

FACULTY OF SCIENCE

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Policies

■ Policy on credit transfer relating to Bachelor-level courses in the Faculty of Science

FROM INCOMPLETE BACHELOR-LEVEL SCIENCE COURSES

Students transferring to a Bachelor degree course offered by the Faculty of Science at QUT from a comparable, partially completed course in a recognised institution may be granted credit towards the QUT award. In general, credit will be granted pro rata; for example, 96 credit points of credit normally will be granted for each year of full-time study (or its equivalent) successfully completed at the other institution. The maximum credit which may be granted is 192 credit points.

Each application for credit towards a Faculty of Science award will be considered individually, on its merits. Students who have successfully completed a year or more of full-time study (or its equivalent) at another institution nevertheless may be required to undertake specific first-level units at QUT. Also, to satisfy the relevant QUT degree rules, some students may have to gain credit totalling more than 288 credit points.

FROM COMPLETED ASSOCIATE DIPLOMA COURSES

Students entering a Bachelor degree course offered by the Faculty of Science at QUT following successful completion of a relevant Associate Diploma course from a recognised institution may be granted credit towards the QUT award. The maximum credit which may be granted is 96 credit points.

Unless the Dean determines otherwise, the credit will be granted as provisional credit. To have the credit confirmed, the student undertakes in the QUT course a program of study of at least 48 credit points and attains a grade point average of not less than 4.0. If, at the conclusion of such a course of study, the student's grade point average is less than 4.0, the Dean shall determine both the extent to which credit granted conditionally may be retained and the student's subsequent program of study in the course.

■ Policy on submission of project reports for assessment

The Science Academic Board has approved the following rules with regard to the completion of project units in all undergraduate and postgraduate courses (including Honours projects):

- (i) A student enrolled in a project unit is required to submit the associated project report, dissertation or thesis for assessment by no later than the final day of the examination period for the semester in which the student's enrolment in that unit will terminate.
- (ii) In special circumstances and on the written recommendation of the student's supervisor, the Dean may grant an extension of time to complete the work associated with the project. The final date for submission of the report after such an extension shall be the last day of the deferred examination period for the semester in which the student's enrolment in that unit would terminate. In such cases, an 'A' result shall be given initially to the student in respect of this unit.
- (iii) The Academic Board may grant a further extension of time to complete the work associated with a project, on condition that the student re-enrols in the project unit for the succeeding semester. Failure to re-enrol in the project unit by the last day of

the deferred examination period for the semester in which, otherwise, the student's enrolment in that unit would terminate will result in a grade of 2 or 1 being awarded in that unit.

Subsequent to the assessment process, the relevant School shall have discretion as to whether a candidate needs to re-enrol to effect any amendments required, or whether such amendments are essentially editorial. However, a student who is required to undertake further investigative work relating to his or her project must continue to be enrolled in the relevant project unit.

Students seeking extensions are advised that late submission of a project report for assessment as indicated in (ii) above may prevent publication of the associated result in time for the student to be included on the graduation list for that semester. Thus course completion and graduate status from the relevant course may be delayed. This could disadvantage students seeking employment or promotion on the basis of the qualification in question.

■ Policy and procedures concerning exemption from practical work

Exemptions from practical work will not normally be granted by Schools in the Faculty. However, where a student wishes to be exempt on the grounds of some extenuating circumstances from the practical component of a unit attempted previously, they must write to the Head of School controlling the unit (or Dean of Faculty in the case of Faculty units), stating the following:

- (i) the year in which the unit was previously attempted,
- (ii) the total mark/grade obtained for the practical component for the semester, and the maximum possible mark/grade, where known, and
- (iii) the circumstances on which the students are basing their application.

Any documentation relevant to these circumstances must be provided with the application.

Students, if required, must submit practical reports, notebooks, field notes, etc. from their previous attempt at the unit. No exemption will be given for practicals where the unit has been attempted more than two years prior to the current enrolment. Students seeking exemption from practical work must do so within two weeks of the commencement of the semester in which the unit is taken.

Heads of School will:

- (i) consult with relevant Course/Strand Coordinators and unit lecturers with regard to the application,
- (ii) respond to the application in writing, and
- (iii) forward a copy of their response to the Course/Strand Coordinator and unit lecturer.

Heads of School will determine individual School policies on exemptions and these may be obtained from the School offices.

■ Master of Applied Science (SC80)

Location : Gardens Point campus

Course Duration: 2 years full-time, 4 years part-time

Total Credit Points: 192

Course Coordinator: Dr Don Field

Entry Requirement: Bachelor of Applied Science

The objectives of this course are:

- to provide postgraduate educational opportunities in specialised fields of applied science by means of a program which involves either an original contribution to knowledge or an original application of existing knowledge
- to provide education in research methods
- to enable graduates employed in industry to undertake further education by a combination of coursework, research and thesis
- to expand the involvement of students employed in industrial organisations and external agencies in undertaking relatively short-duration applied research or investigation.

1. General Conditions

1.1 The Council of the Queensland University of Technology was established in 1989 under the *Queensland University of Technology Act 1988*.

1.2 The Council's power to approve recommendations from Faculty academic boards regarding the registration, supervision and examination of research degree candidates and to develop policy and procedure relating to research degrees is exercised through a Research Management Committee which shall be a subcommittee of Academic Committee.

1.3 Research Management Committee has delegated responsibility for day-to-day administration of research Masters degree courses to Faculty academic boards. Academic boards shall report semiannually to the Research Management Committee on progress made by research Masters degree candidates.

1.4 Unless the context otherwise indicates or requires, the words 'academic board' and 'faculty' shall refer to the Faculty in which the candidate registers.

1.5 In order to qualify for the award of the degree of Master of Applied Science, a candidate must:

- have completed the approved course of study under the supervision prescribed by the Academic Board
- have submitted, and the Academic Board have accepted, a thesis prepared under the supervision of the supervisor
- have completed any other work prescribed by the Academic Board, and
- submit to the Academic Board a declaration signed by the candidate that he/she has not been a candidate for another tertiary award without permission of the Academic Board during the term of enrolment.

2. Registration

2.1 Applications shall be accepted subject to the availability of facilities and supervision.

2.2 Applications may be lodged with the Registrar at any time.

2.3 The minimum academic qualifications for admission to a program leading to a Master of Applied Science shall be:

- possession of a Bachelor degree in applied science from the Queensland University of Technology, or
- possession of an equivalent qualification, or
- submission of such other evidence of qualifications as will satisfy the Academic Board that the applicant possesses the capacity to pursue the course of study.

2.4 Additional requirements for admission to a particular program may be laid down by the Academic Board.

2.5 In considering an applicant for registration the Academic Board shall, in addition to assessing the applicant's suitability, assess the proposed program and its relevance to the aims and objectives of the University.

2.6 A candidate may register either as a full-time or as a part-time student.

2.6.1 To be registered as a full-time student, a candidate must be able to commit to the course not less than three-quarters of a normal working week, averaged over each year of candidacy. Such a student may not devote more than 300 hours annually to teaching activities, including preparation and marking.

2.6.2 A candidate who is unable to devote to the course the proportion of time specified in Section 2.6.1 may register as a part-time student.

2.7 A candidate may be internal or external. An external candidate is one whose program of research and investigation is based at a place of employment or sponsoring institution. Normally, support of the sponsoring institution for the candidate's application is required for a registration.

2.8 The Academic Board may cancel a candidate's registration if, after consulting a candidate's supervisors and having taken account of all relevant circumstances, the Academic Board is of the opinion that the candidate either has effectively discontinued his/her studies or has no reasonable expectation of completing the course of study within the maximum time allowed (see Section 4).

2.9 A candidate whose registration has lapsed or has been cancelled and who wishes subsequently to re-enter the course to undertake a program which is the same or essentially the same as the previous program may be re-admitted under such conditions as the Academic Board may prescribe.

3. Course of Study

3.1 A candidate for the degree of Master of Applied Science shall undertake a program of research and investigation on a topic approved by the Academic Board. All projects should be sponsored either by outside agencies such as industry, government authorities, or professional organisations, or by the University itself.

3.2 The program must be such as to enable to candidate to develop and demonstrate a level of scientific competence significantly higher than that expected of a first degree graduate. The required competence normally would include mastery of relevant techniques, investigatory skills, critical thinking, and a high level of knowledge in the specialist area.

3.3 The program includes both coursework and research.

The coursework is a program of up to 64 credit points as defined in 3.5 and 3.6 as appropriate for each candidate.

The research component is a program of supervised research and investigation of at least 128 credit points as described in 3.1 and 3.2.

3.4 The student's progress will be monitored continually throughout the first 96 credit points of the course. Where the School Research Committee, on the advice of the supervisors, is of the opinion that progress is not satisfactory, the student will be advised to consider transferring his/her enrolment to the SC71 Graduate Diploma in Applied Science course.

3.5 Coursework at Masters level may be conducted in a number of ways such as:

- advanced lecture courses
- seminars in which faculty and students present critical studies of selected problems within the subject field
- independent study or reading courses

In all cases, coursework is based upon a formal syllabus setting out the educational outcomes expected from the course, a list of topics to be covered, the prescribed reading material and the method of assessment of progress through and at the end of the course.

3.6 A candidate shall be required to participate in and present seminars as considered appropriate by the Principal Supervisor. The candidate shall be notified of minimum attendance requirements at the time of acceptance of enrolments.

3.7 Students entering the course with an Honours degree or its equivalent or candidates with substantial relevant work experience normally gain exemptions to a maximum of 96 credit points at the discretion of the Academic Board on the recommendation of the Head of School.

3.8 Students entering the course with a Graduate Diploma may gain exemption to a maximum of 96 credit points at the discretion of the Academic Board on the recommendation of the Head of School.

3.9 An application for registration should set out the candidate's intended course of study in broad outline but with specific objectives for the first year. The description should include the area of study within which the candidate's course lies, the coursework to be undertaken and the proposed title of the thesis to be written.

At an appropriate time during the first year of full-time study or its equivalent the candidate must document and have approved by Academic Board on the recommendation of the Head of School a detailed course of study for the entire program. This description must include in addition to the proposed thesis title, the aim of the proposed program of research and investigation, its background, the significance and possible application of the research program, and the research plan.

