Module Title:
Functional Foods Analysis

Module Code:
AM0206

Maximum Number of Students:
20

Total ECTS Credits
2

Notional Learning Hours
(a) Contact Time -   10 h   **(b) Private Study -**   10 h   **Format of Teaching:**   Lectures   *10* h   Laboratories or Practicals   0 h   Other   0   h   **Teaching Strategy:**   Formal lectures in 60/90 min timetable.

Convener:
M. Palma

University:
University of Cádiz

Language of Tuition:
English

Module Description - The Purpose or Aims:
1. To introduce fundamentals of functional foods and nutraceuticals   2. To introduce fundamentals of analysis of nutraceuticals   3. To illustrate several practical conditions for nutraceuticals' analyses

Learning Outcomes:
At the end of the module the learner is expected to be able to: 1. Correctly recognizing functional foods and nutraceuticals   2. Select adequate analytical methods for analysis of several nutraceuticals   3. Choose between different analytical methodologies for the analysis of nutraceuticals

Summary of Course Content:
Functional foods are going to be presented as a special kind of samples. In some cases functional foods have to be analyzed on line, without sample pre-treatment and without sample modifications. On the other hand, another functional food samples can be destroyed during the analysis. Moreover, depending on the chemical structure of nutraceutical and how it has been added to the food, the most adequate analytical methodology is going to be different. Several analytical methodologies including both chromatographic methods and spectrophotometric methods for the analysis of nutraceuticals will be presented.

Transferable Skills Taught:

Communication:
       To be able to describe a functional food and a nutraceutical
 	
 Interpersonal skills:
       Elaborate and show a group written assignment

Assessment Methods:

1. LO1 – Written Examination (30%)
2. LO2 – Written Examination (30%)
3. LO3 – Group Work Discussion (40%)

Assessment Criteria:

Treshold
LO1 – to correctly describe the concepts of functional foods
LO2 – to be able to identify what analytical technique cannot be applied for some nutraceuticals
LO3 – to determine what analytical methodologies are not useful for the analysis of some functional foods

Good
LO1 – to correctly distinguish between the concepts of functional foods and drug
LO2 – to be able to determine the analytical methodologies capable for the analysis of several nutraceuticals
LO3 –to determine the differences between the capabilities of different analytical methods related to the determinations of nutraceuticals..

Excellent
LO1 – to be able to describe the main advantages of functional foods
LO2 – to be able to choose the best analytical method for different nutraceuticals analysis
LO3 – to be able to determine the best analytical methodology for the analysis of nutraceuticals and functional foods

Resource Implications of Proposal and Proposed Solutions:

Lecture notes will be available for students.
Recommended reading:
"Methods of Analysis for Functional Foods and Nutraceuticals" W J Hurst. CRC Press 2002
"New Techniques in the Analysis of Foods" M. H. Tunick, S. A. Palumbo, P. M. Fratamico. Springer 1998