School of Biological Sciences

BIOL991: Major Research Project

Subject Outline
Annual, 2016
On-Campus
Wollongong

Subject Information
Credit Points 24
Pre-requisite(s): Nil
Co-requisite(s): Nil
Restrictions: Students enrolled in this subject are assumed to have knowledge of biology commensurate with that expected of a BSc graduate. Before enrolling in this subject, students need to identify a supervisor and an appropriate research project.
Contact Hours: Organised in consultation with the project supervisor

Subject Contacts
Subject Coordinator – Environmental Biology Stream

<table>
<thead>
<tr>
<th>Name:</th>
<th>A/PR Todd Minchinton</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location:</td>
<td>Building 35, Room G09</td>
</tr>
<tr>
<td>Telephone:</td>
<td>61 2 4221 5188</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:todd_minchinton@uow.edu.au">todd_minchinton@uow.edu.au</a></td>
</tr>
<tr>
<td>Consultation mode and times:</td>
<td>Email for appointment</td>
</tr>
</tbody>
</table>

Subject Coordinator – Biotechnology Stream

<table>
<thead>
<tr>
<th>Name:</th>
<th>Dr Ren Zhang</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location:</td>
<td>Building 35, Room 103</td>
</tr>
<tr>
<td>Telephone:</td>
<td>61 2 4221 3427</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:ren_zhang@uow.edu.au">ren_zhang@uow.edu.au</a></td>
</tr>
<tr>
<td>Consultation mode and times:</td>
<td>Email for appointment</td>
</tr>
</tbody>
</table>

Project Supervisor
It is the responsibility of the student to identify a suitable research supervisor and project to be undertaken as the core component of this subject. Students should contact the subject coordinator in the first instance for advice, and then consult various potential supervisors for an outline of projects that are on offer. Prospective students are encouraged to discuss possible projects with a range of potential supervisors before deciding on a project. A useful starting point is the school website which outlines the research interests of all members of academic staff. A project and supervisor must be agreed with the subject coordinator no later than the first week of the session in which the project is to be undertaken. Supervision of a project will depend in part on the availability of resources.

Student Support and Advice
For general enquiries please contact the 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.
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Section A: General Information

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

<p>| | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Demonstrate a working knowledge of the subject area of their research project</td>
</tr>
<tr>
<td>2.</td>
<td>Demonstrate an ability to design and carry out a research project</td>
</tr>
<tr>
<td>3.</td>
<td>Demonstrate knowledge of a range of laboratory and/or field techniques relevant to the project, and understanding of the principles underlying the techniques</td>
</tr>
<tr>
<td>4.</td>
<td>Demonstrate an aptitude for critical reading of published literature, and ability to synthesise knowledge and techniques from published sources</td>
</tr>
<tr>
<td>5.</td>
<td>Demonstrate an ability to present experiments, results and interpretations clearly and concisely in a written report and as a seminar presentation</td>
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</table>

Subject Description
The student will undertake a research project on a topic in Biology and present a research report and seminar on a topic chosen by the supervising staff. The research can be undertaken in collaboration with industry or another recognised institution.

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](http://uowblogs.com/moodlelab/files/2013/05/Moodle_StudentGuide-1petpo7.pdf)

Lecture, Tutorial, Laboratory Times
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.


Readings, References and Materials

Textbooks
The following text(s) will need to be purchased by students enrolled in this class.

Nil

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

Nil

Materials
Nil
Recommended Readings
A reading list related to techniques and background to the specific project will be provided by the project supervisor.

Recommended readings are not intended as an exhaustive list, students should use the Library catalogue and databases to locate additional resources.

Recent Changes to this Subject
Nil

List of Topics Covered
As this is a research based subject the list of topics covered will be negotiated between the student and their supervisor.
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 date</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment 1</td>
<td>Supervisors Assessment</td>
<td>At the end of the project</td>
<td>Within 21 days from due date</td>
<td>5%</td>
</tr>
<tr>
<td>Assessment 2</td>
<td>Seminar</td>
<td>End of final teaching week of completing session</td>
<td>Within 21 days from due date</td>
<td>20%</td>
</tr>
<tr>
<td>Assessment 3</td>
<td>Project Report</td>
<td>End of final teaching week of completing session</td>
<td>Within 21 days from due date</td>
<td>75%</td>
</tr>
</tbody>
</table>

Total Marks 100%

Details of Assessment Tasks

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

Assessment 1
Supervisors Assessment
Due date: At the end of the project
Weighting: 5%
Submission: N/A
Type of Collaboration: Individual Assessment
Length: Completion of all tasks
Details: Supervisor's evaluation on overall performance
Style and format: Overall performance
Subject Learning Outcomes: 1-5
Marking Criteria: Understanding, research, experimental performance, presentation

