



EDSE13001 Culinary Science for Teachers

Term 2 - 2021

Profile information current as at 25/04/2024 10:04 pm

All details in this unit profile for EDSE13001 have been officially approved by CQU University and represent a learning partnership between the University and you (our student). The information will not be changed unless absolutely necessary and any change will be clearly indicated by an approved correction included in the profile.

General Information

Overview

This unit explores why foods are prepared the way they are, why certain changes take place in them after undergoing cooking and how this knowledge may be used to improve the final product. Knowledge and skills acquired in this unit form an integral component to the teaching of Home Economics and its related subjects in secondary schools. This area of study aligns with the Home Economics syllabi and provides opportunities to develop strategies for designing activities that will challenge and engage students in the classroom and beyond.

Details

Career Level: *Undergraduate*

Unit Level: *Level 3*

Credit Points: 6

Student Contribution Band: 7

Fraction of Full-Time Student Load: 0.125

Pre-requisites or Co-requisites

There are no requisites for this unit.

Important note: Students enrolled in a subsequent unit who failed their pre-requisite unit, should drop the subsequent unit before the census date or within 10 working days of Fail grade notification. Students who do not drop the unit in this timeframe cannot later drop the unit without academic and financial liability. See details in the [Assessment Policy and Procedure \(Higher Education Coursework\)](#).

Offerings For Term 2 - 2021

- Mixed Mode

Attendance Requirements

All on-campus students are expected to attend scheduled classes - in some units, these classes are identified as a mandatory (pass/fail) component and attendance is compulsory. International students, on a student visa, must maintain a full time study load and meet both attendance and academic progress requirements in each study period (satisfactory attendance for International students is defined as maintaining at least an 80% attendance record).

Residential Schools

This unit has a Compulsory Residential School for distance mode students and the details are:

Click here to see your [Residential School Timetable](#).

Website

[This unit has a website, within the Moodle system, which is available two weeks before the start of term. It is important that you visit your Moodle site throughout the term. Please visit Moodle for more information.](#)

Class and Assessment Overview

Recommended Student Time Commitment

Each 6-credit Undergraduate unit at CQUniversity requires an overall time commitment of an average of 12.5 hours of study per week, making a total of 150 hours for the unit.

Class Timetable

[Regional Campuses](#)

Bundaberg, Cairns, Emerald, Gladstone, Mackay, Rockhampton, Townsville

[Metropolitan Campuses](#)

Adelaide, Brisbane, Melbourne, Perth, Sydney

Assessment Overview

1. **Portfolio**

Weighting: 50%

2. **Practical Assessment**

Weighting: 50%

Assessment Grading

This is a graded unit: your overall grade will be calculated from the marks or grades for each assessment task, based on the relative weightings shown in the table above. You must obtain an overall mark for the unit of at least 50%, or an overall grade of 'pass' in order to pass the unit. If any 'pass/fail' tasks are shown in the table above they must also be completed successfully ('pass' grade). You must also meet any minimum mark requirements specified for a particular assessment task, as detailed in the 'assessment task' section (note that in some instances, the minimum mark for a task may be greater than 50%). Consult the [University's Grades and Results Policy](#) for more details of interim results and final grades.

CQUniversity Policies

All University policies are available on the [CQUniversity Policy site](#).

You may wish to view these policies:

- Grades and Results Policy
- Assessment Policy and Procedure (Higher Education Coursework)
- Review of Grade Procedure
- Student Academic Integrity Policy and Procedure
- Monitoring Academic Progress (MAP) Policy and Procedure – Domestic Students
- Monitoring Academic Progress (MAP) Policy and Procedure – International Students
- Student Refund and Credit Balance Policy and Procedure
- Student Feedback – Compliments and Complaints Policy and Procedure
- Information and Communications Technology Acceptable Use Policy and Procedure

This list is not an exhaustive list of all University policies. The full list of University policies are available on the [CQUniversity Policy site](#).

Previous Student Feedback

Feedback, Recommendations and Responses

Every unit is reviewed for enhancement each year. At the most recent review, the following staff and student feedback items were identified and recommendations were made.

Feedback from Student survey

Feedback

Residential School is intensive.

Recommendation

Prepare students for intensive delivery of Residential School

Feedback from Student survey

Feedback

Draft experiments and individualized feedback was useful

Recommendation

Continue to provide individualized fortnightly feedback to students

Feedback from Student Survey

Feedback

More theory discussions at Residential School

Recommendation

Facilitate structured food experiment theory and results sessions at Residential School

Feedback from Student Survey

Feedback

This unit goes far beyond cooking and explores the 'how and why' of food science.

