School of Environmental and Life Sciences

FSHN3210: Food Product Development

Ourimbah

Semester 2 - 2025

COURSE OUTLINE

OVERVIEW

Course Description

New food products are continually evolving and being added to the marketplace. This course involves going through the process of developing a new food product from concept, through to market analysis, design, development and evaluation, and finally to market release. On successful completion of this course, students will gain a wide range of knowledge and skills that can be applied for the improvement or development of food products to satisfy consumers' changing demands and to improve business related outcomes.

Academic Progress Requirements

Nil

Requisites

Course Pre-Requisite:
Must have successfully completed the following course(s):
At least one course from:
CHEM1110
CHEM1010
Must have successfully completed the following course(s):
CHEM1120
Must have successfully completed the following course(s):
BIOL2011

Assumed Knowledge

FSHN2040, FSHN2050, FSHN2100, and FSHN3230.Students must have successfully completed at a minimum of 140 units to enrol in this course.

Contact Hours

Ourimbah
Laboratory *
Face to Face on Campus
3 hour(s) per week(s) for 13 week(s) starting Week 1

Lecture
Face to Face on Campus
2 hour(s) per week(s) for 13 week(s) starting Week 1

* This contact type has a compulsory requirement.

Unit Weighting

10

Workload

Students are required to spend on average 120-140 hours of effort (contact and non-contact) including assessments per 10-unit course.

CONTACTS

Course Coordinator

Ourimbah
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Consultation: By appointment

Teaching Staff

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School Office

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SYLLABUS

Course Content

1. Trends and innovation in food markets
2. New product development process - from concept to deployment including market analysis, product design, development, quality and sensory assessment, and marketing
3. Properties, roles and applications of colouring, flavouring, additives and functional ingredients in foods
4. Properties, roles and development of food packaging for food products
5. Quality and sensory testing for food products and evaluation of food shelf life
6. Skills for copying established products available from the marketplace

Course Learning Outcomes

On successful completion of this course, students will be able to:

1. Reflect on the role of food trends in the new product development process.
2. Design a food product through the application of knowledge of food ingredients and functional foods.
3. As part of a team, create and evaluate a product using the development process.
4. Design and apply packaging for food products.
5. Evaluate product quality and sensory properties.
6. Combine theoretical knowledge and practical skills to reproduce existing food products.

COMPULSORY REQUIREMENTS

In order to pass this course, each student must complete ALL the following compulsory requirements:

Contact Hour Requirements:

- Laboratory Attend 80% of sessions

Course Assessment Requirements:

- Assessment 1 - Laboratory Practicals & Reports: Pass requirement - Must pass this assessment item to pass the course.

Compulsory Placement and WHS Requirements:

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SCHEDULE

Week	Week Begins	Topic	Learning Activity	Assessment Due
1	21 Jul	- Introduction to the course - Lab induction - Experiment on effects of ingredients on quality of ice cream (week 1)	- Lecture: Course introduction - Lab: (1) Induction to food lab; (2) Production of ice cream	
2	28 Jul	- Product life cycle & new product concepts - Experiment on determining the juice mixture using a software and quality of ice cream (week 2)	- Lecture: Product life cycle & new product concept and design - Lab:(1) Sensory testing of ice cream & (2) Experiment on determining the juice mixture using software	Confirmation of group members for FPD
3	4 Aug	- New food product design - Experiment on determining the food formulation of a commercial jelly product	- Lecture: Food product design and prototypes - Lab: Experiment on determining the food formulation of a commercial jelly product - Part 1	
4	11 Aug	- Sensory testing - Food additives as preservatives - Experiment on determination of food formulation of a commercial jelly product	- Lecture: Sensory testing and Food additives as preservatives - Lab: Experiment on determining the food formulation of a commercial jelly product - Part 2	- Lab report 1 due Friday 15 August - Project proposal - Submission of idea of a new food product due Friday 15 August
5	18 Aug	- Food additives as colouring agents	- Lecture: Food additives as colouring agents - Lab: Working independently to develop your product	
Recess				
6	1 Sep	- Food additives as flavouring agents, emulsifiers and stabilisers	- Lecture: Food additives as flavouring agents, emulsifiers and stabilisers - Lab: Working independently to develop your product	- Lab report 2 due Friday 5 September
7	8 Sep	- The roles of food packaging	- Lecture: The roles of food packaging - Lab: Working independently to develop your product	
8	15 Sep	- Shelf-life evaluation for a new food product	- Lecture: Shelf-life evaluation for a new food product - Lab: Working independently to develop your product	

9	22 Sep	- Improving product success, marketing, scaling up and launching a new product	- Lecture: Improving product success, marketing, scaling up and launching a new product - Lab: Working independently to develop your product	Project proposal - Draft proposal (Not marked) Friday 26 September
Recess				
10	6 Oct		- Student Group Project Presentations during lecture time - Lab: Working independently to develop your product	Project Presentations - Wednesday 8 October (electronic file due Tuesday 7 October)
11	13 Oct	Finalising your new food project and preparation for the Food expo	- Preparation for the Food expo	- In Term Test (online quiz)
12	20 Oct	Food Exhibition	- Food Exhibition	Food Exhibition - Wednesday 22 October Poster - Monday 20 October
13	27 Oct	Final proposal submission	- Preparation and completion of your proposal	- Project proposal due Friday 31 October
Exams				
Exams				

ASSESSMENTS

This course has 5 assessments. Each assessment is described in more detail in the sections below.

