Science Medicine and Health

SCIE914: Current Questions in Science

Subject Outline
Autumn, 2016
Flexible
Wollongong

Subject Information
Credit Points: 6
Pre-requisite(s): Nil
Co-requisite(s): Nil
Restrictions: None
Contact Hours: 5hrs per week

Subject Contacts
Subject Coordinator/Lecturer

<table>
<thead>
<tr>
<th>Name</th>
<th>Dr Katarina Mikac</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Building 41, Room 173</td>
</tr>
<tr>
<td>Telephone</td>
<td>61 2 4221 3307</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:katarina_mikac@uow.edu.au">katarina_mikac@uow.edu.au</a></td>
</tr>
<tr>
<td>Consultation mode and times</td>
<td>Email for appointment</td>
</tr>
</tbody>
</table>

Student Support and Advice
For general enquiries please contact StudentHub 41:

Location: 41.138B
Telephone: 61 2 4221 3492
Email: smah-students@uow.edu.au
Student Consultation and Communication

University staff receive many emails each day. In order to enable them to respond to your emails appropriately and in a timely fashion, students are asked to observe basic requirements of professional communication:

Consider what the communication is about

- Is your question addressed elsewhere (e.g. in the subject outline or, on the eLearning site)?
- Is it something that is better discussed in person or by telephone? This may be the case if your query requires a lengthy response or a dialogue in order to address. If so, see consultation times above and/or schedule an appointment.
- Are you addressing your request to the most appropriate person?

Specific email subject title to enable easy identification of issue

- Identify the subject code of the subject you are enquiring about (as staff may be involved in more than one subject) put this in the email subject heading. Add a brief, specific query reference after the subject code where appropriate.

Professional courtesy

- Address the staff member appropriately by name (and formal title if you do not yet know them).
- Use full words (avoid ‘text-speak’ abbreviations), correct grammar and correct spelling.
- Be respectful and courteous.
- Allow 3 – 4 working days for a response before following up. If the matter is legitimately urgent, you may wish to try telephoning the staff member (and leaving a voicemail message if necessary) or inquiring at the School Office.
- Please ensure that you include your full name and student number and identify your practical class or tutorial group in your email so that staff know who they are communicating with and can follow-up personally where appropriate.
Table of Contents

Section A: General Information ............................................................................................................... 4
  Subject Learning Outcomes ................................................................................................................ 4
  Subject Description ............................................................................................................................. 4
  eLearning Space ................................................................................................................................. 4
  Lecture, Tutorial, Laboratory Times .................................................................................................... 5
  Readings, References and Materials .................................................................................................. 5
    Textbooks........................................................................................................................................ 5
    Prescribed Readings (includes eReadings).................................................................................... 5
    Materials.......................................................................................................................................... 5
    Recommended Readings.................................................................................................................... 5
  Recent Changes to this Subject .......................................................................................................... 5
  List of Topics Covered ........................................................................................................................ 5

Section B: Assessment ............................................................................................................................. 6
  Assessment Summary ........................................................................................................................ 6
  Details of Assessment Tasks .............................................................................................................. 6
  Minimum Requirements for a Pass in this Subject ............................................................................. 8
    Minimum Student Attendance and Participation ............................................................................ 8
  Scaling................................................................................................................................................. 8
  Late Submission.................................................................................................................................. 8
    Late Submission Penalty – at 5% ................................................................................................... 8
  System of Referencing Used for Written Work ................................................................................... 9
  Use of Internet Sources ...................................................................................................................... 9
  Plagiarism............................................................................................................................................ 9
  Submission of Assessments ............................................................................................................... 9
  Assessment Return .............................................................................................................................. 9

Section C: General Advice .................................................................................................................... 10
  University Policies ............................................................................................................................. 10
  Student Support Services and Facilities ........................................................................................... 11
  Student Etiquette............................................................................................................................... 11
  Version Control Table ....................................................................................................................... 11
Section A: General Information

Subject Learning Outcomes

On completion of this subject, students should be able to:

1. Identify and discuss current issues and ‘hot topics’ in major scientific disciplines that are discussed within 5 scales: Micro, Human, Landscape, Earth, Universe

2. Understand how current theoretical and applied research in Science improves the global standard of living and health and how does it impact on the everyday life

3. Effectively paraphrase, summarise and reference scientific data/information published in peer review journals and on the internet related to Science in a written (e.g. scientific report, Executive Summary and Essay), oral (mock Job interview) and graphical format (PowerPoint presentation).

