



TEP 434

Science in the Secondary School II

D2 2012

Education

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General Information

Unit convenor and teaching staff

Unit Convenor

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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 the study TEP433 Science in the Secondary School I. 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 Professional Experience in Secondary School II.

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:

1. Acknowledge of the changing policy context of secondary schooling in NSW (Board of Studies, NSWDET) and Australia (ACARA) with specific reference to science
2. The ability to plan and present sequential lessons based on research data collected during the professional experience (TEP 401)
3. A developing knowledge of both formal and informal assessment procedures in current use in the NSW Stage 6 science syllabus documents
4. The ability to critique (or reflect on) one's own professional practice with due regard to the input provided by experienced science teacher(s)

5. 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
6. 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
7. 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
8. 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>Assessment 1</u>	10%	13 August 2012
<u>Assessment 2</u>	25%	10 September, 2012
<u>Assessment 3</u>	25%	10 September, 2012
<u>Assessment 4</u>	40%	29 October, 2012

Assessment 1

Due: **13 August 2012**

Weighting: **10%**

To develop science concepts using computer animations/simulation

On successful completion you will be able to:

- 5. 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
- 7. 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

- 8. 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 2

Due: **10 September, 2012**

Weighting: **25%**

The purpose of the assignment is to link media report of recent scientific breakthroughs to their place in the senior syllabus

On successful completion you will be able to:

- 1. Acknowledge of the changing policy context of secondary schooling in NSW (Board of Studies, NSWDET) and Australia (ACARA) with specific reference to science
- 5. 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
- 6. 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
- 8. 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 3

Due: **10 September, 2012**

Weighting: **25%**

On successful completion you will be able to:

- 1. Acknowledge of the changing policy context of secondary schooling in NSW (Board of Studies, NSWDET) and Australia (ACARA) with specific reference to science
- 5. 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

- 6. 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
- 8. 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 4

Due: **29 October, 2012**

Weighting: **40%**

The purpose of the assignment is to become familiar with the Options of senior syllabus document in science.

On successful completion you will be able to:

- 2. The ability to plan and present sequential lessons based on research data collected during the professional experience (TEP 401)
- 3. A developing knowledge of both formal and informal assessment procedures in current use in the NSW Stage 6 science syllabus documents
- 4. The ability to critique (or reflect on) one's own professional practice with due regard to the input provided by experienced science teacher(s)
- 5. 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
- 6. 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
- 7. 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
- 8. 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

Delivery and Resources

ABOUT THIS UNIT

This unit builds on the units TEP433, 401 and 395. Curricula, resources and instructional strategies appropriate for the teaching of Biology, Chemistry, Physics and Earth and Environmental Sciences for Senior Science Years 11-12 are examined. TEP 434 is linked to professional experience gained in TEP 401/402. Students complete methodology studies in **two** of the four listed science specialist areas listed below but may attend all areas if they choose.

The timetable for TEP434 workshops in 2012

Monday: Biology, 10.00am - 12.00pm / Chemistry, 5.00 - 7.00pm

Tuesday: Physics, 5.00 - 7.00pm

Wednesday: Chemistry 5.00 - 7.00pm

Thursday: Earth & Environmental Science, 10.00 –12.00pm /Biology, 5.00 - 7.00pm

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 syllabuses. 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.

Please note:

Syllabus documents for each semester along with relevant support documents are available from the Board of Studies.

Internet: http://www.boardofstudies.nsw.edu.au/syllabus_sc/index.html

All workshop notes will be available on iLearn

Technology Used and Required

Technology requirements:

Students enrolled in TEP434 will need regular access to a computer and the internet. There are laptops available for student use in the Science Education Lab (E7B317). There are a number of

university computers in C5C (Rooms 211, 213 and 217) as well as in the dedicated teaching spaces for students studying Education (the TEL Labs C5A201, 204 and 210). Computers in Room C5A210 can be accessed at specified times.

The web page for this unit can be found at <https://ilearn.mq.edu.au/login/MQ/>

Students will need to use their own student username and password to log in and then choose TEP434 from the menu at iLearn:My home.

TEP Science Laboratory E7B317 – location of all classes

The Science Curriculum Laboratory is available for TEP434 student use. At times the laboratory is closed so that workshops can be prepared. Students are asked not to disturb the laboratory staff at these times. There will be some variation in opening times during the semester - students are asked to double check on these times. Please phone/email Ms Zaitoun to check the availability of the laboratory ahead of time.

In the interests of safety and security, students are asked to inform the laboratory assistant when entering and leaving the area. You are required to wear appropriate shoes and safety glasses at all times when conducting experimental work. Doors **must** be left **locked**. *Note:* Children are **NOT** permitted in the Laboratory **OR** in the Preparation Room.

