School of Chemistry

CHEM915: Advanced Chemistry Laboratory Project

Subject Outline
Autumn 2016
On-Campus
Wollongong

Subject Information
Credit Points: 12
Pre-requisite(s): Appropriate degree
Co-requisite(s): Nil
Restrictions: Entry is subject to availability of an appropriate supervisor and by agreement with the Head of School.
Contact Hours: To be arranged after consultation with the subject coordinator

Subject Contacts
Subject Coordinator/Lecturer

<table>
<thead>
<tr>
<th>Name</th>
<th>A/PR Stephen Ralph</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Building 18, Room 102A</td>
</tr>
<tr>
<td>Telephone</td>
<td>61 2 4221 4286</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:stephen_ralph@uow.edu.au">stephen_ralph@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 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:

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.

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.
Section A: General Information

Subject Learning Outcomes

<table>
<thead>
<tr>
<th>On completion of this subject, students should be able to:</th>
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<tbody>
<tr>
<td>1. Proficiently use a variety of primary and secondary sources to obtain current and, where appropriate, historical information about a specified research topic;</td>
</tr>
<tr>
<td>2. Analyse the significance of information obtained from literature sources and gathered from experimental data collected whilst performing their experimental program;</td>
</tr>
<tr>
<td>3. Show independence, where necessary, in performing an extended experimental investigation;</td>
</tr>
<tr>
<td>4. Synthesise the information gathered into a coherent, appropriately structured scientific report that includes a variety of methods of presenting data obtained during the literature search, including chemical structure diagrams, other types of figures, tables and graphs;</td>
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<tr>
<td>5. Use an appropriate software tool (e.g. Power Point) to present information gathered during the literature search to a scientific audience in the form of an oral presentation.</td>
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Subject Description

Under the supervision of a staff member appointed by the Head of School, students will undertake a laboratory project and present a written report and a seminar on a topic chosen by the supervising staff member.

eLearning Space

This subject does not utilize eLearning

Lecture, Tutorial, Laboratory Times

There are no scheduled classes in the university timetable for this subject. All work is to be performed at times decided in consultation with the project supervisor.

Readings, References and Materials

Textbooks
Nil

Prescribed Readings (includes eReadings)
Nil

Materials
Nil

Recommended Readings
Nil

Recent Changes to this Subject
Nil
Ethical Objection to the Use of Animal and Animal Products
In a very small number of cases, in order to achieve specific learning objectives, the use of animals, animal tissues, and or animal-derived products (such as sera) is inherent and unavoidable. Students with conscientious objections to this use should not enrol in this subject.

Laboratory Safety Guidelines
The rules below are general rules that are required in laboratories.

- Before commencing your project you are to ensure that you understand specific procedures for the laboratory in which you work.
- You will need to fill out a risk assessment form before commencing any experiments (confer with your laboratory supervisor).
- Never use any equipment or attempt any experiment without checking the safety implications with your laboratory supervisor or experienced delegated laboratory worker.
- Undergraduate students are not permitted to work after hours unless there is appropriate approval and supervision.

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 dates</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment 1</td>
<td>Written Report</td>
<td>Week 13 – date to be confirmed</td>
<td>Within 21 days of due date</td>
<td>85%</td>
</tr>
<tr>
<td>Assessment 2</td>
<td>Oral Presentation</td>
<td>Study Recess – Date to be confirmed</td>
<td>Within 21 days of due date</td>
<td>15%</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>Total Marks</strong></td>
</tr>
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</table>

### Details of Assessment Tasks

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

#### Assessment 1

- **Due date**: Week 13
- **Weighting**: 85%
- **Submission**: Two bound (spiral bound) copies of the final report are to be handed in directly to the subject coordinator, A/Prof Stephen Ralph, at his office (Bld 18; Room 226) by 4.00pm on the due date.
- **Type of Collaboration**: Individual Assessment
- **Length**: 30 – 40 page written report
- **Subject Learning Outcomes**: 1, 2, 3, 4

**Marking Criteria**: The written report will be assessed by two members of the academic staff. When arriving at their final mark, the examiners will take into account the number and type of experiments performed by the student, the amount of information derived from those experiments, the degree to which the data is analysed into a coherent story, consistency with respect to formatting and referencing, quality and appropriateness of figures, and whether or not the report has an appropriate structure (e.g. does it have an abstract, list of figures, table of contents, conclusion etc.).

#### Assessment 2

- **Due date**: Study Recess – Date to be confirmed
- **Weighting**: 15%
- **Submission**: Not Applicable
- **Type of Collaboration**: Individual Assessment
- **Length**: 20 minute seminar (15 min talk + 5 min question/discussion time)
- **Subject Learning Outcomes**: 1, 2, 5

**Marking Criteria**: The seminar will be judged by all academic members of staff who attend the oral presentation. They will be asked to contribute a mark out of 10 based on the quality of the experimental program undertaken as well as extent and quality of analysis of the results obtained, and a mark out of 10 based on the quality of the presentation itself, taking into account factors such as clarity of presentation slides and verbal communication, ability to engage the audience, and responses to questions from the audience. The final mark awarded for the oral presentation will be derived from the average of all the scores received from the academic staff.
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:

- pass all assessment tasks

Minimum Student Attendance and Participation

Approximately 150-200 hours laboratory work, report writing and seminar preparation. For CHEM915 undertaken in a single semester, this is equivalent to about 2 days per week working in the laboratory and/or performing data analysis for up to 10 weeks, and then up to a further 40 hours writing the report and working on the seminar during the course of the last 3-5 weeks of the semester.

It is the responsibility of the student to remain up-to-date with required work and to negotiate interim deadlines with their advisor/supervisor. It is recommended that each student should schedule regular meetings with their advisor/supervisor to discuss the project proposal and progress.

Scaling

Scaling may occur in this subject at the end of session by the Unit Assessment Committee and/or Faculty Assessment Committee (FAC). Marks will only be scaled to ensure fairness/parity of marking across groups of students. Scaling will not affect any individual student’s rank order within their cohort. For more information refer to Assessment Guidelines – Scaling: http://www.uow.edu.au/about/policy/UOW058609.html

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

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.

For example:

- Student A submits an assessment which is marked out of 100. The assessment is submitted 4 days late. This means that a late penalty of 40 marks will apply (100 x 0.10 x 4). The assessment 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 45/100 for the assessment (85 (original mark) – 40 marks (late penalty) = 45/100 (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 6 marks will apply ((20 x 0.10 x 3). The report is marked as per normal out of 20 and is given a mark of 15/20, and then the late penalty is applied. The result is that the student receives a final mark of 9/20 for the report (15 (original mark) – 6 marks (late penalty) = 9/20 (final mark)).

No marks will be awarded for work submitted after the assessment has been returned to the students.
(except 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). 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.

Supplementary Assessments
This subject has been identified as unsuitable for supplementary assessment, and no supplementary assessment will be offered.

System of Referencing Used for Written Work
The Vancouver referencing system (author-number system) is the preferred referencing system for this subject. Reference numbers will appear either in square brackets (e.g. [1] or as superscripted numbers (e.g. 1)) in the appropriate place. Details of this referencing style are available 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

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>20151216</td>
<td>A/Prof Stephen Ralph – Subject Coordinator</td>
<td>Sonia Losinno – ADE Nominee</td>
<td>Final CHEM915 Autumn 2016 Subject Outline</td>
</tr>
</tbody>
</table>