

**GUIDE FOR POSTGRADUATE
COURSEWORK STUDENTS
2009**

**Master of Biomedical Engineering
Master of Electronic Engineering
Master of Microelectronic Engineering
Master of Telecommunication Engineering
Master of Electronic Systems and Network Engineering
Master of Telecommunications and Network Engineering
Postgraduate Diploma in Electronic Engineering**

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Questions?

www.latrobe.edu.au/ee/coursework_students/index.htm

www.ee.latrobe.edu.au/~dennis/PGadm/Welcome.htm

Cannot find an answer?

- For subject related questions, make an appointment to see your lecturer.
- For other study related questions, make an appointment to see the course coordinator whose consultation time is to be announced.

Table of Contents

	Page
Important Dates	5
Course Organisation	5
• Master of biomedical Engineering	6
• Master of Electronic Engineering	7
• Master of Telecommunication Engineering	11
• Master of Microelectronic Engineering	14
• Master of Electronic Systems and Network Engineering	15
• Master of Telecommunications and Network Engineering	20
• Postgraduate Diploma in Electronic Engineering	27
Assignments	29
Notice Boards	30
Lecture Notes	30
Exam Tutorials	30
Practical work	31
Facilities Available to Postgraduate Coursework Students	31
Department of Electronic Engineering Laboratory Practice	42
Academic Misconduct (inc. Plagiarism)	44
La Trobe University Procedure for Working After Hours in Laboratories or Workshops	47

Introduction

This guide is an important reference for all students commencing Postgraduate Courses in the Department of Electronic Engineering in Second Semester 2008. It covers issues that are important for your studies at La Trobe University and issues that are common to all, or a number of subjects. However, it should be noted that each subject is managed and assessed separately, and that detailed information concerning each subject will be provided by the subject coordinator. Unit codes for units offered by the Department of Electronic Engineering and the Department of Computer Science and Computer Engineering in 2008 have been updated.

Important Dates

March 13	Last day for 1st semester course transfers and unit additions without specific approval from the unit coordinator and course coordinator
August 7	Last day for 2nd semester course transfers and unit additions without specific approval from the unit coordinator and course coordinator

Course Organisation and Details

Staff and Their Role in the Postgraduate Coursework Programs

For matters concerning an individual subject, you should first approach the subject coordinator (and/or lecturer) in charge of that subject.

For more general matters associated with your course such as timetable problems and special consideration concerning a number of subjects, please contact the postgraduate coursework coordinator.

Course Transfers

Subject to the approval of the course coordinator, students may be permitted to transfer courses. Students wishing to apply for a course transfer must fill out an “Application to Transfer” form (available from the Faculty office) and submit it to the course coordinator for approval. Postgraduate students considering a course transfer must note the following:

- (i) course transfers are not permitted after the 2nd week of each semester. Course transfers are permitted again once semester results are available
- (ii) the International Programs Office must approve each course transfer by an international student
- (iii) the International Programs Office may charge a fee for second and subsequent course transfers

Variation of Enrolment

Up to the end of the second week of each semester students may vary their enrolment (i.e. change their enrolled units) via StudentOnline (www.latrobe.edu.au/acadserv/current/studentonline.html) or via a “Variation of Enrolment” form (available from the Faculty office). After the second week of each semester students will NOT normally be permitted to add a unit to their enrolment (i.e. start studying a new unit). Any unit addition requests after the second week of semester must be made via a “Variation of Enrolment” form on which BOTH the unit coordinator and postgraduate coursework coordinator must indicate their approval.

Master of Biomedical Engineering (SMBE)

The Master of Biomedical Engineering is structured to include core, foundation, specialised and elective subjects from Electronic Engineering with emphasis on developing core skills and knowledge base for the professional practice of Biomedical Engineering. The award of the degree requires the student to successfully complete a total of 240 credit points, which must include a biomedical engineering project. The normal duration of the course will be two years.

Course Structure

Year 1 (75 cp for core subjects and 45 cp for elective subjects)

Sem.	Subject Name	Subject Code	CP
1	Embedded Processors	ELE3EMP	15
1	Instrumentation Electronics and Sensors	ELE3IES	15
1	C Programming for Engineers and Scientists	CSE1CES	15
1	Elective		15
2	Digital Signal Processing	ELE3SIP	15
2	Communication Networks	ELE4NET	15
2	Elective		30

Year 2

Sem.	Subject Name	Subject Code	CP
2	Biomedical Engineering A	ELE3BIO	15
1	Biomedical Engineering B	ELE4BME	15
1	Advanced Signal processing	ELE4ASP	15
1	Medical Engineering	ELE5MEN	15
2	Clinical Engineering	ELE4CLN	15
2	Neural Engineering	ELE4NUE	15
1/2	Biomedical Design Exercise	ELE5BDE	30

NOTE: There is an exit pathway to take out a degree or diploma after two semesters study. However, the electives must be specifically chosen to enable this pathway.

- The Post Graduate Diploma in Electronic Engineering requires that ELE5PRA is taken during the first year of enrolment.
- The Master of Electronic Engineering requires that ELE5PRA (15CP) and a design exercise (ELE5NDE, or ELE5EDE - 30CP) are taken during the first year of enrolment.

Master of Electronic Engineering (SMEE)

The Master of Electronic Engineering course is a two-semester (one-year) full-time program requiring the successful completion of 120 credit points. Students should seek advice from a course advisor before enrolling. Where a student can demonstrate that they have previously covered the material in a required unit they may replace it with an elective – requires approval of course coordinator.

Core Subject (15 credit points)

Sem.	Subject Name	Subject code	CP
1/2	Engineering Practice	ELE5PRA	15

Project / Design Subjects

Each student selects a design/project option from the following:

(a) A 30 credit point single semester electronic engineering design exercise

Sem.	Subject Name	Subject code	CP
2	Electronic Engineering Design ¹¹	ELE5EDE	30
or			
1	Network Engineering Design ¹⁰	ELE5NDE	30
or			
1/2	Biomedical Engineering Design	ELE5BDE	30
or			
2	Telecommunication Engineering Design	ELE5TDE	30

(b) A 45 credit point two semester Electronic Engineering project¹³ (students enrol in both subjects)

1/2	Electronic Engineering Project A ¹	ELE5ERA	15
1/2	Electronic Engineering Project B ¹	ELE5ERB	30

(c) A 60 credit point two semester Electronic Engineering major project¹³ (students enrol in both subjects)

1/2	Electronic Engineering Major Project A ¹	ELE5MPA	30
1/2	Electronic Engineering Major Project B ¹	ELE5MPB	30

Elective Subjects

Remaining subjects are chosen from the following, according to the students' interest, to a total of 120 credit points for the entire program. The subjects offered may vary from year to year depending on demand staff availability.

Teaching period	Unit name	Unit code	Credit points
1	Advanced Studies in Telecommunication A ¹	ELE5ASA	15
2	Advanced Studies in Telecommunication B ¹	ELE5ASB	15
1	Advanced Topics A ^{1*}	ELE4ATA	15
2	Advanced Topics B ^{1*}	ELE4ATB	15
1	Advanced Topics in Telecommunications A ¹	ELE5TTA	15
2	Advanced Topics in Telecommunications B ¹	ELE5TTB	15
1 or 2	Directed Study ¹	ELE4DIR	15
2	Biomedical Engineering A ¹	ELE3BIO	15
1	Communications Systems	ELE3CMN	15
1	Control Systems	ELE3CON	15
1	Embedded Processors	ELE3EMB	15
1	Instrumentation Electronics and Sensors	ELE3IES	15
2	Advanced Instrumentation Electronics ⁵	ELE4AAE	15
1	Advanced Signal Processing ⁴	ELE4ASP	15
1	Biomedical Engineering B ^{1,6}	ELE4BME	15
1	Radio Frequency Design ²	ELE4RFD	15
1	Broadband Digital Communications ²	ELE5BDC	15
1	Digital System Design ³	ELE5DSD	15
1	Integrated Circuit Design ³	ELE5ICD	15
1	Multimedia Communications ^{4*}	ELE5MMC *	15
1	Optical Networks ⁹	ELE5OPN	15
1	Personal Mobile Communications	ELE5PMC	15
1	Semiconductor Materials and Devices	ELE5SDP	15
1	Secure Communications*	ELE5SEC *	15
1	Telecommunications Systems Engineering	ELE5TSE	15
2	Digital Communication Systems	ELE3DCS	15
2	Electronic Design Automation-Tools and Technique	ELE3DDE	15
2	Image Processing and Coding	ELE5IPC	15
2	Digital Signal Processing	ELE3SIP	15
2	Antennas and Propagation ⁷	ELE4ANS	15
2	Clinical Engineering ¹	ELE4CLN	15
2	Digital Control Theory ⁸	ELE4DCT	15
2	Communications Networks ²	ELE4NET	15
2	Emerging Topics in IC Design	ELE5ETD	15
2	EDA Tools and Design Methodology*	ELE5TDM *	15

- Key: ¹ Enrolment subject to approval from the course coordinator.
- ² Requires units ELE3CMN (Communication Systems) and [ELE3DCS](#) (Digital Communication Systems) or prior equivalent studies.
- ³ Requires unit [ELE3DDE](#) (Electronic Design and Automation-Tools and Technique) or prior equivalent studies.

- ⁴ Requires unit [ELE3SIP](#) (Digital Signal Processing) or prior equivalent studies.
- ⁵ Requires unit [ELE3IES](#) (Instrumentation Electronics and Sensors) or prior equivalent studies.
- ⁶ Requires unit [ELE3BIO](#) (Biomedical Engineering A) or prior equivalent studies.
- ⁷ Requires unit [ELE3RMO](#) (RF, microwave and optical transmissions) or prior equivalent studies. From 2009 requires [ELE3CMN](#) and [ELE3DCS](#).
- ⁸ Requires unit [ELE3CON](#) (Control Systems) or prior equivalent studies.
- ⁹ Incompatible with [ELE4OFC](#) (Optical Fibre Communication Systems).
- * Not offered in 2008.