4. Period of Time for Completion of Course of Study

4.1 A full-time candidate who does not hold an Honours degree appropriate to the course of study will normally be required to complete both course and research work, including submission of the thesis for examination during a period of registration of 24 months. The corresponding period in the case of a part-time candidate shall be 48 months. In special cases the Academic Board may approve a shorter period.

4.2 A holder of an Honours degree or its equivalent appropriate to the course of study may submit the thesis for examination after not less than 12 months of registration if a full-time student, or 24 months if a part-time student. In special cases the Academic Board may approve a shorter period.

4.3 Where application is made for permission to extend the period within which the candidate may submit a thesis for examination, details of the candidate's progress shall be presented to the Academic Board together with the reasons for the delay in completing the work and the expected date of completion. Where the Academic Board agrees to an extension, it may set a limit to the maximum period of registration in the program.

5. Transfer of Registration

5.1 Where a candidate has undertaken part of a proposed course of study as a registered student in another institution, this period of registration may, on application in writing to the Academic Board at the time of application for registration, be counted towards the candidate's period of registration in the QUT course. The application must include details of the work already undertaken, the reasons for the transfer and the expected date of completion.

5.2 Applications for transfer normally should be submitted at least 12 months in advance of the probable date of submission of the thesis.

6. Supervision

6.1 For each candidate the Academic Board shall appoint one or more supervisors with appropriate experience provided that, where more than one supervisor is appointed, one shall be nominated as the Principal Supervisor and the others as Associate Supervisors.

6.2 In the case of an internal student, the Principal Supervisor normally shall be from the academic staff of the school where the student carries out the work.

6.3 In the case of an external student, the Principal Supervisor normally shall be from the academic staff of the school supporting the work and at least one Associate Supervisor shall be from the sponsoring organisation.

6.4 At the end of each six-month period a student shall submit a report on the work undertaken to the Principal Supervisor and the Principal Supervisor shall submit a report to the Academic Board on the student's work. This report shall be seen by the candidate before submission to the Academic Board.

7. Place and Conditions of Work

7.1 The research program is carried out under supervision in a suitable environment normally in Australia.

7.2 The Academic Board shall not admit a candidate to undertake a program of research based at the University unless it has received a statement from the Head of School in which the study is proposed that, in their opinion, the applicant is a fit person to undertake a research program leading to the Masters degree, that the program is supported, and that the School/Centre is willing to undertake the responsibility of supervising the applicant's work.

7.3 The Academic Board shall not admit a candidate to undertake a research program based at a sponsoring establishment unless it has received:

- a statement from the employer or director of the sponsoring institution that the applicant will be provided with facilities to undertake the research project and that they are willing to accept responsibility for supervising the applicant's work, and
- a statement from the Head of School or the Director of the Centre in which the study is proposed that, in their opinion, the applicant is a fit person to undertake a research program leading to the Masters degree, that the program is supported, and that after examination of the proposed external facilities and supervision, the school is willing to accept the responsibility of supervising the work.

8. Thesis

8.1 In the form of presentation, availability and copyright, the thesis shall comply with the provisions of the document *Requirements for Presenting Theses*.

8.2 The candidate's application for registration should set out the intended course of study in broad outline but with specific objectives for the first year. The description should include the area of study within which the candidate's course lies, the coursework to be undertaken and the proposed title of the thesis to be written.

At an appropriate time during the first year of full-time study or its equivalent the candidate must document and have approved by Academic Board on the recommendation of the relevant Head of School a detailed course of study for the entire program. This description must include in addition to the proposed thesis title, the aim of the proposed program of research and investigation, its background, the significance and possible application of the research program, and the research plan.

The candidate shall give two months' notice of intention to submit the thesis. Such notice shall be accompanied by the appropriate fee, if any.

8.3 The thesis shall comply with the following requirements:

- A significant portion of the work described must have been carried out subsequent to initial registration for the degree.
- It must describe a program of work carried out by the candidate, and must involve either an original contribution to knowledge or an original application of existing knowledge.
- It must reach a satisfactory standard of literary presentation.
- It shall be the candidate's own account of the work. Where work is carried out jointly with other persons, the Academic Board shall be advised of the extent of the candidate's contribution to the joint work.
- The thesis shall not contain as its main content any work or material which the student has previously submitted for another degree or similar award.
- Supporting documents, such as published papers, may be submitted with the thesis if they have a bearing on the subject of the thesis.
- The thesis shall contain an abstract of not more than 300 words.

8.4 Except with the specific permission of the Academic Board, the thesis must be presented in the English language. Such permission must be sought at the time of application for registration, and will not be granted solely on the grounds that the candidate's ability to satisfy the examiners will be affected adversely by the requirement to present the thesis in English.

8.5 Subject to QUT's Intellectual Property policy, the copyright of the thesis is vested in the candidate.

8.6 Where a candidate or the sponsoring establishment wishes the thesis to remain confidential for a period of time after completion of the work, application for approval must be made to the Academic Board when the thesis is submitted. The period of confidentiality normally shall not exceed two years from the date on which the examiners recommend acceptance of the thesis, during which time the thesis will be held on restricted access in the QUT Library.

9. Examination of Thesis

9.1 The Academic Board shall appoint at least two examiners, of whom at least one shall be from outside the University. Normally examiners will be required to agree to read and report upon the thesis within two months of its receipt.

9.2 A candidate may be required to make an oral defence of the thesis.

9.3 On receipt of satisfactory reports from the examiners, and when the provisions of 7.1 have been fulfilled, the Academic Board shall recommend to Academic Committee that the candidate be awarded the degree.

9.4 If the examiners' reports are conflicting, the Academic Board may, after appropriate consultation with the Principal Supervisor, seek advice from a further external examiner.

9.5 If, on the basis of the examiners' reports, the Academic Board does not recommend that the degree be awarded, then it shall:

- permit the student to resubmit the thesis within one year for re-examination, or
- cancel the student's registration.

If a candidate is required to revise and resubmit a thesis, the examiners' reports will be made available to the candidate, the anonymity of the examiners being maintained.

9.6 After the examination process is complete, examiners' reports are to be made available to the candidate on request. The names of examiners will be released on request providing the examiner has indicated willingness to have his/her identity revealed to the candidate.

Course Structure

COURSEWORK

The unit IFN001 Advanced Information Retrieval Skills (4 credit points) should normally be included.

The coursework units for individual strands are as follows. All the units shown on these two pages are units designed for this course.

	Credit Points
CHEMISTRY STRAND	
CHN701 Topics in Advanced Chemistry 1	12
CHN801 Topics in Advanced Chemistry 2	12
CHN705 Research Methodology	12
Elective Units: Two of:	
CHN710 Chemical Instrumentation	12
CHN720 Chemometrics	12
CHN730 Advanced Physical Methods in Chemistry	12
CHN740 Laboratory Techniques for Preparative Chemistry	12
GEOLOGY STRAND	
Selections from the following and other programs, depending on background and research area:	
ESN110 Advanced Topics in Earth Science 1	12
ESN130 Computer Applications in Earth Science	12
ESN140 Research Methodology 1	12
ESN160 Seminars	12
ESN170 Literature Survey	12
LIFE SCIENCE STRAND	
Students are normally expected to complete the following:	
LSN011 Research Seminars in Life Science 1	6
LSN023 Research Seminars in Life Science 3	12
LSN013 Readings in Life Science 3	24
Selections from other programs to a maximum of 18 credit points.	
MATHEMATICS STRAND	
Selections from other School programs and:	
MAN001 Reading Course 1	12
MAN002 Reading Course 2	12
to a maximum of 60 credit points	

PHYSICS STRAND

PHN715	Advanced Topics in Physics 1	12
PHN716	Advanced Topics in Physics 2	12
Selections from other programs to 36 credit points.		

RESEARCH WORK

At least 128 credit points of Masters research

■ **Master of Applied Science (Medical Physics)**
Master of Applied Science (Medical Ultrasound)
Master of Applied Science (Medical Imaging)
Master of Applied Science (Radiation Therapy) (PH80)

Location: Gardens Point campus

Course Duration: 2 years full-time, 4 years part-time (plus Summer School, except for Medical Physics students)

Total Credit Points: 192 – Medical Physics; 204 – Medical Ultrasound, Medical Imaging, Radiation Therapy

Standard Credit Points/Full-Time Semester: 48

Course Coordinators:

Medical Physics Major: Dr Tim van Doorn

Medical Ultrasound Major: Ms Margo Harkness

Medical Imaging Major: Mr Brian Starkoff

Radiation Therapy Major: Associate Professor Brian Thomas

Entry Requirements

This program commences in February each year. Applications are to be made prior to 1 December in the preceding year.

MEDICAL PHYSICS MAJOR

To be eligible to enrol for the Medical Physics Major, an applicant must have completed an acceptable tertiary course with a major in Physics.

Applicants with other qualifications (e.g. Engineering) may be enrolled subject to the approval of the Head of the School of Physics. In some instances, a bridging program may be necessary.

MEDICAL ULTRASOUND, MEDICAL IMAGING, AND RADIATION THERAPY MAJORS

To be eligible to enrol in the Medical Ultrasound or Medical Imaging Major, an applicant will normally be qualified as a diagnostic radiographer (or medical imaging technologist) at degree or diploma level for the Medical Ultrasound Major, or degree level for the Medical Imaging major, and have a minimum of two years' experience in clinical practice. To be eligible to enrol in the Radiation Therapy Major, an applicant will normally be qualified as a Radiation Therapist at degree or diploma level and have had a minimum of two years' experience in clinical practice.

Applicants with other qualifications (e.g. in paramedical or physical sciences), and appropriate experience, may be permitted to enrol subject to the approval of the Head of the School of Physics. In some instances, a bridging program may be necessary.

Applicants must also demonstrate, in writing, that access to suitable clinical experience will be available for the duration of the course.

Course Requirements

MEDICAL PHYSICS MAJOR

To complete Stage 1, students must complete units from the list below, totalling 96 credit points. Units available to students in the Medical Physics Major are indicated by C and MP.

In Semester 2, students may select either PHN213 Biomechanics/Physiological Measurement or PHN214 Health and Occupational Physics for a total of 48 credit points (FT).

