

Bachelor of Science

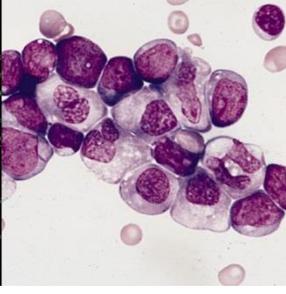
# Honours

Course Handbook

College of Engineering, IT & Environment

Charles Darwin University

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## 1. About the Bachelor of Science Honours Course

The Bachelor of Science Honours (BSCIH) program is a stand-alone award, available to graduates with a science degree, who fulfil the entry requirements. An honours degree is designed to give students a competitive advantage for employment, or to provide a first step in a research or academic career.

The course provides an opportunity for students to:

- Develop an advanced level of understanding about a specific aspect of science in depth
- Gain experience and training in research techniques and principles
- Develop written and oral communication skills
- Learn and demonstrate project management skills
- Work collaboratively on projects with peers, industry and government partners.

The major component of this course is a two semester (full-time) research project.

This research project can be done in a wide range of fields, including environmental science (e.g. aquaculture, biochemistry, botany, marine, freshwater and terrestrial ecology, molecular biology, zoology); biomedical science, , social work and other allied health areas; sports science; chemistry; GIS and remote sensing; and information technology.

The other components of the course are two course-work units designed to develop specific research skills, including the communication of research results which are studied concurrently with the research project.

The program is fully flexible, offering:

- 1 year full time study or 2 years part time study
- first or second semester start
- internal or external study mode

However, the choice of program may be constrained by supervisor and project availability.

### 1.1 Why Honours?

The Bachelor of Science Honours provides an opportunity for students to research a particular area in depth and gain experience in project management. Honours students are expected to successfully manage a complex project as well as demonstrate research skills and technical or clinical skills.

The course trains students in research techniques and principles, develops advanced information acquisition, analysis and problem solving skills, and develops skills to effectively communicate the results of research in written and oral formats. Students develop these skills through pursuing in depth research, under the guidance of experienced researchers, with coursework also targeted to provide appropriate research training. While undertaking their research project, students are mentored and advised by experts in the relevant discipline.

As well as providing advanced, and often a prerequisite, preparation for work in industry and government, Honours qualifications are also essential preparation for research work at Master and Doctoral levels. Honours research projects at Charles Darwin University may be hosted by a range of Colleges and Institutes including the world ranked Research Institute for Environment and Livelihoods and Menzies School of Health Research.

Career opportunities exist in roles such as scientist, environmental scientist, exercise and sports scientist, environmental manager, exercise and sport scientist, biomedical scientist, teacher, scientific technical officer and laboratory manager. Students gain professional recognition and are introduced to research practices and culture. Many students develop professional networks with researchers and managers in industry and in government during their Honours research.

## 2. Coordination of the Bachelor of Science Honours

This course is coordinated through the College of Engineering IT & Environment, with projects and supervisors from a range of disciplines.

### 2.1 Role of the Course Coordinator

The role of the Course Coordinator is to support Honours students and their supervisors towards a successful completion of the Honours course. The Course Coordinator does not play any role in supervising the student.

Specifically, the role of the Course Coordinator includes:

- Assessing the credentials of applicants and approving admission to the course,
- Providing advice on course rules and policy to ensure they are adhered to,
- Advising on study plans and research training options,
- Approving supervisor agreements and project proposals,
- Convening proposal and final seminars, with the support of supervisors and students,
- Providing advice and direction to the supervisor and student at key times in the process of completing the Course requirements,
- Assisting with any supervision or student conflict issues,
- Considering and approving extension requests, and
- Implementing the thesis examination process.

First point of contact is the College of Engineering IT & Environment: [EITAdmin@cdu.edu.au](mailto:EITAdmin@cdu.edu.au)

The current Bachelor of Science Honours Coordinator is A/Prof. Brett Murphy. He can be reached at:

Email: [brett.murphy@cdu.edu.au](mailto:brett.murphy@cdu.edu.au)

Phone: (08) 8946 6049

Office: Yellow 2.2.26

### 2.2 Role of the Supervisor

The candidate's supervisor has responsibility for overseeing the research project, the preparation of seminars, and the production of the thesis. The supervisor will ensure that the student receives clear direction as to the general aim of the project and that the project is achievable as an honours project. The primary supervisor needs to be a CDU academic staff member experienced in undertaking research. The primary supervisor is responsible for the administration of the project and student. Students may have more than one supervisor, and this is particularly advisable when the additional supervisors have recognised expertise in the area of study or the project is multidisciplinary. Associate supervisors may be from CDU or from outside agencies with relevant expertise. In some cases associate supervisors can provide additional resources for the project through their agency. Examples of institutions which have been involved with projects in the past are the NT Government, AIMS, Parks and Wildlife, CSIRO and the NT Museum.

