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1. Subject Coordinator

Professor Danny Sutanto
Room: 35.G37  Tel: 4221 4918  Email: soetanto@uow.edu.au
Consultation Times: Mondays 1530-1730 and Tuesdays 1430-1630. Students are advised to use email to make appointments.

2. Teaching Staff

Associate Professor Sarath Perera
Room: 35.G33  Tel: 4221 3405  Email: sarath@uow.edu.au
Consultation Times: Mondays 1330-1530 and Wednesdays 0830-1030. Students are advised to use email to make appointments.

3. Subject General Information

Equivalence: Nil.
This subject is offered as a 900-level core subject in the Master of Engineering Studies. This 900-level subject is the one of two core subjects offered in this degree program.

4. Subject Description

This subject is designed to provide students with fundamental theoretical and practical skills to undertake the analysis, modelling and simulation of signals and systems using Matlab and Simulink. This subject will cover analog and digital signal representation and transformation; system function; time and frequency response; random signals and analysis; and signal processing applications.

5. Subject Objectives

On successful completion of this subject students should be able to:
(a) represent and analyse signals and systems in time domain and frequency;
(b) understand linear systems and derive their responses to various test input signals;
(c) understand random variables and stochastic processes;
(d) apply basic signal processing operations such as convolution, correlation and transformation to various signal processing problems;
(e) gain substantial Matlab and Simulink skills for signal and system simulation and modelling; and
(f) demonstrate appropriate problem solving capabilities.

6. Graduate Attributes

Students will acquire the following statistical, information, computer and academic literacy as a result of explicit teaching/learning activities in this subject:
(a) observe, describe, document, interpret, make decisions; critically consume and evaluate information. [Graduate Attribute 1/Generic Attribute (i)]
(b) explore issues with existing knowledge, including written and oral analysis; understand principles, laws and formulae to use knowledge to solve academic problems; understand not only the theory of the discipline by also the practical implications and applications of the acquired knowledge. [Graduate Attribute 2/Generic Attributes (c) and (h)]
(c) use all forms of expression to communicate knowledge to others – spoken, written, graphic and other non-verbal forms appropriate to context; formulate clear concise questions based on information needs; appreciate the need for maintaining records. [Graduate Attribute 3/Generic Attribute (b)]

(d) interact effectively with other people on a one to one basis and in groups to achieve a shared goal; engages in and receives constructive criticism and argument. [Graduate Attribute 4/Generic Attribute (f)]

(e) critically evaluate information sources; identify, respond to and devise solutions to problems; understand basic design problems and utilise a variety of methods in their solution; use knowledge of basic science and engineering fundamentals to develop a command of existing knowledge within a chosen discipline. [Graduate Attribute 5/Generic Attributes (a), (d) and (e)]

(f) is information literate, ie. has the ability to access, locate, critically analyse, interpret, evaluate and use information; is computer literate, ie. has the ability to use effectively a personal computer, associated peripherals and generic software to find, store, retrieve and manipulate data. [Graduate Attribute 7]

(g) identify, respond to and devise solutions to problems; identify ethical dimensions of a problem or issue. [Graduate Attribute].

7. Attendance Requirements and Timetable

In accordance with the University Code of Practice – Students, students should attend all lectures, workshops, seminars and practicals associated with this subject.

This subject consists of: 2 hour lecture and 2 hours practical per week. The timetable for this subject is available on SOLS.

8. Major Texts and References

Students are recommended to read the following texts:

Recommended Reading:


*Note: This is not an exhaustive list.*

9. Required Materials

Students are required to purchase a Laboratory Logbook. This is a hardcover, bound book with no loose sheets.

Students will be advised of any further requirements.