Recommendation

Maintain alignment of content with broader contexts of food and teaching in secondary schools

Unit Learning Outcomes

On successful completion of this unit, you will be able to:

1. Design and perform a series of food based experiments which develop practical skills associated with cookery and recipe construction.
2. Apply appropriate problem solving procedures to plan, sequence, implement and assess food production processes used in recipe construction.
3. Recognise and apply skills, sequences and procedures using design and problem solving processes required for teaching a range of cookery skills.
4. Critically evaluate specific applications of recipes and ingredients used in the production of edible foods.
5. Apply appropriate workplace health and safety practices for cookery.

This unit aligns with the following Australian Professional Standards for Teachers (Graduate Career Stage):

Standard 2: Know the content and how to teach it

2.1 Content and teaching strategies of the teaching area

2.2 Content selection and organisation

Standard 4: Create and maintain supportive and safe learning environments

4.4 Maintain student safety

Standard 7: Engage professionally with colleagues, parents/carers and the community

7.2 Comply with legislative, administrative and organisational requirements

Textbooks and Resources

Textbooks

EDSE13001

Prescribed

Cooking as a Chemical Reaction: Culinary Science with Experiments

Second Edition (2019)

Authors: Sibel Z. Ozilgen

CRC Press

Boca Raton , Fl. , USA

ISBN: 9781138597129

Binding: Hardcover

Additional Textbook Information

Both paper and eBook versions can be purchased at the CQUni Bookshop here: <http://bookshop.cqu.edu.au> (search on the Unit code).

[View textbooks at the CQUniversity Bookshop](#)

IT Resources

You will need access to the following IT resources:

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- MS Teams

Referencing Style

All submissions for this unit must use the referencing style: [American Psychological Association 7th Edition \(APA 7th edition\)](#)

For further information, see the Assessment Tasks.

Teaching Contacts

Jay Deagon Unit Coordinator

j.deagon@cqu.edu.au

Schedule

Week 1 - 12 Jul 2021

Module/Topic	Chapter	Events and Submissions/Topic
Water	Chapter 1 - Measurements and Units (pp. 1-22) Chapter 2 - Basic Food Chemistry (pp. 23-37) Chapter 3 - Water in Culinary Transformations (pp. 39-87)	Conduct Experiment 3.4 (p.63) Orange Juice Test

Week 2 - 19 Jul 2021

Module/Topic	Chapter	Events and Submissions/Topic
Water	Chapter 3 - Water in Culinary Transformations (pp. 39-87)	Submit draft Orange Juice Test Lab Report

Week 3 - 26 Jul 2021

Module/Topic	Chapter	Events and Submissions/Topic
Fats & Oils	Chapter 6 – Fats & Oils in Culinary Transformations (pp. 213-256)	Conduct Experiment 6.4 (p. 231) Sugar Cookie
Week 4 - 02 Aug 2021		
Module/Topic	Chapter	Events and Submissions/Topic
Fats & Oils	Chapter 6 – Fats & Oils in Culinary Transformations (pp. 213-256)	Submit draft Sugar Cookie Lab Report
Week 5 - 09 Aug 2021		
Module/Topic	Chapter	Events and Submissions/Topic
Carbohydrates Pigments: Acids & Bases	Chapter 4 – Carbohydrates in Culinary Transformations (pp. 89-143)	Conduct Experiment (not from textbook - see Moodle for details) Acids & Bases
Vacation Week - 16 Aug 2021		
Module/Topic	Chapter	Events and Submissions/Topic
Week 6 - 23 Aug 2021		
Module/Topic	Chapter	Events and Submissions/Topic
Carbohydrates Pigments: Acids & Bases	Chapter 4 – Carbohydrates in Culinary Transformations (pp. 89-143)	Submit draft Acids & Bases Lab Report Commence preparation for Assessment Task 2 "Play with Your Food" Experiment and Teacher Demonstration
Week 7 - 30 Aug 2021		
Module/Topic	Chapter	Events and Submissions/Topic
Proteins	Chapter 5 – Proteins in Culinary Transformations (pp. 145-212)	Conduct Experiment 5.3 (p.163) Steak
Week 8 - 06 Sep 2021		
Module/Topic	Chapter	Events and Submissions/Topic
Proteins	Chapter 5 – Proteins in Culinary Transformations (pp. 145-212)	Optional - Conduct Experiment 5.9 (p. 191) Gels No drafts due. Finalise Assessment Task 1 for submission. Laboratory Reports & Resources Due: Week 8 Friday (10 Sept 2021) 11:45 pm AEST
Week 9 - 13 Sep 2021		
Module/Topic	Chapter	Events and Submissions/Topic
Proteins	Chapter 5 – Proteins in Culinary Transformations (pp. 145-212) Chapter 10 - Safety & Hygiene (pp. 347-376)	Email ingredients list for Assessment Task 2(A) to Unit Coordinator by 4:00PM Tuesday before Residential School
Week 10: Residential School - 20 Sep 2021		
Module/Topic	Chapter	Events and Submissions/Topic
Residential School	Textbook required to conduct experiments at Residential School Chapters 1-6 + Chapter 7 - New Food Development and Sensory Testing	Practical Cookery Skills will be assessed across all 4 days of the Residential School. Lesson Plan, Theory Statement, Workplan & Demonstration Due last day of Residential School
Week 11 - 27 Sep 2021		
Module/Topic	Chapter	Events and Submissions/Topic

