



Universitat de Lleida

DEGREE CURRICULUM  
**METABOLISM AND NUTRITION**

Coordination: Teresa Hernández Jover

Academic year 2015-16

## Subject's general information

<b>Subject name</b>	METABOLISM AND NUTRITION
<b>Code</b>	100637
<b>Semester</b>	Second semester
<b>Typology</b>	Optional
<b>ECTS credits</b>	3
<b>Groups</b>	Únic
<b>Theoretical credits</b>	30
<b>Practical credits</b>	0
<b>Coordination</b>	Teresa Hernández Jover
<b>Office and hour of attention</b>	Time to be determined with the professor Office of Human Nutrition. Faculty of Medecine
<b>Department</b>	Tecnologia d'Aliments
<b>Modality</b>	Presencial
<b>Important information on data processing</b>	Consult <a href="#">this link</a> for more information.
<b>Language</b>	Català English (articles)
<b>Distribution of credits</b>	2 credits masterful activity (classes) 1 credit seminar activity
<b>Office and hour of attention</b>	Time to be determined with the professor Office of Human Nutrition. Faculty of Medecine
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Teresa Hernández Jover

## Subject's extra information

Is known as metabolism and nutrition at chemical transformations suffering nutrients in tissues, once surpassed the processes of digestion and absorption corresponding. This metabolism includes degradative reactions to obtain energy (catabolism) and biosynthetic reactions to form biomolecules using part of this energy (anabolism). This course aims to expand knowledge regarding energy metabolism.

## Learning objectives

1. Expand knowledge on the concept of energy metabolism of nutrients
2. Know the regulation of energy metabolism
3. Know the concept of energy consumption and the factors that influence
4. Know the latest developments in the field of energy metabolism and acquire the skills necessary to stay in place constantly updated.

Objective	Activity	Attended	Student dedication
1-4	Classes	20	30
1-4	Seminars	10	18

\***Student dedication** = attended hours + hours of student work

## Competences

1. Know the basic chemical, biochemical and biological application in Dietetics and Human Nutrition
26. Know the basis of nutrition and energy balance and its regulation
32. Know early detection of deviations and evaluate quantitative and qualitative energy balance and nutritional

## Subject contents

1. Energy metabolism. Concept and regulation.
2. Energy intake. Energy values of nutrients
3. Energy bioavailability
4. Glycemic index
5. Energy expenditure. Basal metabolism.
6. Adaptive thermogenesis. Diet-induced thermogenesis .
7. Energy expenditure and physical activity

8. Energy expenditure in different physiological situations. Influence of chronobiology, stress and genetic factors.

## Methodology

### Classes

Classes are developed with all students. They aim to provide an overview of educational content related to specific knowledge of the subject

### Seminars

**Seminars are required**, will take place in the classroom. Seminars will include the analysis of scientific articles and/or search information, complementing the contents developed in class. Stimulate discussion and participation of students.

### Supervised academic work

Academic work will be conducted in groups of 2-3 people, on a issue which must be chosen from a list provided by the professor. Each group will present the work and will make a brief presentation in the classroom.

## Evaluation

Evaluation consists of weighted average grades obtained from the following elements:

1. **Written test I** (individual exam): 35%
2. **Written test II** (individual exam): 35%
3. **Seminars**: 15%
4. **Supervised academic work**: 15%

It will have 2 partial exams of theoretical part and seminars, with test and developed questions. Students must pass each partial mark of 5 out of 10. Partial examinations suspended shall be recovered in a new examination.

## Bibliography

- Hernández Rodríguez, M.; Sastre Gállego, A. *Tratado de Nutrición*. Ed Díaz de Santos, S.A. Madrid, 1999.
- Bellido Guerrero, D.; de Luis Roman, D. A. *Manual de nutrición y metabolismo*. Ed. Díaz de Santos, Madrid, 2006.
- Gil Hernández, A. *Tratado de Nutrición*. Ed. Acción Médica, 2005.
  
- [www.eufic.org](http://www.eufic.org)
- [www.consumer.es](http://www.consumer.es)
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