Units offered by other departments

Subject to the approval of the course coordinator, students may take a maximum of two units (30 credit points) offered by other departments, provided that they are of an appropriate level and are considered relevant to the course. For example, the units offered by the Department of Computer Science and Computer Engineering applicable to this program include:

Teaching period	Unit name	Unit code	Credit points
1	C Programming for Engineers and Scientists	CSE1CES	15
1 or 2	Network Engineering Fundamentals	CSE2NEF	15
2	Pervasive Network Design	CSE4PND	15
2	Networks Systems and Web Security	CSE3NSW	15
1	Communication Protocol Engineering	CSE4CPE	15
2	Mobile and Pervasive Computing	CSE4MPC	15

Specialisation in Biomedical Engineering

This popular specialisation provides graduates with quality training in both instrumentation and clinical aspects of the biomedical engineering field. Students intending to study this specialisation must include the following subjects in their enrolment and undertake relevant project work:

Sem.	Subject Name	Subject code	CP
1	Biomedical Engineering A	ELE3BIO	15
1	Biomedical Engineering B	ELE4BME	15
2	Clinical Engineering	ELE4CLN	15
1	Instrumentation and Sensors	ELE3IES	15
1/2	Biomedical Engineering Design	ELE5BDE	30

Subject Details

For greater detail of the units listed above see Appendix C.

Notes:

- ¹ Enrolment subject to approval from the course co-ordinator
- ² Requires foundation subjects [ELE3CMN](#) and [ELE3TEL](#) or prior equivalent studies
- ³ Requires foundation subject [ELE3DDE](#) or prior equivalent studies
- ⁴ Requires foundation subject [ELE3SIP](#) or prior equivalent studies
- ⁵ Requires foundation subject [ELE3ACD](#) or prior equivalent studies
- ⁶ Requires foundation subject [ELE3BME](#) or prior equivalent studies

- 7 Requires foundation subject ELE3RMO or prior equivalent studies
- 8 Requires foundation subject ELE3CON or prior equivalent studies
- 9 Incompatible with ELE4OFC
- 10 Requires prerequisite subject ELE4NET
- 11 Requires prerequisite subject ELE3EMP
- 12 Requires foundation subject CSE2NEF or prior equivalent studies
- 13 Enrolment in the 45 or 60 credit point projects is usually restricted to students achieving an average of 70% or greater in their studies.

Master of Telecommunication Engineering (SMTE)

The Master of Telecommunication Engineering course is a two-semester (one-year) full-time program requiring the successful completion of 120 credit points. Students should seek advice from a course advisor before enrolling. Where a student can demonstrate that they have previously covered the material in a required unit they may replace it with an elective – requires approval of course co-ordinator.

Core Subjects (60 credit points)

Sem.	Subject Name	Subject code	CP
1/2	Engineering Practice	ELE5PRA	15
+ minimum three from			
1	Broadband Digital Communication ²	ELE5BDC	15
1	Optical Networks ⁸	ELE5OPN	15
1	Personal Mobile Communication ²	ELE5PMC	15
1	Telecommunications Systems Engineering	ELE5TSE	15
2	Antennas and Propagation ³	ELE4ANS	15
2	Advanced Communication Systems ²	ELE4ACS	15
2	Communications Networks ²	ELE4NET	15

Project / Design Subjects

Each student selects a design/project option from the following:

(a) A 30 credit point single semester telecommunications or network engineering design exercise

Sem.	Subject Name	Subject code	CP
2	Telecommunications Design ⁹	ELE5TDE	30
or			
1	Network Engineering Design ¹⁰	ELE5NDE	30

(b) A 45 credit point two semester telecommunications project¹² (students enrol in both subjects)

1/2	Telecommunications Project A ¹	ELE5TRA	15
1/2	Telecommunications Project B ¹	ELE5TRB	30

(c) A 60 credit point two semester telecommunications major project¹² (students enrol in both subjects)

1/2	Telecommunications Major Project A ¹	ELE5TPA	30
1/2	Telecommunications Major Project B ¹	ELE5TPB	30

Elective Subjects

A total of 120 credit points is required for the entire program. The remaining subjects are chosen from the other core subjects or from the following electives, according to the students' interest. The subjects offered may vary from year to year depending on demand staff availability.

Sem.	Subject Name	Subject Code	CP
1	Semiconductor Materials & Devices	ELE5SDP	15
2	Advanced Instrumentation Electronics ⁶	ELE4AAE	15
1	Applied Management for Engineers	ELE4EMT	15
1	Integrated Circuit Design ⁴	ELE5ICD	15
1	Multimedia Communications ⁵	ELE5MMC (not available in 2008)	15
1	Digital System Design ⁴	ELE5DSD	15
1	Radio Frequency Design ²	ELE4RFD	15
1	Communications Systems	ELE3CMN	15
1	Embedded Processors	ELE3EMP	15
1	Control Systems	ELE3CON	15
1	Analog Circuits & Devices	ELE3ACD	15
2	Advanced Signal Processing ⁵	ELE4ASP	15
2	EDA Tools and Design Methodology	ELE5TDM (not available in 2008)	15
2	Emerging Topics in IC Design	ELE5ETD	15
2	Digital Control Theory ⁷	ELE4DCT	15
2	Electronic Design Automation	ELE3DDE	15
2	Digital Signal Processing	ELE3SIP	15
1	Instrumentation and Sensors	ELE3IES	15
2	RF, Microwave and Optical Transmission	ELE3RMO (not available in 2008)	15
2	Telecommunication Devices, Circuits and Systems	ELE3TEL (not available in 2008)	15
1/2	Advanced Studies in Telecommunication A/B ¹	ELE5ASB	15
1/2	Advanced Topics in Electronic Engineering A/B ¹	ELE4ATB	15
1/2	Advanced Topics in Telecommunications A/B ¹	ELE5TTA/ELE5TTB	15
1	Optical networks	ELE5OPN	15

Subjects offered by other Departments

Subject to the approval of the course coordinator students may take a maximum of two subjects offered by other departments, provided that they are of appropriate level and considered relevant to the course. For example, subjects offered by the Department of Computer Science and Computer Engineering applicable to this program include:

Teaching period	Unit name	Unit code	Credit points
1	C Programming for Engineers and Scientists	CSE1CES	15
1 or 2	Network Engineering Fundamentals	CSE2NEF	15
2	Pervasive Network Design	CSE4PND	15
2	Networks Systems and Web Security	CSE3NSW	15
1	Communication Protocol Engineering	CSE4CPE	15
2	Mobile and Pervasive Computing	CSE4MPC	15

Subject Details

For greater detail of the subjects listed above see Appendix E.

Notes:

- 1 Enrolment subject to approval from the course co-ordinator
- 2 Requires foundation subjects ELE3CMN and ELE3TEL or prior equivalent studies
- 3 Requires foundation subject ELE3RMO or prior equivalent studies
- 4 Requires foundation subject ELE3DDE or prior equivalent studies
- 5 Requires foundation subject ELE3SIP or prior equivalent studies
- 6 Requires foundation subject ELE3ACD or prior equivalent studies
- 7 Requires foundation subject ELE3CON or prior equivalent studies
- 8 Incompatible with ELE4OFC
- 9 Requires prerequisite subject ELE5PMC
- 10 Requires prerequisite subject ELE4NET
- 11 Requires foundation subject CSE2NEF or prior equivalent studies
- 12 Enrolment in the 45 or 60 credit point projects is usually restricted to students achieving an average of 70% or greater in their studies

Master of Microelectronic Engineering (SMME)

In the Master of Microelectronic Engineering, students complete 240 credit points over two years, or part time equivalent. There are 135 credit points of core subjects, of which 60 credit points are 4th year fundamentals subjects. In the final year of study students undertake a major (60 credit point) or minor (30 credit point) microelectronics design project. The remaining credit points are made up of electives consisting of further studies in microelectronics or allied disciplines, which includes the pool of 4th and 5th year subjects offered by the Department of Electronic Engineering.

Students with an appropriate background that includes the material covered by the fundamental subjects may be granted a one semester advanced entry credit, shortening the program to three semesters (full-time). Alternatively, individual fundamentals subjects can be replaced with further electives where a student has demonstrated knowledge of the material covered.

Note: not all subjects listed below are available in both semesters

Core subjects: (135 credit points)

Sem.	Subject Name	Subject code	CP
1/2	Engineering Practice	ELE5PRA	15
1	Applied Management for Engineers	ELE4EMT	15
1	Embedded Processors	ELE3EMP	15
1	Digital Systems Design	ELE5DSD	15
1	Integrated Circuit Design	ELE5ICD	15
1	Semiconductor Materials and Devices	ELE5SDP	15
2	Electronic Design Automation	ELE3DDE	15
2	Test and Verification	ELE4TAV	15

Project subjects: (30 or 60 credit points)

½	Minor Project in Microelectronics ¹	ELE5MIP	30
Or			
½	Major Project in Microelectronics ^{1, 2}	ELE5MAP	60

Elective subjects: (60 or 30 credit points)

Sem.	Subject Name	Subject code	CP
1	C Programming for Engineers and Scientists	CSE1CES	15
2	Object-oriented programming using C++	CSE1CPP	15
2	Digital Signal Processing	ELE3SIP	15
2	Emerging Topics in Microelectronics	ELE5ETD	15
2	Special Elective in Microelectronic Engineering ²	ELE5SEL	15
1	Advanced Signal Processing	ELE4ASP	15

and/or approved 4th and 5th year subjects offered by the Department of Electronic Engineering, or areas of the University² (such as, Computer Science and Computer Engineering, Mathematics, Physics or Statistics).

Notes:¹Students complete one of these two subjects ²Enrolment subject to approval from the course co-ordinator. Enrolment in the Major Project in Microelectronics is usually restricted to students achieving a 70% or greater average in the course.

Master of Electronic Systems and Network Engineering (SMESNE)

The Master of Electronic Systems and Network Engineering is structured to include core, foundation, specialised and elective subjects from Electronic Engineering and Computer Science in the areas of electronic systems and networks with a number of electives from Electronic Engineering and Computer Science. Students complete 240 credit points over the two years of the degree, which must include an Electronic Engineering project. The normal duration of the course is two years. Students should seek advice from a course advisor before enrolling. Where a student can demonstrate that they have previously covered the material in a required unit they may replace it with an elective – requires approval of course co-ordinator.

Students may select a maximum of 60 credit points of Foundation subjects (offered from either Computer Science or Electronic Engineering) depending on their background and the area(s) in which they wish to specialize. Students then choose a minimum of 60 credit points of Specialised Computer Networks subjects and a minimum of 30 credit points of specialised Electronic Engineering subjects. They must include a 30 credit point, 45 credit point or 60 credit point engineering Project. Elective subjects from the list of Specialised and Advanced subjects offered by the Departments of Computer Science and Computer Engineering (CS&CE), and Electronic Engineering (EE) (which may include a CSE40THE) comprise the remaining credit points. Students who take less than the maximum 4 Foundation subjects, choose additional electives from the pool of subjects offered by CS&CE and EE. Subject to approval by the course co-ordinator, students may enrol in up to two relevant subjects to the value of 30 credit points, from other areas of the University.

