



EDTE4340

Science in the Secondary School II

Session 2, Fully online/virtual 2020

Macquarie School of Education

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Disclaimer

Macquarie University has taken all reasonable measures to ensure the information in this publication is accurate and up-to-date. However, the information may change or become out-dated as a result of change in University policies, procedures or rules. The University reserves the right to make changes to any information in this publication without notice. Users of this publication are advised to check the website version of this publication [or the relevant faculty or department] before acting on any information in this publication.

Notice

As part of [Phase 3 of our return to campus plan](#), most units will now run tutorials, seminars and other small group learning activities on campus for the second half-year, while keeping an online version available for those students unable to return or those who choose to continue their studies online.

To check the availability of face-to-face and online activities for your unit, please go to [timetable viewer](#). To check detailed information on unit assessments visit your unit's iLearn space or consult your unit convenor.

General Information

| |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Unit convenor and teaching staff Hye Eun Chu hye-eun.chu@mq.edu.au |
| Credit points 10 |
| Prerequisites (TEP401 or EDTE4010(S)) and (TEP433 or EDTE4330) |
| Corequisites EDTE4020 or TEP402 |
| Co-badged status |
| Unit description This unit examines curricula, resources and instructional strategies appropriate for the teaching of Biology, Chemistry, Physics, and Earth and Environmental Sciences for Senior Science in Years 11 and 12. |

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

Learning Outcomes

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

ULO1: Demonstrate knowledge and understanding of the concepts, substance, and structure of the content/strategies for Stage 6 of the science syllabuses (Biology/Earth and Environmental Science/Chemistry/Physics).

ULO2: Interpret research findings both in science and science education and relate these where appropriate to current syllabus documents and to the lives of students.

ULO3: Plan lesson sequences using knowledge of student learning, content and effective teaching strategies

ULO4: Demonstrate critical thinking about the potential of information and communication technologies (ICT) to enhance the quality of learning and teaching to engage students with science.

ULO5: Demonstrate understanding of assessment strategies, including formal and

informal, diagnostic, formative and summative approaches to assess student learning progress.

ULO6: Develop oral communication skills, listening skills, and teamwork skills.

General Assessment Information

Assessment Presentation and Submission Guidelines

Please follow these guidelines when you submit each assignment:

- Allow a left and right-hand margin of at least 2cm in all assignments.
- Please type all assignments using 12-point font and 1.5 spacing.
- All assessments must be submitted through Turnitin in .doc or .pdf format
- It is the responsibility of the student to ensure that all assessments are successfully submitted through Turnitin.
- Faculty assignment cover sheets are NOT required.

Draft Submissions & Turnitin Originality Reports

- Students may use Turnitin's Originality Report as a learning tool to improve their academic writing if this option is made available in the unit.
- Students are strongly encouraged to upload a draft copy of each assessment to Turnitin at least one week prior to the due date to obtain an Originality Report.
- The Originality Report provides students with a similarity index that may indicate if plagiarism has occurred. Students will be able to make amendments to their drafts prior to their final submission on the due date.
- Generally, one Originality Report is generated every 24 hours up to the due date.

Please note:

- Students should regularly save a copy of all assignments before submission.
- Students are responsible for checking that their submission has been successful and has been submitted by the due date and time.

Assignment extensions

- In general, there should be no need for extensions except through illness or misadventure that would be categorised as serious and unavoidable disruption according to the University definition of same, see: <https://students.mq.edu.au/study/my-study-program/special-consideration>

Applications for extensions must be made via AskMQ according to the Special Consideration policy. Extensions can only be granted if they meet the Special Considerations policy and are submitted via <https://ask.mq.edu.au/>. This will ensure consistency in the consideration of such

requests is maintained.