MEDICAL ULTRASOUND MAJOR

To complete Stage 1, students must complete units from the list below, totalling 108 credit points. Units available to students in the Medical Ultrasound Major are indicated by C, C+ and MU.

MEDICAL IMAGING MAJOR

To complete Stage 1, students must complete units from the list below, totalling 108 credit points. Units available to students in the Medical Imaging Major are indicated by C, C+ and MI.

RADIATION THERAPY MAJOR

To complete Stage 1, students must complete units from the list below, totalling 108 credit points. Units available to students in the Radiation Therapy Major are indicated by C, C+ and RT.

Student progress will be monitored continually throughout Stage 1 of the course. Where the Head of School, on the advice of Course Coordinators, is of the opinion that progress is not appropriate, the student will be advised to consider transferring his/her enrolment to the PH71 Graduate Diploma in Applied Science (Medical Physics/Medical Imaging/Medical Ultrasound/Radiation Therapy).

Stage 1		Credit Points	Contact Hrs/Wk
First Semester			
LSB142	Human Anatomy & Physiology (MP)	12	5
LSN159	Advanced Pathology (C+)	12	4
PHN112	Medical Imaging Science (MP)	12	4
PHN113	Radiation Physics (MP/MI)	12	4
PHN114	Microprocessors & Instrumentation (MP)	12	4
PHN155	Ultrasonic Examination in Obstetrics/Gynaecology (MU)	6	2
PHN156	Ultrasonic Examination of the Abdomen (MU)	6	2
PHN162	Principles of Medical Ultrasound (MU/MI)	12	4
PHN171	Advanced Oncological Imaging (RT)	12	4
PHN173	Advanced Radiotherapy Technique (RT)	12	4
PHN181	Principles of Medical Image Processing (MI/RT)	6	2
PHN182	Computer Tomography (MI)	6	2
PHN183	Nuclear Medicine (MI) ¹	12	4
PHN184	Breast Imaging (MI) ¹	12	4
PHN197	Clinical Attachment 1 (C+)	12	
Second Semester			
PHN211	Medical Imaging (MP)	12	4
PHN212	Radiotherapy (MP)	12	4
PHN213	Biomechanics/Physiological Measurement (MP)	12	4
PHN214	Health & Occupational Physics (MP)	12	4
PHN216	Medical & Health Technology Management (C)	6	2
PHN217	Research Methodology (C)	6	2
PHN271	Principles of Oncology (RT)	12	4
PHN272	Brachytherapy (RT)	6	2

¹ Full-year subject, continues semester 2.

PHN273	Advanced Computer Planning (RT)	6	2
PHN281	Magnetic Resonance Imaging (MI)	12	4
PHN282	Digital Subtraction Angiography (MI)	6	2
PHN291	Medical Diagnosis (C+)	6	2
PHN297	Clinical Attachment 2 (C+)	12	
PHN354	Ultrasonic Examinations of the Head, Neck & Peripheral Organs (MU)	6	2
PHN355	Cardiovascular Ultrasound (MU)	12	4

Summer Term

PHN397	Clinical Attachment 3 (C+)	12	
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The units PHN216 Medical and Health Technology Management and PHN217 Research Methodology are compulsory for students in all majors. Units LSN159 Advanced Pathology, PHN291 Medical Diagnosis, PHN197 Clinical Attachment 1, PHN297 Clinical Attachment 2, and PHN397 Clinical Attachment 3 are compulsory for students in the Medical Ultrasound, Medical Imaging and Radiation Therapy Majors. Each clinical attachment unit involves a minimum of 240 hours of clinical experience. Students must successfully complete these units in the order PHN197, PHN297 and PHN397 unless special permission is granted.

Stage 2

Project Over Two Semesters	Credit Points
PHN520/1/2	96

Project Over Four Semesters	
PHN540/1/2/3/4	96

Note: A student may request an extension of time in which to submit the project report for assessment. A request for an extension of time up to a maximum of six months shall be made in writing through the Head of School to the Dean. Any request for a further extension, or any request for an extension to a date later than six months after the original due date, shall be made in writing to the Academic Board. The Academic Board may grant the extension under such conditions as it may consider appropriate, or may award the student a 'Fail' result in the project unit.

A student who has received a 'Fail' result in the project unit may re-enrol in the unit only in exceptional circumstances and with the express permission of the Academic Board.

■ Master of Applied Science (Life Science) (LS80)

Location: Gardens Point campus

Course Duration: 1.5 years full-time, 3 years part-time

Total Credit Points: 144

Standard Credit Points/Full-Time Semester: 48

Course Coordinator: Dr David Allen

Entry Requirements

Applicants shall hold a Bachelor of Applied Science with a GPA of 5.0 (on a seven-point scale) or better in the appropriate discipline for which they are seeking admission.

Applicants may be required to attend an interview with the Head of School and/or Course Coordinator to establish suitability for entrance into the course.

Graduates of the Graduate Diploma in Biotechnology (LS70) with a GPA of 5.0 or better (on a seven-point scale) will be eligible for entry into the course with a credit for 96 credit points.

Applicants who do not hold the specific tertiary qualification required of normal entrants may be admitted upon successful completion of a qualifying program prescribed by the Head of School.

Special Course Requirements

Students should consult the Course Coordinator regarding their programs.

Students must select two disciplinary specialisation elective units.

For part-time students, the project (dissertation) is normally carried out in the employer's laboratory. The employer's written permission is required.

Note: This course commences in mid-year.

Full-Time Course Structure

		Credit Points	Contact Hrs/Wk
Year 1, Semester 2			
LSB637	Molecular Genetics	12	5
LSN102	Cellular Basis of Disease	12	3
LSN110	Molecular Basis of Disease	12	3
Specialist Elective, select one from the following:			
LSN510	Clinical Biochemistry 1	12	3
LSN511	Haematology 1	12	3
LSN512	Histopathology 1	12	3
LSN515	Microbiology 1	12	3
LSN517	Immunology 1	12	3
LSN518	Diagnostic Cytology 1	12	3
Year 2, Semester 1			
HRN104	Introduction to Management	12	3
LSN150	Ethics and Life Science	12	3
LSP735	Human Molecular Biology	12	5
Specialist Elective, select one from the following:			
LSN610	Clinical Biochemistry 2	12	3
LSN611	Haematology 2	12	3
LSN612	Histopathology 2	12	3
LSN615	Microbiology 2	12	3
LSN617	Immunology 2	12	3
LSN618	Diagnostic Cytology 2	12	3
Year 2, Semester 2			
LSN710	Project	48	

Part-Time Course Structure

Year 1, Semester 2

LSN102	Cellular Basis of Disease	12	3
LSN110	Molecular Basis of Disease	12	3

Year 2, Semester 1

HRN104	Introduction to Management	12	3
LSN150	Ethics and Life Science	12	3

Year 2, Semester 2

LSB637	Molecular Genetics	12	5
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Specialist Elective, select one from the following:

LSN510	Clinical Biochemistry 1	12	3
LSN511	Haematology 1	12	3
LSN512	Histopathology 1	12	3
LSN515	Microbiology 1	12	3
LSN517	Immunology 1	12	3
LSN518	Diagnostic Cytology 1	12	3

Year 3, Semester 1

LSP735	Human Molecular Biology	12	5
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Specialist Elective, select one from the following:

LSN610	Clinical Biochemistry 2	12	3
LSN611	Haematology 2	12	3
LSN612	Histopathology 2	12	3
LSN615	Microbiology 2	12	3
LSN617	Immunology 2	12	3
LSN618	Diagnostic Cytology 2	12	3

Year 3, Semester 2

LSN711	Project 1	24	
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Year 4, Semester 1

LSN712	Project 2	24	
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■ Graduate Diploma in Applied Science (SC71)

Location : Gardens Point campus

Course Duration: 1 year full-time, 2 years part-time

Total Credit Points: 192

Average Credit Points/Full-Time Semester: 48

Course Coordinator: Dr Don Field

Entry Requirement: Bachelor of Applied Science or equivalent

Course Structure

Candidates for the degree of Graduate Diploma in Applied Science shall undertake a program of coursework, or coursework and minor research project, as approved by the Academic Board on the advice of the Head of School.

Students must complete a total of 96 credit points which may consist of:

- at least 60 and up to a maximum of 96 credit points of coursework, and
- up to 36 credit points as a minor research project.

Coursework units will be selected from the specific units available within the SC80 MAppSc course and may contain units selected from other postgraduate courses or advanced undergraduate courses where the background of the student requires this.

■ Graduate Diploma in Applied Science (Medical Physics) Graduate Diploma in Applied Science (Medical Ultrasound) Graduate Diploma in Applied Science (Medical Imaging) Graduate Diploma in Applied Science (Radiation Therapy) (PH71)

No enrolments are accepted directly into this course. For details see the section Course Requirements for Master of Applied Science (Medical Physics), Master of Applied Science (Medical Ultrasound), Master of Applied Science (Medical Imaging), and Master of Applied Science (Radiation Therapy) (PH80).

■ Graduate Diploma in Biotechnology (LS70)

Location: Gardens Point campus

Course Duration: 1 year full-time, 2 years part-time

Total Credit Points: 96

Standard Credit Points/Part-Time Semester: 24

Course Coordinator: Dr Peter Timms

Entry Requirements

NORMAL ENTRY

To be eligible for entry to the Graduate Diploma in Biotechnology, an applicant must have completed an appropriate degree in a relevant science area. Some background in biochemistry is essential.

SPECIAL ENTRY

Applicants who do not hold the tertiary qualifications required for normal entry may be eligible for admission if they have completed a diploma or degree in another appropriate non-science area as determined by the Head of School, and are employed in the biotechnology area.

Note: This course commences in mid-year.