Library Information - <http://www.lib.mq.edu.au>

The Macquarie University Library has a large and diverse selection of resources for the teaching of Science (ranging from posters, books and CD ROM). It is suggested that students use this centre when looking for resources to plan lessons.

ADMINISTRATION AND RELATED MATTERS

Attendance: TEP434 is a professional, workshop-based unit of study. Students are, therefore, required to satisfy the attendance requirements specified by the Department of Education. The relevant policy states that students must attend at least 80 per cent of the scheduled class time. Where the student fails to meet this requirement they may be asked to show cause why they should not be excluded from, or fail the unit. Where a student thinks their attendance may fall below the 80 per cent requirement they should be prepared to substantiate their reasons by supplying the relevant documentation (for example, doctors' certificates). Students should also consider lodging a 'special consideration' application through the University's 'Student Office'.

PROFESSIONAL ATTRIBUTES

TEP434, in conjunction with your other EDUC and professional units, contributes to the development of the following professional attributes:

- a commitment to the belief that every child – irrespective of the socio-economic status, ethnicity or cultural background – has the right to realise their full academic and social potential.

- an appreciation that secondary schools are complex social and administrative systems with distinctive school cultures that influence the nature of the learning environment.
- a knowledge of the dimensions/elements of effective teaching.
- an appreciation of the need to cater for the diversity of learners (including those from non-English speaking backgrounds, Indigenous students, students with special needs and those with challenging behaviours).
- an appreciation of the need to develop and maintain a supportive learning environment in which individual students feel secure and willing to take risks.
- a recognition of the need to master and use a variety of instructional strategies ranging from those that are teacher centred to those that more actively engage students in learning.
- a broad understanding of the nature of the secondary school curriculum, its development and implementation.
- a knowledge of specific disciplines – their nature, traditions, content, characteristic modes of enquiry and their relationship to other areas of the curriculum.
- a working knowledge of the relevant syllabus and policy documents and a demonstrated capacity to develop and evaluate a sequence of outcome-based lessons.
- an awareness of the issues involved in the selection, development and use of educational resources.
- a recognition that all teachers have a role in developing the literacy and numeracy skills of students.
- a developing awareness of the educational applications of information and communication technologies and their pedagogical implications.
- an ability to employ a range of strategies to successfully manage student behaviour.
- the capacity to communicate effectively in classrooms with an explicit focus on questioning skills.
- an appreciation of the importance of teamwork in the educational context.
- a knowledge of contemporary assessment and reporting procedures.
- the ability and willingness to reflect on the origins, purpose and consequences of their actions, as well as on the material and ideological constraints and encouragements embedded in the classroom, school and social contexts in which they work.
- a commitment to continuing professional development through the ability to analyse and evaluate their own teaching or the teaching of others in a co-operative, collegiate manner.

TEACHING AND LEARNING STRATEGIES

TEP434 has two main components:

Mini-lectures that focus on specific issues related to science learning and teaching in final years of secondary schooling, how students re-conceptualise science concepts at Stage 6, programming and assessment and the incorporation of science research into practice.

Lab and ICT based activities that integrate the mini-lectures with practical/ICT opportunities available to senior high school students. Students will be trialling and responding the suitability of suggested activities in each workshop.

All workshops will be held in E7B 317 unless advised otherwise. Details for each workshop are listed in Section 7.

Relationship with TEP 433: Science in the Secondary School 1

TEP 434 focuses on the teaching of specialist science for the final two years of secondary school and further develops some of the themes from TEP 433. Two specialist science workshops must be done from the following group to fulfil the requirements of TEP 434: Biology, Chemistry, Earth & Environmental Science and Physics. The choice is dependent upon previous academic science studies.

Relationship with TEP 402: Professional Experience in Secondary School 1

The work done in TEP 434 complements and supports your work in school with your Master Teacher. Master Teachers provide professional advice and report to the Department of Education about your developing expertise as a science teacher. University supervising lecturers will visit you at school once per semester, observe you in the classroom, consult with your MT and speak with you both during the visit.

Professional experience is an essential component of the Diploma of Education (Science). Close links with TEP 402: Professional Experience in Secondary School will be established and maintained by:

- visits to the student's school by the unit's supervising lecturers;
- relating workshop topics to the student's present school situation;
- providing guidance in workshops on the planning and implementation of lesson plans for students to teach in the school;
- inviting visiting lecturers with expertise in related Science Education areas to address areas of specific interest;
- acquainting Master Teachers with the philosophy, content and teaching methods of TEP 434 Science in the Secondary School II.

Visits to schools will begin in August with one initial visit in Semester 2. You will be informed as to who will be coming. The best time of the day is in the morning up until lunchtime. Ideally, two contrasting lessons need to be prepared for assessment. Where possible lessons should follow each other or be separated by recess. Please ensure that you have addressed each of the following.