The supervisory relationship should be characterised by (for both parties):

- Professional, ethical and respectful behaviour;
- Clearly articulated roles, responsibilities and expectations, established early in the Honours candidature;
- A thorough understanding of the program requirements; and
- Provision of adequate commitment of time during planning, implementation and completion.

Supervisors and students should read the Guidelines for Supervisors and complete the Supervisory Agreement (Appendix 2) together at the commencement of the project.

### 3. Research Projects

Research can be done in a wide array of scientific fields in a number of Colleges at CDU.

Prospective students should contact academics in their area of research interest and can contact the Honours Coordinator if they need assistance.

Staff in the following groups may be contacted to discuss potential projects:

- Research Institute for the Environment and Livelihoods
- College of Health and Human Sciences & the College of Engineering IT & Environment.
- Menzies School of Health Research

### 4. Course Structure and Study Plans

Students should develop a study plan in discussion with their Supervisor and the Course Coordinator at the commencement of their course. Students should refer to the CDU Course Catalogue for the appropriate study plan for their discipline area.

The course structure consists of a major research project (thesis units), a core coursework unit on research writing unit and an elective coursework unit relevant to the discipline.

Over the duration of their program, students need to complete a total of 80# (credit points), comprising of 60# of thesis units and 20# of coursework units. A full-time study load for one semester is 40#. Standard coursework units are normally 10# each, and the thesis units have different credit points to allow flexibility in arranging the course.

#### 4.1 Compulsory Core Unit (Coursework)

SID403 Research Skills is a compulsory core unit for all Honours students and comprises 10# (credit points).

This unit enhances the academic, research and professional skills of Honours candidates. The unit consists of three components: research writing, analysis planning, and research communication. Students learn and practice these critical skills which are required for the successful production of the Honours Thesis, the key assessable component of the Bachelor of Science Honours course.

#### 4.2 Specialist Elective Unit (Coursework)

Students can select one specialist elective for their discipline area of study. The specialist elective should complement their research project and unit choice should be discussed with the research project supervisor and the Course Coordinator. Other relevant 400 or 500 series units may also be considered after justification is provided to the Course Coordinator.

(Please note when enrolling in 500 series units to enrol via special enrolments)

### Health & Clinical Science

- PHM524 Clinical Trials
- PHM526 Research Design
- PHM527 Health Research Skills
- PHM552 Epidemiology (new title 2018)
- PHM553 Biostatistics (new title 2018)
- PHM588 Qualitative Research Methods
- PSY447 Research Methods and Practice
- PSY426 Ethics and Professional Issues
- HEA409 Practice Evaluation Strategies
- 

### Environmental Science

- ENV511 Statistical Methods for Impact Analysis **or** another unit approved by the project thesis supervisor and honours

### Information Technology

- Unit approved by the project supervisor

## General Science

Any of the specialist elective units listed above.

### 4.3 Honours Thesis Units

The research thesis units cover the research project of the BSCIH program. Students need to complete a total of 60# of thesis units during their course. This can be any appropriate combination of 10#, 20# or 30# of units.

Students only need to select the units necessary to make up the required 60#. There is no need for students to do all three units unless their study plan requires it. A student can enrol in the same unit more than once, if their study plan requires it - but should not enrol in the same unit twice in the same semester.

Take 60 credit points comprising of the following units:

- SCI711 Honours Thesis #10 (10cp)
- SCI712 Honours Thesis #20 (20cp)
- SCI713 Honours Thesis #30 (30cp)

## 5. Applications & Enrolment

### 5.1 Entry Requirements

Entry requirements for the Bachelor of Science Honours:

- Undergraduate degree in a relevant science discipline
- GPA >5.0

Always check the CDU website to confirm current entry requirements.

Prospective students must identify both the general area of investigation for their research project and their supervisor when they apply for Honours. Even if applicants meet the entry requirements, they are only admitted to the course if they have identified a project and a CDU academic who has agreed to supervise them, and the Course Coordinator has formally approved their admission.

### 5.2 How to apply

Information on applying to study at CDU: <http://www.cdu.edu.au/prospectivestudents/apply>

Applications for places in CDU courses, including the BSCIH, are made through the SATAC website [www.satac.edu.au](http://www.satac.edu.au). To make an application: Go to the SATAC site. Select the University Postgraduate option and search or navigate to the Bachelor of Science (Honours) CDU course. There are two SATAC course codes for the BSCIH:

- 1BH017 : This is for students who plan to study at the Casuarina Campus. This is also the code students should use if they are external but will be supervised by staff associated with the Casuarina Campus. This includes the Menzies School of Health Research.
- 1BH018 : This is for students who plan to study at the Alice Springs Campus. This is also the code students should use if they are external but will be supervised by staff associated with the Alice Springs Campus. Applicants will be contacted by CDU admissions once their application has been processed by SATAC.