10. Subject Website

The subject has an online support site which will be used for delivery of course material and online assessment. This can be accessed via SOLS.
## 11. Assessment Task List

<table>
<thead>
<tr>
<th>Assessment Task</th>
<th>Weight</th>
<th>Method of Submission</th>
<th>Length, Style and Format Required</th>
<th>Date Due, Time and Location, if Relevant</th>
<th>Penalties for Late Submission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Examination</td>
<td>60%</td>
<td>Official University Examination</td>
<td>Official University Examination</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Mid Session Exam</td>
<td>15%</td>
<td>Hard copy to be handed in during Tutorial class</td>
<td>55 minute exam</td>
<td>During the scheduled Tutorial hour in Week 7.</td>
<td>N/A</td>
</tr>
<tr>
<td>Project</td>
<td>15%</td>
<td>Hard copy</td>
<td>10-15 page report</td>
<td>Report (Assignment Cover Sheet attached) to be handed in to the School's Office (35.G43) by 4.00pm Thursday, Week 13. Topics will be given in Week 8.</td>
<td>10% of the full mark per working day report is late. Score of '0' for both demonstration AND report if demonstration not completed on time.</td>
</tr>
<tr>
<td>Practical</td>
<td>10%</td>
<td>Hard copies to be handed in during Practical class</td>
<td>Hard copy</td>
<td>In allocated class</td>
<td>10% of the full mark per working day late.</td>
</tr>
</tbody>
</table>

In addition to the above, students are advised that School Policies relevant to the assessment of this subject are available on-line on the School webpage under information for Current Students.

Students are advised to access this information immediately. Hard copies are available from the School Office (35.G43) on request.

## 12. Extensions for Written Work/Academic Consideration

Students who miss a deadline or otherwise find their work in the subject affected by illness or serious misadventure are required to lodge a formal request for Academic Consideration via SOLS. The procedures for lodging a request are available at:


## 13. Return and Retention of Assessed Materials

Assessed materials (with the exception of end of session examination papers) will be returned to students in class or available from the SECTE Stores Officer in Room 35.132A. Uncollected materials will be retained until Week 13 of the following Session. Following this date uncollected materials will be securely disposed of.

End of session examination papers are not returned to students. Students wishing to view their end of session examination paper will need to contact the subject coordinator to arrange a time for viewing. End of session examination papers are held by the School in a secure location for a period of two years before they are disposed of securely.
14. Plagiarism

Students are responsible for submitting original work for assessment, without plagiarism or cheating, abiding by the University’s policy on plagiarism as set out in the University Handbook under Universities Policy Directory and in Faculty Handbooks and subject guides. Plagiarism has led to expulsion from the University.

Plagiarism is the use of another person's work, or idea, as if it were your own. The other person may be an author, critic, lecturer or another student. When it is desirable, or necessary, to use other people’s material, take care to include appropriate references and attribution - do not pretend the ideas are your own. Be sure not to plagiarise unintentionally. For example use of phrases, sentences or paragraphs, or use of software algorithms, subroutines, techniques or designs produced by others, without clearly describing their origin, is a common form of plagiarism, which can attract severe penalties and even expulsion from the University.

PLAGIARISM WILL NOT BE TOLERATED.

Non-detection of plagiarism in one case, cannot be used as a excuse for continuing the practice. Plagiarism has led to expulsion from the University. If you are in any doubt as to what plagiarism means, the article on 'Plagiarism and Intellectual Property' in the November 2001, Vol.39, No.11 issue of IEEE Communications Magazine, will answer most of your questions and you are strongly advised to read it. Oral examinations may be conducted to authenticate work.

Students must abide by the University’s policy on Acknowledgement Practice/Plagiarism.

15. Grievance Procedures

Students that have a problem or concern in relation to their academic experience will need to consult the University and Faculty of Informatics Grievance Procedure.

16. School Policies

All School Policies applying to this subject, including academic consideration, grievance procedures and assessment are available from the School's webpage under information for Current Students.

Students are advised to familiarise themselves with these requirements. Hard copies are available from the School Office (35.G43) on request.

School Policies do not supersede any University Codes of Practice, rules and Guidelines. School policies must be read in conjunction with the applicable University requirements.

17. University Codes of Practice, Rules and Guidelines

The University has in place codes of practice, rules and guidelines that define a range of policy issues on both educational and student matters. Students must familiarise themselves with the contents of these requirements:

(a) Code of Practice - Teaching and Assessment

(b) Code of Practice - Students

(c) Acknowledgement Practice/Plagiarism

(d) General Course Rules (including: Enrolment, Assessment and Intellectual Property)

(e) Academic Consideration Policy
(f) Course Progress Policy

(g) Respect for Diversity Policy

(h) Occupational Health and Safety

(i) Student Academic Grievance Policy

(j) Disability Support

End