- Notify your Master Teacher and Supervising Lecturer if you anticipate completion of your 60 days Professional Experience by the last day of Term 3.
- Notify your Master Teacher and Head Teacher Science of the visit – some schools require that the Principal be informed.
- Inform the staff at the front office of the school of the visit and be there at the arranged time.
University staff should not be left waiting.
- Provide the visiting lecturer with a photocopy of your lesson plans for the day including completed student worksheets, lesson notes etc. These should be typed.
- Your record of lesson plans including Master Teacher comments and suggestions will be made available for the visiting lecturer to view. Lesson plans should be of high quality in preparation, planning and implementation. They should be such that you can take them along to an interview as evidence of your professional development.
- Arrange a time for feedback after the lessons with both your Master Teacher and the visiting lecturer.

Satisfactory completion of TEP 402

Satisfactory progress means that a student is showing progress that suggests they will develop the attributes of a Graduate Teacher by the end of the year. Master Teachers will be asked to provide a report on student progress towards the end of TEP402. If progress is not satisfactory students may be requested to withdraw from all Semester 2 methodology and the professional experience unit.

Some students experience initial difficulties in schools. It is vital that they realise that many others have progressed to a fully competent teacher from a slow start. All students have ready access to curriculum lecturers through office visits, telephone calls and email. These are in addition to the normal weekly curriculum workshops. Students are strongly urged to seek support from both their master teacher and curriculum lecturer. They are also advised to reflect carefully upon observations, unit reference lists, materials in the Curriculum Resources Centre and draw upon the experiences of their TEP colleagues.

Academic staff work closely with master teachers in monitoring student progress. Where progress is delayed for any reason the master teacher informs the university of his/her concerns. Depending on the circumstances the student may be deemed to be 'at risk'. If this occurs the

student will be notified in writing.

‘At risk’ students may be provided with a remedial program. Such a program might include:

- Additional supervisory visits by academic staff
- More detailed oral and written feedback from master teachers and academic staff
- The identification of specific areas needing improvement
- Additional days of school experience
- Referral to university-based support services

If reasonable progress has not been observed, the Department of Education reserves the right to place the student at a different school. In cases where inadequate progress is reported in two placements, the student will be deemed to have failed the Professional Experience unit.

Where students have concerns about the level of support provided by their master teacher they must discuss the issue with the curriculum lecturer as soon as possible.

Students cannot make a unilateral decision to cease attending the school in which they are placed. Such a move will result in failure of the Professional Experience unit.

Students may ask to be moved to another school, but the final decision is made by the Director of the Teacher Education Program or his/her nominee. Students must not assume that their requests will be granted.

If a student fails a practicum unit twice she/he will be excluded from all Teacher Education programs offered by the Bachelor Degree Rule 14(2).

The determination of successful completion of a Professional Experience unit is the responsibility of the Department of Education staff (academic supervisor) in consultation with the relevant master teacher.

It is important that students familiarise themselves with the information contained in the TEP Professional Experience Guide.

ASSESSMENT TASKS

Assessment is continuous throughout the unit. All assignments must receive a passing grade in order to pass the unit overall. Assignment details for all four options are found in Section 7.

To pass TEP434 students must complete all forms of assessment satisfactorily and meet the 80% attendance requirement. Attendance and participation in all workshops is mandatory and includes not only informed contribution to discussion but also positive involvement in all aspects of TEP 434. Late arrival to workshops is a disruption for lecturers and students already in the workshop. It is requested that all students arrive on time (5 minutes past the hour). In the event of sickness or misadventure, please notify the lecturer concerned prior to the scheduled time for the class and

confirm in writing with a medical certificate if appropriate.

The purpose of these assignments is for you to begin to develop an understanding of science learning and teaching at the HSC level in both the Preliminary and HSC years across at least two syllabus areas. It is hoped that these assignments will be of assistance to you in terms of becoming better acquainted with the complex task of teaching and learning science from the perspective of both teachers and adolescents. In addition, the assignments are designed in such a way as for you to question your own preconceptions about teaching and learning and to develop, articulate and rationally defend your thinking about science teaching. To achieve these purposes all assignments must be informed by relevant research and professional knowledge and be grounded in analysis of your own teaching practice at HSC Stage 6.

Graded unit components:

Each option has *three* assessment components – Part A (10%), Part B (2 x 25%) and Part C (40%). Students complete Part A in one option; two 25% Part B assignments: one in the same option as Part A and the other in an option of your own choice; and 40% Part C in one option. For example, students might complete Parts A, B and C (75%) in the Chemistry option and only Part B (25%) in the Biology option **or** students might complete Parts A, B and C (75%) in the Physics option and Part B (25%) in the Chemistry option.

All assignment must word-processed and designed in such a way as to benefit your own understanding of the science teaching process. They should be intelligent, reflect your current thinking as well as referenced using the APA (American Psychological Association) style. Part A has a limit of 800 words and should take 6 hours to complete. Each assignment for Part B has a limit of 1500 words and should take 12 hours each to complete. Part C has no word limit (given the nature of the tasks) and should take 16 hours to complete.