Full-Time Course Structure (commencing students)		Credit Points	Contact Hrs/Wk
Year 1, Semester 2			
LSB637	Molecular Genetics	12	5
Select three from the following:			
CHP220	Principles of Bioprocessing	12	5
LSB607	Biochemical Separations	12	5
LSB617	Plant Tissue Culture 2	12	5
LSN102	Cellular Basis of Disease	12	3
LSN110	Molecular Basis of Disease	12	3
Year 1, Semester 1			
LSP127	Business Aspects of Biotechnology	12	3
Select three from the following:			
CHP420	Bioprocess Engineering Laboratory	12	5
HRN104	Introduction to Management	12	3
LSB517	Plant Tissue Culture 1	12	5
LSN150	Ethics & Life Science	12	5
LSP735	Human Molecular Biology	12	5
LSP737	Plant & Animal Molecular Biology	12	5
Part-Time Course Structure (commencing students)			
Year 1, Semester 2			
LSB607	Biochemical Separations	12	5
LSB637	Molecular Genetics	12	5
Year 1, Semester 1			
LSP127	Business Aspects of Biotechnology	12	3
LSP735	Human Molecular Biology	12	5
Year 2, Semester 2			
Select two from the following:			
CHP220	Principles of Bioprocessing	12	5
LSB617	Plant Tissue Culture 2	12	5
LSN102	Cellular Basis of Disease	12	3
LSN110	Molecular Basis of Disease	12	3
Year 2, Semester 1			
Select three from the following:			
CHP420	Bioprocess Engineering Laboratory	12	5
HRN104	Introduction to Management	12	3
LSB517	Plant Tissue Culture 1	12	5
LSN150	Ethics & Life Science	12	3
LSP737	Plant & Animal Molecular Biology	12	5

■ Bachelor of Applied Science (Honours) (SC60)

With majors in: Chemistry, Geology, Life Science, Mathematics and Physics.

Location: Gardens Point campus

Course Duration: 1 year full-time, 2 years part-time

Total Credit Points: 96

Standard Credit Points/Full-Time Semester: 48

Course Coordinator: Dr Don Field

Entry Requirements

To be eligible for admission, students should have completed QUT's Bachelor of Applied Science (SC30, CH32, LS36 or MA34) or equivalent and should have attained a grade point average (GPA) of at least 5.0 over that degree, including grades of at least credit (5) in all units directly relevant to the proposed Honours program. Application for admission should normally be made at the end of the pass degree, or within 18 months of completing that degree.

Applicants who do not satisfy the above conditions but who have demonstrated outstanding performance in only the final year of a degree, or whose application is based on other factors including work experience or involvement in research, may be admitted at the discretion of the Dean.

Please note that for the Mathematics major, other degrees with major studies in Mathematics (including Statistics) may provide suitable entry to the program.

Course Structure

The Honours program comprises 96 credit points. The course structure depends on the major and may vary slightly from one student to another, depending on the program and particular units chosen.

The general course structure consists of a project (see below) and units or advanced topics chosen from the program of the selected major. The unit IFN001 Advanced Information Retrieval Skills may also be included.

Part-time candidates annually undertake approximately half of the full-time program. Classes are held at the same times as for full-time students and thus may involve some day release from employment.

Students should consult the Course Coordinator concerning the availability of units and selection of units for their major.

Course Structure		Credit Points	Contact Hrs/Wk
CHEMISTRY MAJOR			
Semester 1			
CHB700/1	Research Project	24	
CHB701/1	Complementary Studies for Chemists	4	2
CHB780/1	Advanced Topics in Chemistry 1	12	6
IFN001	Advanced Information Retrieval Skills	4	2
	Elective Unit	6	
Semester 2			
CHB700/2	Research Project	24	
CHB701/2	Complementary Studies for Chemists	4	2
CHB780/2	Advanced Topics in Chemistry 1	12	6
	Elective Unit	6	

Elective units are chosen from a selection of Chemistry and other relevant disciplines.

GEOLOGY MAJOR

Semester 1

ESB700/1	Project	24	
ESB701/1	Geology Reviews	6	3
ESB705/1	Complementary Studies	6	3
ESB704	Advanced Studies in Earth Science	20	
IFN001	Advanced Information Retrieval Skills	4	2

Semester 2

ESB700/2	Project	24	
ESB701/2	Geology Reviews	6	3
ESB702/2	Complementary Studies	6	2

LIFE SCIENCE MAJOR (subject to approval)

Semester 1

LSB723/1	Readings in Life Science 1	10	
LSB825/1	Project	28	
IFN001	Advanced Information Retrieval Skills	4	2

Semester 2

LSB722	Research Strategies	16	
LSB723/2	Readings in Life Science 1	10	
LSB825/2	Project	28	

MATHEMATICS MAJOR

Semester 1

MAB989/1	Project	18	
	Three units selected from the list below	36	

Semester 2

MAB989/2	Project	18	
	Two units selected from the list below	24	

Students may take two elective units in Semester 1 and three in Semester 2 with the approval of the Course Coordinator.

Mathematics Elective Units

Five units are to be selected over the two semesters (not all units may be available).

ITB548	Introduction to Cryptology	12	3
ITB549	Error Control and Data Compression	12	3
ITN556	Advanced Topics in Cryptology	12	3
MAB906	Topics in Analysis	12	4
MAB912	Continuum Modelling	12	4
MAB913	Computational Mathematics 3B	12	4
MAB929	Time Series & Statistical Forecasting	12	4
MAB970	Probability Theory & Stochastic Processes	12	4
MAB971	Advanced Mathematics of Finance	12	4
MAB973	Partial Differential Equations	12	4
MAB974	Sampling & Survey Techniques	12	4
MAB975	Ordinary Differential Equations & Chaos	12	4
MAB976	Reliability & Survival Analysis	12	4
MAB977	Scheduling & Networks	12	4
MAB978	Statistical Signal Processing & Image Analysis	12	4
MAB979	Statistical Modelling & Data Analysis	12	4
MAB981	Applied Statistical Inference & Experimentation	12	4
MAB984	Actuarial Statistics	12	4
MAB985	Computational Mathematics 4	12	4
MAB986	Mathematical Modelling of Industrial Processes	12	4
MAB987	Optimisation of Controlled Processes	12	4
MAN012	Advanced Studies	12	4

PHYSICS MAJOR

Semester 1

PHB705/1	Project	24	
	Physics Elective Unit	12	4
	Physics Elective Unit	12	4

Semester 2

PHB705/2	Project	24	
	Physics Elective Unit	12	4
	Physics Elective Unit	12	4

Physics Elective Units

PHB706	Quantum Mechanics	12	4
PHB707	Advanced Materials	12	4
PHB708	Advanced Topics in Physics	12	4
PHN112	Medical Imaging Science	12	4
PHN113	Radiation Physics	12	4
PHN114	Microprocessors & Instrumentation	12	4
PHN211	Medical Imaging	12	4
PHN214	Health and Occupational Physics	12	4
PHN212	Radiotherapy	12	4

■ Bachelor of Applied Science (SC30)

With majors in: Biology, Biotechnology, Chemistry, Geology, Mathematics, Microbiology/Biochemistry, and Physics

Location: Gardens Point campus

Course Duration: 3 years full-time, 6 years part-time

Total Credit Points: 288

Standard Credit Points/Full-Time Semester: 48

Course Coordinator: Dr Don Field

Course Rules

1. A student may enrol as either a full-time or a part-time student. A full-time student is one who is enrolled in 36 or more credit points per semester. A part-time student is one who is enrolled in less than 36 credit points in the semester.
2. All commencing students and certain continuing students are required to attend scheduled academic advising sessions to plan their progression through the course, and to obtain the approval of an academic adviser prior to effecting any change of enrolment.
3. Students are normally expected to complete the course in minimum time. A full-time student enrolls in an average of 48 credit points per semester for six semesters and a part-time student enrolls in an average of 24 credit points per semester for 12 semesters.
4. To fulfil the requirements for the award of the degree, a student must complete units totalling at least 288 credit points, comprising major and minor studies, and supporting units. Major and minor studies are defined in terms of the discipline and the academic level at which units are offered:
 - (i) A major must be completed in one of the following discipline areas: biology, biotechnology, chemistry, mathematics, geology, microbiology/biochemistry, or physics. Completion of a major consists of passing units totalling at least 120 credit points from the second and third schedules, including a minimum of 48 credit points at third level. The general requirements for each major are set out after the Course Rules.

- (ii) A minor must be completed and may be undertaken in any approved subject area within the University. Completion of a minor consists of passing units totalling at least 48 credit points from units at advanced level.

Major and minor studies may be undertaken in the same or in closely related discipline areas.

5. A registered student who has successfully completed the equivalent of the first and second years of the standard full-time course, normally with a grade point average (GPA) of not less than 4.5 overall, may, at the discretion of the Cooperative Education Program Coordinator, undertake the Cooperative Education Program.

This involves 10-12 months of paid full-time employment in an approved industrial/commercial environment during which time the student is enrolled in the unit SCB100 Cooperative Education. On completion of the approved cooperative education placement the student resumes formal studies.

Notes on the Rules

- (i) First, second and third level units are defined, respectively, to be those listed in the first, second and third schedules to the course rules. In general, it is expected that a second level unit will have one or more first-level prerequisite units. Similarly, a third level unit is likely to have one or more second-level prerequisite units. The unit schedules are shown in the Schedule of Units.
- (ii) Instead of the major and minor requirement described in Rule 3, students may, in special circumstances and with the written approval of the Dean, undertake two majors or a major and two minors.
- (iii) In the specification of the minor in rule 4 (ii), the term 'advanced level' means:
- for those students taking minors from the SC30 Science disciplines, units from schedules 2 and 3 in the SC30 schedules of units, and
 - for students taking minors from other Faculties, any units which have a prerequisite of at least one other unit.

General Requirements for Majors

The units and specifications listed are the minimum requirements for completion of a major in each discipline.