Application process:

1. Identify a project and supervisor
2. Discuss application with Course Coordinator and Supervisor
3. Apply through SATAC (domestic applications) or the CDU International Office (international applications)
4. Application goes to the CDU Admissions Team who will contact student
5. Submit the following details to the Course Coordinator:
  - Project title
  - Supervisor
  - Brief overview (1-2 paragraphs) outlining the proposed project aims and objectives and work to be undertaken
6. Once a student has demonstrated that they meet the course entry requirements and has identified a supervisor and project, the Course Coordinator may approve admission to the course.

## 5.3 Enrolment

Students can enrol once their admission to the course has been confirmed. They should discuss their study plan with their supervisor, and Course Coordinator if necessary, prior to enrolment.

There are detailed instructions for activating a student account and enrolling in units on the CDU website: <http://www.cdu.edu.au/student-central/enrolments/get-started>

Closing dates for enrolment and other important dates are also available on the Student Central website: <http://www.cdu.edu.au/current-students/important-dates>

## 6. Preparing for Honours

The honours year is designed so that students complete a major research component, within two semesters (FTE). For that reason students and supervisors need to plan the research project and course carefully. Below are several areas that should help to streamline and simplify the honours experience. It is strongly recommended that students agree on a project with their supervisor at least four weeks prior to the start of semester. This will ensure that students are ready to commence at the start of semester and will be able to complete and present their project proposal and proposal seminar on time. As the research project is the largest, and most important, component of the Honours program, there are several steps which must be followed as part of the application, enrolment and study process. Students are strongly encouraged to discuss the timing of the different components of their research with their supervisor and the course coordinator so that they know when they have to achieve milestones towards their research goals. To avoid problems associated with inappropriate experimental design, it is strongly recommended that candidates discuss the design and expected data analyses of their experiments or observations with staff with experience in these areas. Candidates are also advised to attend any tutorials offered relating to the use of computer software and statistics packages relevant to their studies. Students and supervisors should consider if ethics clearance is required (for research involving human or animal subjects) and factor time required to obtain ethics clearance into their timeline. In some situations this will mean applying for ethics clearance prior to commencement of candidature. Your proposed supervisor can advise whether this will be necessary.

### 6.1 Course timeline and important dates

Appropriate for a full time student completing in two semesters (part time students normally complete over four semesters). Below is a suggested course timeline.

DATE	PHASE
Well prior to commencement of semester	Initiation and planning of project
Prior to commencement of semester	Preparing for admission and enrolment
Semester 1: Weeks 1 – 7	Preparing research proposal (written and seminar)
Semester 1: Weeks 3 – 15	Research
Semester 2: Weeks 1 – 11	Research
Semester 2: Weeks 10 – 15	Preparation of thesis
Semester 2: Monday Week 15	Submission

Also see section 4.1 and App 1 for further information.

## 6.2 Supervisory agreement

The developing and signing of a Supervisory Agreement (Appendix 2) helps to ensure that the student is equipped and supported to achieve their best. The supervisory agreement is developed using the discipline requirements of the research project, and the experience and qualifications of the student. The Course Coordinator can provide advice to the student and supervisor about opportunities that will help to address any skills gaps apparent in the student's background.

## 6.3 Research Training Activities

Students and supervisors are encouraged to consider additional research training activities while drafting the supervisory agreement. These may include activities such as attending (in person or online) training sessions focussed on literature searching or database skills. These training activities are not assessable.

## 6.4 Desk Space

For students studying internally on campus, the supervisor will work with the relevant College Administration team to provide access to a desk space, laboratory and/or other facilities in that College, as required for each project.

## 6.5 Expenditure

Each student is eligible to claim up to \$600 from the College for operational expenses related to their project. It is the supervisor's responsibility to source and provide any additional operational funds (i.e. > \$600) if required.

All expenditure has to be approved by the Supervisor. Once approved, notify the College administration officer [EITAdmin@cdu.edu.au](mailto:EITAdmin@cdu.edu.au) on how to claim reimbursement up to the value of \$600.

Students or supervisors should contact [EITAdmin@cdu.edu.au](mailto:EITAdmin@cdu.edu.au) for a current tally of expenses.

Equipment purchased during the honours project from CDU funds remains the property of the University at completion of the project.