	Assessment Name	Due Date	Involvement	Weighting	Learning Outcomes
1	Laboratory Practicals & Reports*	Friday 11:59pm 2 weeks after completion of the related laboratory exercise(s)	Individual	30%	5, 6
2	In-term quiz	Week 11	Individual	20%	1, 2, 4, 5
3	Project Proposal	Week 4 - Submit new food product idea Week 9 - Draft proposal (not marked) Week 13 - Final proposal Friday 31 October	Group	20%	2, 3, 4
4	Project Presentation	Week 10 Wednesday 8 October Electronic PowerPoint file due Tuesday 7 October	Group	10%	3, 4
5	Project Expo	Week 12 - Posters are due Monday 20 October. Expo - Wednesday 22 October	Group	20%	2, 3, 4, 5

* This assessment has a compulsory requirement.

Late Submissions The mark for an assessment item submitted after the designated time on the due date, without an approved extension of time, will be reduced by up to 10% of the possible maximum mark for that assessment item for each day or part day that the assessment item is late. Note: this applies equally to week and weekend days.

Assessment 1 - Laboratory Practicals & Reports

Assessment Type	Tutorial / Laboratory Exercises
Purpose	To provide the students with knowledge and skills to analyse and reproduce existing food products and write a report on the outcomes
Description	Laboratory investigations and reports enable the student to combine theoretical knowledge and practical skills to analyse and reproduce existing food products. Through this task, the students can demonstrate independent specialised cognitive and technical skills in the evaluation of food product quality and reproduction of the food products. The students are required to submit 2 reports.
Weighting	30%
Compulsory Requirements	Pass requirement - Must pass this assessment item to pass the course.
Due Date	Friday 11:59pm 2 weeks after completion of the related laboratory exercise(s)
Submission Method	Online The students are required to submit their reports via Turnitin in Canvas
Assessment Criteria	Assessment is based on the rubric, which is uploaded on Canvas
Return Method	Online
Feedback Provided	Online - Three weeks after submission via Canvas. Feedback includes strengths and improvements
Opportunity to Reattempt	Students will be given the opportunity to reattempt this assessment.

Assessment 2 - In-term quiz

Assessment Type	In Term Test
Purpose	To examine the students' knowledge and understanding on the whole process to develop a new food product
Description	Students have 2 hours to answer 60 multiple choice questions, which cover the entire content of the course including lecture materials and structured lab experiments
Weighting	20%
Length	2 hours
Due Date	Week 11
Submission Method	Online
Assessment Criteria	Marks will be awarded for choosing the best answer from multiple choice questions based on the material covered.
Return Method	Online
Feedback Provided	In Person - 1 week after submission. Students can request feedback from the course convenor during student contact hours
Opportunity to Reattempt	Students will not be given the opportunity to reattempt this assessment.

Assessment 3 - Project Proposal

Assessment Type	Proposal / Plan
Purpose	To enable students in a team to demonstrate the entire process of developing a new food product
Description	Each student group is required to submit their proposal, which covers the whole process for development of a new food product. Structure and examples will be provided on Canvas.
Weighting	20%
Due Date	Week 4 - Submit new food product idea Week 9 - Draft proposal (not marked) Week 13 - Final proposal Friday 31 October
Submission Method	Online New food product idea and draft proposal submitted via email. The final proposals are submitted via Canvas by a representative of each group.
Assessment Criteria	Assessment is based on the rubric, which is uploaded on Canvas. 1 submission from each group will be required
Return Method	Online
Feedback Provided	Online - Three weeks after submission. Feedback will be provided via a rubric available on Canvas. The mark for the assignment will be posted on the Canvas 'grades' system.
Opportunity to Reattempt	Students will not be given the opportunity to reattempt this assessment.

Assessment 4 - Project Presentation

Assessment Type	Presentation
Purpose	To allow the students working in a team sharing the procedures to develop their products
Description	This task enables the students to orally share their works related to development of a food product and further help them enhance the skills of their future presentations both at university and professionally.
Weighting	10%
Length	20 minutes presentation and 5 minutes for Q & A
Due Date	Week 10 Wednesday 8 October Electronic PowerPoint file due Tuesday 7 October
Submission Method	In Class
Assessment Criteria	Assessment is based on the rubric, which is uploaded on Canvas
Return Method	Not Returned
Feedback Provided	In Class - Feedback will be provided at the time of the presentation.
Opportunity to Reattempt	Students will not be given the opportunity to reattempt this assessment.

