

29225 - Clinical Nutrition and Pharmacology

Información del Plan Docente

Academic Year	2017/18
Faculty / School	229 - Facultad de Ciencias de la Salud y del Deporte
Degree	441 - Degree in Human Nutrition and Dietetics
ECTS	10.0
Year	4
Semester	Annual
Subject Type	Compulsory
Module	---

1.General information

1.1.Introduction

1.2.Recommendations to take this course

1.3.Context and importance of this course in the degree

1.4.Activities and key dates

2.Learning goals

2.1.Learning goals

2.2.Importance of learning goals

3.Aims of the course and competences

3.1.Aims of the course

3.2.Competences

4.Assessment (1st and 2nd call)

4.1.Assessment tasks (description of tasks, marking system and assessment criteria)

5.Methodology, learning tasks, syllabus and resources

5.1.Methodological overview

Clinical Nutrition

The learning process that has been designed for this course is based on the following:

The subject is divided into 30 theoretical lectures of one hour, and 10 thematic seminars/workshops of one to two hours

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and clinical practices in the hospital. The content of the lectures will be based on a book or manual recommended previously and adapted to the level of knowledge of the students. In the Seminar students work on cases related to the subject and must resolve problems through personal effort and teamwork. In Workshops the teacher will present the basic knowledge for the development of a medical history with the knowledge of the basic physical examination and the main signs of the disease using audiovisual methods.

Pharmacology

The subject aims to be a correspondence between the theoretical sessions and the practice sessions, so that these practice sessions to reinforce and support the contents of the subject, to achieve meaningful learning of the student that you can use in the exercise of their future professional work in the field of Dietetics and Nutrition

The theoretical sessions will take place through interactive lectura class, explanatory or demonstrative content sessions, using the blackboard and audiovisual material with computer support.

The practical sessions will be made by:

- discussion of seminars taught by the teacher. Active participation of the student
- laboratory session
- problem‐based learning. Resolution and discussion
- assessment and resolution of clinic cases

course portfolio: collected reports relating to the control of the previous practical activities (individual work)

- realization of a monographic review work, in small groups, on a suggested topic. Presentation and defense. During the realization of the same, corresponding teachers will have various interviews with the working groups for academic orientation and supervisi3n.

As teaching support will be provided in the web: literature recommendations, program of the course, guide teaching, hours of theoretical and practice sessions, as well as summaries of theoretical subjects or supplementary material of the practices in some cases, if necessary. The address where this material will appear is: <http://www.unizar.es/dvirtual.htm> (Teaching Digital Ring)

5.2.Learning tasks

The program offered to students to assist in achieving the expected results includes the following activities

Clinical Nutrition

Learning tasks

The course includes 8.4 ECTS organized according to:

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Lectures 45% 2.60 ECTS (67,50 hours)

Large groups: (50%) 1.20 ECTS (30 hours)

Practice sessions; seminars / workshops (and tutorial) 0.7 ECTS

Practice clinics (in small groups) 0,5 ECTS

Autonomous work (on-line) 3.4 ECTS

1 ECTS= 10 onsite hours

Pharmacology: 4 ECTS

Lecture

Pratice Session:

- . seminar
- . problem‐based learning.
- . clinic cases
- . laboratory session
- . group work and presentation

5.3.Syllabus

CLINICAL NUTRITION PROGRAM

THEORICAL PROGRAM

General indications for nutritional support

Evaluation of artificial nutrition nutritional requirements.

Enteral nutrition. Selection criteria for enteral nutrition formulas.

Dietary fiber. Its application in enteral nutrition.

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Parenteral nutrition. Indications. Types of parenteral nutrition.

Nutrients in artificial nutrition. Metabolic complications of artificial nutrition. Artificial nutrition in Pediatrics.

Nutritional support in surgery.

Peripheral parenteral Nutrition.

Nutritional support in digestive diseases.

Nutritional support in surgical diseases.

Nutritional support in special circumstances: fasting, aggression, and critical situations (Polytraumatized, Sepsis, multiple organ dysfunction syndrome and burned patients).

Nutritional support and cancer.

Nutritional support in organ transplantation.

Home artificial nutrition.

Nutritional assessment in the elderly: scales and differences. Malnutrition in the elderly, consequences. Ethical aspects of malnutrition in the elderly.

Nutritional supplements.

PRACTICAL WORKSHOPS

Pathways to Artificial Nutrition

Enteral Nutrition

Parenteral nutrition

Pharmacy and Nutrition. Preparation of parenteral formulas.

PHARMACOLOGY

THEORETICAL PROGRAM

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GENERAL PRINCIPLES OF PHARMACOLOGY

Topic 1. Concept of Pharmacology. Definition and contents. Division of Pharmacology.

