TEC3192

Systems engineering and reliability analysis

Unit Guide - on campus

Semester 1, 2009
Faculty of Engineering

**TEC3192  Systems engineering and reliability analysis**

Unit Guide – *on campus*

**Semester 1, 2009**

**Unit staff – contact details**

<table>
<thead>
<tr>
<th>Unit Coordinator</th>
<th>Assoc. Prof. Thomas Brown</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus: Clayton</td>
<td>Phone: +61 3 9905 2447</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:Ian.Brown@eng.monash.edu.au">Ian.Brown@eng.monash.edu.au</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Staff:</th>
<th>Dr. Tadeusz Czaszejko</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campus: Clayton</td>
<td>Phone: +61 3 9905 5073</td>
</tr>
<tr>
<td>Email:</td>
<td><a href="mailto:Tadeusz.Czaszejko@eng.monash.edu.au">Tadeusz.Czaszejko@eng.monash.edu.au</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Campus</th>
<th>Dr. Kuang, Ye Chow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaysia</td>
<td></td>
</tr>
</tbody>
</table>
## Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit Outline</td>
<td>1</td>
</tr>
<tr>
<td>Unit synopsis</td>
<td>1</td>
</tr>
<tr>
<td>Learning outcomes</td>
<td>1</td>
</tr>
<tr>
<td>Engineers Australia generic attributes</td>
<td>1</td>
</tr>
<tr>
<td>Workload</td>
<td>3</td>
</tr>
<tr>
<td>Unit relationships</td>
<td>3</td>
</tr>
<tr>
<td>Continuous improvement</td>
<td>3</td>
</tr>
<tr>
<td><strong>Teaching and Learning Method</strong></td>
<td>4</td>
</tr>
<tr>
<td>Communication, participation and feedback</td>
<td>4</td>
</tr>
<tr>
<td>Unit schedule</td>
<td>4</td>
</tr>
<tr>
<td><strong>Unit Resources</strong></td>
<td>6</td>
</tr>
<tr>
<td>Prescribed texts and readings</td>
<td>6</td>
</tr>
<tr>
<td>Recommended texts and readings</td>
<td>6</td>
</tr>
<tr>
<td>Required software (and/or hardware)</td>
<td>6</td>
</tr>
<tr>
<td>Equipment and consumables required or provided</td>
<td>6</td>
</tr>
<tr>
<td>Study resources</td>
<td>6</td>
</tr>
<tr>
<td>Library access</td>
<td>6</td>
</tr>
<tr>
<td>Monash University Studies Online (MUSO)</td>
<td>7</td>
</tr>
<tr>
<td>Assessment tasks</td>
<td>8</td>
</tr>
<tr>
<td>Assessment details and criteria</td>
<td>8</td>
</tr>
<tr>
<td>Electronic submission of assignments in MUSO</td>
<td>8</td>
</tr>
<tr>
<td>Instructions for submitting an assignment electronically using MUSO</td>
<td>9</td>
</tr>
<tr>
<td>Assignment coversheet</td>
<td>10</td>
</tr>
<tr>
<td><strong>University and Faculty policy on assessment</strong></td>
<td>11</td>
</tr>
<tr>
<td>Due dates and extensions</td>
<td>11</td>
</tr>
<tr>
<td>Late assignment</td>
<td>11</td>
</tr>
<tr>
<td>Return dates</td>
<td>11</td>
</tr>
<tr>
<td>Plagiarism, cheating and collusion</td>
<td>12</td>
</tr>
<tr>
<td>Register of counselling about plagiarism</td>
<td>12</td>
</tr>
<tr>
<td>Non-discriminatory language</td>
<td>12</td>
</tr>
<tr>
<td>Students with disabilities</td>
<td>13</td>
</tr>
<tr>
<td><strong>Related links</strong></td>
<td>14</td>
</tr>
</tbody>
</table>
Unit Outline

Unit synopsis

This unit introduces systems engineering and reliability analysis. Key concepts and language are introduced through real-world examples. Frameworks for analysing the life cycles of systems are introduced. Tools and techniques to aid decision-making are provided. Design Automation software tools are introduced with industry-specific examples. Group projects and discussions reinforce the concepts through real-world examples. The concepts of component and system reliability are introduced and extended to reliability analysis of non-repairable and repairable systems, including time-dependent reliability and availability, mean time to failure, mean repair time and lifetime distribution functions.