A **typical** enrolment for students with a background in Electronic Systems would be:

2 Core subjects	30 credit points
2 Foundation Computer Networks subjects	30 credit points
4 Specialised Computer Networks subjects	60 credit points
2 Specialised Electronic Engineering subjects	30 credit points
1 Engineering Project	30 credit points
1 Advanced Computer Science elective	15 credit points
3 Advanced Electronic Engineering electives	45 credit points

Total: 240 credit points

A **typical** enrolment for students with a background in Computer Science would be:

2 Core subjects	30 credit points
Minimum of 2 Foundation Electronic Engineering subjects	30 credit points
2 Specialised Electronic Engineering subjects	30 credit points
1 Engineering Project	30 credit points
4 Specialised Computer Networks subjects	60 credit points
1 Advanced Electronic Engineering electives	15 credit points
3 Advanced Computer Science electives	45 credit points

Total: 240 credit points

Core Subjects (30 credit points)

Sem.	Subject Name	Subject code	CP
1/2	Engineering Practice	ELE5PRA	15
Plus			
1	C Programming for Engineers and Scientists	CSE1CES	15

Electronic Engineering Project / Design Subjects (30 credit points minimum)

Each student selects a design/project option from the following:

(a) A minimum 30 credit point single semester electronic or network engineering design exercise, with the approval of the course coordinator students may study more than one 30 credit point design exercise unit.

Sem.	Subject Name	Subject code	CP
2	Electronic Engineering Design ¹³	ELE5EDE	30
or			
1	Network Engineering Design ¹²	ELE5NDE	30
or			
1/2	Biomedical Engineering Design	ELE5BDE	30

(b) A 45 credit point two semester Electronic Engineering project¹⁴ (students enrol in both subjects)

1/2	Electronic Engineering Project A ¹	ELE5ERA	15
1/2	Electronic Engineering Project B ¹	ELE5ERB	30

(c) A 60 credit point two semester Electronic Engineering major project¹⁴ (students enrol in both subjects)

1/2	Electronic Engineering Major Project A ¹	ELE5MPA	30
1/2	Electronic Engineering Major Project B ¹	ELE5MPB	30

Specialist Computer Networks Subjects

A minimum of 60 credit points (four subjects) from:

Sem.	Subject Name	Subject Code	CP
2	Pervasive Network Design ²	CSE4PND	15
2	Performance Analysis of Computer Systems	CSE4PCS	15
1	Real-Time and Fault-Tolerant Systems	CSE4RFS	15
1	Protocol and Network Engineering ³	CSE4CPE	15
1	Wireless Networks Engineering ²	CSE4WNE	15
2	Mobile and Pervasive Computing ²	CSE4MPC	15

Specialist Electronic Engineering Subjects

A minimum of 30 credit points (two subjects) from:

Sem.	Subject Name	Subject Code	CP
1	Advanced Instrumentation Electronics ⁴	ELE4AAE	15
1	Advanced Signal Processing ⁵	ELE4ASP	15
1	Biomedical Engineering B ⁶	ELE4BME	15
1	Digital Systems Design ⁷	ELE5DSD	15
1	Optical Networks ⁸	ELE5OPN	15
2	Clinical Engineering ⁶	ELE4CLN	15
2	Communications Networks ⁹ (Highly Recommended)	ELE4NET	15

Level 2 and 3 units

A maximum of 60 credit points (four units) may be selected from the list below:

Teaching period	Unit name	Unit code	Credit points
1 or 2	Network Engineering Fundamentals	CSE2NEF	15
1	Intermediate Network Engineering	CSE3INE	15
2	Biomedical Engineering A	ELE3BIO	15
1	Communication Systems	ELE3CMN	15
1	Control Systems	ELE3CON	15
1	Embedded Processors	ELE3EMB	15
2	Instrumentation Electronics and Sensors	ELE3IES	15
2	Network, System and Web Security	CSE3NSW	15
2	Digital Communication Systems	ELE3DCS	15
2	Electronic Design Automation-Tools and Technique	ELE3DDE	15
2	Digital Signal Processing	ELE3SIP	15

Elective units

Advanced computer science – units offered may vary from year to year, depending on demand and staff availability:

Teaching period	Unit name	Unit code	Credit points
1 and 2	Thesis A and Thesis B	CSE4THA and CSE4THB	30 plus 30
1	Advanced Databases	CSE4ADB	15
1	Advanced Games Programming Technology	CSE4AGT	15
1	Real-Time and Fault-Tolerant Systems	CSE4RFS	15
1/2	Advanced Graphics	CSE4AGR	15
2	Data Mining	CSE4DMI	15
2	Performance Analysis of Computer Systems	CSE4PCS	15

Elective units

Advanced electronic engineering – units offered may vary from year to year, depending on demand and staff availability.

Teaching period	Unit name	Unit code	Credit points
1 or 2	Directed Study ¹	ELE4DIR	15
1	Advanced Topics A ^{1*}	ELE4ATA	15
2	Advanced Topics B ^{1*}	ELE4ATB	15
1	Radio Frequency Design	ELE4RFD	15
1	Advanced Studies in Telecommunication A ¹	ELE5ASA	15
1	Broadband Digital Communications ⁹	ELE5BDC	15
1	Integrated Circuit Design	ELE5ICD	15
1	Multimedia Communications ^{9*}	ELE5MMC [*]	15
1	Secure Communications [*]	ELE5SEC [*]	15
1	Semiconductor Materials and Devices	ELE5SDP	15
1	Personal Mobile Communications	ELE5PMC	15
1	Telecommunications Systems Engineering	ELE5TSE	15
2	Image Processing and Coding	ELE5IPC	15
2	Antennas and Propagation ¹⁰	ELE4ANS	15
2	Digital Control Theory ¹¹	ELE4DCT	15
2	Emerging Topics in IC Design	ELE5ETD	15
2	EDA Tools and Design Methodology [*]	ELE5TDM [*]	15
2	Advanced Studies in Telecommunication B ^{1*}	ELE5ASB	15

- Key: ¹ Enrolment subject to approval from the course coordinator.
- ² Requires unit [CSE2NEF](#) (Data Communications Networks), or prior equivalent studies.
- ³ N/A
- ⁴ Requires unit [ELE43IES](#) (Instrumentation Electronics and Sensors) or prior equivalent studies.
- ⁵ Requires unit [ELE3SIP](#) (Digital Signal Processing) or prior equivalent studies.
- ⁶ Requires units [ELE3BIO](#) (Biomedical Engineering A) and [ELE3IES](#) (Instrumentation Electronics and Sensors) or prior equivalent studies.
- ⁷ Requires unit [ELE3DDE](#) (Electronic Design Automation-Tools and Technique) or prior equivalent studies.
- ⁸ Incompatible with [ELE4OFC](#) (Optical Fibre Communication Systems).
- ⁹ Requires units [ELE3CMN](#) (Communication Systems) and [ELE3DCS](#) (Digital Communication Systems) or prior equivalent studies.
- ¹⁰ Requires unit [ELE3RMO](#) (RF, Microwave and Optical Transmission) or prior equivalent studies. From 2009 requires [ELE3CMN](#) and [ELE3DCS](#).
- ¹¹ Requires unit [ELE3CON](#) (Control Systems) or prior equivalent studies.

* Not offered in 2008.

Specialisation in Biomedical Engineering

This popular specialisation provides graduates with quality training in both instrumentation and clinical aspects of the biomedical engineering field. Students intending to study this specialisation must include the following subjects in their enrolment and undertake relevant project work:

Sem.	Subject Name	Subject code	CP
1	Biomedical Engineering A	ELE3BIO	15
1	Biomedical Engineering B	ELE4BME	15
2	Clinical Engineering	ELE4CLN	15
2	Instrumentation and Sensors	ELE3IES	15
1/2	Biomedical Engineering Design	ELE5BDE	30

Subject Details

For greater detail of the subjects listed above see Appendix E.

Cisco CCNA Certification and Academy Program

La Trobe University offers a pathway to Cisco CCNA certification (Cisco Certified Network Associate) and the CCNA Academy Program. Required units are CSE3INE, CSE3INE and CSE2NEF or ELE4NET. For further information regarding CCNA certification and the CCNA Academy Program, please contact Dr. Prakash Veeraraghavan (PS4 169), email: p.veera@latrobe.edu.au

Master of Telecommunications and Network Engineering (SMTNE)

Course Structure

The Master of Telecommunications and Network Engineering is structured to include core, foundation, specialised and elective subjects from Electronic Engineering and Computer Science in the areas of telecommunication and network engineering with a number of electives from Electronic Engineering and Computer Science. Students complete 240 credit points over the two years of the degree, which must include an engineering project. The normal duration of the course is two years. Students should seek advice from a course advisor before enrolling. Where a student can demonstrate that they have previously covered the material in a required unit they may replace it with an elective – requires approval of course co-ordinator.

Students may select a maximum of 60 credit points of Foundation subjects (offered from either Computer Science or Electronic Engineering) depending on their background and the area(s) in which they wish to specialize. Students then choose a minimum of 60 credit points of Specialised Computer Networks subjects. They must also include a minimum of 45 credit points of Specialised Telecommunications, plus a 30 credit point, 45 credit point or 60 credit point engineering project. Elective subjects from the list of Specialised and Advanced subjects offered by the Departments of Computer Science and Computer Engineering (CS&CE), and Electronic Engineering (EE) (which may include a CSE40THE) comprise the remaining credit points. Students who take less than the maximum 4 Foundation subjects, choose additional electives from the pool of subjects offered by CS&CE and EE. Subject to approval by the course co-ordinator, students may enrol in up to two relevant subjects to the value of 30 credit points, from other areas of the University.