4. Discuss current topics in different disciplines of Science, and collaborate with others in a virtual environment to interpret a scientific issue/question.

5. Be capable of employing lateral and paradigm thinking to scientific issues and to apply general scientific knowledge along with independent and creative thinking to issues such as scientific ethics and impact of science on everyday life

6. Be able to work in a multidisciplinary environment and to merge knowledge from different disciplines of science to discuss chosen issues

Subject Description

The subject structure consists of 5 modules (Scales), with a move away from single-disciplinary research to fully synergistic, cross-disciplinary themes. The overarching theme is the highly relevant topic ‘Global Change’, which is divided into 5 Scales and followed by an introduction into Old and New Questions in Science. This multi-scalar approach allows for the meaningful merging and interlinking of topics across a wide range of disciplines, cultivating a deeper understanding amongst the students about the need for multidisciplinary research, effective communication and lateral thinking. For example, it is well-known that to truly understand and appreciate Climate Change a number of disciplines, from malacology to meteorology, through geology to organic chemistry, archaeology and glaciology, all need to be studied together to build a holistic picture of past and present environmental fluctuations and landscape change, in order to better predict the changes that will face us in the future.

This subject aims to ensure that all students entering the Master of Science (by course work) are aware of, and have the opportunity to develop an understanding of current research issues in the major scientific disciplines that are necessary for successful engagement in science subjects at UOW. Current Questions in Science (SCIE914) integrates the: (1) scientific language (spoken and written) skills learnt in SCIE911; (2) use and understanding of standard laboratory and field techniques developed in SCIE12; and (3) numeracy and statistical skills developed in SCIE913. The integration of these skills is fundamental to gaining a solid grasp of current questions in science. Through the exploration of hot scientific topics on the border of different disciplines of science students will consolidate and apply their skills in science communication (orally and in a written format) and data analysis and interpretation. Teamwork is fostered through online discussion of topical issues.

eLearning Space

This subject has materials and activities available via eLearning. To access eLearning you must have a UOW user account name and password, and be enrolled in the subject. eLearning is accessed via SOLS (student online services). Log on to SOLS and then click on the eLearning link in the menu column. For information regarding the eLearning spaces please use the following link: http://uowblogs.com/moodlelab/files/2013/05/Moodle_StudentGuide-1petpo7.pdf
Lecture, Tutorial, Laboratory Times
Dates for study days and weeks will be listed online. All timetable information is subject to variation. Check latest timetabling information on the ‘Current Student’ webpage on UOW website or log into SOLS to view your personal timetable prior to attending classes.

Timetable information can be accessed from

Key University Dates can be accessed from

Readings, References and Materials

Textbooks
Nil

Prescribed Readings (includes eReadings)
The following readings are prescribed for this subject, but students are not expected to purchase these. They are available to students through the library on the subjects eLearning site.

All prescribed readings will be available on the eLearning site

Materials
Internet connection required for off-campus/distance study.

Recommended Readings
Nil

Recent Changes to this Subject
Nil

List of Topics Covered
A Timetable of Topics will be available from the eLearning site in week 1 of session.
Section B: Assessment

Assessment Summary

<table>
<thead>
<tr>
<th>Assessment Item</th>
<th>Form of Assessment</th>
<th>Due Date</th>
<th>Return/Feedback Due Dates</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment 1</td>
<td>‘Communication and Employment in Science’ Practical Exercise</td>
<td>End of week 2</td>
<td>21 days after final submission</td>
<td>15%</td>
</tr>
<tr>
<td>Assessment 2</td>
<td>‘Research into Health, Medicine and Population Growth’ Executive Summary</td>
<td>End of week 5</td>
<td></td>
<td>15%</td>
</tr>
<tr>
<td>Assessment 3</td>
<td>Extinction Of Species, Artificial Intelligence and Neuroscience’ Essay</td>
<td>End of week 8</td>
<td></td>
<td>20%</td>
</tr>
<tr>
<td>Assessment 4</td>
<td>‘Pollution, Climate Change and the Future of the Oceans’ Scientific Report</td>
<td>End of week 10</td>
<td></td>
<td>20%</td>
</tr>
<tr>
<td>Assessment 5</td>
<td>‘Impact of extreme events on Earth’ Presentation</td>
<td>End of week 13</td>
<td></td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td><strong>Total Marks</strong></td>
<td></td>
<td></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Details of Assessment Tasks
Assessment tasks will be marked using explicit criteria that will be provided to students prior to submission.