Learning outcomes

At the completion of this unit students will have the following:

Knowledge and understanding of:
1. The issues of complexity and uncertainty and life cycle costs when designing systems.
2. The concepts of process, policy and quality control.
3. The kinds of software tools that can aid systems design, decision making and life cycle analysis.
4. The applications of probability distributions in the context of reliability analysis.
5. The concepts of redundancy and some of its engineering and economical implications.
7. Approximate methods of reliability evaluation.

Skills to:
1. Create, discuss, analyse and select between alternative systems designs in a logical framework.
2. Identify and apply appropriate mathematical techniques and software tools to aid systems design and optimisation.
3. Analyse reliability performance of series and parallel systems, complex systems and systems comprising components with constant failure rates.
4. Predict time-dependent reliability performance using concepts of Markov process, using indexes such as MTTF, MTBF and MTTR.

Attitudes:
5. Confidence in approaching engineering systems design supported by analytical methods of system design and reliability analysis.

Engineers Australia generic attributes

The Engineers Australia Policy on Accreditation of Professional Engineering Programs – requires that all programs ensure that their engineering graduates develop to a substantial degree the generic attributes listed below. Listed below are the activities in this unit that will help you to achieve these attributes.

Note: that not all graduate attributes are relevant to each unit.
<table>
<thead>
<tr>
<th>Generic Attribute</th>
<th>Activities used in this Unit to Develop Generic Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) ability to apply knowledge of basic science and engineering fundamentals;</td>
<td>Theoretical lecture material, prescribed texts and recommended reading, tutorial problems.</td>
</tr>
<tr>
<td>b) ability to communicate effectively, not only with engineers but also with the community at large;</td>
<td>Written assignment report. In tutorial classes student are asked to present solutions to problems to tutors. Answering questions during laboratory sessions.</td>
</tr>
<tr>
<td>c) in-depth technical competence in at least one engineering discipline;</td>
<td>Selection between alternative systems designs in a logical framework. Application of appropriate mathematical techniques and software tools to aid systems design and optimisation. Analysis of reliability performance of engineering systems.</td>
</tr>
<tr>
<td>d) ability to undertake problem identification, formulation and solution;</td>
<td>Laboratory and tutorial exercises are used for the identifying problems from word descriptions. These are formulated into a formal specification of this unit outline.</td>
</tr>
<tr>
<td>e) ability to utilise a systems approach to design and operational performance;</td>
<td>The very objective of this unit is to teach a systems approach to design and performance analysis.</td>
</tr>
<tr>
<td>f) ability to function effectively as an individual and in multi-disciplinary and multi-cultural teams, with the capacity to be a leader or manager as well as an effective team member;</td>
<td>Laboratories are conducted in teams of 2 or 3 students where students discuss exercise problems and collaborate on the implementation of their joint efforts.</td>
</tr>
<tr>
<td>g) understanding of the social, cultural, global and environmental responsibilities of the professional engineer, and the need for sustainable development;</td>
<td>The impacts on the environment of design decisions are discussed in a general context.</td>
</tr>
<tr>
<td>h) understanding of the principles of sustainable design and development;</td>
<td></td>
</tr>
<tr>
<td>i) understanding of professional and ethical responsibilities and commitment to them; and</td>
<td></td>
</tr>
<tr>
<td>j) expectation of the need to undertake lifelong learning, and capacity to do so.</td>
<td>The lectures and laboratory work illustrate the rapidly changing nature of the systems design environment and the need for continuing education to keep abreast of the latest developments.</td>
</tr>
</tbody>
</table>
Workload

<table>
<thead>
<tr>
<th></th>
<th>Per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lectures</td>
<td>2 hours</td>
</tr>
<tr>
<td>Practice classes</td>
<td>2 hours</td>
</tr>
<tr>
<td>Private study</td>
<td>8 hours</td>
</tr>
<tr>
<td>(consisting of individual and group assignment work, lecture revision, and additional researching and reading)</td>
<td></td>
</tr>
<tr>
<td>Total per week</td>
<td>12 hours</td>
</tr>
</tbody>
</table>

Unit relationships

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Prerequisites</td>
<td>ENG2092</td>
</tr>
<tr>
<td>Corequisites</td>
<td>None</td>
</tr>
<tr>
<td>Prohibitions</td>
<td>ECE3092</td>
</tr>
</tbody>
</table>

Continuous improvement

Monash is committed to ‘Excellence in education’ and strives for the highest possible quality in teaching and learning. To monitor how successful we are in providing quality teaching and learning Monash regularly seeks feedback from students, employers and staff. One of the key formal ways students have to provide feedback is through Unit Evaluation Surveys. It is Monash policy for every unit offered to be evaluated each year. Students are strongly encouraged to complete the surveys as they are an important avenue for students to “have their say”. The feedback is anonymous and provides the Faculty with evidence of aspects that students are satisfied and areas for improvement.

