## 2015 – Honours & Masters Research Projects

### Project Research Areas

**Water & Environmental | Structural | Architectural | Geotechnical | Mining**

### Honours

**Semester 1, 2015 ONLY (AQF-8 transition):**
- C&ENVENG 4222 Research Project (Part 1): Civil (3 units)
- MINING 4222 Research Project (Part 1): Mining (3 units)

**Semester 2, 2015 ONLY (AQF-8 transition):**
- C&ENVENG 4223 Research Project (Part 2): Civil (6 units)
- MINING 4223 Research Project (Part 2): Mining (6 units)

### Masters

- C&ENVENG 7049A/B Masters Civil & Structural Eng Project Part 1 & 2
- C&ENVENG 7050A/B Masters Civil & Environmental Eng Project Part 1 & 2
- MINING 7074A/B Masters Mining Eng Project Part 1 & 2

Course Coordinator: Bec Francis

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### CRITICAL INFORMATION

- **Application Form Deadline:** [4pm Friday, November 7, 2014](#)
- The Application Form is available online and is to be submitted electronically
- Only ONE Application Form is to be submitted per group

### Allocation

Allocation of research projects will commence following the examiners meeting (2014). Students will be advised in due course (likely to be mid-late February 2015).

Once you have been allocated a Research Project, contact your Supervisor as soon as possible so that reading material can be provided and plans made for getting started on the project.
HOW TO MAKE YOUR APPLICATION

1. Research Area Information
2. Application Form
   a. Part A: Group Selection
   b. Part B: Research Area Preferences
3. Frequently Asked Questions
4. The Research Areas

1 Research Project Information
This document provides details of the Research Areas in which projects will be offered to Honours and Masters students in 2015.

There are three main ‘disciplines’ within the School of Civil, Environmental & Mining Engineering (CEME). Each discipline has within it several ‘Research Areas’. The Research Areas each have an associated code number. The first letter of that code relates to the Discipline. These are as follows:

- S | Structural (S) & Architectural (SA) (or Structures)
- W | Water & Environmental (or Water SYSTEMS)
- MM & MG | Mining (MM) & Geotechnical (MG)

Depending upon your program of study, you are eligible to select from the following Discipline Areas:

- Civil & Environmental Engineering: .........................W & MG
- Civil & Structural Engineering: .............................S, W & MG
- Civil & Architectural Engineering: ..........................S, SA & MG
- Mining Engineering: ...........................................MG & MM

Page 5 contains the summary of the Research Areas for 2015.

NOTE: While your preferences are taken into consideration for allocation, they are not guaranteed. The ultimate decision on the group structure and research project rests with the CEME School.

2 Application Form

There is ONE Application Form for Honours and Masters students; ensure you identify the correct level of study for your group. Groups must be formed either wholly from Honours students or wholly from Masters students. A group mix of Honours and Masters students is NOT permitted under ANY circumstances.

The Applications Form is available online and is to be submitted electronically. Only ONE Application Form is to be submitted per group.

The deadline for online submission of your Application Form is: 4pm Friday, November 7, 2014

2.1 Part A: Group Selection

The first section of the Application Form deals with identifying your group members.

Honours students are to self-select into groups of four (4).
Masters students are to self-select into groups of three (3).

Complete ALL the information requested for each member of your group.

2.2 Part B: Research Preferences

The second section of the Application Form deals with identifying your research area preferences.

Each group indicates a minimum of three (3) Research Areas in order of preference. Each group MUST nominate Research Areas from at least TWO (2) different Disciplines (except Mining students).

Each Research Area offering has an associated code, eg. S05. Select this code on the Application Form.

You may choose to identify a Supervising Academic with whom you are interested in working. This is OPTIONAL, however it will be taken into consideration when we are going through the allocation process.
3 Frequently Asked Questions

Eligibility for 2015 Research Projects

• How can Honours students determine if they are eligible for the 2014 Research Project? / What is the eligibility based on?

‘Eligibility criteria’ for Honours no longer applies. From 2015 all students undertake the Research Project courses and are ‘eligible’ for Honours.

• Can students who have completed 3 years of a 5 year undergraduate degree program do the project in their 4th year, or does it have to be in the last year of their degree?

Yes, they can undertake the Research Project in their 4th year of study.

• How are mid-year entry students impacted? Are they eligible to start at the beginning of the year?

Provided the students have completed the course content in relation to the topic of research, it is possible for mid-year entry students to commence the Research Project at the start of the calendar year.

For mid-year Honours student who intend on graduating mid-2016, it is highly advisable to commence your Research Project at the start of 2015.

Group size

• Do all groups need to be four people or can there be smaller groups?

Honours groups need to be four (4) people; Masters groups need to be three (3) people. With the permission of the Head of School exceptions to this might be possible, however due to the limitations on availability of academics, it is highly unlikely.

• What happens if a group is chosen and then one or two students discover that they are not eligible for the project?

Consideration will be given to merging the remaining students to form a suitable group. However this is not always practical.

• How does the group selection process work?

Students organise this themselves.

Structure of the course

• What needs to be produced?

The requirements are likely to be the same as for 2014, which were:

<table>
<thead>
<tr>
<th>Component</th>
<th>Honours</th>
<th>Masters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial Research Report</td>
<td>15%</td>
<td>20%</td>
</tr>
<tr>
<td>Initial Research Project Presentation</td>
<td>15%</td>
<td>5%</td>
</tr>
<tr>
<td>Final Research Report</td>
<td>55%</td>
<td>60%</td>
</tr>
<tr>
<td>Expo Poster &amp; Presentation</td>
<td>15%</td>
<td>-</td>
</tr>
<tr>
<td>Final Research Conference Paper</td>
<td>-</td>
<td>10%</td>
</tr>
<tr>
<td>Final Conference Presentation</td>
<td>-</td>
<td>5%</td>
</tr>
</tbody>
</table>

• Is there an exam?

