# NUTRITION AND DIGESTIVE SYSTEM: ABSORPTION

<table>
<thead>
<tr>
<th>MODULE</th>
<th>CONTENT</th>
<th>SUBJECT</th>
<th>COURSE</th>
<th>SEMESTER</th>
<th>CREDITS</th>
<th>TYPE</th>
</tr>
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<tbody>
<tr>
<td>4</td>
<td>Nutrition and health promotion</td>
<td>Nutrition and digestive system: absorption</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>Optional</td>
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</tbody>
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**LECTURERS**

Mª Inmaculada López Aliaga  
Javier Díaz Castro

ADDRESS FOR MEETINGS AND TUTORSHIPS  
(Postal address, telephone no, e-mail address.)

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**TUTORSHIPS TIMETABLES**

- Mª Inmaculada López Aliaga:  
  Mondays: 10.30-14.30, Wednesdays: 10.30-12.30
- Javier Díaz Castro:  
  Mondays: 17.00-19.00 and Wednesdays: 17.00-19.00

**DEGREE WITHIN WHICH THE SUBJECT IS TAUGHT**

HUMAN NUTRITION MASTER DEGREE

**OTHER POSSIBLE DEGREES**

**PREREQUISITES and/or RECOMMENDATIONS (If necessary)**

Physiological and pathophysiological knowledge of the digestive system.

**BRIEF ACCOUNT OF THE SUBJECT PROGRAMME (ACCORDING TO THE DEGREE)**

Absorption and transport of macro and micronutrients.

Malabsorption syndrome: intestinal resection. Consequences.
Absorption and transport of macro and micronutrients in malabsorption syndrome.

Dietary strategies and functional foods to alleviate the malabsorption syndrome.

GENERAL AND PARTICULAR ABILITIES

Specific (Type A):
1. Know the characteristics of nutrition and balanced nutrition and its role in absorption functions
2. To know the techniques and methods of study of the absorption processes in malabsorption syndrome
3. Develop skills for the design of diets in this syndrome
4. Be able to design an experiment related to nutrition and absorption processes in malabsorption syndrome
5. To know how to incorporate scientific advances into the professional field

Transversal (type B):
Instrumentals
1. Ability to analyze and synthesize
2. Capacity of organization and planning
3. Oral and written communication skills in the native language
4. Knowledge of a foreign language (preferably English)
5. Computer skills related to the field of study
6. Ability to solve problems
7. Capacity for scientific criticism

Personal
1. Ability to work in teams and collaborate effectively with other people
2. Ability to work with multidisciplinary and interdisciplinary teams
3. Develop skills in interpersonal relationships
4. Recognition of diversity and multiculturalism
5. Critical reasoning
6. Ethical Commitment

Systemic
7. Ability to think creatively, and develop new ideas and concepts
8. Initiative and entrepreneurial and innovative spirit
9. To value the quality of the own performance and to know how to develop systems that guarantee the quality of the services themselves

Other competences
1. Ability to take on responsibilities
2. Capacity for self-criticism
3. Knowing how to value personal performance and knowing one’s own competencies and limitations
4. Be able to establish relationships with other relevant professionals and institutions
5. Know how to develop audiovisual presentations
6. Knowing how to obtain information through bibliographic searches
7. Being able to get information from other people effectively
Nuclear (type C):

1. Basic knowledge of Physiology and Human Pathophysiology
2. Know the role of nutrients in the human body
3. Have basic Nutrition and Food
4. Ability to critically evaluate relevant bibliography
5. Know the principles of animal protection and experimentation and clinical trials in humans

OBJECTIVES (EXPRESSED IN TERMS OF EXPECTED RESULTS OF THE TEACHING PROGRAMME)

The student will know / understand:
- To study the processes of absorption and transport of macro and micronutrients
- To know the role of nutrition in the functions of absorption of the small intestine
- To study the alterations in the processes of absorption of nutrients that take place in a syndrome of malabsorption, consequence of a resection of small intestine distal
- Study the mechanisms of adaptation of the intestine according to the location, time elapsed after the exclusion of part of the small intestine, as well as the components of the diet
- To determine the role of diet modification to alleviate intestinal malabsorption processes
- To study the inclusion of functional

The student will be able to:
- Develop nutritional strategies in intestinal absorption processes
- Develop strategies in the treatment of malabsorption syndrome
- To deepen the mechanisms of intestinal adaptation in the malabsorption syndrome
- Design diets for pathological situations related to the malabsorption syndrome
- To know what foods can be functional in this syndrome

DETAILED SUBJECT SYLLABUS

- Processes of absorption and transport of macro and micronutrients
- Role of nutrition in the functions of absorption of the small intestine
- Alterations in nutrient absorption processes occurring in malabsorption syndrome, resulting from a resection of the distal small intestine
- Mechanisms of adaptation of the intestine according to the location, time elapsed after the exclusion of part of the small intestine, as well as to the components of the diet
- Role of diet modification to alleviate intestinal malabsorption processes
- Inclusion of Functional Foods in Malabsorption Syndrome

BIBLIOGRAPHY
Basics


Complementary


- López-Aliaga, I. and Campos, M.S. Repercusiones de las resecciones intestinales sobre algunos aspectos de las secreciones digestivas. Ars Pharmaceutica 40, 87-93, 1999

RECOMENDED LINKS

Websites:
Sociedad Española de Patología Digestiva. https://www.sepd.es/
Sociedad Andaluza de Patología Digestiva. https://www.sapd.es/
- European Association for the Study of the Liver
- American Association for the Study of Liver Diseases
- American Gastroenterological Association
- American College of Gastroenterology
- European Society of Gastrointestinal Endoscopy
- American Society of Gastrointestinal Endoscopy
- United European Gastroenterology Federation
- Organisation Mondiale de Gastroenterologie
- British Society of Gastroenterology
- National Pancreas Foundation
- American Hepato-Pancreato-Biliary Association
**TEACHING METHODOLOGY**

**EVALUATION**
Development of an integrated lecture.
- Assistance to possible conferences on topics related to the course
- Performing a personal work related to the study of the concepts included in the face-to-face classes, as well as the interpretation of research papers and hypothesis emission, objectives, experimental design, methodology, etc. for the realization of a possible research work and its publication if appropriate.

**EVALUATION SYSTEM**

Continuous assessment system.

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Attendance at face-to-face sessions</td>
<td>15%</td>
</tr>
<tr>
<td>Design of diets</td>
<td>25%</td>
</tr>
<tr>
<td>Guided work (group or autonomous)</td>
<td>50%</td>
</tr>
<tr>
<td>Participation in class discussions</td>
<td>10%</td>
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