Topic 2. Drug Absorption. Routes of drug administration.

Topic 3. Drug Distribution.

Topic 4. Elimination: Drug Metabolism. Drug Excretion.

Topic 5. Pharmacodynamics.

Topic 6. Adverse drug reactions (ADR).

DRUGS ACTING ON AUTONOMIC NERVOUS SYSTEM AND PERIPHERAL NERVOUS SYSTEM

Topic 7. Cholinergic Transmission. Cholinergic agent (Parasympathomimetics)

Topic 8. Anticholinergic agents (Antimuscarinic agents). Neuromuscular blocking drugs

Topic 9. Adrenergic Transmission. Adrenergic Drugs (Sympathomimetics)

Topic 10. Adrenergic-receptor antagonists block the effects of sympathetic stimulation: Alpha blocker and Beta blockers

SPECIFIC PHARMACOLOGICAL GROUPS

Topic 11. Pharmacology of gastric secretion. Medical and dietary treatment of peptic ulcer.

Topic 12. Pharmacology of gastrointestinal motility. Medical and dietary treatment of constipation and diarrhea.

Topic 13. Hypertension: medical treatment and diet

Topic 14. Plasma lipid modifying agents.

Topic 15. Nutritional anemia: iron deficiency anemia, vitamin B12 and folic acid deficiency anemia. Nutritional and therapeutic aspects

Topic 16. Nonsteroidal anti-inflammatory drugs (NSAIDs)

Topic 17. Steroids antiinflammatory drugs (Corticosteroids)

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Topic 18. Diabetes Mellitus. Medical and dietary treatment of Diabetes Mellitus

Topic 19. Anti-obesity drugs and treating of eating disorders (anorexia and bulimia)

DRUG- NUTRIENTS INTERACTIONS

Topic 20. Influence of diet, nutrients and nutritional status on the efficacy and safety pharmacological response

Topic 21. Influence of drugs on nutrients utilization and nutritional status

Topic 22. Frequently Drug-Nutrients Interactions

PRACTICE PROGRAM

- Seminar
- Problem-bases learning
- Clinic cases
- Laboratory
- Group work and presentation

5.4.Course planning and calendar

Clinical Nutrition:

Calendar of sessions and presentations during the 8th semester of the degree (from February to May). Lectures: 2 classes a week for 14 weeks. Workshops/seminars: 1 workshop per week. Clinical practices: according to schedule in small groups. Calls for examination on dates designated by the Centre (June).

Pharmacology:

Calendar of sessions and presentations will take place during the 7th semester of the degree. The theoretical sessions will take place through the lectures according to the program presented according to the schedule assigned to the beginning of the course. The practice sessions includes: seminar (second and third week); Problem-based learning (fourth and fifth week); Clinic cases (sixth week); Laboratory (seventh and eighth week); Exposition and defence of monographic works made by students in small groups (ninth and tenth week).

Exams on dates designated by the Centre (June and September) .

For further details concerning the timetable, classroom and further information regarding this course please refer to

<https://fccsyd.unizar.es/>

5.5. Bibliography and recommended resources

BIBLIOGRAFIA COMPLEMENTARIA

- Tratado de nutrición. Tomo IV, Nutrición clínica / Director Ángel Gil Hernández ; coordinadores Mercè Planas Vilà ... [et al.] . 2ª ed. Madrid [etc.] : Editorial Médica Panamericana, 2010
- Mestres Miralles, Concepción. Farmacología en nutrición / Concepción Mestres Miralles, Màrius Duran Hortolà . Madrid [etc.] : Médica Panamericana, cop. 2012

Pharmacology:

Recommended bibliography

- Farmacología humana / director, Jesús Flórez ; directores asociados, Juan Antonio Armijo, África Mediavilla . - 6ª ed. Ámsterdam ; Barcelona ; Madrid [etc.] : Elsevier Masson , 2014
- Lorenzo Velázquez, Benigno. Farmacología básica y clínica / Velázquez ; [colaboradores], P. Lorenzo ... [et al.]. 18ª ed., 2ª. reimp. Madrid [etc.] : Editorial Médica Panamericana, 2010
- Farmacología / H.P. Rang ... [et al.]. 7ª ed. Ámsterdam ; Barcelona ; Madrid [etc.] : Elsevier, D.L. 2012
- Materese, Laura E.. Nutrición clínica práctica / Laura E. Materese, Michele M. Gottschlich . - 2ª ed. Madrid [etc.] : Elsevier, D.L. 2004
- Rodota, L.; Castro, M. . Nutrición Clínica y Dietoterapia 2012; Edición1ª (ISBN 9789500602723)
- Téllez Villagómez, María Elena. Nutrición Clínica Manual Moderno, 2014 (ISBN: 9786074484250)