No.

• How long does it (the whole Research Project) run?

Usually two consecutive semesters. I say ‘usually’ as 2015 is a transition year for Honours and this is changing as we move towards 2016.

• What time commitment is expected?

The workload relates to the number of ‘units’ for each course. According to university policy, for every 3-units allocated to a course in one semester this corresponds to 12 hours a week for the average student to achieve a credit. So, for a 6-unit course (per semester), students should expect to spend 24 hours a week in ‘contact’ and independent study (averaged across the semester) for the semesters in which you carry out the Research Project.

• Why is this different for Honours in previous years?

Usually two consecutive semesters. I say ‘usually’ as 2015 is a transition year for Honours and this is changing as we move towards 2016.
Assessment

• Are all students in a group awarded the same grade?
Not necessarily. There are some (minor) components that are graded individually (e.g., oral presentation), and in addition there is the process of Peer Review which enables staff to moderate grades based on their own observations as well as peer recommendations of individual’s contributions.

• If one student in a group is eligible for 1st class honours and another student is eligible for 2nd class honours will the marking of the Research Project limit the ability of the 1st class honours student to achieve a high score?
No. Your Research Project grade/mark is only one part of what contributes to your Honours Award Classification. Remember, the class of Honours that you are awarded is determined by the ECMS Faculty based on the weighted average of your courses from Level 2 and above.

Choosing a Research Area

• Should the selected Research Area match specialization courses?
Usually.

• I’m interested in …… how do I find out what software will be used and/or more about the projects?
Ask the supervisors associated with the research area.

• Is it important to fully understand the concept of the topic of the research area before we choose to do it?
Not necessarily – many students discover that the literature review that takes place in the first semester of the Research Project moves their understanding and research in a new direction. This is perfectly fine!

How to excel in the project

• What makes a good project
Enthusiastic and committed students who start early!

Submitting the online Application Form

• Who should it be emailed to?
Upon clicking the ‘SUBMIT’ button the form will be automatically addressed to rebecca.francis@adelaide.edu.au, and this is the correct address.

• Who should I contact if I have a problem?
Send an email to the current Coordinator, Bec Francis at: rebecca.francis@adelaide.edu.au.

Further

In addition to the above, a video recording will be available of the special lecture ‘Honours 2015 Introductory Lecture’ (Monday October 27, 2014). This lecture includes explanation of the process and projects, who is eligible, and how you go about applying, and answers to questions from the student audience.
4 The Research Areas
You can look further into the research interests of individual academics by clicking on their name (link to their homepage)...

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Code</th>
<th>Research Area</th>
<th>Supervisors who usually work in this area*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structures</td>
<td>S01</td>
<td>Extreme Loading Resilience: Earthquake / Blast resistant design of structures</td>
<td>Terry Bennett</td>
</tr>
<tr>
<td></td>
<td>S02</td>
<td>Enhancing Structural Sustainability: Sustainable construction materials / Structural Condition Assessment &amp; Safety</td>
<td>Michael Griffith</td>
</tr>
<tr>
<td></td>
<td>S03</td>
<td>Theoretical/Computational Mechanics: Numerical/computer modelling of structures / Structural failure/damage modelling</td>
<td>Terry Bennett</td>
</tr>
<tr>
<td></td>
<td>S04</td>
<td>Structures: Concrete / Steel / Composite (Steel-Concrete, FRP etc) / Masonry</td>
<td>Michael Griffith</td>
</tr>
<tr>
<td></td>
<td>S05</td>
<td>Bridge Engineering</td>
<td>Mohamed Ali Sadakkathulla</td>
</tr>
<tr>
<td></td>
<td>S06</td>
<td>Material Development: Concrete Technology</td>
<td>Togay Ozbakkaloglu</td>
</tr>
<tr>
<td></td>
<td>SA07</td>
<td>Architectural: Sustainable Building Technologies*</td>
<td>Bec Francis</td>
</tr>
<tr>
<td>Water Systems</td>
<td>W01</td>
<td>Asset Management</td>
<td>Martin Lambert</td>
</tr>
<tr>
<td></td>
<td>W02</td>
<td>Decision Support and Optimisation</td>
<td>Holger Maier</td>
</tr>
<tr>
<td></td>
<td>W03</td>
<td>Hydrology and Climate</td>
<td>Dmitri Kavetski</td>
</tr>
<tr>
<td></td>
<td>W04</td>
<td>Water resource and water systems modelling</td>
<td>Dmitri Kavetski</td>
</tr>
<tr>
<td>Mining &amp; Geotechnical</td>
<td>MM01</td>
<td>Geomechanics</td>
<td>An Deng</td>
</tr>
<tr>
<td></td>
<td>MM02</td>
<td>Rock fracture modelling</td>
<td>Peter Dowd</td>
</tr>
<tr>
<td></td>
<td>MM03</td>
<td>Mine Design and Optimisation</td>
<td>Emmanuel Chanda</td>
</tr>
<tr>
<td></td>
<td>MG04</td>
<td>Geotechnical Engineering</td>
<td>An Deng</td>
</tr>
</tbody>
</table>

Availability of individual Academics is dependent upon staffing arrangements which may vary from the time of publishing.

*NOTE: There will be only a very few SA07 (architectural engineering) projects on offer. This Research Area is NOT available to Masters students.