Faculties have the option of administering the Unit Evaluation survey online through the my.monash portal or in class. Lecturers will inform students of the method being used for this unit towards the end of the semester.

Previous Student Evaluations of this unit
If you wish to view how previous students rated this unit, please go to [http://www.monash.edu.au/unit-evaluation-reports/](http://www.monash.edu.au/unit-evaluation-reports/)

Over the past few years the Faculty of Engineering has made a number of improvements to its units as a result of unit evaluation feedback. Some of these benefits include tutor/demonstrator training, improved objectives and better feedback mechanisms.
Immediate feedback for us

According to past evaluations of this unit, we have set an improvement priority for this semester. It is to make the learning outcomes clearer; to make the unit more stimulating; to improve resources and to improve the level of tutoring and feedback.

Feedback is welcome at any time throughout the semester. Please use email to send it to the unit co-ordinator, or in person.

You may wish to use the open ended questions in the unit evaluation to provide written feedback on your experience of this and whether it has been helpful to you during this semester.

Teaching and Learning Method

Communication, participation and feedback

Monash aims to provide a learning environment in which students receive a range of ongoing feedback throughout their studies. In this unit it will take the form of group feedback via practice classes, individual feedback, peer feedback, self-comparison, verbal and written feedback, discussions in class, as well as more formal feedback related to assignment marks and grades. Students are encouraged to draw on a variety of feedback to enhance their/your learning.

Unit schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture</th>
<th>Practice class</th>
<th>Assignment activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction to concepts of reliability, historical overview, component classification in reliability studies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Binomial distribution in reliability; modelling concepts using reliability networks; simple systems: series and parallel models; concepts of partial and standby redundancy;</td>
<td>Applications of binomial distribution and network modelling</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Reliability evaluation of complex systems: conditional probability approach, minimal path set and cut set method, fault trees</td>
<td>Analysis of complex systems using cut set, path set and decomposition methods</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Lifetime probability distributions: time to failure, cumulative failure distribution, survivor function, failure rate and hazard rate; practical failure patterns: bathtub curve; constant</td>
<td>Simple systems with time dependent failure rates</td>
<td>Assignment 1</td>
</tr>
<tr>
<td>Week</td>
<td>Topics</td>
<td>Assignments/Exercises</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Time dependent reliability in simple systems; repairable systems: Markov process, system state diagrams, state probabilities, system availability and unavailability</td>
<td>Reliability analysis using Markov methods</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Frequency and duration methods: mean duration of states, MTTF, MTTR, and MTBF; merging states; approximate methods for time-dependent reliability systems; Monte Carlo simulation</td>
<td>MTTF, long-term availability and reliability using frequency and duration techniques; approximate methods</td>
<td>Assignment 2</td>
</tr>
<tr>
<td>7</td>
<td>Introduction to systems engineering: Systems point of view; Definitions of Systems Engineering. System Challenges and Pitfalls. Skills of a Systems Engineer.</td>
<td>Library Information Session</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Methodological Frameworks and Systems Engineering Processes.</td>
<td>Group design project part 1 (Pick a simple system to design and write a design document)</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Defining a product or system: Generation of Alternatives and System Synthesis; Analysis of alternatives with imperfect information; Feasibility Studies.</td>
<td>Group design project part 2</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Tools for systems analysis: System dynamics; Optimization in design and operations; Economic models.</td>
<td>Tutorial: design optimization and economic model</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Tools for systems analysis (continued): Queuing theory and analysis; concepts of process, policy and quality control.</td>
<td>Report writing on a selected topic, e.g. review of UML</td>
<td>Assignment 3</td>
</tr>
<tr>
<td>12</td>
<td>Design Automation: History of Design Automation; Systems-Level DA; Lifecycle Management DA; Industry-Specific examples</td>
<td>Green-field design: economic considerations</td>
<td>Green-field design: economic considerations</td>
</tr>
<tr>
<td>13</td>
<td>Revision</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Unit Resources