Details of Assessment Tasks

Assessment 1

<table>
<thead>
<tr>
<th>Due date</th>
<th>End of week 2 (Friday)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighting</td>
<td>15%</td>
</tr>
<tr>
<td>Submission</td>
<td>Submit an electronic copy of your assignment via upload to eLearning</td>
</tr>
<tr>
<td>Type of Collaboration</td>
<td>Individual Assessment</td>
</tr>
<tr>
<td>Length</td>
<td>In-person or Skype interview, CV and Covering letter replying to selection criteria needs to be submitted prior to the interview</td>
</tr>
<tr>
<td>Details</td>
<td>Assignment details posted online</td>
</tr>
<tr>
<td>Style and format</td>
<td>Interview Techniques</td>
</tr>
<tr>
<td>Subject Learning Outcomes</td>
<td>2, 4, 5, 6</td>
</tr>
</tbody>
</table>

Marking Criteria
Assessment tasks will be marked using explicit criteria that will be provided to students prior to submission.

Assessment 2

<table>
<thead>
<tr>
<th>Due date</th>
<th>End of week 5 (Friday)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weighting</td>
<td>15%</td>
</tr>
<tr>
<td>Submission</td>
<td>Submit an electronic copy of your assignment via upload to eLearning</td>
</tr>
<tr>
<td>Type of Collaboration</td>
<td>Individual Assessment</td>
</tr>
<tr>
<td>Length</td>
<td>700 words</td>
</tr>
<tr>
<td>Details</td>
<td>Assignment details posted online, number of topics to choose will be provided</td>
</tr>
<tr>
<td>Style and format</td>
<td>Executive summary</td>
</tr>
<tr>
<td>Subject Learning Outcomes</td>
<td>1, 2, 3, 5, 6</td>
</tr>
</tbody>
</table>

