropper SS, Hunt SM (1995)** .Advanced Nutrition and Human Metabolism
- **Linder, M.C. (1992)**. "Nutrición. Aspectos Bioquímicos, Metabólicos y Clínicos". Ediciones Universidad de Navarra (Eunsa), Pamplona, España.
- **Mahan L.D. and Escott-Stump, S. (2009)**. "Nutrición y Dietoterapia de Krause". (12ª Edición). McGraw-Hill Interamericana, Ed. Elsevier, SL Barcelona.
- **Martínez, J.A. (2000)**. "Fundamentos Teórico-Prácticos de Nutrición y Dietética", McGraw-Hill. Madrid, España.
- **Mataix Verdu J (2009)**. Nutrición y alimentación humana (2 tomos). Ed. Ergen. Madrid.
- **Ministerio De Sanidad y Consumo (1995)**. Tablas de composición de alimentos españoles. Ed. Ministerio de Sanidad y Consumo. Secretaría General Técnica. Centro de Publicaciones, Madrid.
- **Muñoz M, Aranceta J, Garcia-Jalon I (2004)**. Nutrición aplicada y dietoterapia, 2ª ed. Ed. Eunsa. Pamplona.
- **Novartis**. Tablas de composición de los alimentos. (Ultima ed. 5º). Siempre disponible en fotocopiadora.
- **Requejo A, Ortega Rm (2000)**. Nutriquia. Manual de Nutrición clínica en atención primaria. Ed. Complutense. Madrid.
- **Salas-Salvado J, Bonada A, Trallero R, Saló Me, Burgos R (2008)**. Nutrición y Dietética Clínica. 2ª ed. Ed. Masson. Barcelona.



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- **SENC (2004)**. Guías de la alimentación saludable. Edita Sociedad Española de Nutrición Comunitaria. Madrid.
  - **Serra Majen L, Aranceta J (2006)**. Nutrición y salud pública: métodos, bases científicas y aplicaciones, 2ª ed. Ed. Masson, Madrid
  - **Shils Me, Olson Ja, Shike M (2002)**. Nutrición en Salud y Enfermedad. 9ª ed. (2 tomos). McGraw-Hill. México.
  - **Shils ME, Olson JA, Shike M, Ross C. (1999)** Nutrición en Salud y Enfermedad. Ed. Mc Graw Hill.
  - **Willett, W. (1993)**. Nutritional epidemiology Oxford University Press
- BIBLIOGRAFÍA COMPLEMENTARIA:  
 Son recomendables todas las correspondientes a Organismos oficiales y profesionales.  
<http://www.uned.es/pea-nutricion-y-dietetica>.

#### RECOMMENDED LINKS

- ▶ Ingestas dietéticas de referencia (DRIs): <http://www.nal.usda.gov/fnic/etext/000105.html>
- ▶ Organización de Naciones Unidas para la agricultura y alimentación. [www.fao.org](http://www.fao.org)
- ▶ Agencia española de seguridad alimentaria y nutrición: [www.aesan.msc.es](http://www.aesan.msc.es)
- ▶ Federación española de sociedades de nutrición, alimentación y dietética. <http://www.fesnad.org/>

#### TEACHING METHODOLOGY

	ACTIVIDAD FORMATIVA	COMPETENCIAS	ECTS	%	
Attendance	Theory classes	CG 4-1 CG4-2 CE6, CE10, CE14, CE26, CE27, CE28, CE30	1,4	21%	40 %
	Practical classes	CE6, CE10, CE14, CE27, CE28, CE30	0,6	10%	
	Seminars and / or exhibition of works	CE26, CE27, CE28, CE30	0,36	6%	
	Examination	CG 4-1 CG4-2 CE6, CE10, CE14, CE26, CE27, CE28, CE30	0,04	2,6%	
Non-contact	Theory study	CG 4-1 CG4-2 CE6, CE10, CE14, CE26, CE27, CE28,	2,4	44%	60 %



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		CE30		
	Preparation and study of practices	CE6, CE10, CE14, CE27, CE28, CE30	1	5,33%
	Preparation of works	CE26, CE27, CE28, CE30	0,8	10,67%