Late Assessment Penalty

- Unless a Special Consideration request has been submitted and approved, (a) a penalty for lateness will apply – two (2) marks out of 100 will be deducted per day for assignments submitted after the due date – and (b) no assignment will be accepted more than seven (7) days (incl. weekends) after the original submission deadline. No late submissions will be accepted for timed assessments – e.g. quizzes, online tests.
- Students should keep an electronic file of all assessments. Claims regarding "lost" assessments cannot be made if the file cannot be produced. It is also advisable to keep an electronic file of all drafts and the final submission on a USB untouched/unopened after submission. This can be used to demonstrate easily that the assessment has not been amended after the submission date.

Requesting a re-assessment of an assignment

If you have **evidence** that your task has been incorrectly assessed against the grade descriptors you can request a re-mark. To request a re-mark you need to contact the unit convenor within **7 days** of the date of return of the assignment and provide **a detailed assessment of your script against the task criteria**. Evidence from your assignment must be provided to support your judgements.

Note: Failed assessments cannot be re-marked as they are all double-marked as a part of the moderation process.

University policy on grading

Criteria for awarding grades for assessment tasks

Assignments will be awarded grades ranging from HD to F according to guidelines set out in the University's Grading Policy. The following descriptive criteria are included for your information.

Please note: The outcome of a re-mark may be a **higher/lower or unchanged grade**. Grades are *standards referenced* and effort is NOT a criterion.

Descriptive Criteria for awarding grades in the unit

In order to meet the unit outcomes and successfully pass this unit, students must make a genuine attempt at all assessment tasks. Where any submitted assessment task is considered to be unsatisfactory in this regard, the highest possible final grade that can be awarded for the unit will be 45.

Students will be awarded grades ranging from HD to F according to guidelines set out in the policy: <https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policies/assessment-in-effect-from-session-2-2016>

Withdrawing from this UG Unit

If you are considering withdrawing from this unit, please seek academic advice via <https://ask.m>

q.edu.au before doing so as this unit may be a co-requisite or prerequisite for units in the following sessions and may impact on your progression through the degree.

Results

Results shown in iLearn, or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit [ask.mq.edu.au](#).

Assessment Tasks

| Name | Weighting | Hurdle | Due |
|---------------------------------------------------------|-----------|--------|------------|
| Lesson Plan | 50% | No | 7/Sep/2020 |
| Design a test (Teaching and Assessment) | 50% | No | 08/11/2020 |

Lesson Plan

Assessment Type ¹: Lesson plan

Indicative Time on Task ²: 30 hours

Due: **7/Sep/2020**

Weighting: **50%**

The aim of this assignment is for students to consider media reports of recent breakthroughs in scientific research and their place within the Stage 6 syllabus. This assignment is an opportunity for students to develop the skill of interpreting research findings in science to relate them to people's lives (max 1500 words, 20% for 1st teaching science subject and 20% for 2nd teaching science subject)

On successful completion you will be able to:

- Demonstrate knowledge and understanding of the concepts, substance, and structure of the content/strategies for Stage 6 of the science syllabuses (Biology/Earth and Environmental Science/Chemistry/Physics).
- Interpret research findings both in science and science education and relate these where appropriate to current syllabus documents and to the lives of students.
- Demonstrate understanding of assessment strategies, including formal and informal, diagnostic, formative and summative approaches to assess student learning progress.

Design a test (Teaching and Assessment)

Assessment Type ¹: Design Task

Indicative Time on Task ²: 45 hours

Due: **08/11/2020**

Weighting: **50%**

This assignment has two components – Part (i) Design science activities and test items (40%) and Part (ii) presentation (10%). Students must complete both components satisfactorily. The purpose of this assignment is for students to become familiar with the Stage 6 (Years 12) Science Syllabus and assessment (Bio/Chem/EES/Phy) [no more than 20 pages (11-point letter size and single line space)]

On successful completion you will be able to:

- Demonstrate knowledge and understanding of the concepts, substance, and structure of the content/strategies for Stage 6 of the science syllabuses (Biology/Earth and Environmental Science/Chemistry/Physics).
- Plan lesson sequences using knowledge of student learning, content and effective teaching strategies
- Demonstrate critical thinking about the potential of information and communication technologies (ICT) to enhance the quality of learning and teaching to engage students with science.
- Demonstrate understanding of assessment strategies, including formal and informal, diagnostic, formative and summative approaches to assess student learning progress.
- Develop oral communication skills, listening skills, and teamwork skills.

