Syllabus

Descrizione corso

Titolo insegnamento	Food processing equipment
Codice insegnamento	44708
Titolo aggiuntivo	
Settore Scientifico-Disciplinare	AGRI-04/B
Lingua	Inglese
Corso di Studio	Corso di laurea magistrale in Scienze degli alimenti per l'innovazione e l'autenticità
Altri Corsi di Studio (mutuati)	
Docenti	dr. Giovanni Carabin, Giovanni.Carabin@unibz.it https://www.unibz.it/en/faculties/agricultural-environmental-food-sciences/academic-staff/person/35346 dr. Pasqualina Gloria Sacco, PasqualinaGloria.Sacco@unibz.it https://www.unibz.it/en/faculties/agricultural-environmental-food-sciences/academic-staff/person/48345
Assistente	
Semestre	Primo semestre
Anno/i di corso	2nd
CFU	6
Ore didattica frontale	36
Ore di laboratorio	24
Ore di studio individuale	90
Ore di ricevimento previste	18
Sintesi contenuti	The course aim is to provide the attendants theoretical and practical fundamentals of the basic principles of a food production chain, focusing on the engineering and organisational aspects of the food processing equipment that must be there used. Particular emphasis will be devoted to the conceptual tools that must be

	used in the designing of a full production industrial line. The aim of the course is to offer a general overview of scientific contents combined with specific professional skills and knowledge. In addition, the student will acquire soft skills connected to scientific presentations or reports.
Argomenti dell'insegnamento	The course will cover the following key areas: - Introduction to Food Processing Equipments - Conceptualization of Food Processing - Fundamentals of Food Process Design - Introduction to financial aspects - Basic Physics for Food Process Design - Analysis of specific Unit Operations in Food Processing - Introduction to Life Cycle Assessment (LCA) methodology for evaluating the environmental impacts of food processing systems.
Parole chiave	Food Processing Equipments, Fundamentals of Design FPE, Financial aspects for FPE, FPE Unit Operations, Life Cycle Assessment in FPE
Prerequisiti	
Insegnamenti propedeutici	None
Modalità di insegnamento	The course will be delivered through in-person lectures, supported by teaching materials provided directly by the instructors. Textbooks may be optionally recommended, intended solely for students who wish to explore topics in greater depth or consult an additional reference.
Obbligo di frequenza	No
Obiettivi formativi specifici e risultati di apprendimento attesi	The course aim is to provide the attendants theoretical and practical fundamentals of the basic principles of a food production chain, focusing on the engineering and organisational aspects of the food processing equipment that must be there used. Particular emphasis will be devoted to the conceptual tools that must be used in the designing of a full production industrial line. The aim of the course is to offer a general overview of scientific contents combined with specific professional skills and knowledge. In addition, the student will acquire soft skills connected to scientific presentations or reports.
Obiettivi formativi specifici e risultati di apprendimento attesi (ulteriori info.)	Knowledge and understanding of the conceptual design and planning of an industrial food production line, including insights in the food unit operations and related physical running principles.

	Applying knowledge and understanding in scientific and professional environments, focusing on specific case studies. Applying analytical and modelling tools for conceptual and practical designing of production lines. Making judgments when assessing different solutions for a given technological application on the basis of its technical, organizational, environmental and economic performances. Achieving the basis for investment assessment. Communication skills in presenting scientific results in written and oral form, in particular using an appropriate English language, as well as proper graphical tools for exhaustive analytical reports. Learning skills concerning the ability to find information on the web and access their validity, to use and transmit the technical knowledge acquired in the course.
Modalità di esame	Assessment will be conducted through an oral examination designed to evaluate the student's knowledge, presentation skills, and practical competencies acquired during the course. The oral exam (maximum duration: 45 minutes) includes a scientific presentation - prepared individually at home - on a topic chosen by the student. The presentation should be supported by slides (e.g., PowerPoint). Following the presentation, additional questions will be asked on topics covered during the lectures.
Criteri di valutazione	The criteria that will be relevant for assessment will consider clarity of answers, mastery of language, ability to summarize, evaluate, and establish relationships between topics, capability of managing graphical designing tools.
Bibliografia obbligatoria	Materials distributed by the teachers.
Bibliografia facoltativa	Materials distributed and/or recommended by the teachers.
Altre informazioni	
Obiettivi di Sviluppo Sostenibile (SDGs)	Innovazione e infrastrutture, Buona salute