Flavour Pairing
Food Additives

Chapter 8 - The Science of Flavour and
Flavour Pairing
Chapter 9 - Food Additives in Culinary
Transformations

Review demonstration video for
professional reflection

Week 12 - 04 Oct 2021

Module/Topic	Chapter	Events and Submissions/Topic
Professional Reflections		

Review/Exam Week - 11 Oct 2021

Module/Topic	Chapter	Events and Submissions/Topic
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Exam Week - 18 Oct 2021

Module/Topic	Chapter	Events and Submissions/Topic
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Term Specific Information

Residential School
Week 10 Tuesday to Friday
9:00am - 4:30pm daily (all days inclusive)
CQUniversity Rockhampton City Campus
Trade Training Kitchen and Willby's Restaurant

Assessment Tasks

1 Laboratory Reports & Resources

Assessment Type

Portfolio

Task Description

Rationale

To teach food related topics, you need to know the chemical reactions and processes that occur when food is prepared, cooked and stored. A knowledgeable, successful and inspiring food educator needs to possess the vocabulary, skills and abilities to construct and deliver content in fun and challenging ways. An appropriate teaching strategy to explain complex scientific processes is to perform laboratory testing and experiments on food. This experimental approach complements the 'hands on' and practical approach that underpins learning and teaching in food contexts.

The Task: 4 Food Experiments

Conduct 4 experiments as directed, drawn from the textbook and/or Moodle unit material. Each experiment will need to be completed at your home. The experiments are:

1. Water: Orange Juice Test
2. Fats & Oils: Sugar Cookies
3. Carbohydrates: Acids & Bases: Pigments
4. Proteins: Steak
5. Proteins: Gels (optional extension experiment)

What to Submit

Complete 4 laboratory reports and accompanying resources. You are expected to use the proforma Laboratory Report and Resources sheets provided which include:

1. Experiment Objective
2. Equipment and Ingredients
3. Method
4. Results tables
5. Discussion, comparison and application of theory
6. Glossary of key terms
7. 50-100 word theoretical explanations of 3 key procedures or chemical processes for each experiment with accompanying photographs

Detailed task descriptions, weekly study schedule, criteria sheets and proformas for Laboratory Reports and Resources

are located on the Moodle site for this unit.

Weighting 50%

Assessment Due Date

Week 8 Friday (10 Sept 2021) 11:45 pm AEST

Drafts due fortnightly as indicated in schedule. All final reports uploaded via Moodle as directed

Return Date to Students

Fortnightly draft submissions provide formative feedback to students. Summative feedback provided 2 weeks after submission.

Weighting

50%

Minimum mark or grade

Pass

Assessment Criteria

- Apply accurate and appropriate use of culinary science vocabulary and key concepts
- Explore teaching and learning challenges within the culinary science environment
- Construct resources appropriate for theoretical and practical culinary science lessons

Referencing Style

- [American Psychological Association 7th Edition \(APA 7th edition\)](#)

Submission

Online

Submission Instructions

Use correct file name extensions. Compress all photographs. Submit via Moodle.

Learning Outcomes Assessed

- Design and perform a series of food based experiments which develop practical skills associated with cookery and recipe construction.
- Apply appropriate problem solving procedures to plan, sequence, implement and assess food production processes used in recipe construction.
- Recognise and apply skills, sequences and procedures using design and problem solving processes required for teaching a range of cookery skills.
- Critically evaluate specific applications of recipes and ingredients used in the production of edible foods.
- Apply appropriate workplace health and safety practices for cookery.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy
- Information Technology Competence
- Cross Cultural Competence
- Ethical practice

2 Practical Cookery, Teacher Demonstration & Resources

Assessment Type

Practical Assessment

Task Description

Rationale

Food educators not only require the skills and knowledge to demonstrate specific practical cookery skills, but also have the confidence to simultaneously deliver theory to an audience. A demonstration provides a "snap shot" of a complex task. Food experiments are a fun and interactive way to engage an audience with content; but require considerable organisation and preparation. Practical Home Economics, Food & Nutrition or Food Technology classes are set apart from many other school subjects because of their 'hands on' pedagogy. Especially relevant in busy kitchen environments, students need to understand explicitly what is required and expected. To scaffold (coach) students through new cookery knowledge and techniques, a "show and tell" demonstration usually precedes each practical cookery lesson and can take 10 minutes or a whole lesson to complete.