BIOLOGY

First level:	Animal and Plant Structure and Function Cell and Molecular Biology 1 Chemistry 1 Introduction to Life Science Statistics or Statistics 1A
Second & third levels:	120 credit points of Biology units including 48 from the third level

BIOTECHNOLOGY

First level:	Animal and Plant Structure and Function Cell and Molecular Biology 1 Chemistry 1 Chemistry 2 Introduction to Life Science Statistics or Statistics 1A
Second & third levels:	120 credit points of Biotechnology units including 48 from the third level

CHEMISTRY

First level: Chemistry 1
Chemistry 2
At least 36 credit points from other first level Science units OR
Computing OR
Software Development 1

Second & third levels: 120 credit points of Chemistry units including 48 from the third level

GEOLOGY

First level: Physical Geology
Historical Geology
12 credit points of Chemistry units
12 credit points of Mathematics or Physics units
Statistics or Statistics 1A
Computing OR
Software Development 1

Second & third levels: 120 credit points of Geology units including 48 from the third level

MATHEMATICS

First level: Algebra and Analysis B
Calculus and Analysis A²
Calculus and Vector Algebra³
Statistics 1A

Second & third levels: 120 credit points of Mathematics units including 48 from the third level

MICROBIOLOGY/BIOCHEMISTRY

First level: Animal and Plant Structure and Function
Cell and Molecular Biology 1
Chemistry 1
Chemistry 2
Introduction to Life Science
Statistics or Statistics 1A

Second & third levels: 120 credit points of Microbiology/Biochemistry units including 48 from the third level

PHYSICS

First level: Computing OR
Software Development 1⁴
Calculus & Analysis A²
Algebra & Analysis B
Calculus & Vector Algebra
Physics 1 and 2

Second & third levels: 120 credit points of Physics units including 48 from the third level
Mathematics 3 & 4 OR
Multivariable Calculus & Differential Equations

All students must take SCB001 Learning at University unless exemption has been granted.

Note: There is no evening program for part-time students. Part-time students will attend classes with full-time students and therefore will require day release from employment to attend most units. Many mathematics units are available by evening study.

² Students who have not obtained a Sound Achievement in Senior Maths C must also take MAB200 Mathematics.

³ This unit can be replaced by another first-level mathematics unit with permission from the School of Mathematics.

⁴ These units need not be taken in First Year.

Schedule of Units		Semester	Credit	Contact
First Schedule – First Level Units		Offered	Points	Hrs/Wk
CHB142	Chemistry 1	1	12	6
CHB182	Chemistry 1	1,2	12	6
CHB242	Chemistry 2	2	12	6
CHB282	Chemistry 2	1,2	12	6
CSB263	Computing	1,2	12	4
ESB122	Physical Geology	1	12	5
ESB222	Historical Geology	2	12	5
ITB410	Software Development 1	1,2	12	3
LSB118	Introduction to Life Science	1	12	5
LSB150	Human Anatomy	1,2	12	5
LSB228	Animal & Plant Structure & Function	2	12	5
LSB238	Cell and Molecular Biology 1	2	12	5
MAB102	Basic Mathematics	1	12	4
MAB200	Mathematics	1	12	4
MAB237	Statistics	1,2	12	4
MAB301	Calculus & Analysis A	1,2	12	4
MAB303	Algebra & Analysis B	1,2	12	4
MAB304	Calculus & Vector Algebra	1,2	12	4
MAB321	Computational Mathematics 1	1,2	12	4
MAB342	Mathematics of Finance	1,2	12	4
MAB347	Statistics 1A	1,2	12	4
MAB348	Statistics 1B	1,2	12	4
PHB122	Physics 1	1	12	5
PHB222	Physics 2	2	12	5
SCB001	Learning at University	1	2	1
SCB202	Science Technology & Society	2	12	5
SCB222	Exploration of the Universe	2	12	5

INTRODUCTORY UNITS

CHB001	Introductory Chemistry	1,2	6	3
LSB001	Introductory Biology	1	6	3
PHB001	Introductory Physics	1,2	6	3

OTHER UNITS

Students may take units from any discipline within the University. Some other units offered at first level are listed below:

PHB150	Physics 1H	1	12	6
PHB263	Physics 2E	2	12	6

Schedule of Units – Second Level Units

CHB313	Analytical Chemistry 3	1,2	12	5
CHB333	Inorganic Chemistry 3	1	12	5
CHB352	Organic Chemistry 3	1	12	5
CHB372	Physical Chemistry 3	1	12	5
CHB423	Chemical Technology 4	2	12	5
CHB453	Organic Chemistry 4	2	12	5
CHB473	Physical Chemistry 4	2	12	5
ESB312	Mineralogy	1	12	5
ESB332	Geophysics	1	12	5
ESB342	Structural Geology and Geomechanics	1	12	5
ESB392	Field Techniques and Studies	1	12	5
ESB432	Geomorphology and Sedimentary Geology	2	12	5
ESB452	Geochemistry	2	12	5
ESB462	Lithology	2	12	5
ESB472	Mineral Deposits & Mine Geology	2	12	5
LSB302	Animal Biology	1	12	5
LSB308	Biochemistry 1	1	12	5
LSB318	Biochemical Methodology	1	12	5
LSB328	Microbiology 1	1	12	5
LSB338	Cell & Molecular Biology 2	1	12	5
LSB348	Genetics	1	12	5

LSB352	Population Ecology	1	12	5
LSB358	Physiology 1	1	12	5
LSB362	Experimental Design	1	12	5
LSB408	Biochemistry 2	2	12	5
LSB428	Microbiology 2	2	12	5
LSB438	Immunology 1	2	12	5
LSB448	Plant Biology	2	12	5
LSB458	Physiology 2	2	12	5
LSB468	Molecular Biology	2	12	5
LSB478	Animal Physiology	2	12	5
LSB488	Plant Physiology 1	2	12	5
LSB498	Ecological Methods	2	12	5
MAB422	Topics in Mathematics	2	12	4
MAB432	Mathematics 3 ⁵	1	12	4
MAB452	Mathematics 4 ⁵	2	12	4
MAB601	Multivariable Calculus	1	12	4
MAB612	Differential Equations	2	12	4
MAB618	Computational Mathematics 2	1,2	12	4
MAB620	Finite Mathematics	2	12	4
MAB630	Linear Algebra & its Applications	1	12	4
MAB632	Mathematical Modelling	2	12	4
MAB637	Operations Research 1A	1,2	12	4
MAB638	Operations Research 1B	2	12	4
MAB641	Actuarial Mathematics	1	12	4
MAB642	Methods of Mathematical Economics	2	12	4
MAB647	Statistics 2A	1	12	4
MAB648	Statistics 2B	2	12	4
PHB322	Physics 3A	1	12	5
PHB332	Physics 3B	1	12	5
PHB342	Physics 3C	1	12	5
PHB422	Physics 4A	2	12	5
PHB432	Physics 4B	2	12	5
PHB462	Experimental Physics 4	2	12	5
SCB402	Earth Resources Management	2	12	5

OTHER UNITS

Students may take units from any discipline within the University. Some other units offered at second level are listed below.

PUB353	Consumer Food	1	12	4
PUB405	Human Nutrition	2	12	5

Cooperative Education Program

A registered student who has completed the equivalent of the first and second years of the standard full-time course, normally with a GPA of not less than 4.5 overall, may, at the discretion of the Cooperative Education Program Coordinator, undertake the Cooperative Education option. This involves 10-12 months of paid full-time employment in an approved industrial/commercial environment during which time the student is enrolled in the unit SCB100 Cooperative Education. On completion of the approved cooperative education placement the student resumes formal studies.

Schedule of Units – Third Level Units

CHB513	Instrumental Analysis 5	1	12	5
CHB523	Chemical Technology 5	1	12	5
CHB533	Inorganic Chemistry 5	1	12	5
CHB553	Organic Chemistry 5	1	12	5
CHB573	Physical Chemistry 5	1	12	5
CHB603	Project	2	12	5
CHB613	Instrumental Analysis 6	2	12	5
CHB623	Chemical Technology 6	2	12	5
CHB643	Applied Spectroscopy	2	12	5

⁵ May not be available after 1996.

CHB663	Environmental Chemistry	2	12	5
CHB693	Materials Chemistry	2	12	5
ESB512	Igneous & Metamorphic Petrology	1	12	5
ESB522	Hydrogeology	1	12	5
ESB542	Engineering & Environmental Geology	1	12	5
ESB582	Ore Genesis	1	12	5
ESB592	Advanced Geological Mapping	Y ⁶	12	
ESB602	Geological Investigations	2	12	5
ESB652	Exploration Geoscience	2	12	5
ESB672	Fossil Fuel Geology	2	12	5
ESB682	Sedimentology & Basin Analysis	2	12	5
LSB502	Projects 1	1	12	5
LSB508	Biochemistry 5	1	12	5
LSB522	Population Management	1	12	5
LSB527	Analytical Biochemistry 6	1	12	5
LSB528	Microbial Physiology & Metabolism	1	12	5
LSB532	Population Genetics	1	12	5
LSB537	Genetic Engineering	1	12	5
LSB542	Plant Tissue Culture 2	1	12	5
LSB552	Aquaculture 1	1	12	5
LSB558	Advanced Physiology	1	12	5
LSB568	Electron Microscopy	2	12	5
LSB578	Virology	1	12	5
LSB602	Projects 2	2	12	5
LSB607	Biochemical Separations	2	12	5
LSB608	Biochemistry 6	2	12	5
LSB612	Aquaculture 2	2	12	5
LSB622	Case Studies	2	12	5
LSB628	Advanced Microbiology	2	12	5
LSB632	Plant Physiology 2	2	12	5
LSB637	Molecular Genetics	2	12	5
LSB648	Microbial Technology	2	12	5
LSB652	Biological Resources	2	12	5
LSB658	Clinical Physiology	2	12	5
MAB906	Topics in Analysis	1	12	4
MAB907	Statistics 3A	1	12	4
MAB908	Statistics 3B	2	12	4
MAB911	Computational Mathematics 3A	1	12	4
MAB912	Continuum Modelling	1	12	4
MAB913	Computational Mathematics 3B	2	12	4
MAB927	Operations Research 2A	1	12	4
MAB928	Operations Research 2B	2	12	4
MAB929	Time Series & Statistical Forecasting	2	12	4
MAB933	Mathematical Biology	1	12	4
MAB941	Mathematical Modelling in Economics	1	12	4
MAB942	Optimisation Methods	1	12	4
MAB960	Project Work	1,2	12	4
MAB970	Probability Theory & Stochastic Processes	1	12	4
MAB971	Advanced Mathematics of Finance	2	12	4
MAB973	Partial Differential Equations	2	12	4
MAB974	Sampling & Survey Techniques	2	12	4
PHB512	Project	1,2	12	5
PHB522	Applied Quantum Mechanics	1	12	5
PHB532	Electromagnetic Field Theory	1	12	5
PHB562	Physical Methods of Analysis	1	12	5
PHB622	Solid State Physics	2	12	5
PHB632	Nuclear & Particle Physics	2	12	5
PHB642	Applied Radiation & Health Physics	2	12	5
PHB662	Topics in Physics	1	12	5
SCB510	Introduction to Quality Management	1	12	4

⁶ Year-long unit.