A typical enrolment for students with a background in Telecommunications would be:

2 Core subjects	30 credit points
2 Foundation Computer Networks subjects	30 credit points
4 Specialised Computer Networks subjects	60 credit points
3 Specialised Telecommunication Engineering subjects	45 credit points
1 Engineering Project	30 credit points
1 Advanced Computer Science elective	15 credit points
2 Advanced Telecommunication Engineering electives	30 credit points
Total:	240 credit points

A typical enrolment for students with a background in Computer Science would be:

2 Core subjects	30 credit points
Minimum 2 Foundation Telecommunication/Electronic Eng. subjects	30 credit points
3 Specialised Telecommunication Engineering subjects	45 credit points
1 Engineering Project	30 credit points
4 Specialised Computer Networks subjects	60 credit points
3 Advanced Computer Science electives	45 credit points
Total:	240 credit points

Core Subjects (30 credit points)

Sem.	Subject Name	Subject code	CP
1/2	Engineering Practice	ELE5PRA	15
Plus			
1	C Programming for Engineers and Scientists	CSE1CES	15

Telecommunications Project / Design Subjects (minimum 30 credit points)

Each student selects a design/project option from the following:

(a) A 30 credit point single semester telecommunications or network engineering design exercise, with approval by the course coordinator students may study both 30 credit point design exercise units

Sem.	Subject Name	Subject code	CP
2	Telecommunications Design ¹²	ELE5TDE	30
or			
1	Network Engineering Design ¹³	ELE5NDE	30

(b) A 45 credit point two semester telecommunications project¹⁴ (students enrol in both subjects)

1/2	Telecommunications Project A ¹	ELE5TRA	15
1/2	Telecommunications Project B ¹	ELE5TRB	30

(c) A 60 credit point two semester telecommunications major project¹⁴ (students enrol in both subjects)

1/2	Telecommunications Major Project A ¹	ELE5TPA	30
1/2	Telecommunications Major Project B ¹	ELE5TPB	30

A minimum of 60 credit points (four subjects) from:

Sem.	Subject Name	Subject Code	CP
2	Pervasive Network Design ²	CSE4PND	15
2	Performance Analysis of Computer Systems	CSE4PCS	15
1	Real-Time and Fault-Tolerant Systems	CSE4RFS	15
1	Protocol and Network Engineering ³	CSE4CPE	15
1	Wireless Networks Engineering ²	CSE4WNE	15
2	Mobile and Pervasive Computing ²	CSE4MPC	15

Specialist Telecommunication Engineering Subjects

A minimum of 45 credit points (three subjects) from:

1	Broadband Digital Communication ⁴	ELE5BDC	15
1	Optical Networks ¹⁰	ELE5OPN	15
1	Personal Mobile Communication ⁴	ELE5PMC	15

1	Telecommunications Systems Engineering	ELE5TSE	15
2	Antennas and Propagation ⁵	ELE4ANS	15
2	Advanced Communications Systems ⁴	ELE4ACS	15
2	Communications Networks ⁴	ELE4NET	15

Level 2 and 3 units

A maximum of 60 credit points may be taken from the following list:

Teaching period	Unit name	Unit code	Credit points
1 or 2	Network Engineering Fundamentals	CSE2NEF	15
1	Intermediate Network Engineering	CSE3INE	15
1	Communication Systems	ELE3CMN	15
1	Control Systems	ELE3CON	15
1	Embedded Processors	ELE3EMB	15
2	Instrumentation Electronics and Sensors	ELE3IES	15
2	Networks Systems and Web Security	CSE3NSW	15
2	Digital Communication Systems	ELE3DCS	15
2	Electronic Design Automation-Tools and Technique	ELE3DDE	15
2	Digital Signal Processing	ELE3SIP	15

Elective units

Advanced computer science

Units offered may vary from year to year depending on demand and staff availability.

Teaching period	Unit name	Unit code	Credit points
1 and 2	Thesis A and Thesis B	CSE4THA and CSE4THB	30 plus 30
1	Advanced Databases	CSE4ADB	15
1	Advanced Games Programming Technology	CSE4AGT	15
1	Real-Time and Fault-Tolerant Systems	CSE4RFS	15
1	Software Engineering and Project Management	CSE4SPM	15
1	Web Services Engineering	CSE4WSE	15
2	Advanced Graphics	CSE4AGR	15
2	Data Mining	CSE4DMI	15
2	Performance Analysis of Computer Systems	CSE4PCS	15

Elective units

Advanced electronic engineering

Units offered may vary from year to year, depending on demand and staff availability.

Teaching period	Unit name	Unit code	Credit points
1	Digital System Design ⁶	ELE5DSD	15
1	Optical Networks ¹⁰	ELE5OPN	15

Teaching period	Unit name	Unit code	Credit points
1	Secure Communications*	ELE5SEC *	15
1	Semiconductor Materials and Devices	ELE5SDP	15
2	Advanced Instrumentation Electronics ⁸	ELE4AAE	15
1	Advanced Signal Processing ⁷	ELE4ASP	15
1	Radio Frequency Design	ELE4RFD	15
1	Integrated Circuit Design	ELE5ICD	15
1	Telecommunications Systems Engineering	ELE5TSE	15
2	EDA Tools and Design Methodology*	ELE5TDM *	15
2	Emerging Topics in IC Design	ELE5ETD	15
2	Antennas and Propagation ⁵	ELE4ANS	15
2	Communications Networks ⁴	ELE4NET	15
2	Digital Control Theory ⁹	ELE4DCT	15
1	Advanced Studies in Telecommunication A ¹	ELE5ASA	15
2	Advanced Studies in Telecommunication B ¹	ELE5ASB	15
1	Advanced Topics A ^{1*}	ELE4ATA	15
2	Advanced Topics B ^{1*}	ELE4ATB	15
1	Advanced Topics in Telecommunications A ¹	ELE5TTA	15
2	Advanced Topics in Telecommunications B ¹	ELE5TTB	15
1 or 2	Directed Study ¹	ELE4DIR	15
2	Image Processing and Coding	ELE5IPC	15

- Key: ¹ Enrolment subject to approval from the course coordinator.
- ² Requires unit [CSE2NET](#) (Data Communications Networks) or prior equivalent studies.
- ³ Requires unit [CSE2NEF](#) (Network Engineering Fundamentals), or prior equivalent studies.
- ⁴ Requires units [ELE3CMN](#) (Communication Systems) and [ELE3DCS](#) (Digital Communication Systems) or prior equivalent studies.
- ⁵ Requires unit [ELE3RMO](#) (RF, Microwave and Optical Transmission) or prior equivalent studies. From 2009 requires units [CSE3CMN](#) and [ELE3DCS](#).
- ⁶ Requires unit [ELE3DDE](#) (Electronic Design and Automation-Tools and Technique) or prior equivalent studies.
- ⁷ Requires unit [ELE3SIP](#) (Digital Signal Processing) or prior equivalent studies.
- ⁸ Requires unit [ELE3IES](#) (Instrumentation Electronics and Sensors) or prior equivalent studies.
- ⁹ Requires unit [ELE3CON](#) (Control Systems) or prior equivalent studies.
- ¹⁰ Incompatible with [ELE4OFC](#) (Optical Fibre Communication Systems).

* Not offered in 2008.

Foundation Subjects

A maximum of 60 credit points (four subjects) from:

Sem.	Subject Name	Subject Code	CP
1/2	Network Engineering Fundamentals	CSE2NEF	15
1	Intermediate NetWork Engineering	CSE3INE	15
2	Networks and Systems Security	CSE3NSW	15
1	Analog Circuits & Devices	ELE3ACD	15
1	Communication Systems	ELE3CMN	15
1	Control Systems	ELE3CON	15

1	Embedded Processors	ELE3EMP	15
2	Digital Signal Processing	ELE3SIP	15
2	Electronic Design Automation	ELE3DDE	15
2	Instrumentation and Sensors	ELE3IES	15
2	RF, Microwave and Optical Transmission	ELE3RMO	15
2	Telecommunication Devices, Circuits and Systems	ELE3TEL	15

Elective Subjects

Advanced Computer Science - subjects offered may vary from year to year depending on demand and staff availability. Also includes remaining specialist computer networks subjects.

Sem.	Subject Name	Subject Code	CP
1	Advanced games Programming Technology	CSE4AGT	15
1	Directed Study ¹	CSE4DIR	15
1	Neural Networks	CSE4NN	15
1	Software Engineering and Project Management	CSE4SPM	15
1	Software Tools and Case	CSE4STC	15
1	Advanced Databases	CSE4ADB	15
2	Advanced Graphics	CSE4AGR	15
2	Data Mining	CSE4DMI	15

Advanced Electronic Engineering - subjects offered may vary from year to year depending on demand and staff availability. Also includes remaining specialist telecommunication engineering subjects.

Sem.	Subject Name	Subject Code	CP
1	Digital Systems Design ⁶	ELE5DSD	15
1	Semiconductor Materials & Devices	ELE5SDP	15
1	Advanced Instrumentation Electronics ⁸	ELE4AAE	15
1	Applied Management for Engineers	ELE4EMT	15
1	Radio Frequency Design	ELE4RFD	15
2	Advanced Signal Processing ⁷	ELE4ASP	15
2	EDA Tools and Design Methodology	ELE5TDM	15
2	Emerging Topics in IC Design	ELE5ETD	15
2	Integrated Circuit Design	ELE5ICD	15
2	Digital Control Theory ⁹	ELE4DCT	15
1/2	Advanced Studies in Telecommunications A/B ¹	ELE5ASA/ELE5ASB	15
1/2	Advanced Topics in Electronic Engineering A/B ¹	ELE4ATA/ELE4ATB	15
1/2	Advanced Topics in Telecommunications A/B ¹	ELE5TTA/ELE5TTB	15

Subject Details

For greater detail of the subjects listed above see Appendix E.

Cisco CCNA Certification and Academy Program

La Trobe University offers a pathway to Cisco CCNA certification (Cisco Certified Network Associate) and the CCNA Academy Program. Required units are CSE41FPP, CSE42FLN and CSE41/42FNT or ELE42NET. For further information regarding CCNA certification and the

CCNA Academy Program, please contact Dr. Prakash Veeraraghavan (PS4 169), email: p.veera@latrobe.edu.au

Notes:

- 1 Enrolment subject to approval from the course co-ordinator
- 2 Requires foundation subject CSE3NET or prior equivalent studies
- 3 Requires foundation subject CSE2NEF or CSE3INE or CSE3INE or prior equivalent studies
- 4 Requires foundation subjects ELE3CMN and ELE3TEL or prior equivalent studies
- 5 Requires foundation subject ELE3RMO or prior equivalent studies
- 6 Requires foundation subject ELE3DDE or prior equivalent studies
- 7 Requires foundation subject ELE3SIP or prior equivalent studies
- 8 Requires foundation subject ELE3ACD or prior equivalent studies
- 9 Requires foundation subject ELE3CON or prior equivalent studies
- 10 Incompatible with ELE4OFC
- 11 May only be offered in one semester, see Appendix A: Subject table for details.
- 12 Requires prerequisite subject ELE5PMC.
- 13 Requires prerequisite subject ELE4NET.
- 14 Enrolment in the 45 or 60 credit point projects is usually restricted to students achieving an average of 70% or greater in their studies.

