## Academic Year 2016-2017

### SUBJECT GUIDE

**Nutrition and Food science**

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### LECTURER(S)

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### DEGREE WITHIN WHICH THE SUBJECT IS TAUGHT

PHARMACY

### PREREQUISITES and/or RECOMMENDATIONS (if necessary)

Having studied the subjects of Biochemistry and Physiology

### BRIEF ACCOUNT OF THE SUBJECT PROGRAMME (ACCORDING TO THE DEGREE ??)

Human nutrition and dietetics. Analytical criteria and health of food.

### GENERAL AND PARTICULAR ABILITIES

#### GENERAL ABILITIES

- Providing advice in drug and diet therapy as well as at the nutritional and food area level food in the area in the establishments in which they render service.
- To participate in the activities of health promotion and disease prevention, at the individual, family and community level, with a comprehensive and multidisciplinary view of the health-disease process.
- To develop hygienic-sanitary analysis, especially those related to food and the environment.
- To recognize own limitations and the need to maintain and update professional skills, giving special importance to the self-learning of new knowledge based on available scientific evidence.
PARTICULAR ABILITIES

• To develop health and hygiene analysis (biochemical, food science, microbiological and parasitological analyses) related to general health and food and the environment in particular.
• To acquire the necessary skills to provide therapeutic counseling on drug and diet therapy and nutritional and dietary advice to users of the establishments in which they serve.
• To understand the relationship between food and health, and the importance of diet in the treatment and prevention of disease.
• To learn the techniques related to analytical laboratory, diagnosis, toxic, food and environment.

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

At the end of the course the student is expected to be able:
• To know the nutrients, namely their functions, health implications and food sources.
• To know the composition and nutritional value of food, nutritional requirements and recommendations.
• To know the characteristics of a balanced diet, the nutritional guidelines in the life cycle and dietary recommendations in diseases of the consumer society.
• To demonstrate the understanding of the hygienic aspects and analytical control of food

DETAILED SUBJECT SYLLABUS

THEORETICAL PROGRAM

THEMATIC UNIT I: INTRODUCTION

Item 1. Presentation of the subject. Concept of Nutrition, Food Science, Dietetics, Food Technology and Food Security. Role of the pharmacist in the field of Nutrition and Food Science.

THEMATIC UNIT II: NUTRITION

CHAPTER I: Energy requirements and nutritional


CHAPTER II: Nutrients


THEMATIC UNIT III: OVERVIEW OF FOOD

CHAPTER III. Food law


CHAPTER IV: Food additives


CHAPTER V. Food hygiene


Item 13. Food preservation: Methods affecting sensory properties: salting, smoking, pickling, sugar and alcohol addition. Additives (chemical preservatives)


THEMATICAL UNIT IV: FOOD GROUPS

CHAPTER VI: Protein foods


CHAPTER VII: Lipid foods


CHAPTER VIII: Food hydrocarbon


Item 22. Legumes: classification, chemical composition and nutritional importance.


CHAPTER IX: Other foods


THEMATIC UNIT V: DIETETICS


SEMINARS

First seminar: Labelling. Nutrition and health claims in food


PRACTICAL PROGRAM

NUTRITION and DIET

Practice 1. Calculation of basal metabolism and total energy requirements
Practice 2. Calculating the energy profile of a diet and quality indexes

Practice 3. Use of food composition tables and alcoholic energy drinks.


Practice 6. Registration and evaluation of a 5-day diet. Assessment of nutritional status.

FOOD SCIENCE


Practice 2. Drinks: Determination of Brix of juices


Practice 4. Milk density, acidity and enzymes (peroxidase, alkaline phosphatase).

Practice 5. Flours: moisture and gluten

Practice 6. Edible fats: fat in food extraction and determination of fatty acids by GC.

Practice 7. Alcoholic beverages: Alcohol. Preservatives: sulfites

READING

KEY LITERATURE:

- NUTRITION AND DIETETICS

- FOOD SCIENCE

ADDITIONAL LITERATURE:

- NUTRITION AND DIETETICS


- FOOD SCIENCE


RECOMMENDED INTERNET LINKS

• United Nations Organization for Agriculture and Food: http://www.fao.org/index_es.htm
• Spanish Agency for Food Safety and Nutrition: www.aesan.msc.es
• Spanish Federation of Societies of nutrition, food and dietary. http://www.fesnad.org/
• Ministry of Environment and Rural and Marine Area: http://www.marm.es/