Assessment 5 - Project Expo

Assessment Type	Exhibition / Poster
Purpose	To allow the students to launch their products and show their products to the audience
Description	The new products will be evaluated based on specific criteria. This task enables the students to get the feedback from the potential customers for their new products. 15% weighting mark is for exhibition and 5% for posters.
Weighting	20%
Length	4-6 hours
Due Date	Week 12 - Posters are due Monday 20 October. Expo - Wednesday 22 October
Submission Method	Specific Location Specific location for the food expo is advised 2 weeks before the expo day
Assessment Criteria	A marking rubric with specific criteria for the food exhibition and poster is advised on Canvas
Return Method	Not Returned
Feedback Provided	No Feedback.
Opportunity to Reattempt	Students will not be given the opportunity to reattempt this assessment.

ADDITIONAL INFORMATION

Grading Scheme

This course is graded as follows:

Range of Marks	Grade	Description
85-100	High Distinction (HD)	Outstanding standard indicating comprehensive knowledge and understanding of the relevant materials; demonstration of an outstanding level of academic achievement; mastery of skills*; and achievement of all assessment objectives.
75-84	Distinction (D)	Excellent standard indicating a very high level of knowledge and understanding of the relevant materials; demonstration of a very high level of academic ability; sound development of skills*; and achievement of all assessment objectives.
65-74	Credit (C)	Good standard indicating a high level of knowledge and understanding of the relevant materials; demonstration of a high level of academic achievement; reasonable development of skills*; and achievement of all learning outcomes.
50-64	Pass (P)	Satisfactory standard indicating an adequate knowledge and understanding of the relevant materials; demonstration of an adequate level of academic achievement; satisfactory development of skills*; and achievement of all learning outcomes.
0-49	Fail (FF)	Failure to satisfactorily achieve learning outcomes. If all compulsory course components are not completed the mark will be zero. A fail grade may also be awarded following disciplinary action.

*Skills are those identified for the purposes of assessment task(s).

Attendance

Attendance/participation will be recorded in the following components:

- Laboratory (Method of recording: Student signature each scheduled lab session)

Communication Methods

Communication methods used in this course include:

- Canvas Course Site: Students will receive communications via the posting of content or announcements on the Canvas course site.
- Email: Students will receive communications via their student email account.
- Face to Face: Communication will be provided via face-to-face meetings or supervision.

Course Evaluation

Each year feedback is sought from students and other stakeholders about the courses offered in the University for the purposes of identifying areas of excellence and potential improvement.

Learning Analytics

The University uses an evidence-based approach to enhancing student learning and delivering support. Our careful analysis of data through learning analytics informs decision making processes related to student learning, academic outcomes, and support services. Learning analytics may be used to identify targeted individual opportunities for additional support services or interventions.

Interviews on Assessment Items

An Interview may be conducted on any assessment item in this course, in accordance with the Interview on Assessment Items Procedure. The purpose of the interview is to verify the author of the material submitted in response to the assessment task and provide a quality assurance measure.

In the event the Course Coordinator is not satisfied that a student's oral responses are consistent with the work originally submitted, the matter will be referred to the Student Academic Conduct Officer, who will take appropriate action under the Student Conduct Rule.

Academic Integrity and Ethical Academic Conduct Policy	All students are required to meet the academic integrity standards of the University. These standards reinforce the importance of integrity and honesty in an academic environment. Academic Integrity policies apply to all students of the University in all modes of study and in all locations. Please refer to the Academic Integrity and Ethical Academic Conduct Policy
Adverse Circumstances	The University acknowledges the right of students to seek consideration for the impact of allowable adverse circumstances that may affect their performance in assessment item(s). Applications for special consideration due to adverse circumstances will be made using the online Adverse Circumstances system where: 1. the assessment item is a major assessment item; or 2. the assessment item is a minor assessment item, and the Course Co-ordinator has specified in the Course Outline that students may apply the online Adverse Circumstances system. 3. you are requesting a change of placement; or 4. the course has a compulsory attendance requirement. Before applying you must refer to the Adverse Circumstance Affecting Assessment Items Procedure.
Use of generative artificial intelligence in course assessments	It is critical that any work submitted for assessment is your own original work. Before using generative AI tools (such as ChatGPT, Perplexity, Microsoft Copilot, etc) in any assessable work you must ensure that such use is in line with the requirements for the course and expectations of your Course Coordinator Misuse of AI tools may be considered a breach of the University's Student Conduct Rule and could result in disciplinary action. Artificial Intelligence detection software may be used to review any work you submit. If you have used AI in any way other than has been expressly permitted by your course coordinator, you may be engaging in academic misconduct and be subject to penalties. For information, refer to: • Generative AI Tools • Academic Integrity
Important Policy Information	The Help button in the Canvas Navigation menu contains helpful information for using the Learning Management System. Students should familiarise themselves with the policies and procedures at https://www.newcastle.edu.au/current-students/respect-at-uni/policies-and-procedures that support a safe and respectful environment at the University

This course outline was approved by the Head of School. No alteration of this course outline is permitted without Head of School approval. If a change is approved, students will be notified, and an amended course outline will be provided in the same manner as the original.
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