¹ If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the [Writing Centre](#) for academic skills support.

² Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

Delivery and Resources

This unit has a full web presence through iLearn.

There are regular Zoom sessions for EDTE4340. Please refer to the unit iLearn page for details.

Students will need regular access to a computer and the Internet to complete this unit.

Weekly access to iLearn is compulsory for all students. Important assessment information will be posted here, as will other relevant unit notices and materials, including a reading template and guide to lecture note taking to assist your studies.

Various activities and materials for discussion and critical reflection are included. Please check the iLearn unit regularly.

Access and technical assistance

Information for students about access to the online component of this unit is available at ilearn.mq.edu.au/login/MQ/. You will need to enter your student username and password.

Please do NOT contact the Unit Convenor regarding iLearn technical help.

No extensions will be given for any technical issues. Allow enough time for your submissions.

Assistance is available from IT Helpdesk ph: 1800 67 4357, or log a request at help.mq.edu.au. OneHelp is the online IT support service for both students and staff.

This unit requires students to use several ICT and software skills:

- Internet access: The iLearn site contains materials for this unit; it is also required for the online submission of all Assessment Tasks, and for the use of Turnitin submission for ALL tasks.
- Word processing, visual representations, and document formatting: You are required to use an appropriate form of software to present your assignments.
- Uploading of assessment tasks to iLearn.

Structure

Students must take a major option (subject studied to third year at university) and a minor option (subject studied to at least first year and preferably to second year at university).

All workshops focus on strategies for teaching these subjects at the senior level and assume a level of content knowledge covered by the respective syllabus documents. Each subject area will incorporate relevant aspects of the Stage 6 General Science Syllabus. If your content knowledge of chemistry or physics is inadequate and you wish to attend these workshops, then it is advisable to complete first year units in chemistry or physics or to revise the relevant areas prior to the workshops each week.

The unit comprises a series of online tutorials. In the tutorial students will discuss issues and questions arising from the lectures and prescribed readings. They are expected to base their arguments/discussions on evidence from published research and other relevant material. Attendance at all tutorials is expected. There will be a supporting website for the unit providing additional readings, links and materials.

Students are required to participate in small group activities, whole class discussion, to read the weekly material in advance, and to complete brief tasks either as individuals or in pairs. The weekly program for the course with the accompanying readings/ preparation is available on the following pages or on the unit iLearn site.

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central>). Students should be aware of the following policies in particular with regard to Learning and

Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)
- [Academic Progression Policy](#)
- [Assessment Policy](#)
- [Fitness to Practice Procedure](#)
- [Grade Appeal Policy](#)
- [Complaint Management Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#) (**Note:** *The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.*)

Students seeking more policy resources can visit the [Student Policy Gateway](https://students.mq.edu.au/support/study/student-policy-gateway) (<https://students.mq.edu.au/support/study/student-policy-gateway>). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit [Policy Central](http://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<http://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central>).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/study/getting-started/student-conduct>

Results

Results published on platform other than [eStudent](#), (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit ask.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to help you improve your marks and take control of your study.

- [Getting help with your assignment](#)
- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module](#)

The Library provides online and face to face support to help you find and use relevant information resources.

- [Subject and Research Guides](#)
- [Ask a Librarian](#)

Student Services and Support

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

Student Enquiries

For all student enquiries, visit Student Connect at ask.mq.edu.au

If you are a Global MBA student contact globalmba.support@mq.edu.au

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](#). The policy applies to all who connect to the MQ network including students.

Changes since First Published

| Date | Description |
|------------|-----------------------------------------------------------|
| 27/08/2020 | Assignment 2 due date was changed from week 9 to week 13. |
| 08/08/2020 | A1 date was changed from 31 Aug2020 to 7 Sep2020 |