## 6.6 Work Health and Safety (WHS) and Fieldwork

Any laboratory, field work or clinical activities undertaken under the auspices of an Honours project must be approved

All documentation relating to fieldwork and travel must be completed by the student, checked and authorised by the supervisor and approved by the College Dean. The supervisor or course coordinator can provide more information.

### Fieldwork

For some projects, students may need to go into the field to collect data. Depending upon the project, fieldwork may be required only occasionally, or it may be a regular and integral part of the research. As the Honours course is hosted by the College of Engineering IT & Environment, students doing fieldwork for their project will need to follow the guidelines and procedures of this College.

The Fieldwork Process is outlined here: <http://www.cdu.edu.au/ehse/policies-procedures>. Fieldwork forms also can be accessed here. Students should always ensure they are accessing and completing the most recent versions of the forms required from the website.

The actual requirements of the process depend upon the nature and location of the fieldwork.

## 6.7 Ethics

Any project which involves researching animals or humans will require CDU ethics approvals. This process can be time consuming, so students and supervisors should start this process as soon as the research project has been established. Please see below for more information.

### 6.7.1 Human Ethics

Students and Supervisors should refer to the Office of Research and Innovation Human Ethics Committee information here: <https://www.cdu.edu.au/research/ori/ethics>

This includes details of meeting and submission dates, forms and guidelines for applications.

The University has a duty of care toward members of the university community and also toward members of the general community where the University's activities impact upon them. The primary purpose of ethical review is for the protection of the welfare and rights of participants in research and other activities, and also non-participants who may be affected by the activities. This objective is based on the principle of respect for the inherent dignity and autonomy of individuals. Historically, the development of ethics committees to ensure protection of participants in research was in response to situations in which the welfare and rights of participants were not well protected. Where involvement of individuals has a potential for infringing basic ethical principles, review by an ethics committee is warranted. Protection of the welfare and rights of participants entails scrutiny of the impact of research and other projects on participants' rights in relation to the following:

- Privacy. Claims to privacy are part of the claim that the autonomy of each individual should be protected and his or her integrity respected. Individuals should not be interfered with without their consent and they should have a measure of control over their own privacy.
- Confidentiality. Individuals have a right to expect that their wishes in regard to information given to another party in confidence will be respected.
- Avoidance of harm. Project managers have an obligation to protect the right of individuals to be free of risk of harm, unless the risk has been explained and accepted, and can be justified in terms of the benefits likely to accrue as a result of the project. The term "harm" includes any discomfort, inconvenience, mental, physical or emotional distress, suffered by participants.

## Ethical review system at CDU

With respect to research and similar activities which involve humans, CDU fulfils its duty of care through the establishment of a system of ethical review of such activities. The system of ethical review conforms to national guidelines established and published by the National Health & Medical Research Council (NHMRC). CDU recognises that ethical review of research and other activities undertaken under its auspices is conducted at many levels and by various bodies and individuals. Researchers undertaking research themselves explicitly or implicitly conduct an ethical review of their research. Peer review is also an established mechanism at the University, including formally through Office of Research and Innovation committees and university ethics committees. The CDU Human Ethics Research Committee is an important mechanism in assisting the University to meet its duty of care through the identification of ethical issues which need to be addressed by researchers, lecturers and students, and through its educative role vis a vis applicants. The Human Research Ethics Committee is constituted and operates in accordance with the NHMRC National Statement on ethical conduct in research involving humans. The Committee was established by the Vice-Chancellor and reports to the Vice-Chancellor's delegate, the Pro Vice-Chancellor (Research). Administration is the responsibility of the Research Office.

All University staff and students who intend to undertake research involving humans are required to obtain ethics clearance from the Human Research Ethics Committee. Where ethical clearance is required for projects funded or administered by the Research Committee, funds will not be released until ethical clearance has been obtained. Ethical clearance for research must be obtained prior to the commencement of activities involving humans. Where applications are submitted to the Office of Research and Innovation Ethics Committee, that committee may issue a provisional clearance, which enables commencement of activities involving humans, pending a final clearance by the HREC. The Human Research Ethics Committee guidelines assist further with the identification of projects which must be submitted to Human Research Ethics Committee for review.

Honours students conducting research projects involving humans must obtain prior approval from the ORI Human Ethics Committee. The committee currently meets seven times per year, and applications must be lodged well in advance of each meeting. Projects must be approved by the CDU Human Ethics Committee before research projects involving humans can commence.

Application forms, meeting dates and other information can be downloaded from the website.

## 6.7.2 Ethics – Animal

Students and supervisors should refer to the current Animal Welfare and Ethics information on the CDU website: <http://www.cdu.edu.au/research/ori/animal-ethics>

Research involving animals must follow established procedures and guidelines.