To ensure security, assignments should be submitted through the 400-Level Assignment Box on Level 8 of C3A. This box is cleared daily and assignments date stamped. When marked, assignments will be returned through the Department of Education Office (C3A 828). Assignments must **NOT** be placed in plastic sleeves or display folders. Under no circumstances will assignments be accepted via FAX or email attachment.

Applications for extensions must be made in writing BEFORE the submission date. The appropriate form is available from the Department of Education Office. Extensions can only be granted by the Unit Convenor – Dr Kathy Stewart. This will ensure consistency in the consideration of such requests is maintained.

Unless an extension is granted, late submissions will be penalised 5 per cent of the total possible mark for the assignment for each day late.

Students must keep a photocopy or electronic copy of assignments. In all but exceptional circumstances, claims about 'lost' assignments cannot be made where these copies cannot be produced.

Information related to special consideration can be found at <http://www.mq.edu.au/policy/docs/spec>

[ial_consideration/policy.html](http://www.reg.mq.edu.au/academic-index.html). The relevant application form can be found at <http://www.reg.mq.edu.au/academic-index.html>

THE CURRICULUM RESOURCE CENTRE

The Curriculum Resource Centre in the Macquarie Library contains school level curriculum materials for the support of the University's Teacher Education Programs.

The Centre contains: curriculum documents, textbooks, curriculum projects children's literature, kits, games, audio-tapes, school magazines, posters, charts, pamphlets, publishers' catalogues and reference books.

All items in the collection are able to be borrowed on a two week basis. Students are encouraged to use the Centre to the fullest in order to enrich their teaching with the most appropriate supporting resource materials.

The University Library also provides a range of learning opportunities aimed at developing student capabilities in research and information technology. Topics covered include:

- computer kick start;
- getting started – finding library materials;
- project on-line training;
- researching a topic; and
- searching the catalogue.

You can choose to learn online or at face-to-face sessions in the Library.

More information is available at: www.lib.mq.edu.au – Follow the links to Training. Phone 9850 7399.

THE MACQUARIE GATEWAY TO ACADEMIC LITERACY

The Macquarie Gateway to Academic Literacy is an interactive online course designed to help students improve their literacy and skills in writing. It can be accessed at: <http://writinggateway.mq.edu.au>

Part 1: Getting started: Writing at university

What makes writing 'academic', what tutors expect from assignments, dealing with time management and writing anxiety, and handy tips from students on assignment writing.

Part 2: Writing tutorials

Step by step tutorials in writing your paper from analysing the question to editing and proofreading. The tutorials include activity tasks for practice in each area, and a useful print out summary of the main points of each tutorial.

Part 3: Sample essays and report in different disciplines

Sample essays and reports with marker feedback and tutor comments on what tutors expect in assignment writing in your division, and how this can be achieved.

In addition to Macquarie Gateway, the University provides online and on-campus courses and counselling to help students improve their literacy skills details of which are available on the gateway site.

Macquarie Library information skills

InfoSkills gateway or to a specific module <http://infoskills.mq.edu.au/>

Unit Schedule

	BIOLOGY	EARTH/ ENVIRONMENTAL	CHEMISTRY	PHYSICS
WEEK 1	Introduction	Introduction -Overview of Syllabus & assignments	Focus Where do atoms come from? Combustion	Introduction and Stage 6 Physics Syllabus Overview
WEEK 2	Preliminary 8.2 A Local Ecosystem	Preliminary 8.2: Planet Earth and its Environment	Focus Separating substances	Unit 8.5: The Cosmic Engine
WEEK 3	Fieldwork in Secondary Biology	Preliminary:8.3: The Local Environment	Focus: Putting atoms together – Bonding and Structure	Unit 8.3: Electrical Energy in the Home
WEEK 4	Preliminary 8.3: Patterns in Nature	Preliminary 8.4: Water Issues	Focus Organising atoms - The Periodic Table	Unit 8.4: Moving About
WEEK 5	Preliminary 8.4: Life on Earth	Preliminary 8.5: Dynamic Earth	Focus Counting atoms - The Mole Concept I	Unit 8.2: The World Communicates
WEEK 6	Preliminary 8.5: Evolution of Australian Biota	Assessment tasks for Preliminary HSC	Focus Counting atoms - The Mole Concept II	Unit 9.2: Space
WEEK 7	Assessment tasks – Practical test for the Preliminary Year	HSC 9.2: Tectonic Impacts	Focus Rates of Reactions	Unit 9.3: Motors and Generators
MID SEMESTER BREAK				
WEEK 8	Public Holiday – no classes for Biology and Chemistry	HSC 9.3: Environments Through Time	Public Holiday	Unit 9.4: Ideas to Implementation
WEEK 9	HSC 9.2: Maintaining a Balance + HSC questions	HSC 9.4: Caring for the Country	Focus Renewable fuels	Outcomes, Verbs, Scaffolds, Skills and Assessment Tasks in Stage 6 Physics.
WEEK 10	HSC 9.3: Blueprint of Life + HSC questions	Assessment tasks for the HSC year	Focus Batteries	The BOS Standards Package and Website