Assessment 2
Seminar
Due date: End of final teaching week of completing session
Weighting: 20%
Submission: Present seminar and answer questions on the due date.
Type of Collaboration: Individual Assessment
Length: 15 min plus questions
Details: See Appendix 1 – ‘Assessment Criteria for the Research Project Seminar’
Style and format: Oral presentation
Marking Criteria: See Appendix 1 – ‘Assessment Criteria for the Research Project Seminar’
Subject Learning Outcomes: 4, 5
Marking Criteria: The marking criteria will be made available on your eLearning site by week 1 of session.
Assessment 3 | Project Report  
---|---  
Due date | End of final teaching week of completing session  
Weighting | 75%  
Submission | Submit two hardcopies of your assessment to your subject coordinator by 4:00pm on the due date  
**Environmental Biology Stream**: A/PR Todd Minchinton  
(Building 35 Room G09)  
**Biotechnology Stream**: Dr Ren Zhang  
(Building 35 Room 103)  
Type of Collaboration | Individual Assessment  
Length | 35-40 pages excluding references  
Details | See Appendix 2 – ‘Assessment Criteria for the Research Project Report’  
Style and format | Written report with required sections and format  
Subject Learning Outcomes | 1-5  
Marking Criteria | The marking criteria will be made available on your eLearning site by week 1 of session.  

**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:  
- A total mark of 50% or more must be achieved.  

**Minimum Student Attendance and Participation**  
It is expected that students will allocate 48 hours per week to this subject, including any required class attendance, completion of prescribed readings and assessment tasks.  

Students are not required to attend set classes. It is the responsibility of the student to coordinate appropriate meetings with their project supervisor.  

**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](http://www.uow.edu.au/student/central/academicconsideration/index.html)  

**Late Submission Penalty**  
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 10% 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 10 marks per day (10% of 100 possible marks per day). The formula for calculating the late penalty is the total possible marks x 0.10 x number of days late. For the purposes of this policy a weekend (Saturday and Sunday) will be regarded as two days.  

No marks will be awarded for work submitted after the assessment has been returned to the students.
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. Student Charter

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

e. Academic Integrity and Plagiarism Policy

f. Student Academic Consideration Policy

g. Course Progress Policy

h. Graduate Qualities Policy

i. Academic Complaints Policy (Coursework and Honours Students)

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

k. Workplace Health and Safety, where relevant

l. Intellectual Property Policy

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

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

o. Human Research Ethics Guidelines, where relevant

p. Animal Research Guidelines, where relevant

q. 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](http://www.uow.edu.au/student/services/index.html)

Student Etiquette


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>20151207</td>
<td>AVPR Todd Minchinton – Subject Coordinator</td>
<td>Mrs Sonia Losinno- ADE Nominee</td>
<td>FINAL BIOL991 Annual 2016 Subject Outline</td>
</tr>
</tbody>
</table>
Students will be required to give a 15-minute seminar (followed by 5 minutes of question time) on their research project. The assessment criteria for these seminars are shown below.

**Student:**

**INTRODUCTION:**
- Demonstration of sound knowledge of overall research area
- Presented in an accurate and easy-to-understand fashion

**AIMS:**
- Clearly stated aims or hypotheses

**METHODS:**
- Brief, concise description of how experiments were performed
- Knowledge of advantages and shortcomings of methodologies

**RESULTS/DISCUSSION:**
- Summarised in a meaningful and comprehensible fashion
- Clearly indicated own results
- Other people's work - relevance and criticism
- Validity of conclusions from results obtained
- Outline of future studies

**HANDLING OF QUESTIONS:**
- Concise and valid answers to questions

**PRESENTATION:**
- Fluency (flow) of seminar
- Use of effective audio/visual aids
- Structure & organisation of seminar
- Demonstrated "critical" scientific approach

**OTHER COMMENTS:**

**ASSESSMENT**
Examiners please select the grade first by circling one category and then record a final mark within that prescribed range.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Final mark</th>
<th>Mark:</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Distinction</td>
<td>Final mark ≥ 85%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distinction</td>
<td>Final mark ≥ 75%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credit</td>
<td>Final mark ≥ 65%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pass</td>
<td>Final mark ≥ 50%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fail</td>
<td>Final mark &lt; 50%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Assessor: ______________
SUMMARY
Introductory remarks
Major results
Conclusion

INTRODUCTION
Clear explanation of the background
Clearly stated aims/hypotheses

MATERIALS AND METHODS
Description of materials (including sources) and solutions/media
Detailed methodology which can be followed by colleagues

RESULTS
Clear description of results obtained
Assisting tables and figures

DISCUSSION
Invention/improvement in methodology, if any
Reason for failed experiments if unsuccessful
Significance of the results in relation to the research direction
Other people/group’s work - relevance and criticism
Future work
Concluding remarks

REFERENCES
Adequate citations and correct format

FORMATTING

LENGTH (20-25 pages for BIOL993 and 35-40 for BIOL991, excluding references)

OTHER COMMENTS

ASSESSMENT
Examiners please select the grade first by circling one category and then record a final mark within that prescribed range.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Final mark criteria</th>
</tr>
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<tbody>
<tr>
<td>High Distinction</td>
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</tr>
<tr>
<td>Fail</td>
<td>Final mark &lt; 50%</td>
</tr>
</tbody>
</table>

Mark: %
Assessor: ____________