“The objective of the Animal Ethics Committee (AEC) is to ensure the humane care of animals used for scientific purposes under the auspices of Charles Darwin University. The Committee reviews proposals for the use of animals for scientific purposes and monitors the care and the use of animals.”

### Animal ethics approval

Honours students conducting research projects involving vertebrate animals will need to obtain approval from the CDU Animal Ethics Committee (AEC) for their project. The supervisor will be listed on the application as the Principal Investigator, and the student will also be listed as an Investigator on the project. However, even though the supervisor is the Principal Investigator, students are encouraged to download the application form from the CDU Office of Research and Innovation website and complete the first draft of the application before passing it to their supervisor for completion. The University’s Animal Welfare Officer can assist in this process, and should be consulted if there is any doubt about the most appropriate procedures to use. If the project lasts more than one year (as would be the case for a part-time student), a Progress Report will be submitted at the end of the first year. On completion of the project, a Final Report must be provided to the AEC, and this must include details of the total number of animals used in the project. Students proposing to work with animals should discuss ethics approval with their supervisor at the earliest opportunity because it may take some time to obtain AEC approval, and the work involving animals cannot begin before approval is granted. If the supervisor has ongoing research in the area of the project, then it may be possible to add the student to a previously approved project using a “Project Personnel Amendment Form”. The CDU AEC currently meets six times per year, and applications must be lodged approximately two weeks before each meeting (meeting dates and deadlines for submitted applications are posted on the website). As stated above, projects must be approved before work with animals can commence. Meeting dates, application forms and other information can be downloaded from the AEC website here.

### Animal ethics issues

Animal ethics issues are an integral component of research using animals, and they cannot be taken lightly. Breaches of the Code of Conduct carry serious consequences. Students should, however, consider the AEC as a source of information and advice, rather than a bureaucratic obstacle that has to be overcome. The Committee members have a broad range of expertise and experience within animal experimentation and ethics issues. The aim of the committee is not to impede research, but rather to assist students by making sure that animal research is conducted with the appropriate respect and care. Learning about animal ethics issues is an important component of the research training of all scientists who use animals in their research careers. Most funding agencies require approval from an ethic committee as a condition for funding, and the Parks and Wildlife Commission requires ethics approval before permits to conduct scientific research on native animals are issued. The information required on the application is straightforward and, regardless of AEC requirements, these issues should have

already been planned well in advance for the sake of an orderly and well managed research project. It is important that the form is filled in completely and carefully and with sufficient detail so that the procedures can be understood by the committee. Students should note the following important points: All research involving vertebrate animals requires AEC approval, even if it is fieldwork which is purely observational in nature.

Animal Ethics Training is offered periodically by the University (at least once a year), and if you are using vertebrate animals in your project, then you will be expected to attend the training session. These are usually half-day sessions.

## 7. Research Project and Assessment

The research project is normally completed over two or four semesters, depending upon whether the candidate is pursuing the course full-time or part-time. A student switching from full-time to part-time part way through the course may complete in three semesters. Any change in enrolment status should be discussed with the supervisor and course coordinator.

### 7.1 Assessment Timeline

The table below shows the due dates for the assessment items required as part of the Bachelor of Science Honours (BSCIH) course. To correctly interpret this table, candidates will need to know whether they are in the first, second/third, or final semester of their program of study; then look up the relevant due dates.

Coursework requirements (SID403 and an elective unit) depend upon the actual units being done and the semester of enrolment. Candidates should check the Unit Information booklet, Learnline site or contact the Unit Coordinator for this information.

Item	Item Due	% Final Mark (Credit Points)
Project Summary	At least two weeks prior to the start of the first semester of course, prior to course acceptance	Not assessed
Project Proposal	Friday of Week 3 in first semester of course	Hurdle assessment
Project Proposal Seminar	During Week 4 – 6 in first semester of course	Hurdle assessment
Compulsory Core Unit: SID403 Research Skills	Refer to specific unit information	12.5% (10#)
Specialist Elective Unit	Refer to specific unit information	12.5% (10#)
Final seminar	Weeks 11–13 in final semester of course	5% (4#)
Thesis	Monday of Week 15 in final semester of course	70% (56#)

### 7.2 Research Project Proposal

Students are required to submit a detailed written Project Proposal within the first three weeks of their first semester, outlining the project background, aims and design of the project, resource and ethics implications, and a proposed schedule.

The research proposal will include a timeline for stages of the research. This should be revisited frequently by student and supervisor to make sure adequate progress is maintained during candidature. The proposal should also include a list of all the resources needed for the successful completion of the project, indicating those that can be provided by the Supervisor and those that must be sought from elsewhere.