WEEK 11	HSC 9.4: The Search For Better Health + HSC questions	HSC Examination Questions – past and present	Focus Acids	HSC Exams 1
WEEK 12	Using ICT for Biology	HSC Option – Introduction Species	Focus Atomic Absorption Spectroscopy	HSC Exams 2
WEEK 13	Student Presentations of HSC Options	Student Presentations of HSC Options	Student Presentations of HSC Options	Student Presentations of HSC Options

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://www.mq.edu.au/policy/docs/academic_honesty/policy.html

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

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

Special Consideration Policy http://www.mq.edu.au/policy/docs/special_consideration/policy.html

In addition, a number of other policies can be found in the [Learning and Teaching Category](#) of Policy Central.

Macquarie University has a range of policies that relate to learning and teaching, including assessment, unit guide and special consideration. They can be found at Policy Central (<http://www.mq.edu.au/policy/>).

GENERAL INFORMATION ABOUT ASSESSMENT

Basic Requirements

- A satisfactory level of English is expected for ALL assessment tasks. Assessment Tasks MUST be word processed. Headings, sub-headings and clear organisation of information are encouraged. Specific criteria for assignments can be found at the end of this Unit Guide.
- Students must attempt all components of the assessments. All components of the assessment program must be completed and submitted on time in order to satisfy course requirements.
- Students may be excluded for unsatisfactory attendance (less than 80%).
- No assignment grades will be released over the telephone or email. Please do not phone School of Education Office staff for this information.
- If you have queries about your assignment grades, you should consult the assignment marker in the first instance.
- If you wish to make a formal appeal about your grade, this should be made in writing to the unit convenor within one week of the marked assignment being returned. You will need to submit a clean, unedited copy of the assignment together with the marked copy and a covering letter to the School of Education Office (C3A 829). Clearly mark the envelope for the attention of Dr Robyn

Moloney.

Submission of assignments

- Assignments can be submitted (with the appropriate cover sheet and feedback sheet) through the assigned Assignment Boxes in the Faculty Student Services Office on Level 3, C3A.
- The School of Education subscribes to the American Psychological Association (APA) referencing guidelines. You are expected to adopt these in your assignments.
- All assignments MUST be word processed.
- Assignments must NOT be placed in plastic sleeves or display folders.
- Assignments must be submitted with the cover sheets and feedback sheets.
- All assignments should represent your own work. Plagiarism is an offence and will be penalised (see below).
- Ensure that your assignment meets the requirements outlined on the front of your Assignment Cover Sheet.
- Assignments should be typed on one side of an A4 page, with a margin of at least 3cm. Use 1.5 line spacing.
- A penalty may be applied to assignments exceeding the word limit. A 'rule of thumb' is 10 % plus or minus the limit.
- Applications for extensions must be made in writing. The appropriate form is available from the School Office.
- Under no circumstances will assignments be accepted after the return of marked work.
- Lost assignments: Students should keep a photocopy of assignments. In all but exceptional circumstances, claims re 'lost' assignments cannot be made where the photocopy cannot be produced.

Return of assignments

- Assignments will be available for return after marking in the Faculty Student Office - level 3, C3A. Students will be informed, via email or announcement on iLearn when assignments will be ready for collection.

Extensions:

Ordinarily, no extension of time for submission of written work will be granted. If an extension is required for medical or other extenuating circumstances, you must submit a request in writing prior to the due date, together with a medical certificate or other similar evidence.

Extensions will be granted only in special circumstances and with documentary support by the unit convenor only.

There are ONLY two possible grounds for extension a) illness and b) misadventure (circumstances beyond the student's control, not pressure of accumulated assignments). Professional experience is not an acceptable reason for extensions.

If you wish to apply for an extension on the grounds of illness or some other cause beyond your control, you **must** complete the relevant form and forward it to the unit convenor **prior to due date**. Supporting evidence **must** be attached.

If you have been granted an extension and cannot submit by the revised date, you must apply in writing for a further extension within seven days of the revised date. If you do not do this, it will be assumed that you have withdrawn from the unit. This could result in a failure.

You cannot submit your assignment after the marked assignments have been returned. In exceptional circumstances, you may be given an alternative topic.

Late Submissions:

If you have not been granted an extension, or if you submit after your extension date, you will be penalised at a rate of 10% of the maximum mark for the assignment for each day it is late.

No assessable work will be accepted after the return of marked work on the same topic. If a student is still permitted to submit on the basis of unavoidable disruption, an alternative topic must be set.