Prescribed texts and readings


Recommended texts and readings


P Kales, Reliability for Technology, Engineering and Management, Prentice-Hall, 1998

Patrick D T O'Connor, Practical Reliability Engineering, Wiley 2004

Required software (and/or hardware)

Matlab

Equipment and consumables required or provided

N/A

Study resources

N/A

Library access

The Monash University Library site contains details about borrowing rights and catalogue searching. To learn more about the library and the various resources available, please go to http://www.lib.monash.edu.au
Monash University Studies Online (MUSO)

All unit and lecture materials are available through the MUSO (Monash University Studies Online) site. You can access this site by going to:

a) http://muso.monash.edu.au or
b) via the portal (http://my.monash.edu.au).

Click on the My Units tab, then the Monash University Studies Online hyperlink.

In order for your MUSO unit(s) to function correctly, certain programs may need to be installed such as Java version 1.4.2. This can easily be done by going to http://www.monash.edu.au/muso/support/students/downloadables-student.html to update the relevant software.

You can contact the MUSO helpdesk by:

**Phone** (+61 3) 9903-1268 or 9903-2764

Operational hours (Monday – Thursday) – local time

Australia: 8 am to 10 pm (8pm Non Teaching period)
Malaysia: 6 am to 8 pm (6 pm Non Teaching period)
South Africa: 11pm to 1pm (11 am Non Teaching period)

Operational hours (Friday) – local time

Australia: 8 am to 8 pm
Malaysia: 6 am to 6 pm
South Africa: 11pm to 11 am

Operational hours (Saturday-Sunday) – local time (Teaching and Exam Period Only)

Australia: 1 pm to 5 pm
Malaysia: 11 am to 3 pm
South Africa: 4 am to 8 am

Further information can be obtained from the following site

ECSE Department also provides additional unit resources for some units on the website:

Assessment tasks

<table>
<thead>
<tr>
<th>Week</th>
<th>Submission Date</th>
<th>Activity</th>
<th>Value %</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td></td>
<td>Reliability continuous assessment</td>
<td>20%</td>
</tr>
<tr>
<td>8-12</td>
<td></td>
<td>Systems Engineering continuous assessment</td>
<td>20%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total continuous assessment</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Examination (3 hours)</td>
<td>60%</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Total assessment</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

The unit coordinator reserves the right to moderate the assessments given by the individual tutors. This process will occur at the end of the semester.

Assessment details and criteria

Examination: (3 hrs), 60%. Continuous assessment: 40%. Students must achieve a mark of no less than 45% in each of these components, as well as an overall mark of no less than 50%, to achieve a pass grade.

The practice sessions will be based on individual student work. They will involve general design exercises or solving numerical problems with the help of Matlab and/or other software. For this reason, all practice sessions will be held in a computer laboratory.

Attendance will be taken in all practice sessions. Each absence from the practice class without justified reason will result with a reduction of the final mark for the progressive work. The deduction will be calculated separately for each part of the unit and it will amount to 20% for each undocumented absence. The continuous assessment mark will be obtained from assignments. The assignment issue dates are specified in the Unit Schedule. The due dates for the assignments will be given on each assignment sheet.

Hard copy assignment submissions

All assignments are to be submitted via the assignment box located on the first floor in building 72 around the corner from the ECSE Office.

**Note:** You must keep a copy of your assignment solutions in an electronic format. We suggest you keep a print out also.

Electronic submission of assignments in MUSO

**How it works**

1. If Electronic Submission has been approved for your unit, use only the MUSO assignment submit tool. Do not submit files attached to email. Log into MUSO http://muso.monash.edu.au and select the unit for which you wish to submit work.
2. Unless you have made prior arrangements with your lecturer, only the following file formats will be accepted: .doc, .rtf, .txt, .pdf, .html

3. It is essential you adhere to the following format for the naming of the file you wish to submit:
   a) It MUST contain your Authcate name.
   b) There must be NO SPACES in the filename.

4. You will receive a confirmation message within MUSO once you have successfully submitted your assignment within the electronic dropbox.

