

FSHN2040: Animal Food Products

Ourimbah

Semester 1 - 2024



THE UNIVERSITY OF
NEWCASTLE
AUSTRALIA

OVERVIEW

Course Description	Commodities of Animal origin constitute a major component of the diet of people worldwide, providing essential nutrients, such as proteins and fat, through fresh, minimally processed and fully processed products. The physicochemical properties of milk are studied, as are the processing methods involved in the conversion of milk to other dairy products such as cheese, yoghurt and butter. The chemistry, structure, composition, properties, uses, and method of processing of animal food such as eggs, fish meat and meat products are also examined. By completing this course, students will appreciate the properties of animal-based foods and explain the processing methods of animal foods.
Academic Progress Requirements	Nil
Assumed Knowledge	To facilitate success in this course, students are expected to have successfully completed FSHN1010, CHEM1110, CHEM1120.
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.

COURSE OUTLINE

CONTACTS

Course Coordinator	Ourimbah Dr Penta Pristijono Penta.Pristijono@newcastle.edu.au (02) 43494783 Consultation: By appointment
Teaching Staff	Other teaching staff will be advised on the course Canvas site.
School Office	School of Environmental and Life Sciences SO-104 Science Offices OURIMBAH CESE-SELS@newcastle.edu.au (02) 4349 4568 / 4348 4115 9am-5pm (Mon-Fri)

SYLLABUS

Course Content	<ul style="list-style-type: none">• Milk - composition, structure and function.• Milk - processing and milk products• Meat - composition, structure and function.• Meat - conversion of muscle to meat.• Meat - storage, preservation and processing of meat and meat products.• Fish - composition, postharvest quality, processing of fish and fish products.• Egg - composition, properties and quality of eggs and egg products
Course Learning Outcomes	<p>On successful completion of this course, students will be able to:</p> <ol style="list-style-type: none">1. Explain the composition, structure and function of meat, eggs, milk and fish;2. Identify and describe the physical and biochemical changes occurring during the conversion of muscle to meat;3. Describe and evaluate the implication of storage and processing operations on the quality of selected foods of animal origin;4. Collect and interpret the data of experiments on the effect of processing conditions on quality parameters of animal food products;5. Identify and explain the product composition, quality and production process of commercially available selected animal food products.
Course Materials	<p>Other Resources:</p> <ul style="list-style-type: none">- Canvas site Students enrolled in the course can login https://canvas.newcastle.edu.au/to access the Canvas course site used to support this course. You need to visit the Canvas course site on a regular basis. <p>Recommended Reading:</p> <ul style="list-style-type: none">- Lawrie, R.A. Lawrie's Meat Science 7th edition [electronic resource] CRC Press. Woodhead 2017. Available online University of Newcastle Libraries in Knovel- Varnam, A.H, and Sutherland, J.P. Milk and Milk Products: Technology, Chemistry and Microbiology. Chapman & Hall, London; 1994.

- James, S. J., & James, C. (2002). *Meat refrigeration*. Cambridge, England ; Boca Raton, Florida: Woodhead Publishing Limited : CRC Press. 2022. Available online University of Newcastle Libraries in Knovel.
- Kinsman, D.M., Kotula, A.W. and Burdette, C. *Muscle Foods: Meat, poultry and seafood technology*. John Wiley & Sons; 1994.
- Shahidi F. and Botta J.R. *Seafoods: Chemistry, processing technology and quality*. Blackie Academic & Professional, London; 1994
- Stadelman W.J. and Cotterill O.J. *Egg science and technology*. Food Products Press, New York; 1995
- Several other books dealing with the subject of animal food products are available in Canvas course site (Course readings) and as electronic resources.
- Note that this list is not exhaustive and that omission from this list does not imply that textbooks not included are not suitable for the course.

COMPULSORY REQUIREMENTS

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

Contact Hour Requirements:

- Laboratory Attend 80% of sessions

Course Assessment Requirements:

- Assessment 1 - Laboratory practicals and reports: Pass requirement - Must pass this assessment item to pass the course.

SCHEDULE

Week	Week Begins	Topic	Learning Activity	Assessment Due
1	26 Feb	Introduction	Lecture 1 - Introduction to the course	
2	4 Mar	Milk Composition	Lecture 2 - Milk composition Lab 1 - Milk coagulation	
3	11 Mar	Milk Properties and milk products	Lecture 3 - Milk Properties and Milk products 1 Lab 2 and 3 - Yoghurt 1	
4	18 Mar	Technology of Milk Products	Lecture 4 - Milk Products 2 Lab 2 and 3 - Yoghurt 2	Lab report 1 - Milk coagulation Report, Friday 22 March 2024
5	25 Mar	Meat Structure and Composition	Lecture 5 - Red meat structure and composition No lab - public holiday	
6	1 Apr	Conversion of Muscle to Meat	Lecture 6 - Conversion of muscle to meat Lab 4 - Milk Composition	
7	8 Apr	Meat Processing and Meat Products	Lecture 7 - Meat processing and meat products 1 Lab 5 - Meat muscle and storage	Lab Report 2 - Yoghurt report, Friday 12 April 2024.
Mid-Semester Recess				