The project proposal is a hurdle assessment for the honours units and **needs to be approved by the Honours Coordinator before the project can progress**. The proposal is unmarked and will not contribute to the final honours mark. The aim of this and the proposal seminar is to gain feedback at the commencement of the project.

The Course Coordinator will provide feedback on the proposal and proposal seminar to both the Student and Supervisor. If the Course Coordinator does not believe the proposal meets the approval criteria (Appendix 4), the student may be advised to:

- Withdraw from the BSc (Hons) course and consider transferring to an alternative course
- Withdraw from the BSc (Hons) course and to re-enrol in the future, after further development of research skills or project development
- Reconsider their proposal and /or presentation and be given further time to prepare; an extension to the thesis submission date may also be considered at this time.

The Research Project Proposal should be about four to six pages and use the headings listed below.

1. Background
2. Aims, objectives and/or hypotheses
3. Research design and proposed statistical analyses
4. Resources
5. Animal or human ethics issues
6. Study site(s)
7. Proposed schedule or timeline
8. Relevance and significance of study
9. References

Example of a timeline is shown below:

	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Proposal - written	*								
Proposal seminar		*							
Write introduction									
Literature review									
Ethics approval	*								
Data collection									
Write Methods									
Data analysis									
Write Results									
Write Discussion									
Write conclusions and abstract									
Research seminar								*	
Submit thesis									*

### 7.3 Research Proposal Seminar

The proposal seminar is a short (20 minutes, including 5 minutes for questions) unassessed seminar intended to inform staff and fellow students of the proposed research program. This is also an unmarked, hurdle assessment. It should also enable the student to gain:

- Practice in speaking in seminars; and
- Suggestions for improving the research project from other experienced academics and peers

The seminar should be held in the first half of the student's first semester of study (Week 4-6). The Honours Coordinator will contact students to organise a time and venue.

### 7.4 Thesis

The research project comprises 60# (credit points) out of the 80# of the honours program and is worth 75% of the final mark for the Honours Course. The major assessable outcome of the project is a written thesis and the mark for the thesis is 70% of the overall, final mark. As a consequence, the quality of the thesis has a greater influence on the final honours grade than any other item of assessment. It is, therefore, essential that students exercise special care in the preparation of this document. The thesis is prepared in consultation with the supervisor/s and is examined by relevant experts in the discipline area.

#### Format of the thesis

The thesis should not be longer than 20,000 words, not including references and any Appendices. Students are urged to actively consult with their supervisor(s) about the format, referencing and editing of draft chapters, but are reminded that it is not the supervisor's responsibility to write or re-write all or part of the work. Candidates are also advised to review past Honours theses for reference (see notes below about accessing other theses for review). Further details on presentation are below. In writing, students should conform to both scientific and grammatical conventions. Students should familiarise themselves with the standards which are considered appropriate by consulting previous theses and a style manual (such as Style Manual for Authors, Editors and Printers of Australian Government Publications). Students should also consult their supervisor(s) on the specific conventions required in scientific writing. These include the use of standard abbreviations for chemical substances, the use of the SI system of units, the use of scientific names of plants, animals and micro-organisms, and the use of standard statistical abbreviations and conventions.

#### Thesis Specifications

##### Page size and format

- A4 (international size)
- good quality bond
- margins: top, bottom, right, left – 25mm
- gutter (inside edge) – 15 mm
- 1.5 line spacing throughout (no line numbers)
- Pages should be numbered consecutively, including pages with diagrams, photographs, maps, etc.

### **Title page and statement of authorship**

The title page should include the following details:

“Thesis submitted by student’s full name and list of degrees already held in partial fulfilment of the requirements for the Degree of Bachelor of Science with Honours in the College of Engineering IT & Environment of College of Health and Human Sciences Charles Darwin University. Submitted on month and year.”

The title page should be followed by a page carrying the following wording:

“I declare that this thesis is my own work and has not been submitted in any form for another degree or diploma at any university or other institute of tertiary education. Information derived from the published and unpublished work of others has been acknowledged in the text and a list of references given.”

This page should also be signed and dated.

### **Abstract**

Following the statement of authorship should be an abstract.

This should be on a separate page and summarise the main findings of the research in no more than 500 words.

### **Other**

The abstract page is normally followed by a table of contents, a list of illustrations and diagrams, acknowledgments, the main text, appendices and list of references. The list of references must conform to an accepted standard.

### **Accessing completed theses**

Some CDU Honours theses are available through the CDU Library <http://espace.cdu.edu.au/> (Collection: CDU Theses – Selected Honours).

## **7.5 Results Seminar**

The results seminar is a 20 minute presentation (with an additional 10 minutes for questions) which is assessed. It gives the student an opportunity to clearly and succinctly present their results to an audience with broad interest and to answer questions from that audience.