5. Comments and grading of your assessment will be communicated to you either by MUSO, email, or post.

Instructions for submitting an assignment electronically using MUSO

1. Click on the Assignments icon on the relevant unit homepage. The Assignments screen displays.

2. Click on the assignment title for which you wish to submit your work.

3. Click on the Add Attachments button.

4. To locate your file, click on the Upload File button. The Upload File menu will appear.

5. Locate the assignment file you wish to upload by clicking on the Browse button.

6. Select the file and click on the Open button. The Upload File for Assignment screen appears with your uploaded file displayed.

7. Click on the Save button.

8. You will see a green tick next to your uploaded file. To confirm this is the file you wish to upload, click the Add Selected button.

9. Click on the Submit button. You'll see a confirmation window when your assignment has been successfully submitted.

10. To return to the MUSO homepage, click on the Continue button.

The rules
By submitting your assignment electronically you are deemed to have accepted these rules.

1. Late assignments will not be accepted electronically as the mailbox will be disabled at 5.00pm on the due date.

2. You must keep a copy of your assignment in electronic format. We suggest you keep a print out also.
3. The cover page of your assignment must set out your name, student number, topic, tutor's name and a declaration that says "I [insert your name] declare that this assignment is entirely my own work and that it has not been submitted for assessment in any other unit. I have kept a copy of this assignment. This project contains no material that has been accepted for the award of any other degree or diploma in any educational institution and, to the best of my knowledge and belief, it contains no material previously published or written by another person, except where due reference is made in the text of the project."

4. Remember that, just as for hard copy submissions, you should arrange your study /workload so as to allow plenty of time for last minute hitches. Computer problems/ busy servers will NOT be an excuse for an extension. Do not leave electronic submission of your assignment to the last minute.

Assignment coversheet

All assignments need to be submitted with a coversheet.

The Faculty assessment coversheet is accessible on the Faculty website under Current Students, Undergraduate and Graduate Coursework Students, Assessment, exams and results at:

University and Faculty policy on assessment

Due dates and extensions

The due dates for the submission of assignments are given in the previous section. Please make every effort to submit work by the due dates. Students are advised to NOT assume that granting of an extension is a matter of course.

If you need an extension for any of the assignments, you must submit a written request \textit{48-hours before} the due time and date, and attach supportive evidence such as medical certificate.

\textbf{The form should preferably be forwarded as an email attachment}, sent to the unit co-ordinator. The email should be sent from your university email address with your name typed in lieu of signature.

Note that other lecturers cannot grant extensions. Lecturer-in-charge (unit co-ordinator) will indicate at the time of granting the extension whether any penalty in marks will apply to the submitted work.

If an extension is granted, the approval must be attached to the assignment.

Late assignment

If you are late in applying for an extension or you don’t have a good reason, you should still submit the work, but 10\% of the total marks available for that assessment component will usually be deducted for each day late.

No assignment will be accepted once an assignment has been returned to the class.

Deferred tests and examinations may be granted in cases of extenuating personal circumstances such as serious personal illness or bereavement.

Remember, you are required to keep an up-to-date copy of all submitted assignments to safeguard against the loss of work through accident or error.

Return dates

Students can expect assignments to be returned within two weeks of the submission date or after receipt, whichever is later.

Assessment for the unit as a whole is in accordance with the provisions of the Monash University Education Policy at:
Plagiarism, cheating and collusion

The University regards most seriously any acts of dishonesty in assessment such as plagiarism, collusion, resubmission of previously marked work in different units, examination misconduct and theft of other students’ work.

**Plagiarism**  While some people incorrectly assume that plagiarism occurs only where someone copies verbatim, it really involves taking and using another person’s ideas or work and passing these off as one’s own by failing to give appropriate acknowledgement; that is, not indicating by referencing that the ideas expressed are not your own. Good scholarship is marked by an acknowledgement of the origin of ideas you use, develop or synthesise.

**Collusion** (or unauthorised collaboration) Means joint effort in preparing material submitted for assessment, between students or others, except where this has been approved by the lecturer-in-charge of the unit.

**Cheating** Means seeking to obtain an unfair advantage in an examination or in other written or practical work required to be submitted or completed by a student for assessment. Hence, if the passing off was done intentionally you have cheated, if it was not intentional, the offence you have committed is the academic misdemeanor of failing to reference a source correctly.