### ACTIVITY PROGRAM

First quarter	Subjects of the agenda	Classroom activities						Non-contact activities			
		Classroom activities (hours)	Practical sessions (hours)	Exhibitions and seminars (hours)	Collective tutorials (hours)	Exams (hours)	Etc.	Individual tutorials (hours) Group work (hours)	Study and individual student work (hours)	Group work (hours)	Etc.
Week 1	1,2	3									
Week 2	3	3									
Week 3	4	3	15g1								
Week 4	5	2									
Week 5	5, 6	3	15g2								
Week 6	6,7	3	15g3 (E)								
Week 7	7,8	1,1									
Week 8	8	3									
Week 9	8	3									
Week 10	9	3									



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<b>Week 11</b>	9,10	1,1				1					
<b>Week 12</b>	14	1									
<b>Week 13</b>	14	3									
<b>Week 14</b>	14, 11	1		2							
<b>Week 15</b>	12										
<b>Week 16</b>	11			1							
<b>Week 17</b>	12, 13			3							
<b>Week 18</b>	13			3							
<b>Week 19</b>											
<b>Total hours</b>		35	15	9		1					

**EVALUATION (EVALUATION INSTRUMENTS, EVALUATION CRITERIA AND PERCENTAGE ON THE FINAL QUALIFICATION OR WEIGHTING, ETC.)**

The evaluation will consist of:

- \_ **SE1:** Theoretical exam based on questions about the contents of the program.
- \_ **SE2:** Practical exam: Examination of practical exercises and / or exercises delivered from problems carried out at home.
- \_ **SE3:** Assessment of autonomous work: Realization and exhibition of works by the student.

**Weighting: SE1.**

**The qualification of the subject will be obtained considering:**

- Theoretical exam 70% of the final grade.
- Nutrition Practices 20%.
- Self-employment of the student 10% (max 5% for work done and max 5% for exposure). "

• **Evaluation of theoretical knowledge will consist of:**

\_ **The realization of a 1st eliminatory control** from 6.5 that will be held in December and whose date is indicated in the Guide of the Faculty. To eliminate control or any examination, the knowledge must be uniform on the subjects evaluated. The 2nd control will coincide with the final exam in January, whose date is also indicated in The Guide. If the student has eliminated the 1st control, he will only have to take the final exam corresponding to the 2nd control; If you did not eliminate the 1st, the final exam in January will be the 2 controls, 1st and 2nd.



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- The controls and the final exam may be either a test type, short questions or long-term questions. None of the approved controls will be saved for the next call.

**Autonomous work.**

\_ It is necessary to do the autonomous work as well as the practices to pass the subject.

**Assistance to face-to-face classes**

\_ The minimum attendance to be able to appear at each control is 60%.  
 \_ If this assistance is not reached, the student can only take the final exam in February. However, it is the teacher's authority to allow the examination.

**Evaluation of the knowledge and practical skills of the subject**

- It will be divided into the two parts that it contemplates (it will represent 20% of the final rating granted):

**\_ For the evaluation of Nutrition practices, the following will be assessed:**

\_ The attitude expressed by the students during the development of the same, as well as their active participation in the resolution of the exercises and the debate (20% of the final qualification of these practices).  
 \_ Examination and / or approval of a practical work of solving theoretical and practical concepts (80% of the final grade for these practices).  
 \_ Students who do not pass the practices on the date of their call, during the month of October, as they have been called, may recover them in another call.

\_ It is essential to overcome the practices and perform and expose the autonomous work to be able to take the theoretical exam.

\_ In summary: The overcoming of any of the tests will not be achieved without a uniform and balanced knowledge of all the subject.

**CONTROL AND FOLLOW-UP MECHANISMS:**

- **The general control** and monitoring mechanisms that will be used to evaluate the efficiency of the teaching-learning system used by the teacher will be:

\_ Class attendance.  
 \_ Issues raised by students in the development of classes.  
 \_ Problem solving and active participation in theoretical and practical classes.  
 \_ Exhibition, debate and development of autonomous work.  
 \_ Delivery of the reports and problems corresponding to the practices of the subject.  
 \_ Examination of practices and / or presentation of a work.  
 \_ Control exams 1st, 2nd and, where appropriate, final of the theoretical knowledge of the subject.

- **In addition to checking** the follow-up of the subject by the students, it is will consider:

**The individualized tutoring according to the schedule of tutorials of attention to the student, that appears in the pag. Web of the Department of Nutrition and Bromatology from the beginning of the course, and that will be carried out in the office that the professor has in said Department.**

**FINAL UNIQUE EVALUATION:**



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It can be requested to the director of the department, by the students who so wish and justify the cause, during the two weeks following their enrollment.  
These students maintain the obligatory nature of presenting themselves to an exam of practices and will be evaluated in final only exam



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