The seminar will usually be held at least a week before the thesis is due for submission so the student has sufficient time to make minor clarifications in the thesis in response to any feedback received after the results seminar. The Honours Coordinator will contact students to organise a time and venue. All Honours students are encouraged to attend proposal and results seminars throughout their candidature.

## **7.6 Thesis Submission**

A PDF copy should be submitted to the Course Coordinator by the thesis submission deadline.

## 7.7 Examination Process and Grades

The thesis will be marked by at least two examiners, neither of whom may be a supervisor. If there is a significant disparity in the marks awarded, the thesis may be sent to a third examiner. The final grade awarded to the thesis is based on demonstration of the ability to:

- Do research;
- Organise the work;
- Present, analyse and interpret the results; and
- Examine, discuss and defend ideas.

After examination, the thesis will be returned to the candidate, via the supervisor. Any typographical mistakes or errors identified by examiners can then be corrected by the candidate after consultation with the supervisor. The candidate may then wish to print and bind copies of their thesis for their own use, and the supervisor may request a PDF copy be submitted to the CDU Library. Students do not have to submit a corrected copy of the thesis to the library.

The following points are considered in the assessment of the thesis.

1. Introduction
  - 1.1. Is there sufficient background provided to justify the aims of the study?
  - 1.2. Does the introduction demonstrate a sound understanding of previous research in this field?
  - 1.3. Are the aims of the investigation explicitly stated?
  - 1.4. Is the scope of the research clearly defined?
2. Methods
  - 2.1. Are the methods appropriate to the research aims?
  - 2.2. Are the assumptions, limitations, and problems with the methods discussed and evaluated?
3. Results
  - 3.1. Are the results appropriately analysed and interpreted?
  - 3.2. Are results displayed adequately and clearly?
4. Discussion
  - 4.1. Are results discussed with adequate reference to other published studies?
  - 4.2. Are the arguments and supporting evidence clearly and coherently presented?
  - 4.3. Are the results clearly related to the Aims (and/or Objectives) of the study?
  - 4.4. Are limitations, or problems, with the results discussed and considered?
  - 4.5. Has a significant contribution been made to the topic being investigated?
5. Presentation
  - 5.1. Are relevant sources of information consulted, referred to, and accurately cited?
  - 5.2. Is the writing clear, with appropriate and correct expression, punctuation and grammar?
  - 5.3. Is the thesis free of typographic errors, formatting inconsistencies and other presentation problems?

## 7.8 Grading

Grades are based on the overall mark - from the thesis, final seminar and two coursework units.

Compulsory core coursework unit: SID403 mark	12.5%
Elective coursework unit mark	12.5%

Final seminar mark	5%
Thesis mark	70%
	100%

Grades are assigned in accordance with CDU policy on Honours and Assessment:

- The CDU rules for Honours Bachelors Awards
- The CDU Assessment Rules

Refer to the Grading Policy here: <http://www.cdu.edu.au/governance/doclibrary/pol-017.pdf>

### Grades

The CDU Grading Policy affects how Honours is graded. In brief, grades will be assigned as described below.

Honours Class: Honours Class is based on the mean (average) percentage over the total number of graded credit points attempted in the Honours degree. Where the Honours degree is embedded in a four (4) year degree, only the Honours degree units will be included in the Honours Class calculations.

The Honours Class ranges will be:

Grade	Marks
H1 – First Class Honours	80% and over
H2A – Second Class Honours, Division A	70% to 79%
H2B – Second Class Honours, Division B	60% to 69%
H3 – Third Class Honours	50% to 59%

## 8. Supporting Information

### 8.1 Deferral and Intermission (Leave of Absence)

If the student experiences problems immediately prior to, or during the course they may need to consider changing enrolment. One option, if a full time student, is to consider continuing the course part-time. If the supervisor agrees to this change, the Honours Coordinator can help identify which units the student needs to withdraw from, and enrol in, to change enrolment from full-time to part-time. A change to part-time might be appropriate if, for instance, circumstances (e.g. financial issues) reduced the amount of time available to focus on studies but there were no other problems (e.g. health issues) which were likely to impede student progress. In other situations, deferral or leave of absence may be appropriate. In all cases, the student should, as long as they consider it appropriate, initially discuss the situation with their primary supervisor and course coordinator. If the student has concerns about this for some reason, contact the Honours Course Coordinator or Student Support and Equity Services.

