



INTRODUCTION

- **Course description:** This subject aims to introduce students to the process of developing and launching a new food product to the market.
- **Degree:** Pharmacy and Nutrition
- **Module in the Degree Program:** Module VIII: Materias Optativas (Pharmacy Degree); and Module VII: Formación para la Actuación del Dietista (Human Nutrition and Dietetics Degree)
- **Number of credits ECTS:** 3ECTS
- **Semester:** First semester.
- **Type of course:** Elective subject.
- **Instructors:** Diana Ansorena Artieda (dansorena@unav.es)
- **Language:** English
- **Requirements:** Students must have studied Bromatología. Fluency in speaking and writing English is required.
- **Lecture schedule:** Mondays. 14:00h - 15:00h (Room 2- Castaños).

LEARNING OUTCOMES (Competencies)

DEGREE IN PHARMACY

BÁSICAS Y GENERALES

CG9 - Intervenir en las actividades de promoción de la salud, prevención de enfermedad, en el ámbito individual, familiar y comunitario; con una visión integral y multiprofesional del proceso salud-enfermedad.

CG13 - Desarrollar habilidades de comunicación e información, tanto orales como escritas, para tratar con pacientes y usuarios del centro donde desempeñe su actividad profesional. Promover las capacidades de trabajo y colaboración en equipos multidisciplinares y las relacionadas con otros profesionales sanitarios.

CG15 - Reconocer las propias limitaciones y la necesidad de mantener y actualizar la competencia profesional, prestando especial importancia al autoaprendizaje de nuevos conocimientos basándose en la evidencia científica disponible.

CB4 - Que los estudiantes puedan transmitir información, ideas, problemas y soluciones a un público tanto especializado como no especializado.

CB5 - Que los estudiantes hayan desarrollado aquellas habilidades de aprendizaje necesarias para emprender estudios posteriores con un alto grado de autonomía.

DEGREE IN NUTRITION

BÁSICAS Y GENERALES

CG2 - Desarrollar la profesión con respeto a otros profesionales de la salud, adquiriendo habilidades para trabajar en equipo.



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CG29 - Adquirir la formación básica para la actividad investigadora, siendo capaces de formular hipótesis, recoger e interpretar la información para la resolución de problemas siguiendo el método científico, y comprendiendo la importancia y las limitaciones del pensamiento científico en materia sanitaria y nutricional.

CB3 - Que los estudiantes tengan la capacidad de reunir e interpretar datos relevantes (normalmente dentro de su área de estudio) para emitir juicios que incluyan una reflexión sobre temas relevantes de índole social, científica o ética.

CB4 - Que los estudiantes puedan transmitir información, ideas, problemas y soluciones a un público tanto especializado como no especializado.

PROGRAM

Objectives of the course:

The following aims for the course are proposed:

- **Contents:** Knowing the Food Product Development process, from the concept to the product launch and marketplace.
- To evaluate the factors affecting every step during the process.
- To understand the basis to create and develop new products or to improve those already existing.
- **Skills:** To integrate former knowledge on Food Science and Nutrition areas.
- To be able to design and present a new food product, after analyzing consumer needs and current trends in the food industry.
- To be able to define and explain the manufacturing process of the selected product (including shelf-life considerations), as well as to consider regulatory aspects (composition, claims, labeling, safety)
- To improve social and communication skills within a professional environment.
- To develop organization and time management skills
- To improve abilities in searching information using different scientific sources.

Program

Lesson 1. Introduction. Objectives. Relation to other subjects. Bibliography and ADI (documents and interesting webs).

Lesson 2. Defining New Food Products. Types. Concept of Novel food. Reasons for NFPD. Life cycle for a food product.

Lesson 3. Stages in the NFPD process. Criteria.

Lesson 4. Ideas for the development of a New Food Product: internal and external sources. Advantages and disadvantages.

Lesson 5. Marketplace studies. Focus groups. Interviews. Consumer testing. Follow up studies.

Lesson 6. The new product development team. Skills.

Lesson 7. Nutritional and sensory evaluation of a new product. Importance and implementation.



Lesson 8. Shelf life testing. Static, accelerated and use/abuse tests. Industrial criteria.

Lesson 9. Packaging: product requirements. Information and communication.

Lesson 10. Cost estimation. Direct and indirect costs. Overheads.

Lesson 11. Legal aspects to be applied in NFPD. Composition, labelling and claims.