Acts of dishonesty in assessment could result in penalties, including failure in the unit and possible exclusion from the University. For further details please refer to the University’s Discipline Statute (Statute 4.1).


Register of counselling about plagiarism

The university requires faculties to keep a simple and confidential register to record counselling to students about plagiarism (e.g. warnings). The register is accessible to Associate Deans Teaching (or nominees) and, where requested, students concerned have access to their own details in the register.

Non-discriminatory language

The Faculty of Engineering is committed to the use of non-discriminatory language in all forms of communication. Discriminatory language is that which refers in abusive terms to gender, race, age, sexual orientation, citizenship or nationality, ethnic or language background, physical or mental ability, or political or religious views, or which stereotypes groups in an adverse manner. This is not meant to preclude or inhibit legitimate academic debate on any issue; however, the language used in such debate should be non-
discriminatory and sensitive to these matters. It is important to avoid the use of discriminatory language in your written work. The most common form of discriminatory language in academic work tends to be in the area of gender inclusiveness. You are, therefore, requested to check your work for this and to ensure it is non-discriminatory in all respects.

**Students with disabilities**

Students with disabilities that may disadvantage them in assessment should seek advice from Faculty of Engineering Student Service staff and/or their Unit Coordinator before completing assessment tasks and examinations.

Deferred assessment and special consideration

Deferred assessment (not to be confused with an extension for submission of an assignment) may be granted in cases of extenuating personal circumstances such as serious personal illness or bereavement. Special consideration in the awarding of grades is also possible in some circumstances. Refer to the Faculty Assessment Policy and forms at: [http://www.policy.monash.edu/policy-bank/academic/education/assessment/](http://www.policy.monash.edu/policy-bank/academic/education/assessment/)
Related links

Responsibilities of Students
As a student of the University you have the following responsibilities:

• to apply yourself to your studies to the best of your abilities
• to become familiar with the rules and regulations governing the degree in which you are enrolled, and to ensure that the units selected meet the degree requirements
• to be aware of the policies and practices of the University and of any faculty and department in which you are enrolled, which are contained in the materials and information made available to you
• to be aware of the rules and regulations concerning the use of University computing, library and other facilities, as set out in published material
• to meet deadlines for work to be submitted
• to take the initiative and consult appropriately when problems arise
• to submit original work for assessment without plagiarising or cheating
• for on-campus students, to attend lectures, tutorials and seminars for each unit in which you are enrolled and, for off-campus students, to engage thoroughly with all course materials and participate in any prescribed residential schools
• to accept joint responsibility for your own learning
• to contribute to the development of university programs and policies by participating in consultative and deliberative processes in a responsible and ethical manner
• to be aware of the university's commitment to equal opportunity and to demonstrate tolerance and respect for all members of the University community
• to respect the right of staff members to express views and opinions
• to respect the working environment of others in all areas of the University
• to retain a copy of all assignment work submitted for assessment, and hold it until a grade for the unit has been published
• to regularly scan personal computers for viruses and other destructive software and to ensure that 'infections' are not transmitted to computers owned by the University, or to computers owned by other students, or by other individuals or organisations
• to regularly back-up documents, databases, presentations, spreadsheets and other files held on a personal computer which relate to your study at university and to arrange secure storage for these 'back-up' copies.
• to regularly check both the unit WebCT site and your official University email account.

Plagiarism, Cheating & Collusion
University link:
Faculty link:

Ethical Behaviour
University link:
Faculty link:

Occupational Health & Safety Policy
Information for Students
University links:
Also available on the OHSE website
Occupational health & safety policies, procedures and guidelines, which include:
Alcohol & other drugs policy
Environment policy
Procedures for hazard & incident reporting, investigation & recording
Immunisation policy
Occupational health & safety policy
Policy on first aid
Policy on the prevention of bullying & occupational violence at Monash
to be used in conjunction with the Procedures for managing incidents of bullying & occupational violence in the workplace
Policy with respect to smoking
OHS procedures for work & study during times when emergency response is limited
Procedures for health & safety issue resolution

Pets on campus

Ergonomic guidelines Computer User Guide

Ergonomics at Monash - Computer Workplace Design Guidelines

Emergencies
For all non-medical emergencies in working hours, telephone extension 333.
For all emergencies out of normal hours, telephone extension 333.
Faculty link: