



THE UNIVERSITY OF
WESTERN AUSTRALIA
Achieving International Excellence

MECH2499

Mech.Eng Special Unit

School of Mechanical Engineering
Faculty of Engineering, Computing and Mathematics

UNIT OUTLINE

Semester 2 2010

Table of Contents

ESSENTIAL ADMINISTRATIVE INFORMATION.....	3
Important Notice	3
UNIT COORDINATOR.....	3
TEACHING STAFF	4
INTRODUCTION	4
LEARNING OUTCOMES	5
LEARNING ACTIVITIES	5
STUDENT FEEDBACK.....	5
ASSESSMENT DETAILS.....	6
Assessment Mechanism.....	6
Academic Conduct	7
STUDENTS' RIGHTS AND RESPONSIBILITIES	8
ADDITIONAL INFORMATION.....	8
Telephone Contacts:	8

ESSENTIAL ADMINISTRATIVE INFORMATION

Unit Title: Mech.Eng Special Unit

Unit Code: MECH2499

Unit Coordinator: A/Prof Nathan Scott

School: Mechanical Engineering

Credit Value: 6 points

Handbook Website: There appears to be no university handbook entry for this unit

Unit Website: <http://wiki.mech.uwa.edu.au/index.php/MECH2499>

Faculty or School Website: <http://www.mech.uwa.edu.au/>

Contact Hours: Discuss this with your project supervisor; some additional activities will be arranged.

Important Notice

The Unit Outline (this document) gives the student important information about the unit, its aims, outcomes, materials, programme and assessment.

Note that important information relating to policies, examinations, expectations, copyright, referencing, academic misconduct assistance with communication skills is available on the Faculty website though <http://www.ecm.uwa.edu.au/studentnet/exams>.

You are required to be aware of and fulfill your responsibilities under the University's rules, policies and procedures so it is important that you review the content of these in detail.

UNIT COORDINATOR

Every unit has a person who is responsible for the overall administration of that unit. This person is the Unit Coordinator. If you cannot contact the person who is teaching you or if you have further queries about this unit, you may wish to contact the Unit Coordinator for this unit. Their contact details are below:



Unit Coordinator:	A/Prof Nathan Scott
Email:	nscott@mech.uwa.edu.au
Phone:	6488 3761 (mob. 0406 923 870)
Fax:	6488 1024
Building:	ENCM
Room:	G42
Contact Hours:	9am to 5pm weekdays

TEACHING STAFF

MECH2499 is a project unit and the detail of the work is negotiated at the start of semester. All students are expected to find a project supervisor. Project supervisors for 2010 include:

Subject area(s)	Name, phone number etc.
Civil & Structural Engineering	<p><u>Asst/Prof James Doherty</u></p> <p><i>Assistant Professor</i> Academic Staff (Civil and Resource Engineering) Phone 6488 3991 Fax 6488 1018 MBDP M051 Email doherty@civil.uwa.edu.au</p>
Mechanical Engineering, mechatronics engineering, engineering education	<p><u>A/Prof Nathan Scott (see above for contact details)</u></p>
Environmental Engineering	<p><u>Professor Myra Keep</u></p> <p><i>Professor</i> Earth and Environment, School of Phone 6488 7198 Fax 6488 1037 MBDP M004 Email myra.keep@uwa.edu.au</p>
Environmental Engineering	<p><u>Asst/Prof Marco Ghisalberti</u></p> <p><i>Assistant Professor</i> Environmental Systems Engineering, School of Phone 6488 2408 Fax 6488 1015 MBDP M015 Email Marco.Ghisalberti@uwa.edu.au</p>
Electrical & Electronic Engineering	<p><u>Professor Thomas Braunl</u></p> <p><i>Professor</i> Electrical, Electronic and Computer Engineering, School of Phone 6488 1763 Fax 6488 1168 MBDP M018 Email tb@ee.uwa.edu.au</p>

Many other staff in our Faculty will also be involved, either as project supervisors or in an advisory capacity.

INTRODUCTION

MECH2499 [described by the U. Notre Dame Office of International Studies](#):

"A special program that combines course work with intensive field research has also been developed. The field research course is unique to engineering students, and was established in conjunction with several Australian mining and engineering companies."

"Engineering students will also be placed with either local companies or will work with UWA graduate students on projects for their "hands on" field experience course.

In addition, all program participants will have the opportunity to travel to other parts of Western Australia where a special field component in Aboriginal culture is conducted. They will visit a

variety of geographic and ecological zones which offer fascinating case studies in the links between human economic development and the environment."

LEARNING OUTCOMES

The Field Research could take various forms so the detailed outcomes will depend on what you end up doing – and how hard you work at it. However it is expected that you will develop your skills in these general areas:

- 1 Problem identification and refinement ("are we asking the right questions?");
- 2 Independent research skills – planning a contribution to a larger effort;
- 3 Traditional academic communication skills – reporting what you did in written form and as a presentation;
- 4 Teamwork, negotiation, collaboration;
- 5 Understanding of at least one engineering technical area e.g. if you do a fluid mechanics project it is expected you will know a lot more fluid mechanics at the end than when you started.
- 6 Professional conduct.

And perhaps most importantly of all – you will make new friends, experience a new environment and **have a great time**. Is that learning? Who cares – it is part of what we do here.

LEARNING ACTIVITIES

Quite early in the semester you will discuss project opportunities with supervisors and get into a project team.

Be sure to take careful note of your supervisor's name, email, phone number etc. You should arrange your first project meeting.

It is then expected that you will meet your supervisor quite often to discuss the work. As a bare minimum this should be a formal or semi-formal meeting once a week. If you are working intensively on something it may be necessary to have much more contact than that – daily for example. Your supervisor will negotiate with you about the time and place of project meetings.

You can and should also meet your fellow UWA students to pursue the work. Very likely you will end up in a lab with third year, 4th year and postgraduate students doing various units and projects. They can help you find your way around.

At the time of writing the details of the projects that will be offered are still somewhat sketchy. When that is better known I will arrange some field trips for specific groups (if this is not done by the supervisor). For example if we have a group doing a project in rehabilitation engineering, I'll take just those students out to The Centre for Cerebral Palsy to see their workshops.

STUDENT FEEDBACK

We welcome your feedback as one way to keep improving this unit. Later this semester, you will be encouraged to give unit feedback through **SURF**, UWA's online student feedback system.

ASSESSMENT DETAILS

Assessment Mechanism

The assessment for this unit consists of the following items.

Assessment Tasks	Worth	Due	Unit Learning Outcome Assessed
Professional journal	90%	Each week	All
Presentation	10%	End of semester – date to be arranged	Presentation and communication skills
TOTAL	100%		

General assessment rules

All students in a project team will get the same mark unless there is a complaint from any team member. In that case the matter will be resolved in a meeting with the unit coordinator.

Professional journal

Engineers typically must produce documents for various readers:

- For those who will continue the work at some later date;
- For those who manage the work;
- For advertising or marketing purposes, or to secure funding.

To earn your credit towards your ND degree, I propose that each student, or each student team, **should write something each week**. The Journal should record

- Project activity in a given week. Where did you go, what did you do, what problems were attacked, solved, not solved?
- Pictures of what you are doing and the people and places related to the work.
- Technical details you think might be useful to whoever will continue the work when you are done.

Various software tools could be used to create and maintain the journal. However by default I would like to encourage use of a simple web tool called a WIKI. It has many advantages for this sort of journal. It is easy to edit from any internet terminal; the whole class can see what everyone is doing; and it helps with page formatting.

To edit the wiki and thus publish your journal material for a given week, *visit the unit web site*.

If your project is confidential then you should only publish non-confidential stuff in the public form of your journal (the wiki). In this case keep an additional journal file on your laptop which documents progress in the confidential part of the work. Be sure to back up computer files at least once a week.

The journal is intended to be a true chronological record of what you do. So by default I expect that once you have written a given week's chapter you won't revise it. New stuff should go in a new weekly report. Then at the end the reader will get a true picture of what happened, as it happened, rather than some sanitised thing.

Marking Criteria

I'll mark each week's submission on Friday evening or on the weekend. There will be 12 or 13 such submissions. ***The mark for each week's work will be 80%*** provided

1. Something has been added and it is clearly a substantial new chunk;
2. It is rich in graphics, drawings, pictures, diagrams, web links;
3. I can easily understand what you have been doing for the week;
4. There is an appropriate amount of technical content;
5. Where material from books and the internet is included, it is properly referenced so I can find the source and author.

Your diary will be read, in effect, by two types of reader:

1. An engineering manager who wants to keep an eye on what you are doing from a professional-development point of view;
2. Prospective students in MECH2499 who want to know what it is and whether they might want to do it.

So please include content that will interest both types of reader. If it is just a dusty dry academic document, you will drive the prospective students away. If it is too much like a Facebook(TM) page, it will turn off your academic reader. So please try to achieve a balance with some social stuff, some fun stuff, but also some engineering substance.

I will add comments to your journal after marking so that you will soon know if you are getting it right.

Submission Details

Edit the wiki any time but I will check the content on Friday evening or on the weekend.

Presentation

At the end of semester I would like each of you, or each team, to make a short presentation about your time in Australia. As with the Professional Journal the purpose of this is to communicate both social and technical outcomes. The presentation should be entertaining but also informative. I will try to arrange it as an evening event including food and possibly beer. More details closer to the date.

Marking Criteria

The mark for all presentations will be 80% plus some bonus for the strength of the applause at the end. Or minus some amount if there is an awkward silence.

Academic Conduct

Academic Conduct Essentials

It is a University requirement that all newly enrolled students complete a short compulsory online unit called Academic Conduct Essentials (ACE) within the first 10 weeks of semester. ACE can be accessed via WebCT (<http://webct.uwa.edu.au/webct/entryPageIns.dowebct>).

To find out more about Academic Integrity, look at these great resources:

- Student Services, who run workshops on Academic Integrity
<http://www.studentservices.uwa.edu.au/ss/learning>
- <http://www.ryerson.ca/academicintegrity/index.html> , a series of flash videos from a Canadian University exploring Academic Integrity
- <http://www.lc.unsw.edu.au/onlib/plag.html> which takes you to an on-line quiz where you test your understanding of plagiarism, and where there are links to other universities' academic integrity pages.

STUDENTS' RIGHTS AND RESPONSIBILITIES

It is the responsibility of every student to be aware of all relevant legislation, policies and procedures relating to their rights and responsibilities as a student. These include:

- the Student Charter,
- the University's Guiding Ethical Principles,
- the University's policy and statements on plagiarism and academic integrity,
- copyright principles and responsibilities,
- the University's policies on appropriate use of software and computer facilities,
- the use of calculators in exams
- students' responsibility to check enrolment,
- deadlines, appeals, and grievance resolution,
- student feedback,
- other policies and procedures
- electronic communication with students

See <http://www.ecm.uwa.edu.au/studentnet/exams> for comprehensive information on all of the above.

The Student Guild employs a number of Education Officers who provide information, support and advocacy with a range of academic matters

http://www.guild.uwa.edu.au/home/student_assistance/academic_help . or

Guild Student Centre

Opening Hours:	8.30am - 5.00pm, Monday to Friday
Location:	Ground floor, Guild Village, near Bankwest ATM machine.
Mailing Address:	M300, 35 Stirling Highway, Crawley Western Australia 6009
Phone:	+61 8 6488 2295
Fax:	+61 8 6488 1200
Email (general):	enquiries@guild.uwa.edu.au
Email (confidential):	education@guild.uwa.edu.au

ADDITIONAL INFORMATION

Telephone Contacts:

If you have a query relating to administrative matters such as:-

- requests for deferment of study
- difficulties with accessing online study materials
- obtaining assessment results

please contact your Unit Coordinator.

If you have a query relating to other matters such as:-

- missed assessments
- missing part of Semester
- being considered for special consideration

please contact the Associate Dean (Students):

Dr Jennifer Hopwood
6488 3061
sub.dean@ecm.uwa.edu.au