Lost assignments:

Students should keep an electronic copy/ photocopy of assignments. In all but exceptional circumstances, claims re "lost" assignments cannot be made where an electronic copy or photocopy cannot be produced.

Resubmissions:

Where a student is awarded a 'fail' grade for a specified assessment task they may be asked to resubmit the task or submit a supplementary task. No more than one supplementary submission is permitted in any one unit.

The resubmitted task will be graded as either 'satisfactory' or 'unsatisfactory'. A 'satisfactory' grade indicates that the student has met the minimum standard expected of a student teacher at this stage of their professional development. Where a student fails to resubmit the task or the supplementary task fails to meet the minimum standard expected, the student may be deemed as

having failed the unit.

The student's final grade for the unit will be determined by the grade and mark allocated to the original submission.

Special consideration

Students who experience a disruption to their studies through ill-health or misadventure are able to apply for 'Special Consideration'. Information related to University's policy on special consideration can be found at: http://www.mq.edu.au/policy/docs/special_consideration/policy.html. The relevant application form can be found at: <http://www.reg.mq.edu.au/academic-index.html>

If you experience serious, unavoidable disruption to any aspect of your study not covered by an extension request, such as tutorial attendance, you may be eligible for special consideration. Special consideration forms must be lodged with the Student Enquiry Service in the Lincoln Building within 5 days. Those with chronic conditions should contact Campus Wellbeing.

Extension and Special Consideration Exclusions

Some circumstances routinely encountered by students are not acceptable grounds for claiming either an extension or special consideration:

- Routine demands of employment or need for financial support
- Routine demands of practical placements
- Routine family demands and/or problems (e.g. tensions with parents or spouses)
- Difficulty adjusting to university life or to the demands of academic work
- Stress or anxiety associated with any aspect of academic work
- Routine demands of sport or clubs, or social or extra-curricular activities
- Conditions existing prior to the commencement of a unit of study

PLAGIARISM & ACADEMIC HONESTY

The University defines plagiarism in its rules: "Plagiarism involves using the work of another person and presenting it as one's own." Plagiarism is a serious breach of the University's rules and carries significant penalties. Plagiarism includes, but is not limited to, any of the following acts:

- copying out part(s) of any document or audio-visual material or computer code or website content without indicating their origins
- using or extracting another person's concepts, experimental results, or conclusions
- summarising another person's work

- submitting substantially the same final version of any material as another student in an assignment where there was collaborative preparatory work
- use of others (paid or otherwise) to conceive, research or write material submitted for assessment
- submitting the same or substantially the same piece of work for two different tasks (self-plagiarism).

The policies and procedures explain what plagiarism is, how to avoid it, the procedures that will be taken in cases of suspected plagiarism, and the penalties if you are found guilty. Penalties may include a deduction of marks, failure in the unit, and/or referral to the University Discipline Committee.

Please see the University policy on Academic Honesty at http://www.mq.edu.au/policy/docs/academic_honesty/policy.htm

UNIVERSITY POLICY ON GRADING

Academic Senate has a set of guidelines on the distribution of grades across the range from fail to high distinction. Your final result will include one of these grades plus a standardised numerical grade (SNG).

On occasion your raw mark for a unit (i.e., the total of your marks for each assessment item) may not be the same as the SNG which you receive. Under the Senate guidelines, results may be scaled to ensure that there is a degree of comparability across the university, so that units with the same past performances of their students should achieve similar results.

It is important that you realise that the policy does not require that a minimum number of students are to be failed in any unit. In fact it does something like the opposite, in requiring examiners to explain their actions if more than 20% of students fail in a unit.

The process of scaling does not change the order of marks among students. A student who receives a higher raw mark than another will also receive a higher final scaled mark.

For an explanation of the policy see <http://www.mq.edu.au/policy/docs/grading/policy.html>

Please read this carefully.

Criteria for awarding grades in the unit.

Students will be awarded grades ranging from HD to F according to guidelines set out in the policy: <http://www.mq.edu.au/policy/docs/grading/policy.html>. The following generic grade descriptors provide university-wide standards for awarding final grades.

HD (High Distinction): Provides consistent evidence of deep and critical understanding in relation to the learning outcomes. There is substantial originality and insight in identifying, generating and communicating competing arguments, perspectives or problem solving approaches; critical evaluation of problems, their solutions and their implications; creativity in application as appropriate

to the discipline.

D (Distinction): Provides evidence of integration and evaluation of critical ideas, principles and theories, distinctive insight and ability in applying relevant skills and concepts in relation to learning outcomes. There is demonstration of frequent originality in defining and analysing issues or problems and providing solutions; and the use of means of communication appropriate to the discipline and the audience.