Mid-Semester Recess				
8	29 Apr	Meat Processing and Meat Products	Lecture 8 - Meat processing and meat products 2 Lab 6 - Sausages	Investigative Report, Wednesday 01 May 2024
9	6 May	Fish Quality and Technology	Lecture 9 - Fish science and technology 1 Lab 7 and 8 - Fish preservation and storage 1	
10	13 May	Fish Quality and Technology	Lecture 10 - Fish science and technology 2 Lab 7 and 8 - Fish preservation and storage 2	Lab 3 - Sausages report, Friday 17 May 2024
11	20 May	Egg Science and Technology	Lecture 11 - Egg science and technology Lab 9 - Eggs	Presentation file, Wednesday 22 May 2024
12	27 May	Group Presentations on allocated topics	Group presentations No Lab	Lecture Time, Wednesday 29 May 2024
13	3 Jun	Revision week	Lecture 12 - Course revision No Lab	
Examination Period				
Examination Period				

ASSESSMENTS

This course has 4 assessments. Each assessment is described in more detail in the sections below.

	Assessment Name	Due Date	Involvement	Weighting	Learning Outcomes
1	Laboratory practicals and reports*	Lab report 1 - Milk coagulation, Friday 22 March 2024. Lab Report 2 - Yoghurt, Friday 12 April 2024. Lab Report 3 - Sausages, Friday 17 May 2024.	Combination	45%	4, 5
2	Individual investigative report	5pm Wednesday 01 May 2024	Individual	15%	5
3	Presentation Group	Presentation file, Wednesday 22 May 2024	Group	10%	1, 5
4	Formal Examination	Formal Examination period.	Individual	30%	1, 2, 3

* 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 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 and reports

Assessment Type

Tutorial / Laboratory Exercises

Purpose

The purpose of the lab activity is to develop oral communication skills, to enable peer to peer learning, and ability to record the data; to produce articulate and concise documents which convey evidence-based understanding of the concepts and topics.

Description

Students will participate in different experiments and write 3 lab reports

Weighting

45%

Compulsory Requirements

Pass requirement - Must pass this assessment item to pass the course.

Due Date

Lab report 1 - Milk coagulation, Friday 22 March 2024.

Submission Method	Lab Report 2 - Yoghurt, Friday 12 April 2024. Lab Report 3 - Sausages, Friday 17 May 2024.
Assessment Criteria	Online Students will be assessed on format style and quality of their reports. Details of criteria will be uploaded on the course Canvas site prior to the first report submission.
Return Method	Online
Feedback Provided	Online - Three weeks after submission. Each student will be given feedback in the report.
Opportunity to Reattempt	Students WILL be given the opportunity to reattempt this assessment.

Assessment 2 - Individual investigative report

Assessment Type	Report
Purpose	The purpose of the Individual report is to provide the student with the opportunity to develop literature research skills and written communication skills.
Description	Report is to be written on an animal based food product that can be readily purchased from retail outlets. Reports to be completed per instructions and format guidelines provided on the course Canvas site.
Weighting	15%
Due Date	5pm Wednesday 01 May 2024
Submission Method	Online
Assessment Criteria	Students will be assessed on format style and quality of their reports. Details of criteria will be uploaded on the course Canvas site prior to the report submission.
Return Method	Online
Feedback Provided	Online - Three weeks after submission. Each student will be given feedback in the report. Students WILL NOT be given the opportunity to reattempt this assessment.

Assessment 3 - Presentation Group

Assessment Type	Presentation
Purpose	The purpose of the group activity is to enable peer-to-peer learning; develop oral communication skills and the ability to record data, synthesise an opinion and convey this clearly in a well presented and articulate manner.
Description	Group presentations are to be made on an animal based food product that can be readily purchased from retail outlets. The presentation should last 10-15 minutes, allowing 5 minutes for questions by the Course Co-Ordinator and other attending students.
Weighting	10%
Due Date	Presentation file, Wednesday 22 May 2024
Submission Method	Online Presentations will be held in class (lecture time). Each group has to submit an electronic copy of the presentation slides, evidence (a table or spreadsheet) of groups' discussion identifying dates and items discussed in week 11.
Assessment Criteria	Details of criteria will be uploaded on the course Canvas site prior presentation day.
Return Method	Not Returned
Feedback Provided	In Class - Each group will be given feedback at the end of the presentation day

Assessment 4 - Formal Examination

Assessment Type	Formal Examination
Purpose	Formal Examination
Description	The final exam will test all topics of the course. Any of multiple choice, short answer, calculations or essay questions may be included.
Weighting	30%
Due Date	Formal Examination period.
Submission Method	Formal Exam
Assessment Criteria	Details about the structure of the formal exam will be provided on the course Canvas site prior to exam.
Return Method	Not Returned
Feedback Provided	No Feedback

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).

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.

Oral Interviews (Vivas)

As part of the evaluation process of any assessment item in this course an oral examination (viva) may be conducted. The purpose of the oral examination is to verify the authorship of the material submitted in response to the assessment task. The oral examination will be conducted in accordance with the principles set out in the [Oral Examination \(viva\) Procedure](#). In cases where the oral examination reveals the assessment item may not be the student's own work the case will be dealt with under the [Student Conduct Rule](#).

Academic Misconduct

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. For the Student Academic Integrity Policy, refer to <https://policies.newcastle.edu.au/document/view-current.php?id=35>.

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 available at <https://policies.newcastle.edu.au/document/view-current.php?id=236>

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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