OTHER UNITS

Students may take units from any discipline within the University. One other unit offered at third level is:

PUB631	Nutritional Biochemistry 2	12	5
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■ Bachelor of Applied Science (Applied Chemistry) (CH32)

Location: Gardens Point campus

Course Duration: 3 years full-time, 6 years part-time

Total Credit Points: 288 (minimum)

Standard Credit Points/Full-Time Semester: 48

Course Coordinator: Mr Eric O'Reilly

Full-Time Course Structure

Credit Points	Contact Hrs/Wk
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Note: It is strongly recommended that students also undertake the unit SCB001 Learning at University in their first semester.

Year 1, Semester 1

CHB173	Chemistry 1A	12	6
CHB183	Chemistry 1B	12	6
MAB200	Mathematics	12	4
PHB122	Physics 1	12	5

Year 1, Semester 2

CHB213	Concepts of Analytical Chemistry	12	5
CHB283	Chemistry 2A	12	5
CHB253	Chemistry 2B	12	5
MAB237	Statistics	12	4

Year 2, Semester 1

CHB313	Analytical Chemistry 3	12	5
CHB333	Inorganic Chemistry 3	12	5
CHB353	Organic Chemistry 3A	12	5
CHB373	Physical Chemistry 3A	12	5

Year 2, Semester 2

CHB423	Chemical Technology 4	12	5
CHB453	Organic Chemistry 4	12	5
CHB473	Physical Chemistry 4	12	5
CSB263	Computing	12	4

Year 3, Semester 1

CHB513	Instrumental Analysis 5	12	5
CHB523	Chemical Technology 5	12	5
Two of:			
CHB533	Inorganic Chemistry 5	12	5
CHB553	Organic Chemistry 5	12	5
CHB573	Physical Chemistry 5	12	5
	Elective Unit	12	

Year 3, Semester 2

CHB613	Instrumental Analysis 6	12	5
CHB623	Chemical Technology 6	12	5
CHB693	Materials Chemistry	12	5
One of:			
CHB603	Project	12	5
CHB643	Applied Spectroscopy	12	5
CHB653	Applied Biological Chemistry	12	5

CHB663	Environmental Chemistry Elective Unit	12 12	5
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Cooperative Education Program

A registered student who has completed the equivalent of the first and second years of the standard full-time course, normally with a GPA of not less than 4.5 overall, may, at the discretion of the Cooperative Education Program Coordinator, undertake the Cooperative Education option.

This involves 10–12 months of paid full-time employment in an approved industrial/commercial environment during which time the student is enrolled in the unit SCB100 Cooperative Education. On completion of the approved industrial experience the student resumes formal studies.

Part-Time Course Structure	Credit Points	Contact Hrs/Wk
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Note: It is strongly recommended that students also undertake the unit SCB001 Learning at University in their first semester.

Year 1, Semester 1

CHB173	Chemistry 1A	12	6
PHB122	Physics 1	12	5

Year 1, Semester 2

CHB183	Chemistry 1B	12	6
MAB200	Mathematics	12	4

Year 2, Semester 1

CHB283	Chemistry 2A	12	5
MAB237	Statistics	12	4

Year 2, Semester 2

CHB213	Concepts of Analytical Chemistry	12	5
CHB253	Chemistry 2B	12	5

Year 3, Semester 1

CHB353	Organic Chemistry 3A	12	5
CHB373	Physical Chemistry 3A	12	5

Year 3, Semester 2

CHB453	Organic Chemistry 4	12	5
CHB473	Physical Chemistry 4	12	5

Year 4, Semester 1

CHB313	Analytical Chemistry 3	12	5
CHB333	Inorganic Chemistry 3	12	5

Year 4, Semester 2

CHB423	Chemical Technology 4	12	5
CSB263	Computing	12	4

Year 5, Semester 1

CHB513	Instrumental Analysis 5	12	5
CHB523	Chemical Technology 5	12	5

Year 5, Semester 2

CHB613	Instrumental Analysis 6	12	5
CHB623	Chemical Technology 6	12	5

Year 6, Semester 1

Two of:			
CHB533	Inorganic Chemistry 5	12	5
CHB553	Organic Chemistry 5	12	5
CHB573	Physical Chemistry 5	12	5
	Elective Unit	12	

Year 6, Semester 2

CHB693	Materials Chemistry	12	5
One of:			
CHB603	Project	12	5
CHB653	Applied Biological Chemistry	12	5
CHB663	Environmental Chemistry	12	5
	Elective Unit	12	

Note: It is not intended that all Chemistry elective units will be offered. Those units offered in any one year will be determined by student demand.

■ Bachelor of Applied Science (Mathematics) (MA34)

Location: Gardens Point campus

Course Duration: 3 years full-time, 6 years part-time

Total Credit Points: 288

Standard Credit Points/Full-Time Semester: 48

Course Coordinator: Mr Clif Bothwell

Course Requirements

A student selects units from the list given below, having regard to specified prerequisites and co-requisites, and must complete:

- (i) all units from List A
- (ii) at least 36 credit points from List B
- (iii) at least 144 credit points from Lists C and D with at least 48 credit points from List D
- (iv) a minimum of 288 credit points.

		Semester Offered	Credit Points	Contact Hrs/Wk
List A				
CSB155	Introduction to Computing	1,2	12	4
MAB301	Calculus and Analysis A	1,2	12	4
MAB303	Algebra and Analysis B	1,2	12	4
MAB347	Statistics 1A	1,2	12	4
List B				
MAB304	Calculus and Vector Algebra	1,2	12	4
MAB321	Computational Mathematics 1	1,2	12	4
MAB342	Mathematics of Finance	1,2	12	4
MAB348	Statistics 1B	1,2	12	4
List C				
MAB601	Multivariable Calculus	1	12	4
MAB612	Differential Equations	2	12	4
MAB618	Computational Mathematics 2	1,2	12	4
MAB620	Finite Mathematics	2	12	4
MAB630	Linear Algebra & its Applications	1	12	4
MAB632	Mathematical Modelling	2	12	4
MAB637	Operations Research 1A	1,2	12	4
MAB638	Operations Research 1B	2	12	4
MAB641	Actuarial Mathematics	1	12	4
MAB642	Methods of Mathematical Economics	2	12	4
MAB647	Statistics 2A	1	12	4
MAB648	Statistics 2B	2	12	4

Non-mathematical units from any Faculty [a maximum total of 72 credit points with not more than 48 at first level. First level units are generally units with no prerequisites other than course entry requirements.]

	1,2	8-12ea	3-6ea	
List D				
MAB906	Topics in Analysis	1	12	4
MAB907	Statistics 3A	1	12	4
MAB908	Statistics 3B	2	12	4
MAB911	Computational Mathematics 3A	1	12	4
MAB912	Continuum Modelling	1	12	4
MAB913	Computational Mathematics 3B	2	12	4
MAB927	Operations Research 2A	1	12	4
MAB928	Operations Research 2B	2	12	4
MAB929	Time Series & Statistical Forecasting	2	12	4
MAB933	Mathematical Biology	1	12	4
MAB941	Mathematical Modelling in Economics	1	12	4
MAB942	Optimisation Methods	1	12	4
MAB960	Project Work	1,2	12	4
MAB970	Probability Theory & Stochastic Processes	1	12	4
MAB971	Advanced Mathematics of Finance	2	12	4
MAB973	Partial Differential Equations	2	12	4
MAB974	Sampling & Survey Techniques	2	12	4
SCB510	Introduction to Quality Management	1	12	4

Cooperative Education Program

A registered student who has completed the equivalent of the first and second years of the standard full-time course, normally with a GPA of not less than 4.5 overall, may, at the discretion of the Cooperative Education Program Coordinator, undertake the Cooperative Education option.

This involves 10-12 months of paid full-time employment in an approved industrial/commercial environment during which time the student is enrolled in the unit SCB100 Cooperative Education. On completion of the approved Cooperative Education placement the student resumes formal studies.

■ Bachelor of Applied Science (Medical Laboratory Science) (LS36)

Location: Gardens Point campus

Course Duration: 3 years full-time, 6 years part-time

Total Credit Points: 288

Standard Credit Points/Full-Time Semester: 48

Course Coordinator: Ms Pam Stallybrass

Professional Recognition

Graduates are immediately eligible for graduate membership of the Australian Institute of Medical Scientists and will have completed the academic requirements for admission as associate members.

Special Course Requirements

Students in the part-time program should be aware that they are required to attend much of their program during the day.

Students are required to undertake a four-week work experience program in a practising pathology laboratory. This takes place at the end of the second year full-time and in a suitable vacation period during the part-time program. This is a requirement for the unit LSB480 Professional Practice.

Full-Time Course Structure (continuing students only)

		Credit Points	Contact Hrs/Wk
Year 3, Semester 1			
LSB500	Microbiology 5	16	7
LSB520	Clinical Biochemistry 5	8	4
LSB530	Immunology 5	8	4
LSB550	Haematology 5	8	4
LSB560	Histopathology 5	8	4
Year 3, Semester 2			
LSB600	Clinical Bacteriology 6	16	7
LSB620	Clinical Biochemistry 6	8	4
LSB630	Immunohaematology 6	8	4
LSB650	Haematology 6	8	4
LSB660	Histopathology 6	8	4

Part-Time Course Structure (continuing students only)

Students enrolling in the part-time program must consult with the Course Coordinator.