EDUCATIONAL ACTIVITIES

All educational activities will take place in English.

- **Lectures** (13h): Lectures will explain the content of the program.
- **Paired Project:** To Design, Develop, and Present a new food product that addresses a particular need of a food company/society. (36h)

**Students are required to use the design process to describe the steps of Food Product Development for the particular food. Each step in the design process will be evaluated. A written report must be presented at the end of the course. The use of AI (when applies) must be disclosed: a detailed information of the use of AI tools and application is required.

** An oral presentation (7 minutes) will show the product to the rest of students in class.

** Rubric for knowing items to be assessed is presented in Learning materials folder

- **Web search activities:** students will have to find specific information asked by the lecturer along the semester; Reading scientific articles that will be distributed by ADI; Answering by ADI different questions made during lessons along the course. (5h)
- Appointments with tutor to evaluate the evolution of the Project (2h)
- Personal study (17h)
- Assesment (2h)

ASSESSMENT

CONVOCATORIA ORDINARIA

First call

Final test (in English)

Multiple choice questions and short questions

The content discussed during the lectures and activities will be evaluated.

Value over total mark: **50%**. A minimum mark (5.0) is required to promediate with the rest of marks.

Date: 26th November 2025 - 8:30 Room 21

Group Project

The written report and the oral presentation of the proposed NFP will account for a **40%** of the total mark. Criteria and poits to be evaluated are summarized in the document



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"Outcomes-Project", which is included in "Learning materials" ADI section. A minimum mark (5.0) is required to promediate with the rest of marks.

Deadline for:

-delivering project draft (one page: title and aim): 29th September- By uploading in "Activities" area

-delivering written report - project: 17th November - By uploading in "Activities" area

Presentation dates: 24th November

ADI questions

The answer of questions proposed during the lectures, and uploaded in "Activities" will account for a **10%** of the total mark. Attending appointments with tutor to evaluate the evolution of the project will also be taken into account under this issue.

CONVOCATORIA EXTRAORDINARIA

- **Date: (Pending).**
- A student may find himself in extraordinary call for not having passed either the exam or the work or both. In the case that one of the two parts has been passed, the corresponding grade will be saved until the next extraordinary call, always within the same academic year, never for the following year. The conditions for evaluation of the work and exam in this extraordinary call will be the same as for the ordinary call.

Additional information:

Students with special educational needs must first contact the Academic Coordination Office of the (faculty/school) to obtain the corresponding authorization for the required adaptations (for example, extra time in examinations). This authorization must then be sent by the student to the professor. It is recommended that this procedure be completed at the beginning of the semester.

ATTENTION: Please note that any attempt at fraud, cheating, plagiarism, or other irregular behavior constitutes a serious offense, as established in Title IV, "*Disciplinary rules for students*", within the System of Rules on Coexistence at the University of Navarra.

In justified cases where exams must be taken outside the official dates, the type and structure of the exam may vary

OFFICE HOURS

Dra. Diana Ansorena (dansorena@unav.es)

- Edificio de Investigación. Planta baja
- Previous appointment by e-mail.

BIBLIOGRAPHY and RESOURCES



Books

Basic references:

- New Food Product Development. From Concept to Marketplace.(2nd Ed.). Gordon W. Fuller. Ed CRC Press, 2011. Signature:Brom 2401 [Find this book in the Library](#)
- Developing new functional food and nutraceutical products, Elsevier, 2017 [Localízalo en la Biblioteca \[Recurso electrónico\]](#)
- Accelerating New Food Product Design and Development (Second Edition)-2017 [Localízalo en la Biblioteca](#)

<https://www.mdpi.com/2071-1050/12/8/3364>

Other references:

- "Food processing technology: principles and practice". Fellows. 2017. [Localízalo en la Biblioteca](#)
- An Integrated Approach to New Food Product Development. Moskowitz, H.R., Saguy, I.S., Straus, T. Ed. CRC Press, 2009. [Find this book in the Library](#)
- Functional Food Product Development. Smith, J., Charter, E. Ed. Wiley-Blackwell, 2010. [Find this book in the Library](#)

Other resources

- Documents from ADI
- Webs:

www.preparedfoods.com

www.foodingredientsfirst.com/

www.foodnavigator.com

<http://www.ift.org/food-technology.aspx>

<https://www.ulmapackaging.com/es>