Postgraduate Diploma in Electronic Engineering (SPEE)

This course has been designed for individuals wanting to update their skills in one of the four areas (communications, biomedical, electronic systems, or optical engineering) offered in the course. The course consists of one year of full-time study.

For candidates with a four-year degree in engineering of science (with an electronics major) the course provides a means to keep up with state-of-the-art developments in these specialist areas. Alternatively this course offers the opportunity for candidates with three-year qualifications (BSc, BTech, etc) to prepare for higher degree study in the Master of Electronic Engineering or Master of Telecommunications Engineering by coursework degrees, or the Master of Engineering by research degree.

Course structure

This 120-credit point course comprises four 15-credit point elective units and a 45-credit point project ([ELE4EPA/ELE4EPB](#)) and the 15-credit point core unit ([ELE5PRA](#)).

Core unit (60 credit points)

Teaching period	Unit name	Unit code	Credit points
1 or 2	Engineering Project A	ELE4EPA	15
1 or 2	Engineering Project B	ELE4EPB	30
1 or 2	Engineering Practice	ELE5PRA	15

Elective units (60 credit points)

The remaining four units are chosen from the following, according to the student's background and interests. The units offered may vary from year to year, depending on demand and staff availability.

Teaching period	Unit name	Unit code	Credit points
1 or 2	Directed Study ¹	ELE4DIR	15
1	Communication Systems	ELE3CMN	15
1	Control Systems	ELE3CON	15
1	Embedded Processors	ELE3EMB	15
1	Instrumentation Electronics and Sensors	ELE3IES	15
2	Advanced Instrumentation Electronics ³	ELE4AAE	15
1	Advanced Digital Systems Design ²	ELE4ADD	15
1	Advanced Signal Processing ⁴	ELE4ASP	15
1	Biomedical Engineering B ^{1,5}	ELE4BME	15
2	Optical Fibre Communication Systems ⁶	ELE4OFC	15
1	Radio Frequency Design ⁶	ELE4RFD	15
2	Biomedical Engineering A ¹	ELE3BIO	15
2	Digital Communication Systems	ELE3DCS	15
2	Electronic Design Automation-Tools and Technique	ELE3DDE	15
2	Image Processing and Coding	ELE5IPC	15
2	Digital Signal Processing	ELE3SIP	15

Teaching period	Unit name	Unit code	Credit points
2	Antennas and Propagation ⁷	ELE4ANS	15
2	Clinical Engineering ¹	ELE4CLN	15
2	Digital Control Theory ⁸	ELE4DCT	15
2	Communications Networks ⁹	ELE4NET	15

- Key: ¹ Enrolment subject to approval from the course coordinator.
- ² Requires unit [ELE3DDE](#) (Electronic Design Automation-Tools and Technique) or prior equivalent studies.
- ³ Requires unit [ELE3IES](#) (Instrumentation Electronics and Sensors) or prior equivalent studies.
- ⁴ Requires unit [ELE3SIP](#) (Digital Signal Processing) or prior equivalent studies.
- ⁵ Requires unit [ELE3BIO](#) (Biomedical Engineering A) or prior equivalent studies.
- ⁶ Requires unit [ELE3IES](#) (Instrumentation Electronics and Sensors).
- ⁷ Requires unit units [ELE3CMN](#) (Communication Systems) and [ELE3DCS](#) (Digital Communication Systems) or prior equivalent studies.
- ⁸ Requires unit [ELE3CON](#) (Control Systems) or prior equivalent studies.
- ⁹ Requires unit [ELE3DCS](#) (Digital Communications Systems).

Units offered by other departments

Subject to the approval of the course coordinator students may take a maximum of two units (30 credit points) offered by other departments, if they are of appropriate level and considered relevant to the course.

With the approval of the course co-ordinator students include the following one year, 45 credit point project elective– usually reserved for projects with a research emphasis.

Subjects offered by other Departments

Subject to the approval of the course coordinator students may take a maximum of two subjects offered by other departments, provided that they are of appropriate level and considered relevant to the course.

Subject Details

For greater detail of the subjects listed above see Appendix E.

Assignments

Assignments are an important part of the assessment in every theory component. Assignments must be handed in by the due date and time. The due time for an assignment will always be Monday 2pm. You must post your assignment into the correct assignment slot (opposite room 118 in the Physical Sciences II building.) **Each assignment must have a completed assignment declaration attached. No credit will be given for assignments submitted without a completed and signed declaration.** Your name, student number and the assignment number must be filled in, and the declaration concerning plagiarism signed. If you require extra copies of the declaration slip, they are available near the assignment slots or from Margaret North. Failure to submit the assignment by the due date will be registered as a non-submission. Late assignments will only be accepted in exceptional circumstances. In this case see Margaret North in the first instance. **Do not post late assignments in the assignment slots** - these should be given to Margaret North.

Every student enrolled in a theory component should be submitting assignments. It is not possible to be granted exemption from assignments even if you are repeating a subject. Apart from the percentage allocation in the final assessment, assignments provide us with an indication of your performance and assist in making decisions regarding applications for special consideration and borderline marks.

Submission of fewer than 70% of assignments in a subject may be regarded as unsatisfactory performance when judging special consideration applications.

Retaining copies of assignment submissions

It is your responsibility to retain an extra copy of your assignments and labs submitted for assessment. You must retain marked assignments after they are returned until publication of final examination results at the end of the year.

Penalties for late submission of assignments

Penalties will be applied for assignments submitted after the due date and time, as follows:

A penalty of 5% per day will be imposed on all late assignments up to 4 days. An assignment submitted more than four working days after the due date **will not be accepted**. Weekends are not included in the late period.

This arrangement is designed to permit you some emergency leeway. You should plan to submit your assignments on time, even if incomplete, as this sliding scale disadvantages late submissions.

You must submit your LATE assignment/lab to Room 118 Physical Sciences 2 Building. **DO NOT SLIDE YOUR LATE ASSIGNMENT UNDER THE LECTURER'S DOOR** - They **MUST** be submitted to Room 118 to be stamped and recorded.

Use of University Logo

The use of the crest, armorial bearings and corporate logo of La Trobe University by students should not occur without authorisation. The Deputy Vice-Chancellor has been vested with the authority to approve use of the crest, the armorial bearings and the corporate logo and all requests for use of these images should be referred to the Deputy Vice-Chancellor by mail, facsimile (9479 1449) or email (dvc@latrobe.edu.au).

Plagiarism

Plagiarism is the act of copying or reproducing another person's words or ideas and presenting them as your own without proper acknowledgment. The copying of another student's work (in whole or in part) is an obvious form of cheating and will be treated accordingly. University legislation requires that proven cases of plagiarism be severely dealt with. **This issue is covered in greater detail in Appendix E – which each student must read.**

Certification by Students of the Originality of Submitted Work

The University Secretary, at the direction of the Academic Board, has directed that all work submitted by a student for assessment which has a value determined by the relevant department to be ten per cent or more of the final mark or grade for a subject shall be accompanied by a "Statement of Authorship" in which the student signifies that the work submitted is original. In respect of work submitted for assessment which has a value less than ten per cent of the final mark or grade, the student shall make a *declaration* in writing that the material is the original work of the student.

A *statement of authorship* or an *assignment header slip* (on which a *declaration* is made) must be attached to all work submitted for assessment. Failure to do so may result in the work submitted not being assessed and hence given zero grade.

Copies of *statement of authorship* forms and *assignment header slips* are available near the assignment slots on the ground floor of the Physical Sciences 2 building, or from Margaret North.

Notice Boards

A postgraduate notice board is located in room 420 on the fourth level of the Beth Gleeson. Students taking fourth level subjects should also check the fourth year notice board on the ground floor of the Physical Sciences 2 building. It is recommended that you check these notice boards weekly. Failure to read important notices will not be accepted as an excuse or as a basis for special consideration.

During semesters, class lists containing student numbers and names may be placed on notice boards to inform students of their allocated laboratory and tutorial classes, and other information as required.

Lecture Notes

A number of subjects have companion lecture notes available for students who wish to purchase them. Subject Coordinators will provide details of any lecture notes in their subject.

Exam Tutorials

During the examination study period each lecturer will be rostered on for a number of exam tutorials, usually between 2pm and 4pm on the days leading up to their exam. These are held in the 1st year laboratory (BG 324). The exam tutorials are the best time to ask questions of your lecturer and to listen to the answers to questions put by other students. All students are strongly advised to use the exam tutorials, often more lecturer will be available – so it can be an effective use of your valuable study time. Examination and Exam Tutorial Timetables will be placed on departmental noticeboards near the end of the semester.

Practical Work - General Information

NO PRACTICAL CLASSES have been scheduled in the FIRST WEEK of 2nd SEMESTER

Academic Content: detailed information on the practical work for each subject will be provided by the subject coordinator.

Attendance: failure to attend your designated practical class will be registered as zero grade unless a prior arrangement has been made with the lecturer concerned.

Special Consideration: If you can not attend a practical class for any special reason (e.g. illness, accident etc.) you should apply for special consideration as soon as practicable. Special Consideration will not be given to students who turn up at the end of the semester with tales of misfortune that occurred weeks or months previously.

Working Groups: For most practical classes, students will normally work in groups of two, initially you will be allowed to choose your own working partners. However, at various times throughout the semester working groups may be changed.

Tools: For those subjects requiring the construction of electronic circuits, each group will be required to provide their own tools (cutters, pliers, screwdrivers, etc.)

Preliminary Work: Some experiments will require you to conduct preliminary work before you attend the practical class. DO NOT expect much help with preliminary work during laboratory classes as little (if any) will be forthcoming.

Facilities available to Postgraduate Coursework students in Electronic Engineering

Coursework Masters students are important and valued members of our Department. To make your time with us as fruitful and happy as possible we provide a range of facilities. Many of these are not available at other universities.

Computer Accounts

Each student has a university computer account, generated as a part of the enrolment process. Details of your account are provided on your statement of enrolment. If you have any problems using your computer account, please see the Study Hall help desk. The Study Hall is located between Menzies and Glenn colleges on the eastern side of the campus. During semester time the Study Hall is open 9am to 10pm weekdays and 9am to 5pm weekends. During opening hours the Study Hall Help Desk can be contacted on 9479 3694. For more information on the Study Hall please see www.latrobe.edu.au/studyhall/. Information on ICT services for students can be found on www.latrobe.edu.au/ict/services/services_for_students.

Student Email Accounts

All students at La Trobe University are provided with an email address. The University strongly encourages you to utilize this email address for communication matters related to your enrolment, course administration and course material. Each student has a university computer account, generated as a part of the enrolment process. Your email account is *username@students.latrobe.edu.au*, your username is that provided on your statement of enrolment. To access your email account go to <http://students.latrobe.edu.au/>. If you have any problems using your email account, please see the Study Hall help desk.