Full-Time Course Structure (commencing students only)**Year 1, Semester 1**

CHB142	Chemistry 1	12	6
LSB150	Human Anatomy	12	5
LSB118	Introduction to Life Science	12	6
PHB150	Physics 1H	12	6

Year 1, Semester 2

CHB242	Chemistry 2	12	6
LSB260	Quantitative Methods in Life Science 1	12	6
LSB238	Cell & Molecular Biology	12	5
LSB250	Human Physiology	12	6

Year 2, Semester 1

LSB308	Biochemistry 1	12	5
LSB300	Microbiology 1	8	4
LSB320	Quantitative Methods in Life Science 2	8	5
LSB348	Genetics	12	5
LSB350	General & Systematic Pathology	8	4

Year 2, Semester 2

LSB410	Biochemistry 2	8	5
LSB400	Microbiology 2	8	4
LSB430	Immunology 1	8	4
LSB450	Haematology 1	8	4
LSB460	Histopathology 1	8	4
LSB437	Molecular Biology	8	4
LSB480	Professional Practice		4 weeks

Year 3, Semester 1

LSB510	Microbiology 3	8	5
LSB520	Clinical Biochemistry 1	8	4
LSB530	Immunology 2	8	4
LSB550	Haematology 2	8	4
LSB560	Histopathology 2	8	4
LSB540	Molecular Pathogenesis & Disease Diagnosis 2	8	2

Year 3, Semester 2

LSB610	Clinical Bacteriology	8	5.5
LSB620	Clinical Biochemistry 2	8	4
LSB630	Immunohaematology	8	4
LSB650	Haematology 3	8	4
LSB660	Histopathology 3	8	4
LSB640	Molecular Pathogenesis & Disease Diagnosis 2	8	2

Part-Time Course Structure (commencing students only)

Year 1, Semester 1

CHB142	Chemistry 1		
LSB150	Human Anatomy	12	4

Year 1, Semester 2

CHB242	Chemistry 2	12	6
LSB260	Quantitative Methods in Life Science 1	12	5

Year 2, Semester 1

LSB118	Introduction to Life Science	12	6
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Year 2, Semester 2

LSB238	Cell & Molecular Biology	12	5
LSB250	Human Physiology	12	6

Year 3, Semester 1

LSB308	Biochemistry 1	12	4
LSB300	Microbiology 1	8	4
LSB350	General & Systematic Pathology	8	2

Year 3, Semester 2

LSB410	Biochemistry 2	8	5
LSB400	Microbiology 2	8	4
LSB437	Molecular Biology	8	4

Year 4, Semester 1

LSB320	Quantitative Methods in Life Science 2	8	4
LSB348	Genetics	12	5

Year 4, Semester 2

LSB430	Immunology 1	8	4
LSB450	Haematology 1	8	4
LSB460	Histopathology 1	8	4
LSB480	Professional Practice		2-4 weeks

Year 5, Semester 1

LSB510	Microbiology 3	8	5
LSB520	Clinical Biochemistry 1	8	4
LSB530	Immunology 2	8	4

Year 5, Semester 2

LSB610	Clinical Bacteriology	8	5.5
LSB620	Clinical Biochemistry 2	8	4
LSB630	Immunohaematology	8	4
LSB480	Professional Practice		2-4 weeks

Year 6, Semester 1

LSB550	Haematology 2	8	4
LSB560	Histopathology 2	8	4
LSB540	Molecular Pathogenesis & Disease Diagnosis 1	8	4

Year 6, Semester 2

LSB650	Haematology 3	8	4
LSB660	Histopathology 3	8	4
LSB640	Molecular Pathogenesis & Disease Diagnosis 2	8	2

■ Bachelor of Applied Science (Medical Radiation Technology) (PH38)

With majors in: Medical Imaging Technology and Radiotherapy Technology

Location: Gardens Point campus

Course Duration: 3 years full-time

Total Credit Points: 288

Standard Credit Points/Full-Time Semester: 48

Course Coordinator: Associate Professor Brian J. Thomas

Coordinators:

Medical Imaging Technology Major: Ms Pam Rowntree

Radiotherapy Technology Major: Mrs Michelle Oppelaar

Conversion Program

A program to allow holders of an associate diploma or diploma to upgrade to degree level is offered in both majors. Refer to PH90 for course details.

Full-Time Course Structure (commencing students)		Credit Points	Contact Hrs/Wk
Year 1, Semester 1			
COMMON UNITS			
LSB141	Anatomy 1	10	4
MAB151	Quantitative Techniques	4	2
NSB201	Principles of Patient Care	4	2
PHB111	Physics 1B	8	3
PHB178	Principles of Medical Radiations	12	6
SSB910	Introductory Psychology for Health Professionals	4	2
Year 1, Semester 2			
COMMON UNITS			
LSB221	Introduction to Pathology	8	3
LSB241	Anatomy 2	10	4
PHB272	Radiation Physics 1	12	5
MEDICAL IMAGING TECHNOLOGY MAJOR			
PHB275	Processing Technology	4	2
PHB276	General Radiography 1	12	6
PHB278	General Radiography Practice 1	8	3
RADIOTHERAPY TECHNOLOGY MAJOR			
PHB286	Treatment Planning 1	12	6
PHB287	Megavoltage Therapy 1	8	4
Full-time Course Structure (continuing students who commenced in 1995)			
Year 2, Semester 1			
COMMON UNITS			
LSB321	Systematic Pathology	8	3
LSB343	Imaging Anatomy 1	8	4
MEDICAL IMAGING TECHNOLOGY MAJOR			
PHB373	Nuclear Medicine Imaging 1	4	2
PHB374	Radiographic Equipment 1	4	2
PHB376	General Radiography 2	8	4
PHB379	Clinical Radiography 1	8	4
PHB378	General Radiography Practice 2	8	3
RADIOTHERAPY TECHNOLOGY MAJOR			
PHB382	Radiotherapy Physics 1	4	2
PHB386	Treatment Planning 2	12	6
PHB387	Megavoltage Therapy 2	12	5
PHB389	Clinical Radiotherapy 1	8	4
Year 2, Semester 2			
COMMON UNITS			
LSB443	Imaging Anatomy 2	8	4
PHB475	Medical Radiation Computing 1	8	3

MEDICAL IMAGING TECHNOLOGY MAJOR			
PHB473	Medical Ultrasound	4	2
PHB474	Radiographic Equipment 2	4	2
PHB476	Special Procedures	12	5
PHB479	Clinical Radiography 2	8	4
RADIOTHERAPY TECHNOLOGY MAJOR			
PHB485/1	Principles of Treatment	4	3
PHB487	Megavoltage Therapy 3	12	4
PHB489	Clinical Radiotherapy 2	8	4
PHB585	Computer Assisted Treatment Planning 1	12	3

Full-Time Course Structure (continuing students who commenced prior to 1995)

Year 3, Semester 1

COMMON UNITS

PHB471	Radiation Physics 2	4	2
PHB575	Medical Radiation Computing 2	8	3
PHB672/1	Project	2	

MEDICAL IMAGING TECHNOLOGY MAJOR

LSB421	Imaging Pathology	4	2
PHB572	Image Recording & Evaluation	4	2
PHB574	Quality Assurance in Medical Imaging	6	3
PHB576	Advanced Radiographic Technique 1	12	6
PHB578	Image Interpretation	4	2
PHB579	Clinical Radiography 4	8	4

RADIOTHERAPY TECHNOLOGY MAJOR

PHB584	Principles of Treatment 2	4	2
PHB587	Orthovoltage & Superficial Therapy	10	4
PHB589	Clinical Radiotherapy 4	12	6
PHB685	Computer Assisted Treatment Planning 2	8	4

Year 3, Semester 2

COMMON UNITS

PHB671	Radiation Biology	4	2
PHB672/2	Project	6	
SSB918	Counselling for Health Professionals	4	2

MEDICAL IMAGING TECHNOLOGY MAJOR

PHB676	Advanced Radiographic Technique 2	8	3
PHB679	Clinical Radiography 5	14	6

Select one of the following units:

PHB680	Nuclear Medicine Imaging 2	10	5
PHB681	Computed Tomography Imaging	10	5

RADIOTHERAPY TECHNOLOGY MAJOR

PHB583	Complementary & Evolving Techniques	6	3
PHB683	Oncological Imaging	6	3
PHB687	Specialised Radiotherapy Technique	10	4
PHB689	Clinical Radiotherapy 5	8	4

■ Bachelor of Applied Science (Medical Radiation Technology) (PH90)

Conversion Course with majors in: Medical Imaging Technology and Radiotherapy Technology

Location: Gardens Point campus

Course Duration: 2 years part-time for holders of a Diploma in Radiography (QUT) or equivalent or 3 years part-time for holders of an Associate Diploma in Radiography (QUT)

or equivalent. The programs are also available over half the duration mentioned above in full-time mode.

Total Credit Points: 96 (diploma holders); 144 (associate diploma holders).

Standard Credit Points/Part-Time Semester: 24

Course Coordinator: Associate Professor Brian Thomas

Coordinators:

Medical Imaging Technology Major: Ms Pam Rowntree

Radiotherapy Technology Major: Mrs Michelle Oppelaar

Part-Time Course Structure for Diploma Holders

	Credit Points	Contact Hrs/Wk
Year 1, Semester 1		
COMMON UNITS		
LSB321 Systematic Pathology	8	3
LSB343 Imaging Anatomy 1	8	4
MAB151 Quantitative Techniques	4	2
Year 1, Semester 2		
COMMON UNITS		
LSB441 Imaging Anatomy 2	8	4
PHB475 Medical Radiation Computing 1	8	3
Year 2, Semester 1		
COMMON UNITS		
PHB575 Medical Radiation Computing 2	8	3
PHB673/1 Project	6	1
MEDICAL IMAGING TECHNOLOGY MAJOR		
LSB421 Imaging Pathology	4	2
PHB571 Quality Assurance in Medical Imaging	6	3
PHB578 Image Interpretation	4	2
RADIOTHERAPY TECHNOLOGY MAJOR		
PHB685 Computer Assisted Treatment Planning 2	8	4
Year 2, Semester 2		
COMMON UNIT		
PHB673/2 Project	6	
MEDICAL IMAGING TECHNOLOGY MAJOR		
PHB670 Advanced Radiographic Practice 2	20	4
Select one of the following units:		
PHB680 Nuclear Medicine Imaging 2	10	5
PHB681 Computed Tomography Imaging	10	5
RADIOTHERAPY TECHNOLOGY MAJOR		
PHB687 Specialised Radiotherapy Technique 2	12	4
PHB889 Advanced Radiotherapeutic Practice	20	4