Cr (Credit): Provides evidence of learning that goes beyond replication of content knowledge or skills relevant to the learning outcomes. There is demonstration of substantial understanding of fundamental concepts in the field of study and the ability to apply these concepts in a variety of contexts; convincing argumentation with appropriate coherent justification; communication of ideas fluently and clearly in terms of the conventions of the discipline.

P (Pass): Provides sufficient evidence of the achievement of learning outcomes. There is demonstration of understanding and application of fundamental concepts of the field of study; routine argumentation with acceptable justification; communication of information and ideas adequately in terms of the conventions of the discipline. The learning attainment is considered satisfactory or adequate or competent or capable in relation to the specified outcomes

F (Fail): Does not provide evidence of attainment of learning outcomes. ?There is missing or partial or superficial or faulty understanding and application of the fundamental concepts in the field of study; missing, undeveloped, inappropriate or confusing argumentation; incomplete, confusing or lacking communication of ideas in ways that give little attention to the conventions of the discipline.

NOTE: Except where specified numerical marks will NOT be awarded for specific assessment. They will only be awarded with your final grade.

APPEALS AGAINST GRADES

University regulations allow for students to appeal a unit grade if they feel they have been disadvantaged.

Grading appeals can be lodged on the following grounds:

- The unit coordinator did not provide the outline as required;
- Assessment requirements as specified in the unit outline were varied in an unreasonable way;
- A clerical error has occurred in the computation of the grade;
- Due regard has not been paid to the evidence of illness or misadventure that was submitted by the specified date;
- I have been disadvantaged in some way due to the conduct of the final examination; and
- The examiner's judgement was not objectively applied because of prejudice against the individual.

Further information can be found on the Dean of Students website: <http://www.deanofstudents.mq.edu.au/grades.html>

Appeals must be lodged on the appropriate university form. This can be accessed at: <http://www.registrar.mq.edu.au/academic-index.htm>

A Grade Review or Grade Appeal may result in:

- no change to the awarded Standardised Numerical Grade, or
- a reduced Standardised Numerical Grade, or
- an increased Standardised Numerical Grade

Student Support

Macquarie University provides a range of Academic Student Support Services. Details of these services can be accessed at: <http://students.mq.edu.au/support/>.

UniWISE provides:

- Online learning resources and academic skills workshops http://www.mq.edu.au/learning_skills/
- Personal assistance with your learning & study related questions.
- The Learning Help Desk is located in the Library foyer (level 2).
- Online and on-campus orientation events run by Mentors@Macquarie.

Student Wellbeing

Macquarie University provides a range of Academic Student Support Services. Details of these services can be accessed at <http://www.student.mq.edu.au>.

Special Consideration Policy

The University is committed to equity and fairness in all aspects of its learning and teaching. In stating this commitment, the University recognises that there may be circumstances where a student is prevented by unavoidable disruption from performing in accordance with their ability. This policy supports students who experience serious and unavoidable disruption such that they do not reach their usual demonstrated performance level.

http://mq.edu.au/policy/docs/special_consideration/policy.html for further advice.

Advice for International Students

Macquarie International is the first point of contact for international students.

<http://www.international.mq.edu.au/> See also <http://www.international.mq.edu.au/studentservices/index.aspx>

International students can make individual or small group appointments to see the Study Skills Adviser, or drop-in for quick questions to E3A, Level 1. Don't forget to bring your unit outlines with you to your appointment.

Study Skills Support Unit

Assistance is provided through a range of programs for students.

See: <http://www.mq.edu.au/studyskillssupport/>

http://www.ling.mq.edu.au/support/writing_skills/index.htm

Writing Skills:

Unit staff are not expected to help you with basic writing advice. Further, in fairness to other students, unit staff will not provide you with information and advice concerning assessments, which is not readily available to all students in the unit.

Macquarie University offers a number of courses and services to help students with writing problems, whether they be first or second language speakers of English. If you find writing difficult, you are advised to:

- Visit the Macquarie Gateway site (<http://online.mq.edu.au/pub/EDUCGATEWAY>) where you will find detailed help and advice related to writing skills
- Contact Sue Spinks, Writing Skills Coordinator, Department of Linguistics, W6A531. Telephone: 9850 8770
- Contact the Writing Skills Adviser, Centre for Open Education, X5B. Tel: 9850 7470.
- See also: Peters, P. (1985). Strategies for student writers. Brisbane: John Wiley.

Student Services and Support

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

Advice for students with disabilities/ health conditions

The Disability Support Unit provides support and assistance to students with a disability/ health condition to enable them to achieve their academic potential. Service provision is tailored to individual need following an interview and the provision of supporting documentation.

Students who are enrolled at Macquarie University can register with the Disability Support Unit by downloading and returning an Advice of Disability/Health Condition form from

www.registrar.mq.edu.au/academic-index.htm and making an appointment to see a Disability Advisor.

Annual registration with the Disability Support Unit is required for all disability/health conditions.