Computer Access

The workstation computers in BG420 are available for the exclusive use of Postgraduate by Coursework Students. At times, some of the computer workstations will be required for the

teaching of masters' subjects. Otherwise, the computers are available for use on a first come first served basis, 24 hours a day, 7 days a week. Postgraduate students may also use the computer lab PS2 109 on level one of the Physical Sciences II Building, 9am to 5pm, Monday to Friday, provided the room is not required for teaching. Access to other computer labs in the Department will depend on your unit (subject) enrolments. Unit coordinators will advise on lab access policies for their units. Students undertaking Computer Science and Computer Engineering units (units/subjects with code starting with "CSE") should use the computer lab facilities on levels 1 & 2 of the Beth Gleason building.

The computing facilities are made available for use related to your study here at La Trobe and are NOT to be used for any other purposes or by unauthorized persons. Your computer account is for your own personal use and you are not permitted to allow other persons to use your account. All students are reminded of their responsibility under the University's Regulations, particularly the Computer Regulation and Internet Code of Practice (www.latrobe.edu.au/its/regulations.htm). The locking of computers is also prohibited. Students are allowed to restart unattended computers which have been locked. The department will not be held responsible for any information loss or damage to your windows profile due to restarting the computer while it is locked.

Any student found in breach of any of the above will have their access privileges frozen and face disciplinary action under section 16 of the University's Statutes and Regulations.

Wireless Networking

The university has installed a wireless network for use by students and staff. Students with their own computer may connect to the wireless network. For more information please see www.latrobe.edu.au/ict/services/networks/wireless_network, or ask at the Study Hall Help Desk.

Microsoft Vista

At this time the university does not support Microsoft Vista

Work Room

Room 420 in the Beth Gleeson has been made available as a workroom for coursework postgraduate students. You can study or work here with fellow students. This is intended for quiet study. Please be considerate of your fellow students. There are also a number of high performance computer workstations available for project work and other study related work. A telephone is available within this room for internal (university) calls and emergency ('2222') calls only. Food and drink are not to be consumed in this room.

Tea Room

The Staff Tearoom, Beth Gleeson Building, Room 445, is available for use by postgraduate students during office hours, Monday-Friday. There is no formal tea club, but feel free to use the refrigerator to store your own drinks etc. Please only use items from the refrigerator that you have placed there – to avoid confusion please write your name on all food packages. There is also a microwave oven in the kitchen off the tearoom if you have any trouble using it please see Peter Stewart in Room SW4 435. **THERE IS NO CLEANING SERVICE FOR THE TEA ROOM**, so please ensure that you wash any cups etc that you use and clean up any mess.

Photocopying and Printing

Photocopying and printer facilities are available in BG 420 for Postgraduate Coursework students to use. These operate on the Cafe Digital debit system with pre-paid accounts tied to the university username/password authentication system. The charge is 8c per single A4 page. (For prices on color printing/photocopying, duplex printing and other page sizes, please refer to Cafe Digital's price list) The department will place a \$20 credit in your account each semester. If you use more than \$20 worth of printing/photocopying then you will need to personally add money to

your account at Cafe Digital - located on the 2nd level, South West corner of the Agora , near the Eagle Clock.

Please note:

- (1) to receive the \$20 credit you must activate your Cafe Digital account - to do this please refer to the Cafe Digital notice displayed behind the printer and photocopier in BG 420;
- (2) the \$20 credit will appear in your account at the end of the first week of semester or in the week following you activating your account – whichever is the later date.
- (3) to enable photocopying you will need to setup your pin number via the Cafe Digital web page for details.

Please refer to the Cafe Digital notice displayed behind the printer and photocopier in BG 420

Access to Buildings and Computer Labs

Access to buildings and labs is controlled by an electronic access control system ("Cardax"). Authorised students can gain access to a lab by placing their student card close to the proximity reader adjacent to the door. Each student's access is determined by their enrolment.

Currently, Masters by Coursework students are entitled to access the Beth Gleeson Building on a 24 hour, 7 day a week basis (24/7), including public holidays, 24/7 access to R420 and 9am-5pm weekday access to R109. Depending on which subjects you are enrolled in, you may have access to other labs. If a lab is required for teaching you must vacate it when requested by a member of staff to do so.

To apply for Cardax access to labs please complete the online form "Application for Cardax access to labs". Follow the link 'Laboratory Access' from the Department's home page www.latrobe.edu.au/ee.

Access to the building and facilities is for enrolled students only. Any student found allowing unauthorized persons (this includes your friends not enrolled at La Trobe, or in other courses at La Trobe) access to the building and facilities will have their access privileges frozen and face disciplinary action under section 16 of the University's Statutes and Regulations.

After Hours Use of Labs

Students will only be granted after-hours access to the building and labs if they agree to comply with the Department's After Hours policy, specifically:

1. to enter their details in the after-hours log book when they enter and leave the building;
2. to evacuate the building without delay in the event that the evacuation signal sounds;
3. to advise security on 9479 2222 in the event of any emergency; and
4. to refrain from consumption of food and drink in the lab.

Any unauthorised use of the lab or misbehaviour will result in disciplinary action being taken.

Responsible Use of Facilities

Access to the facilities listed above is a privilege not a right. We hope that you will use these facilities responsibly.

Note in particular.

- **the workroom and other facilities are for use of Electronic Engineering postgraduate students only - do not invite your friends here**

Required/Recommended Enrolments for Various Postgraduate Programs – 1st Semester Start

1. Postgraduate Diploma in Electronic Engineering
2. PG Dip in EE (interest in Biomedical Engineering)
3. PG Dip in EE (interest in Microelectronic Engineering)
4. PG Dip in EE (interest in Telecom – no communications background)
5. PG Dip in EE (interest in Telecom – basic communications background)
6. Master of Electronic Engineering
7. Master of Electronic Engineering (Biomedical Specialisation)
8. Master of Microelectronic Engineering
9. Master of Telecommunication Eng (assumes some communications background)
10. Master of Elect Sys & Net
11. Master of Elect Sys & Net (Biomedical Specialisation)
12. Master of Telecom & Net (some communications background, but limited programming background)
13. Master of Telecom & Net (considerable programming background, but little or no communications background)

Notes: * = required subject

= highly recommended unit

- Where a student can demonstrate that they have previously covered the material in a required/recommended unit they may replace it with an elective.

1. Postgraduate Diploma in Electronic Engineering (general interest)

1st semester

- ELE5PRA *
 - ELE3EMP #
- + 2 from
- ELE3ACD
 - ELE3CMN
 - ELE3CON

2nd semester

from

- ELE3IES
- ELE3SIP
- ELE3DDE
- ELE3RMO
- ELE3TEL

2. Postgraduate Diploma in Electronic Engineering (Interest in Biomedical Engineering)

1st semester

- ELE5PRA *
- ELE3BME *
- ELE3ACD *
- ELE3EMP #

2nd semester

- ELE3IES *

- ELE3SIP #
- ELE3DDE#
- ELE4ANS

3. Postgraduate Diploma in Electronic Engineering (interest in Microelectronic Engineering)

1st semester

- ELE5PRA *
- ELE3EMP *
- ELE5EMT*
- CSE1CES#

2nd semester

- ELE3DDE*
- ELE3SIP #
- + 15 credit point elective

4. Postgraduate Diploma in Electronic Engineering (interest in Telecommunication Engineering – no communications background)

1st semester

- ELE5PRA *
- ELE3CMN *
- + 2 from
- ELE3ACD
- ELE3EMP
- ELE3CON
- ELE4EMT

2nd semester

- ELE3RMO *
- ELE3TEL *
- ELE4NET*
- + 1 from
- ELE3SIP
- ELE3IES
- ELE3DDE
- ELE4ANS

5. Postgraduate Diploma in Electronic Engineering (interest in Telecommunication Engineering – basic communications background)

1st semester

- ELE5PRA *
- + 3 from
- ELE3EMP
- ELE3ACD
- ELE4RFD
- ELE4EMT

2nd semester

- ELE3RMO *
- ELE3TEL *
- ELE4NET#

- ELE4ANS
- If ELE3RMO or ELE3TEL material already covered replace with:
- ELE3SIP or ELE3IES or ELE3DDE

6. Master of Electronic Engineering

(general interest)

1st semester

- ELE5PRA *
- ELE3EMP *
- + 2 from
- ELE3CON
- ELE4AAE (requires previous studies in analog circuits)
- ELE4EMT
- ELE5PMC
- ELE5OPN

2nd semester

- ELE5EDE* (30cp project in embedded system design – requires ELE3EMP)
- ELE4ASP (requires ELE3SIP or prior equivalent studies)
- ELE4NET#
- + 1 from
- ELE3IES
- ELE3DDE
- ELE3SIP
- ELE3RMO
- ELE4ANS (NOT OFFERED 2007)
- ELE4DCT
- ELE4ATB

7. Master of Electronic Engineering

(Biomedical Specialisation)

1st semester

- ELE5PRA *
- ELE3BME *
- ELE4BME*
- ELE3ACD #

2nd semester

- ELE5BDE* (30cp project)
- ELE3IES *
- ELE4CLN*

8. Master of Microelectronic Engineering (starting 2007)

1st semester

- ELE5PRA *
- ELE3EMP *
- ELE5ICD*
- ELE5EMT*

2nd semester

- ELE3DDE*

- CSE1CPP#
- ELE5ETD# or ELE3SIP

1st semester (year 2)

- ELE5DSD*
- ELE5SDP*
- + ELE5MAP* (major project 30 credit points)
- OR Electives 30 credit points

2nd semester (year 2)

- ELE5MAP (major project 30cp – cont.)
- or
- ELE5MIP (minor project 30cp)
- + ELE4TAV
- Elective 15 credit points

9. Master of Microelectronic Engineering (starting 2008)

1st semester

- ELE5PRA*
- ELE3EMP*
- ELE5ICD*
- CSE1CES#

2nd semester

- ELE3DDE*
- ELE4TAV*
- ELE5ETD# or ELE3SIP #

1st semester (year 2)

- ELE5DSD*
- ELE5EMT*
- ELE5SDP
- Elective (15 credit points)

2nd semester (year 2)

- ELE5MAP (major project 60cp)
- or
- ELE5MIP (minor project 30cp)
- + Electives (30 credit points)