The Tasks

Part A:

1. Practical: Compulsory attendance at Residential School and completion of all practical cookery tasks as instructed
2. Research: theory statement that explains the scientific procedures and processes for "Play with your Food" themed experiment (500 words)
3. Prepare: Lesson plan, workplan including preparation, ingredients, costing, estimated timing, utensils, and method required to deliver demonstration
4. Present: 10 minute teacher demonstration to your peers

Part B:

5. Reflect: Professional self-reflection on practical, research, preparation and performance (500 words)
- Support for this task will be provided via weekly Zoom tutorials and detailed task descriptions, weekly study schedule, criteria sheets and exemplars are located on Moodle.

Weighting 50%

Important Note: Attendance at all 4 days of Residential School is compulsory. Non-attendance will result in a failed grade for this unit.

Assessment Due Date

Part A: WEEK 10: Compulsory Attendance (all days inclusive) at Residential School; Lesson Plan, Theory Statement, Workplan & Demonstration Due last day of Residential School. Part B: WEEK 11 Reflection due Friday

Return Date to Students

Feedback will be given during the Residential School and final results released after certification of grades

Weighting

50%

Minimum mark or grade

Pass

Assessment Criteria

- Create a challenging and engaging food science activity appropriate for school students
- Build teacher confidence and deliver a teacher demonstration to a live audience
- Simultaneously demonstrate and verbally express technical cookery skills and chemical reactions theory
- Apply complex preparation and planning procedures to deliver a cookery demonstration
- Research and apply accurate and appropriate culinary science theory
- Engage in constructive peer feedback
- Critically reflect on professional practice and performance

Referencing Style

- [American Psychological Association 7th Edition \(APA 7th edition\)](#)

Submission

Offline Online

Submission Instructions

Upload lesson plan, theory statement & workplan via Moodle and hand in hard-copy before presentation at Res School. Reflection submitted via Moodle

Learning Outcomes Assessed

- Design and perform a series of food based experiments which develop practical skills associated with cookery and recipe construction.
- Apply appropriate problem solving procedures to plan, sequence, implement and assess food production processes used in recipe construction.
- Recognise and apply skills, sequences and procedures using design and problem solving processes required for teaching a range of cookery skills.
- Critically evaluate specific applications of recipes and ingredients used in the production of edible foods.
- Apply appropriate workplace health and safety practices for cookery.

Graduate Attributes

- Communication
- Problem Solving
- Critical Thinking
- Information Literacy

- Team Work
- Information Technology Competence
- Cross Cultural Competence
- Ethical practice

Academic Integrity Statement

As a CQUniversity student you are expected to act honestly in all aspects of your academic work.

Any assessable work undertaken or submitted for review or assessment must be your own work. Assessable work is any type of work you do to meet the assessment requirements in the unit, including draft work submitted for review and feedback and final work to be assessed.

When you use the ideas, words or data of others in your assessment, you must thoroughly and clearly acknowledge the source of this information by using the correct referencing style for your unit. Using others' work without proper acknowledgement may be considered a form of intellectual dishonesty.

Participating honestly, respectfully, responsibly, and fairly in your university study ensures the CQUniversity qualification you earn will be valued as a true indication of your individual academic achievement and will continue to receive the respect and recognition it deserves.

As a student, you are responsible for reading and following CQUniversity's policies, including the [Student Academic Integrity Policy and Procedure](#). This policy sets out CQUniversity's expectations of you to act with integrity, examples of academic integrity breaches to avoid, the processes used to address alleged breaches of academic integrity, and potential penalties.

What is a breach of academic integrity?

A breach of academic integrity includes but is not limited to plagiarism, self-plagiarism, collusion, cheating, contract cheating, and academic misconduct. The Student Academic Integrity Policy and Procedure defines what these terms mean and gives examples.

Why is academic integrity important?

A breach of academic integrity may result in one or more penalties, including suspension or even expulsion from the University. It can also have negative implications for student visas and future enrolment at CQUniversity or elsewhere. Students who engage in contract cheating also risk being blackmailed by contract cheating services.

Where can I get assistance?

For academic advice and guidance, the [Academic Learning Centre \(ALC\)](#) can support you in becoming confident in completing assessments with integrity and of high standard.

What can you do to act with integrity?



Be Honest

If your assessment task is done by someone else, it would be dishonest of you to claim it as your own



Seek Help

If you are not sure about how to cite or reference in essays, reports etc, then seek help from your lecturer, the library or the Academic Learning Centre (ALC)



Produce Original Work

Originality comes from your ability to read widely, think critically, and apply your gained knowledge to address a question or problem