



TEP 434

Science in the Secondary School II

S2 Day 2014

Education

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General Information

Unit convenor and teaching staff

Unit Convener

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Credit points

3

Prerequisites

TEP433(P) and (TEP401(S) or TEP414(S))

Corequisites

TEP402

Co-badged status

Unit description

This unit builds on TEP433. Curricula, resources and instructional strategies appropriate for the teaching of biology, chemistry, physics, and earth and environmental sciences for senior science years 11 and 12 are examined. It is linked to the school experience gained in TEP402.

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:

Having successfully completed TEP434 students will be able to demonstrate: UO1 a knowledge of the changing policy context of secondary schooling in NSW (Board of Studies, NSWDET) and Australia (ACARA) with specific reference to science; UO2 the ability to plan and present lesson sequences based on research data collected during the professional experience (TEP 402); UO3 a developing knowledge of both formal and informal assessment procedures in current use in the NSW Stage 6 science syllabus documents; UO4 the ability to critique (or reflect on) one's own professional practice with

due regard to the input provided by experienced science teacher(s) (TEP402); UO5 a working knowledge of the relevant syllabus science documents from both the Board of Studies (NSW) and National Curriculum (ACARA) with specific reference to the final years of secondary schooling; UO6 the ability to interpret research findings both in science and science education and relate these where appropriate to current syllabus documents and to the lives of adolescent students; UO7 to think critically about the potential of information and communication technologies (ICT) to enhance the quality of learning and teaching to engage adolescent students with science; UO8 a developing understanding of key elements of pedagogy including: the strategies needed to cater for the diversity of learners (including specific equity groups), actively engaging adolescent students in learning, classroom management, beginning and ending lessons, integrating a focus on literacy, developing and selecting resources, questioning, and assessment and evaluation.

Assessment Tasks

Name	Weighting	Due
<u>Animations/simulations for Sta</u>	10%	4 September
<u>Current issues/science researc</u>	50%	9 October
<u>Teaching HSC Options</u>	40%	6 November

Animations/simulations for Sta

Due: **4 September**

Weighting: **10%**

See Unit Guide for details

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Current issues/science research

Due: **9 October**

Weighting: **50%**

See Unit Guide for Details

On successful completion you will be able to:

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students in learning, classroom management, beginning and ending lessons, integrating a focus on literacy, developing and selecting resources, questioning, and assessment and evaluation.

Teaching HSC Options

Due: **6 November**

Weighting: **40%**

See Unit Guide for further details

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Delivery and Resources

Students attend two tutorials according to their specialisations for senior science (e.g. Biology and Chemistry). Each tutorial runs for 2 hours and is held in 317, E7B.

Unit Schedule

See Unit Guide

Learning and Teaching Activities

Tutorial format

Overview of Syllabus topic, practical activities relevant to the Syllabus topic

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central](#). Students should be aware of the following policies in particular with regard to Learning and Teaching:

Academic Honesty Policy http://mq.edu.au/policy/docs/academic_honesty/policy.html

Assessment Policy <http://mq.edu.au/policy/docs/assessment/policy.html>

Grading Policy <http://mq.edu.au/policy/docs/grading/policy.html>

Grade Appeal Policy <http://mq.edu.au/policy/docs/gradeappeal/policy.html>

Grievance Management Policy http://mq.edu.au/policy/docs/grievance_management/policy.html

Disruption to Studies Policy http://www.mq.edu.au/policy/docs/disruption_studies/policy.html *The Disruption to Studies Policy is effective from March 3 2014 and replaces the Special Consideration Policy.*

In addition, a number of other policies can be found in the [Learning and Teaching Category](#) of 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/support/student_conduct/

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 improve your marks and take control of your study.

- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module for Students](#)
- [Ask a Learning Adviser](#)

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

IT Help

For help with University computer systems and technology, visit <http://informatics.mq.edu.au/help/>.

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

Graduate Capabilities

Capable of Professional and Personal Judgement and Initiative

We want our graduates to have emotional intelligence and sound interpersonal skills and to demonstrate discernment and common sense in their professional and personal judgement. They will exercise initiative as needed. They will be capable of risk assessment, and be able to handle ambiguity and complexity, enabling them to be adaptable in diverse and changing environments.

This graduate capability is supported by:

Learning outcome

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Assessment tasks

- Animations/simulations for Sta
- Current issues/science research
- Teaching HSC Options

Commitment to Continuous Learning

Our graduates will have enquiring minds and a literate curiosity which will lead them to pursue knowledge for its own sake. They will continue to pursue learning in their careers and as they participate in the world. They will be capable of reflecting on their experiences and relationships with others and the environment, learning from them, and growing - personally, professionally and socially.

This graduate capability is supported by:

Assessment task

- Current issues/science research

Discipline Specific Knowledge and Skills

Our graduates will take with them the intellectual development, depth and breadth of knowledge, scholarly understanding, and specific subject content in their chosen fields to make them competent and confident in their subject or profession. They will be able to demonstrate, where relevant, professional technical competence and meet professional standards. They will be able to articulate the structure of knowledge of their discipline, be able to adapt discipline-specific knowledge to novel situations, and be able to contribute from their discipline to inter-disciplinary solutions to problems.

This graduate capability is supported by:

Learning outcome

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Assessment tasks

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Critical, Analytical and Integrative Thinking

We want our graduates to be capable of reasoning, questioning and analysing, and to integrate and synthesise learning and knowledge from a range of sources and environments; to be able to critique constraints, assumptions and limitations; to be able to think independently and systemically in relation to scholarly activity, in the workplace, and in the world. We want them to have a level of scientific and information technology literacy.

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Assessment tasks

- Animations/simulations for Sta
- Current issues/science research
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Creative and Innovative

Our graduates will also be capable of creative thinking and of creating knowledge. They will be imaginative and open to experience and capable of innovation at work and in the community. We want them to be engaged in applying their critical, creative thinking.

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Assessment task

- Teaching HSC Options

Effective Communication

We want to develop in our students the ability to communicate and convey their views in forms effective with different audiences. We want our graduates to take with them the capability to read, listen, question, gather and evaluate information resources in a variety of formats, assess, write clearly, speak effectively, and to use visual communication and communication technologies as appropriate.

This graduate capability is supported by:

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a focus on literacy, developing and selecting resources, questioning, and assessment and evaluation.

Assessment tasks

- Current issues/science research
- Teaching HSC Options