10. Master of Telecommunication Engineering

1st semester

- ELE5PRA*
- ELE5PMC*
- + 2 from
- ELE5OPN
- ELE5BDC#
- ELE5TSE#
- ELE4RFD
- ELE4EMT

2nd semester

- ELE5TDE* (30cp project in telecommunications design – requires ELE5PMC)
- + 2 from*
- ELE4ACS#

- ELE4NET#
- ELE4ANS #

11. Master of Electronic Systems and Network Engineering (general interest)

Option 1 Network Design Project	Option 2 Embedded Systems Design Project
<p>1st semester</p> <ul style="list-style-type: none"> ▪ CSE1CES* ▪ ELE5PRA* + 2 from* ▪ ELE3EMP ▪ ELE4AAE (requires previous studies in analog circuits) ▪ ELE5OPN ▪ ELE4EMT <p>2nd semester</p> <ul style="list-style-type: none"> ▪ ELE4NET* ▪ Electives 45cp <p>1st semester (year 2)</p> <ul style="list-style-type: none"> ▪ ELE5NDE* (network design project – requires ELE4NET) + 2 from ▪ CSE4NMN* ▪ CSE4PCS* ▪ CSE4RFS* <p>2nd semester (year 2)</p> <ul style="list-style-type: none"> ▪ Electives 30cp + 2 from* ▪ CSE4APP ▪ CSE4DIS(NOT OFFERED 2008) ▪ CSE4WNE ▪ CSE4PNB 	<p>1st semester</p> <ul style="list-style-type: none"> ▪ CSE1CES* ▪ ELE5PRA* ▪ ELE3EMP* + 1 from* ▪ ELE4AAE (requires previous studies in analog circuits) ▪ ELE5OPN ▪ ELE4EMT <p>2nd semester</p> <ul style="list-style-type: none"> ▪ ELE5EDE* (30cp project in embedded system design – requires ELE4EMT) ▪ ELE4NET# ▪ Elective 15cp <p>1st semester (year 2)</p> <ul style="list-style-type: none"> ▪ Electives 30cp + 2 from ▪ CSE4PND* ▪ CSE4PCS* ▪ CSE4RFS <p>2nd semester (year 2)</p> <ul style="list-style-type: none"> ▪ Electives 30cp + 2 from* ▪ CSE4APP ▪ CSE4DIS(NOT OFFERED 2008) ▪ CSE4WNE ▪ CSE4PNB

12. Master of Electronic Systems and Network Engineering

(Biomedical Specialisation)

1st semester

- CSE1CES*
- ELE5PRA *
- ELE3BME *
- ELE4BME*

2nd semester

- CSE2NEF*
- ELE3IES *
- ELE4CLN*
- ELE3SIP #

1st semester (year 2)

- ELE5BDE* (30cp project in biomed)
- + 2 from
- CSE4PND*
- CSE4PCS*
- CSE4RFS

2nd semester (year 2)

- Electives 30cp (ELE4NET recommended)
- + 2 from*
- CSE4APP
- CSE4DIS(NOT OFFERED 2008)
- CSE4WNE
- CSE4CPE

13. Master of Telecommunication and Network Engineering
 (some communications background, but limited programming background)

<p align="center">Option 1 Network Design Project</p>	<p align="center">Option 2 Telecommunications Design Project</p>
<p>1st semester</p> <ul style="list-style-type: none"> ▪ CSE1CES* ▪ ELE5PRA* + 2 from* ▪ ELE5BDC ▪ ELE5PMC ▪ ELE5OPN ▪ ELE5TSE <p>2nd semester</p> <ul style="list-style-type: none"> ▪ ELE4NET* ▪ Electives 45cp <p>1st semester (year 2)</p> <ul style="list-style-type: none"> ▪ ELE5NDE* (network design project – requires ELE4NET) + 2 from* ▪ CSE4PND* ▪ CSE4PCS* ▪ CSE1RFS* <p>2nd semester (year 2)</p> <ul style="list-style-type: none"> ▪ Electives 30cp + 2 from* ▪ CSE4MPC* ▪ CSE4DIS(NOT OFFERED 2008)* ▪ CSE4WNE* ▪ CSE4CPE* 	<p>1st semester</p> <ul style="list-style-type: none"> ▪ CSE1CES* ▪ ELE5PRA* ▪ ELE5PMC* + 1 from* ▪ ELE5BDC ▪ ELE5OPN ▪ ELE5TSE <p>2nd semester</p> <ul style="list-style-type: none"> ▪ ELE5TDE* (telecommunications design project – requires ELE5PMC) ▪ ELE4ANS# <p>1st semester (year 2)</p> <ul style="list-style-type: none"> ▪ Electives 30cp + 2 from ▪ CSE4PND* ▪ CSE4PCS* ▪ CSE4RFS* <p>2nd semester (year 2)</p> <ul style="list-style-type: none"> ▪ Electives 30cp + 2 from* ▪ CSE4MPC* ▪ CSE4DIS(NOT OFFERED 2008)* ▪ CSE4WNE* ▪ CSE4CPE*

14. Master of Telecommunication and Network Engineering

(considerable programming background, but little or no communications background)

<p style="text-align: center;">Option 1 Network Design Project</p>	<p style="text-align: center;">Option 2 Telecommunications Design Project</p>
<p>1st semester</p> <ul style="list-style-type: none"> ▪ ELE5PRA * ▪ ELE3CMN * + 2 from* ▪ CSE4PND ▪ CSE4PCS ▪ CSE4RFS <p>2nd semester</p> <ul style="list-style-type: none"> ▪ ELE4NET* ▪ ELE3TEL * + 2 from* ▪ CSE4MPC ▪ CSE4DIS(NOT OFFERED 2008) ▪ CSE4WNE ▪ CSE4CPE <p>1st semester (year 2)</p> <ul style="list-style-type: none"> ▪ ELE5NDE* (network design project – requires ELE4NET) + 2 from* ▪ ELE5PMC ▪ ELE5BDC ▪ ELE5OPN ▪ ELE5TSE <p>2nd semester (year 2)</p> <ul style="list-style-type: none"> ▪ Electives 60cp 	<p>1st semester</p> <ul style="list-style-type: none"> ▪ ELE5PRA * ▪ ELE3CMN * + 2 from* ▪ CSE4NME ▪ CSE4PCS ▪ CSE4RFS <p>2nd semester</p> <ul style="list-style-type: none"> ▪ ELE3RMO * ▪ ELE3TEL # + 2 from* ▪ CSE4MPC ▪ CSE4DIS(NOT OFFERED 2008) ▪ CSE4WNE ▪ CSE4CPE <p>1st semester (year 2)</p> <ul style="list-style-type: none"> ▪ ELE5PMC* ▪ Elective 15cp + 2 from* ▪ ELE5BDC ▪ ELE5OPN ▪ ELE5TSE <p>2nd semester (year 2)</p> <ul style="list-style-type: none"> ▪ ELE5TDE* (telecommunications design project – requires ELE5PMC) ▪ Elective 30cp

DEPARTMENT OF ELECTRONIC ENGINEERING LABORATORY PRACTICE

1. Safety

- (i) UNDERGRADUATE STUDENTS ARE NOT ALLOWED IN LABORATORIES OUTSIDE ALLOCATED LABORATORY TIMES UNLESS BY SPECIFIC PERMISSION FROM A SUPERVISOR ON EACH OCCASION.
- (ii) SOLID FOOTWEAR MUST BE WORN AT ALL TIMES WHILE IN EXPERIMENTAL LABORATORIES (ie. NO bare feet or thongs)
- (iii) STUDENTS MUST NOT OPERATE ANY POWER TOOLS UNLESS UNDER DIRECT STAFF SUPERVISION.
- (iv) NO PERSON IS PERMITTED TO OPERATE POWER TOOLS* UNLESS THEY HAVE RECEIVED APPROPRIATE TRAINING AS DETERMINED BY THE CHAIRMAN OR LABORATORY MANAGER.
- (v) SAFETY GLASSES MUST BE WORN AT ALL TIMES WHEN OPERATING POWER TOOLS OR SOLDERING IRONS.
- (vi) ALL NEWLY-CONSTRUCTED MAINS-POWERED EQUIPMENT OR LEADS MUST BE CHECKED BY A MEMBER OF STAFF.
- (vii) Be familiar with procedures to be adopted in the event of electric shock.
- (viii) Do not place equipment or string up leads in hazardous places.
- (ix) Do not block ventilation holes on equipment, this may cause the equipment to overheat and may cause a fire.
- (x) If you suspect that any equipment has been damaged or is malfunctioning in anyway, report it to a member of staff immediately.
- (xi) Make certain that equipment is turned off (especially soldering irons) and that all windows and doors are locked at the end of the day.

2. Care of Equipment

- (i) Read the operating instructions before using an unfamiliar item of equipment.
- (ii) Avoid mechanical damage by carrying equipment carefully (with two people if necessary) and always place it carefully on a bench or trolley before use. Do not apply excessive force to switches or controls.

YOU HAVE THE PRIVILEGE OF USING QUITE SOPHISTICATED ITEMS OF EQUIPMENT DURING THIS COURSE. DO NOT LET STUPIDITY THREATEN THIS PRIVILEGE.

3. Ethics and Sharing

- (i) Do not remove equipment which is connected to a test rig without obtaining permission. In emergencies always leave an explanatory note.
- (ii) Do not leave equipment connected to a test rig for any longer than is necessary.
- (iii) Never modify existing leads or equipment to meet a particular requirement of your own and so ruin them for others.

NOTE: Students are not permitted to relocate equipment unless by specific instruction from a supervisor.

4. Discipline

- (i) Students will be held **responsible for any damage** to equipment which occurs through **wilful, reckless or grossly negligent behaviour**. Students will be charged the full costs of repair or replacement and may be suspended from the course.
- (ii) The **THEFT** of any **EQUIPMENT** or **COMPONENTS** will result in automatic suspension of the students from the course and will be reported to the **POLICE**.
- (iii) **Unruly or excessively noisy behaviour** which causes disturbance to other students trying to work will result in **eviction from the laboratory** and no marks will be credited for work currently being undertaken.
- (iv) **Disobedience** of a **reasonable direction by a member of the staff** of the University is a breach of the "Student Discipline" regulation.

5. General

- (i) Keep a laboratory book.
- (ii) Equip yourself with your own hand tools and data books.

Academic Misconduct

All students must read the following statement on Academic Misconduct

(Summarised for use in Electronic Engineering from: La Trobe University Academic Policies – Academic Misconduct.