Marking Criteria
Assessment tasks will be marked using explicit criteria that will be provided to students prior to submission.
<table>
<thead>
<tr>
<th>Assessment 3</th>
<th>‘Extinction Of Species, Artificial Intelligence and Neuroscience’ Essay</th>
</tr>
</thead>
<tbody>
<tr>
<td>Due date</td>
<td>End of week 8 (Friday)</td>
</tr>
<tr>
<td>Weighting</td>
<td>20%</td>
</tr>
<tr>
<td>Submission</td>
<td>Submit an electronic copy of your assignment via upload to eLearning</td>
</tr>
<tr>
<td>Type of Collaboration</td>
<td>Individual Assessment</td>
</tr>
<tr>
<td>Length</td>
<td>1200 words</td>
</tr>
<tr>
<td>Details</td>
<td>Assignment details posted online, number of topics to choose will be provided</td>
</tr>
<tr>
<td>Style and format</td>
<td>Essay</td>
</tr>
<tr>
<td>Subject Learning Outcomes</td>
<td>1, 2, 3, 5, 6</td>
</tr>
<tr>
<td>Marking Criteria</td>
<td>Assessment tasks will be marked using explicit criteria that will be provided to students prior to submission.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Assessment 4</th>
<th>‘Pollution, Climate Change and the Future of the Oceans’ Scientific Report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Due date</td>
<td>End of week 10 (Friday)</td>
</tr>
<tr>
<td>Weighting</td>
<td>20%</td>
</tr>
<tr>
<td>Submission</td>
<td>Submit an electronic copy of your assignment via upload to eLearning</td>
</tr>
<tr>
<td>Type of Collaboration</td>
<td>Individual Assessment</td>
</tr>
<tr>
<td>Length</td>
<td>1000 words</td>
</tr>
<tr>
<td>Details</td>
<td>Assignment details posted online, number of topics to choose will be provided</td>
</tr>
<tr>
<td>Style and format</td>
<td>Scientific report</td>
</tr>
<tr>
<td>Subject Learning Outcomes</td>
<td>1, 2, 3, 5, 6</td>
</tr>
<tr>
<td>Marking Criteria</td>
<td>Assessment tasks will be marked using explicit criteria that will be provided to students prior to submission.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Assessment 5</th>
<th>‘Impact of extreme events on Earth’ Presentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Due date</td>
<td>End of week 13 (Friday)</td>
</tr>
<tr>
<td>Weighting</td>
<td>30%</td>
</tr>
<tr>
<td>Submission</td>
<td>Submit an electronic copy of your assignment via upload to eLearning</td>
</tr>
<tr>
<td>Type of Collaboration</td>
<td>Individual Assessment</td>
</tr>
<tr>
<td>Length</td>
<td>12 slides + pdf with annotated bibliography</td>
</tr>
<tr>
<td>Details</td>
<td>Assignment details posted online, number of topics to choose will be provided</td>
</tr>
<tr>
<td>Style and format</td>
<td>Multimedia presentation (such as PPT or Prezi) supplemented by detailed annotated bibliography</td>
</tr>
<tr>
<td>Subject Learning Outcomes</td>
<td>1, 2, 3, 5, 6</td>
</tr>
<tr>
<td>Marking Criteria</td>
<td>Assessment tasks will be marked using explicit criteria that will be provided to students prior to submission.</td>
</tr>
</tbody>
</table>
Minimum Requirements for a Pass in this Subject
To receive a clear pass in this subject a total mark of 50% or more must be achieved. In addition, failure to meet any of the minimum performance requirements is grounds for awarding a Technical Fail (TF) in the subject, even where total marks accumulated are greater than 50%.

The minimum performance requirements for this subject are:
- Successfully pass all assessment tasks
- Participate in each lecture and complete online quizzes

Minimum Student Attendance and Participation
It is expected that students will allocate 12 hours per week to this subject, including any required class attendance, completion of prescribed readings and assessment tasks.

Student attendance at tutorials, practicals, seminars and/or simulations is not compulsory but is strongly recommended.

Scaling
Scaling will not occur in this subject

Late Submission
Late submission of an assessment task without an approved extension of the deadline is not acceptable. If you are unable to submit an assessment due to extenuating circumstances (e.g. medical grounds or compassionate grounds), you can make an application of academic consideration. Not all circumstances qualify for academic consideration. For further details about applying for academic consideration visit the Student Central webpage: http://www.uow.edu.au/student/central/academicconsideration/index.html

Late Submission Penalty – at 5%
Late submission of an assessment task without an approved extension of the deadline is not acceptable. Marks will be deducted for late submission at the rate of 5% of the total possible marks for that particular assessment task per day. This means that if a piece of work is marked out of 100, then the late penalty will be 5 marks per day (5% of 100 possible marks per day). The formula for calculating the late penalty is: total possible marks x 0.05 x number of days late. For the purposes of this policy a weekend (Saturday and Sunday) will be regarded as two days.

For example:
- Student A submits an assignment which is marked out of 100. The assignment is submitted 7 days late. This means that a late penalty of 35 marks will apply (100 x 0.05 x 7). The assignment is marked as per normal out of 100 and is given a mark of 85/100, and then the late penalty is applied. The result is that the student receives a final mark of 50/100 for the assignment (85 (original mark) – 35 marks (late penalty) = 50/100 (final mark)).
- Student B submits a report which is marked out of 20. The report is submitted three days late. This means that a late penalty of 3 marks will apply ((20 x 0.05 x 3). The report is marked as per normal out of 20 and is given a mark of 17/20, and then the late penalty is applied. The result is that the student receives a final mark of 14/20 for the report (17 (original mark) – 3 marks (late penalty) = 14/20 (final mark)).

No marks will be awarded for work submitted either after the assessment has been returned to the students or more than two weeks after the due date, whichever is the sooner. This does not apply to situations where a particular assessment task is undertaken by students at different times throughout the session, but where the assessment is based on experiments or case studies specific to a student. In this case no marks will be awarded for work submitted more than two weeks after the due date.