**Part-Time Course Structure for Associate Diploma Holders
(for commencing students)**

Year 1, Semester 1

COMMON UNIT

LSB321 Systematic Pathology	8	3
LSB343 Imaging Anatomy 1	8	4

MEDICAL IMAGING TECHNOLOGY MAJOR

PHB500 Advanced Imaging Practice 1	14	4
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RADIOTHERAPY TECHNOLOGY MAJOR		
MAB151	Quantitative Techniques	4 2
Year 1, Semester 2		
COMMON UNIT		
LSB443	Imaging Anatomy 2	8 4
MEDICAL IMAGING TECHNOLOGY MAJOR		
PHB473	Medical Ultrasound	4 2
RADIOTHERAPY TECHNOLOGY MAJOR		
PHB475	Medical Radiation Computing 1	8 3
PHB585	Computer Assisted Treatment Planning 1	12 6

**Part-Time Course Structure for Associate Diploma Holders
(for continuing students)**

Year 2, Semester 1

MEDICAL IMAGING TECHNOLOGY MAJOR		
LSB421	Imaging Pathology	4 2
MAB151	Quantitative Techniques	4 2
PHB373	Nuclear Medicine Imaging 1	4 2
RADIOTHERAPY TECHNOLOGY MAJOR		
LSB321	Systematic Pathology	8 3
PHB471	Radiation Physics 2	4 2
PHB575	Medical Radiation Computing 2	8 3

Year 2, Semester 2

MEDICAL IMAGING TECHNOLOGY MAJOR		
PHB475	Medical Radiation Computing 1	8 3
PHB679	Clinical Radiography 5	14
RADIOTHERAPY TECHNOLOGY MAJOR		
PHB583	Complementary & Evolving Techniques	6 3
PHB671	Radiation Biology	4 2
PHB683	Oncological Imaging	6 3

Year 3, Semester 1

COMMON UNIT		
PHB673/1	Project	2 1
MEDICAL IMAGING TECHNOLOGY MAJOR		
PHB571	Quality Assurance in Medical Imaging	6 3
PHB575	Medical Radiation Computing 2	8 3
PHB578	Image Interpretation 1	4 2
RADIOTHERAPY TECHNOLOGY MAJOR		
PHB685	Computer Assisted Treatment Planning 2	8 4
PHB889	Advanced Radiotherapeutic Practice 2	20 4

Year 3, Semester 2

COMMON UNIT		
PHB673/2	Project	6
MEDICAL IMAGING TECHNOLOGY MAJOR		
PHB670	Advanced Radiographic Practice 2	20 4
Select one of the following units:		
PHB680	Nuclear Medicine Imaging 2	10 5
PHB681	Computed Tomography Imaging	10 5
RADIOTHERAPY TECHNOLOGY MAJOR		
PHB687	Specialised Radiotherapy Technique 2	10 4

■ Associate Degree in Applied Science (Biology) Associate Degree in Applied Science (Chemistry) (SC12)

Location: Gardens Point campus

Course Duration: 2 years full-time, 4 years part-time

Total Credit Points: 192

Standard Credit Points/Full-Time Semester: 48

Course Coordinator: Dr Graham Smith

Full-Time Course Structure	Credit Points	Contact Hrs/Wk
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This course is being phased out. Students requiring units from the first two semesters of the course should consult with the Course Coordinator to arrange for alternative units.

BIOLOGY MAJOR

Year 2, Semester 1

CHA442	Introduction to Occupational Safety	4	2
LSX310	Introduction to Bioculture	8	3
LSX311	Computer Applications in Biology	8	3
LSX312	Animal & Plant Techniques	12	4
Plus two elective units selected from:			
LSX313	Taxonomy	8	3
LSX316	Hydrobiological Techniques	8	3
	Other approved Elective Units		

Year 2, Semester 2

LSX223	Microbiology 2	8	3
LSX410	Environmental Biology	8	3
LSX411	Population Biology	8	3
LSX412	Field Techniques	8	3
LSX413	Applications in Electron Microscopy	8	3
	Plus one other approved Elective Unit	8	3

CHEMISTRY MAJOR

Year 1, Semester 2

CHA218	Analytical Chemistry 1	8	3
CHA219	Qualitative Analysis	6	3
CHA230	Chemistry of Inorganic Materials	4	2
CHA240	Instrumental Techniques	8	3
CHA250	Organic Chemistry 1	8	3
CHA270	Physical Chemistry 1	8	3

Year 2, Semester 1

CHA318	Instrumental Analytical Chemistry	8	4
CHA319	Analytical Chemistry 2	6	3
CHA320	Chemical Process Principles 1	8	3
CHA350	Organic Chemistry 2	8	3
CHA370	Physical Chemistry 2	6	2
CHA442	Introduction to Occupational Safety	4	2
CSA259	Introduction to Computing	8	2

Plus one Elective Unit selected from:

ESA310	Geology	8	3
LSA123	Biology	8	3
	Any other approved Elective Unit		

Year 2, Semester 2

CHA368	Industrial Chemistry	8	3
CHA410	Computers in Chemistry	8	3
CHA550	Organic Chemistry 3	8	3
CHA610	Industrial Analysis	8	3
CHA670	Physical Chemistry 3	8	3

Plus one Elective Unit selected from:

LSA223	Microbiology	8	3
LSX213	Introductory Biochemistry	8	3
	Any other approved Elective Unit		

Part-Time Course Structure

Part-time programs can be organised in consultation with the Course Coordinator. Refer to the full-time program for semesters in which units are offered. Day release from employment will be required for most units.

Notes

Students in the Biology Major may apply to have their current employment arranged and assessed in lieu of one or more electives. In such cases, the employer, in consultation with the Head of School, nominates an honorary supervisor to collaborate with a school tutor. Under such an arrangement students are required to maintain a work log and complete such exercises and assignments as required.

Students in the Biology Major with relevant technical experience may seek total or partial exemption from one or more of the elective units of the course.

Students participate in excursions and field work where these form part of the curriculum. Occasionally field work may be scheduled at weekends or during University recess periods.

■ Associate Degree in Applied Science (SC15)

With majors in: Chemistry, Medical Laboratory Techniques

Location: Gardens Point campus

Course Duration: 2 years full-time, 4 years part-time

Total Credit Points: 192

Standard Credit Points/Full-Time Semester: 48

Course Coordinators:

Chemistry: Dr Graham Smith

Medical Laboratory Techniques: Ms Pam Stallybrass

The first year of this course will be offered in 1996.

Full-Time Course Structure

(Year 1, Semester 1 is common to both majors)

Year 1, Semester 1

	Credit Points	Contact Hrs/Wk
CHA140	Chemistry	8
LSA123	Biology	8
PHA154	Introductory Physics	8
CHA110	Laboratory Techniques	8
MAA251	Statistics & Data Processing	8
CSA259	Introduction to Computing	8

Year 1, Semester 2

MEDICAL LABORATORY TECHNIQUES MAJOR

LSA221	Biological Chemistry	12
LSA222	Laboratory Instrumentation	8
LSA223	Microbiology	8
LSA224	Pathology	8
LSA225	Anatomy & Physiology	12

CHEMISTRY MAJOR

CHA210	Analytical Chemistry 1	12
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CHA240	Instrumental Techniques	8
CHA250	Organic Chemistry 1	8
CHA271	Physical & Inorganic Chemistry 1	12
CHA280	Consumer Chemistry	8

Part-Time Course Structure

Part-time programs can be organised in consultation with the Course Coordinators. Refer to the full-time program for the semesters in which units are offered. Day release from employment will be required for most units.

■ Associate Degree in Clinical Techniques (LS12)

With elective units in: Laboratory Techniques and Anaesthetic Techniques

Location: Gardens Point campus

Course Duration: 2 years full-time, 4 years part-time

Total Credit Points: 192

Standard Credit Points/Full-Time Semester: 48

Course Coordinator: Ms Pam Stallybrass

Professional Recognition

LABORATORY TECHNIQUES ELECTIVE UNITS

This program is recognised by both the Commonwealth and state governments as a suitable employment qualification. Graduates from this program are recognised by the Australian Institute of Medical Scientists and are eligible to become intermediate members of this professional body.

ANAESTHETIC TECHNIQUES ELECTIVE UNITS

This program is endorsed by the College of Anaesthetists.

Special Course Requirements

Students may undertake the course on a full-time or part-time basis. Part-time students are required to attend lectures during normal working hours.

Full-Time Course Structure (for continuing students)

Year 2

In Year 2 students should choose either the Laboratory Techniques Elective Units (Group A) or the Anaesthetic Techniques Elective Units (Group B).

		Credit Points	Contact Hrs/Wk
LABORATORY TECHNIQUES PROGRAM			
Year 2, Semester 1			
MAA251	Statistics & Data Processing	8	3
Group A Elective Units			
Select five of the following:			
LSX320	Clinical Biochemical Techniques 3	8	4
LSX321	Clinical Microbiological Techniques 3	8	4
LSX322	Haematological Techniques 3	8	4
LSX323	Histological Techniques 3	8	4
LSX324	Immunological Techniques 3	8	4
LSX325	Cytological Techniques 3	8	4

Year 2, Semester 2

CSA259	Introduction to Computing	8	2
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Group A Elective Units

Select five of the following:

LSX420	Clinical Biochemical Techniques 4	8	4
LSX421	Clinical Microbiological Techniques 4	8	4
LSX422	Haematological Techniques 4	8	4
LSX423	Histological Techniques 4	8	4
LSX424	Transfusion Techniques 4	8	4
LSX425	Cytological Techniques 4	8	4

ANAESTHETIC TECHNIQUES PROGRAM**Group B Elective Units****Year 2, Semester 1**

LSX331	Foundations of Anaesthetic Techniques	12	5
LSX332	Physiology and Pharmacology	12	5
LSX333/1	Electronics and Computing	6	5
LSX334	Operating Room Equipment	12	5

Year 2, Semester 2

LSX333/2	Electronics & Computing	6	5
LSX431	Cardiac Care and Resuscitation	12	5
LSX432	Care of Respiratory Airways & Intensive Care	12	5
LSX433	Anaesthesia for Specialised Surgery	12	5
LSX434	Professional Practice	12	5

Part-Time Course Structure (continuing students)

Students enrolling in the part-time program must consult with the Course Coordinator.