Students should also read the entire University document at <http://www.latrobe.edu.au/policies/>

Academic Honesty, Cheating and Plagiarism

Plagiarism: One form of academic misconduct is **plagiarism**, the reproducing of someone else's words, ideas or findings and presenting them as one's own without proper acknowledgment. There are many forms of plagiarism including the following:

- (a) Direct copying of sentences, paragraphs or other extracts from someone else's published work (including on the Internet and in software) without acknowledging the source;
- (b) Paraphrasing someone else's words without acknowledging the source;
- (c) Using facts and information derived from a source without acknowledging it;
- (d) Using ideas directly derived from an identifiable author without acknowledging the source;
- (e) Producing assignments which should be the student's own, independent work in collaboration with and/or using the work of other people (eg a student or tutor).

Assisting another person to plagiarise material may be punished as severely as is plagiarism itself. Assisting plagiarism may involve lending work (or by posting it on the Internet for sale) which is intended for submission for assessment, or which has already been submitted, so that it can be copied and handed in by another student as that student's own work.

The University encourages students to communicate with one another in constructive ways about the learning process. You may choose to assist each other, for example in discussing the approaches that might be taken to assignment topics, or helping with the availability of ready materials. You should, however, write your assignments independently, except when asked to work on a project as a member of a group which is submitted as a joint report, as equal contributors. In this case, except where the final written work consists of sections for which particular individuals take sole responsibility, the group as a whole assumes responsibility for it and the proper acknowledgment of any use made of the words or ideas of people outside the group.

Responsibility of the University

- The University recognises its obligation to educate students in the definition, identification and avoidance of plagiarism.
- The University will ensure that all students are made aware of its policy on plagiarism.
- Students will be taught that rigorous standards in referencing and acknowledgment of sources will be required in their academic work and that these standards and practices could differ from those they may have acquired in secondary school.

Responsibility of the Student

- Observe in all respects the ethical approaches to learning that the University fosters.
- Declare ALL sources in their work submitted for assessment, from which they obtain material or ideas.
- Do this in ways approved by the discipline, faculty and department.
- Consult and use the guides and information provided by the University to instruct them in the avoidance of plagiarism.
- Take part in the sessions on plagiarism avoidance and learning programs provided by the University.
- Submit work for assessment with the appropriate statement of authorship.
- Retain copies of all assignment they submit for assessment.
- Ensure that they do not knowingly or carelessly make their work available to other students in any form.
- Consult with staff when in doubt about any matter where plagiarism is or may be involved.

Other forms of Academic Misconduct

There are many ways in which a student might deliberately attempt to deceive an examiner into believing that a piece of work submitted for assessment is their own. Examples include, but are not limited to:

- Direct copying of an assignment from another student, past or present.
- Engaging or attempting to engage another person to do all or part of the work required for the assessment (for payment or otherwise).
- Fabricating or falsifying data.
- Bringing into an examination forbidden material or gaining access to such material during an examination.
- Copying from an adjacent student in a formal examination.
- Gaining knowledge of or revealing content of an examination in a circumstance in which a student has taken the examination earlier or later than the scheduled time and has signed a statutory declaration to not communicate with others regarding the content of the examination.
- Attempting to copy another student's work by fraudulent means.
- Presenting fraudulent documents for the purpose of gaining credit.

The seriousness of the deception may vary, but such attempts to deliberately gain benefit by cheating should, once proven, normally result in suspension from the University for a period of time.

Assisting with Academic Misconduct or with plagiarism or cheating, whether carelessly or deliberately is also considered a breach of University regulations. Alleged cases of neglectful assistance will be treated as minor plagiarism breaches. Deliberate assistance will be treated as for serious cases of academic misconduct.

Penalties for Academic Misconduct are severe and are governed by University legislation.

The University procedures regarding plagiarism and academic dishonesty shall be invoked where an examiner believes that a student has sought to gain credit by dishonest or fraudulent means, including such instances where a student has submitted substantially plagiarised work.

Examples of minor and serious offences and sample penalties:

First Offence, 1st year student

1. **Poor referencing** – marks deducted, academic counselling

2. **Copying of short extract from document(s) without acknowledgment** – marks deducted, academic counselling, record kept by unit examiner.
3. **Inappropriate collaboration** – zero grade for work, academic counselling.
4. **Copying a large amount from one or more documents** – zero grade for unit and possible suspension.
5. **Copying from another student's work** - significant amount copied, zero grade for unit and possible suspension, normally for one year.

Repeat offence and/or later year students

1. **Poor referencing** – 50% reduction in mark for piece of work; academic counselling.
2. **Copying of short extract from document without acknowledgment** – reduced marks for piece of work; academic counselling; record kept by unit examiner and copy forwarded to University Secretary.
3. **Copying a number of short extracts from documents without acknowledgment** – in minor cases, or for minor pieces of work Head of Department may award zero for the piece of work; otherwise refer to Faculty Academic Misconduct Committee; zero grade for unit.
4. **Inappropriate collaboration** - refer to Faculty Academic Misconduct Committee; zero grade for unit.
5. **Copying a large amount from one or more documents** - zero for unit; suspension, normally for one year.
6. **Copying from another student's work** - zero for unit; suspension, normally for one year.

If a student is found guilty of any of the offences 2-4 above more than twice, they will be referred to the Faculty Academic Committee and should be suspended.

Formal Examination

1. **Possession of general authorised material** - refer to Faculty Academic Misconduct Committee (normally zero for the examination and suspension, normally for one year).
2. **Copying from adjacent student** - refer to Faculty Academic Misconduct Committee (normally zero for the examination and suspension, normally for one year).

Other Academic Misconduct

1. **Deliberate attempt to deceive an examiner into believing that a piece of work is their own when it is not and other forms of academic misconduct** - refer to Faculty Academic Misconduct Committee (normally zero for the piece of work and suspension, normally for one year).
2. **Assisting others with plagiarism or other forms of academic misconduct**
 - Carelessly – warning or zero for work
 - Second careless offence – normally refer to Faculty Academic Misconduct Committee and zero for unit.
 - Deliberately - refer to Faculty Academic Misconduct Committee (normally zero for the unit and possible suspension, depending on the seriousness of the plagiarism or academic misconduct involved.)

Certification by students of the originality of submitted work in Electronic Engineering

All work submitted by a student (excl examinations) which has a **value of 10% of a units final mark** shall be accompanied by a **'Statement of Authorship'** in which students signify that the work is their own.

**All other Electronic Engineering assignments and labs must have a signed DECLARATION form which declares originality of the work attached.
(Available from outside Room PS2 118).**

While the Department wishes to emphasise the importance of students sharing ideas and discussing problems amongst each other to facilitate greater understanding, it is essential that all work is original.

The full University Policy on Academic Misconduct should be read by students and can be found at: <http://www.latrobe.edu.au/policies/>

Plagiarism and all forms of Academic Misconduct are unacceptable in this University.

Appendix D

LA TROBE UNIVERSITY

WORKING AFTER HOURS IN LABORATORIES OR WORKSHOPS

1. PURPOSE

In ideal circumstances, university work on campus would be completed during normal working hours. In practice, however, it is sometimes necessary or desirable for staff or students to work on campus at other times also. In these circumstances there is an increased prima facie risk to health because of the lower availability of assistance if someone is incapacitated due to accidental injury or sudden illness. Such risk is greater in designated laboratory or workshop environments where there are particular hazards (see definition below).

The purpose of this procedure is to ensure that appropriate measures are taken to minimise risk to the health and safety of staff or students who work on campus in designated laboratories or workshops after hours.

2. DEFINITIONS

After hours. For the present purpose this is defined as the period between 7.30pm and 7.30am on working days, and all times of day on weekends and public holidays.

Designated laboratory or workshop. A laboratory, workshop or other such area in which there are chemical, biological, radioactive, electrical, mechanical or other hazards which present a substantially greater risk than is normally present in other areas on campus, as determined by the hazard identification and risk assessment procedure and approved by the responsible manager.

Designated high risk procedures. A work procedure which presents a substantially greater risk than is normally presented by other work procedures in that area, as determined in accord with the hazard identification and risk assessment procedure and approved by the responsible manager.

3. RESPONSIBILITIES.

Heads of School and area managers are responsible for:

- taking all practicable measures to ensure that staff and students for whom they are responsible, and who might work in designated laboratories or workshops, are aware of, and act in compliance with, this Procedure;

- ensuring that currently valid hazard identification and risk assessment procedures have been completed, and taking all practicable measures to ensure that any subsequent recommendations are implemented within designated laboratories and workshops within their area;
- ensuring that a telephone is accessible in each designated laboratory and workshop. The telephone should have a direct line to security, and/or the University emergency phone number 2222 must be displayed on or near the phone.

Supervisors of staff or of students working in a designated laboratory or workshop are responsible for:

- determining whether the work to be completed after hours is (or should be) a designated high risk procedure;
- taking all practicable measures to ensure that no designated high risk procedure is undertaken by anyone working alone after hours;
- maintaining a record of all occasions and people for which/whom they authorise the performance of designated high risk procedures after hours
- determining whether the work to be completed after hours requires special safety precautions, such as having two people in the room when a particular procedure is carried out, or having supervision by a member of staff (in the case of work performed by students);
- determining the types of work task which are not permitted at all after hours; the types of work task which are permitted after hours only when performed by staff; and the types of work task which are permitted after hours only when performed by either staff or postgraduate students.

4. DESCRIPTION

Prior to staff or students working after hours in a designated laboratory or workshop, they:

- (a) must have completed appropriate induction training, including emergency evacuation and other necessary emergency procedures;
- (b) must notify their supervisor of their intentions;
- (c) must obtain their supervisor's authorisation to perform any designated high-risk procedures; (note: approval will not be given for such procedures to be performed by anyone intending to work *alone*).

Staff or students working after hours in a designated laboratory or workshop;

- (d) must not perform any designated high-risk procedures if working *alone*;
- (e) must comply with all normal safety procedures and take any special safety precautions as previously agreed with their supervisor;
- (f) must inform security staff of their presence in that location, and the expected duration of their presence there. They should do this by entering the required details into a database established and maintained for this purpose on the university website for use by security staff, or by other means as may be agreed.
- (g) must establish their identity when requested by security staff by showing their staff or student card.

5. REFERENCES

OH&S Act 1985

6. CROSS REFERENCES

LTU Restricted Access Procedure http://www.latrobe.edu.au/ohs/manual/restricted_access.pdf Hazard ID and Risk Assessment
http://www.latrobe.edu.au/ohs/manual/Risk_assessment.pdf General Staff EBA August 2003

7. DOCUMENTATION

This procedure was reviewed by the Health Science OHS Zone Committee Issue 2 has been endorsed by the Executive Occupational Health and Safety committee at its meeting June 2004