Notwithstanding this, students must complete all assessment tasks to a satisfactory standard and submit them, regardless of lateness or loss of marks, where submission is a condition of satisfactorily completing the subject.
System of Referencing Used for Written Work

The Author-Date (Harvard) referencing system should, unless otherwise specified for a particular assessment (check Details of Assessment Tasks), be utilised. A summary of the Harvard system can be accessed on the Library website at: http://public01.library.uow.edu.au/refcite/style-guides/html/

Use of Internet Sources

Students are able to use the Internet to access the most current information on relevant topics and information. Internet sources should only be used after careful critical analysis of the currency of the information, the role and standing of the sponsoring institution, reputation and credentials of the author, the clarity of the information and the extent to which the information can be supported or ratified by other authoritative sources.

Plagiarism

The full policy on Academic Integrity and Plagiarism is found in the Policy Directory on the UOW website.

"The University’s Academic Integrity and Plagiarism Policy, Faculty Handbooks and subject guides clearly set out the University’s expectation that students submit only their own original work for assessment and avoid plagiarising the work of others or cheating. Re-using any of your own work (either in part or in full) which you have submitted previously for assessment is not permitted without appropriate acknowledgement. Plagiarism can be detected and has led to students being expelled from the University.

The use by students of any website that provides access to essays or other assessment items (sometimes marketed as ‘resources’), is extremely unwise. Students who provide an assessment item (or provide access to an assessment item) to others, either directly or indirectly (for example by uploading an assessment item to a website) are considered by the university to be intentionally or recklessly helping other students to cheat. This is considered academic misconduct and students place themselves at risk of being expelled from the University."

Submission of Assessments

Refer to the submission requirements under the details of the individual assessments. Students should ensure that they receive a receipt acknowledging submission. Students will be required to produce this in the event that an assessment task is considered to be lost. Students are also expected to keep a copy of all their submitted assessments in the event that re-submission is required.

Assessment Return

Students will be notified when they can collect or view their marked assessment. In accordance with University Policy marked assessments will usually only be held for 21 days after the declaration of marks for that assessment.
Section C: General Advice

Students should refer to the Faculty of Science, Medicine and Health website for information on policies, learning and support services and other general advice.

University Policies

Students should be familiar with the following University policies:

a. Code of Practice – Teaching and Assessment

b. Code of Practice – Research, where relevant

c. Code of Practice – Honours, where relevant

d. Student Charter

e. Code of Practice – Student Professional Experience, where relevant

f. Academic Integrity and Plagiarism Policy

g. Student Academic Consideration Policy

h. Course Progress Policy

i. Graduate Qualities Policy

j. Academic Complaints Policy (Coursework and Honours Students)

k. Policy and Guidelines on Non-Discriminatory Language Practice and Presentation

l. Workplace Health and Safety, where relevant

m. Intellectual Property Policy

n. IP Student Assessment of Intellectual Property Policy, where relevant

o. Policy on Ethical Objection by Students to the Use of Animal and Animal Products in Coursework Subjects, where relevant

p. Human Research Ethics Guidelines, where relevant

q. Animal Research Guidelines, where relevant
r. Student Conduct Rules and accompanying Procedures or Research Misconduct Policy for research students

Student Support Services and Facilities
Students can access information on student support services and facilities at the following link. This includes information on “Academic Support”, “Starting at University,” “Help at University” as well as information and support on “Career’s and Jobs”. http://www.uow.edu.au/student/services/index.html

Student Etiquette
Guidelines on the use of email to contact teaching staff, mobile phone use in class and information on the university guide to eLearning ‘Netiquette’ can be found at http://www.uow.edu.au/student/elearning/netiquette/index.html

Version Control Table

<table>
<thead>
<tr>
<th>Version Control</th>
<th>Release Date</th>
<th>Author/Reviewer</th>
<th>Approved By</th>
<th>Amendment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20151201</td>
<td>Dr Katarina Mikac – Subject Coordinator</td>
<td>Mrs Sonia Losinno – ADE Nominee</td>
<td>FINAL SCIE914 Autumn 2016 Subject Outline</td>
</tr>
</tbody>
</table>