Karen Gregory, Academic Disability Liaison Officer, Department of Education,

Ph: 9850 8619 karen.gregory@mq.edu.au

Louella Freeman, ph. 9850 8619, Academic Disability Liaison Officer, Dept. of Education

Nicole Saunders, Administrative Assistant, Disability Support Unit ph 9850 6494 email: disability@mq.edu.au

Sondra Wibberley, Disability Services Co-ordinator, Counselling & Health Services students with Disabilities. Student Services Building, Ph: 9850 7490

In person: Level 2, Lincoln Building (C8A). www.sss.mq.edu.au/equity

Student Enquiries

Details of these services can be accessed at <http://www.student.mq.edu.au/ses/>.

IT Help

If you wish to receive IT help, we would be glad to assist you at <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 and it outlines what can be done.

General IT Support and Troubleshooting

Please do NOT contact the Unit Convener or Tutors regarding technical support for your computer access.

For support with access to wireless and other general technology matters, please contact the Macquarie University Library Student IT Help Desk (Phone: 9850 4357; Email: support@mq.edu.au).

Please do NOT contact the Unit Convener regarding Blackboard technical support. CONTACT Macquarie University Library Student IT Help Desk. Phone: 9850 4357, Email: <http://informatics.mq.edu.au/help/>

Technology requirements

It is assumed that students enrolled in TEP units have access to a computer and the Internet.

There are a number of university computers in C5C (Rooms 211, 213 and 217) as well as in the dedicated teaching spaces for students studying Education (the TEL Labs C5A201, 204 and 210). Computers in Room C5A210 can be accessed at specified times.

In order to successfully complete various TEP units students need to ensure they have a reasonable level of competence in ICTs and Information Literacy skills. If you feel uncertain about your competency it is your responsibility to undertake training to acquire or improve these skills as soon as possible as they will be assumed in the workshops.

Getting Help with Computers @ Uni

<http://www.lib.mq.edu.au/help/ithelp/email.html>

Phone: (02) 9850 HELP (4357) or Freecall: 1800 063 191 Internet Chat: MSN Messenger at ithelp@mq.edu.au Face to Face: IT Help Desk, Level 1, University Library Email: Just Ask form <http://www.library.mq.edu.au/justask/> 24x7 Follow the Sun Helpdesk email: ithelp@mq.edu.au

Want to Develop Your Computer Skills?

Access to online training and training notes for library courses is also available from the library web site (<http://www.lib.mq.edu.au/training/>).

ICT skills training

The Library (telephone 02-9850 7500) offers excellent training courses in information literacy and ICT skills. Students who are newly arrived at the University, are encouraged to attend the Library Tour. <http://www.lib.mq.edu.au/training/> . For a full list of library services see: <http://www.lib.mq.edu.au/services/> .

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 outcomes

- 1. Acknowledge of the changing policy context of secondary schooling in NSW (Board of Studies, NSWDET) and Australia (ACARA) with specific reference to science
- 2. The ability to plan and present sequential lessons based on research data collected

during the professional experience (TEP 401)

- 4. The ability to critique (or reflect on) one's own professional practice with due regard to the input provided by experienced science teacher(s)
- 6. 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
- 7. 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
- 8. 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

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:

Learning outcome

- 6. 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

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 outcomes

- 2. The ability to plan and present sequential lessons based on research data collected during the professional experience (TEP 401)
- 3. A developing knowledge of both formal and informal assessment procedures in current use in the NSW Stage 6 science syllabus documents
- 5. 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
- 8. 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

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.

This graduate capability is supported by:

Learning outcomes

- 1. Acknowledge of the changing policy context of secondary schooling in NSW (Board of Studies, NSWDET) and Australia (ACARA) with specific reference to science
- 4. The ability to critique (or reflect on) one's own professional practice with due regard to the input provided by experienced science teacher(s)
- 6. 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
- 7. 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

Problem Solving and Research Capability

Our graduates should be capable of researching; of analysing, and interpreting and assessing data and information in various forms; of drawing connections across fields of knowledge; and

they should be able to relate their knowledge to complex situations at work or in the world, in order to diagnose and solve problems. We want them to have the confidence to take the initiative in doing so, within an awareness of their own limitations.

This graduate capability is supported by:

Learning outcomes

- 1. Acknowledge of the changing policy context of secondary schooling in NSW (Board of Studies, NSWDET) and Australia (ACARA) with specific reference to science
- 6. 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

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.

This graduate capability is supported by:

Learning outcomes

- 2. The ability to plan and present sequential lessons based on research data collected during the professional experience (TEP 401)
- 7. 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

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:

Learning outcomes

- 2. The ability to plan and present sequential lessons based on research data collected during the professional experience (TEP 401)
- 4. The ability to critique (or reflect on) one's own professional practice with due regard to the input provided by experienced science teacher(s)
- 6. 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

- 7. 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