#### a. Deferral

'Deferral is where a new student, who has been offered a place in a course, either does not commence the course, or enrolls and withdraws **before the semester's census date.**'

Deferral, therefore, applies in situations in which the student wishes to delay the time at which they start a course or program. Students should contact Student Central at [student.central@cdu.edu.au](mailto:student.central@cdu.edu.au) or on 1800 061 963 to submit the application to defer. Once a student has started a course and passed the census date for the semester there is no longer the option to defer. Instead, the student may consider taking leave of absence.

#### b. Intermission (Leave of Absence)

'If you are a continuing student, have completed at least one unit and wish to take a break from your studies you need to apply for an Intermission.'

If students experience problems during their course and think they will be unable to submit items of assessment by the due date they should contact the relevant staff as soon as possible.

- In the case of a coursework unit such as SID401, students should in the first instance contact the unit coordinator to request an extension.
- In the case of components of the research program (e.g. project proposal, seminars, thesis), students should contact their primary supervisor and the Honours Coordinator.

Intermission (leave of absence) is likely to be appropriate if problems have arisen (e.g. financial, health or personal) which are, or are likely to, seriously interfere with a student's ability to focus on their studies. In such cases, it may be best for the student to 'take a break' from their studies to allow time to deal with these other issues. Students should discuss this with their primary supervisor and with the Honours Coordinator.

Further information on intermission is available from Student Central

<http://www.cdu.edu.au/student-central>, email [student.central@cdu.edu.au](mailto:student.central@cdu.edu.au) or phone 1800 061 963.

### 8.2 Extension Policy

A common submission date is set for all students completing their thesis in a given semester (see section 4.1).

If an extension is required, it must be requested and substantiated in writing to the Course Coordinator. For extensions of up to two days and due to minor logistical or other reasons, these may be requested via email and sent to the Course Coordinator. The Course Coordinator has the authority to approve (or not) these requests.

For longer extensions, the student must complete an extension request form, and seek the support of their supervisor (Appendix 3). This request must be sent to the Course Coordinator, who will provide a recommendation to submit to the Head of School for approval.

### 8.3 CDU important information and links

The official rules, entry requirements, fees and other stipulations for this course are available from the CDU website (search the course catalogue for BSCIH). Prospective and current students should ensure that they are familiar with this material. Please note that the official repository takes precedence, in the event of any conflict between information in this document and on that site.

### 8.4 Where to find help and assistance

- Supervisor
- Honours Course Coordinator – see page 4 for current contact details
- College of Engineering IT & Environment: [EITAdmin@cdu.edu.au](mailto:EITAdmin@cdu.edu.au) or 08 8946 6781
- CDU Student Central: [student.central@cdu.edu.au](mailto:student.central@cdu.edu.au) or 1800 061 963  
<http://www.cdu.edu.au/student-central>
- CDU Equity Services: <http://www.cdu.edu.au/equity-services>
- CDU Library: <http://www.cdu.edu.au/library/>
- CDU Library Research students:  
<http://www.cdu.edu.au/library/services/membership/CDUResearchers.html>

## APPENDIX 1: Schedule for Bachelor of Science Honours Candidature

Appropriate for a full time student completing in two semesters (part-time students normally complete over four semesters).

DATE	PHASE	ACTIONS	RESPONSIBILITY
Well prior to commencement of semester	Initiation & planning	<p>Frame project idea and publish on Hons website - applicants can approach staff in the field of interest to see if a project is available or possible. They do not necessarily have to do an advertised project.</p> <ul style="list-style-type: none"> <li>• Draft Animal Ethics and/or Human Ethics applications</li> <li>• Review Ethics committee meeting dates to ensure project approval will allow enough time to implement the project</li> </ul>	<ul style="list-style-type: none"> <li>• Supervisor</li> </ul>
		<ul style="list-style-type: none"> <li>• Review relevant Honours project offerings of Honours website, or contact staff working in the discipline of interest</li> <li>• Discuss project with prospective supervisor (several projects and supervisor may be considered ahead of final decision)</li> <li>• Contact Hons Course Coordinator to notify of intention to enrol</li> <li>• Finalise project choice</li> </ul>	<ul style="list-style-type: none"> <li>• Student</li> </ul>
Prior to Commencement of semester	Preparing admission for and enrolment	<ul style="list-style-type: none"> <li>• Develop enrolment plan (i.e. selection of coursework units)</li> <li>• Confirm appointment of supervisor</li> <li>• Apply for Course admission via SATAC</li> <li>• CC approves admission</li> <li>• Enrol in first coursework unit(s)</li> <li>• Enrol in first research unit(s)</li> <li>• Finalise access to resources (desk space, laboratory space) in relevant School</li> </ul>	<ul style="list-style-type: none"> <li>• Student</li> <li>• Supervisor</li> <li>• Course Coordinator can provide advice</li> <li>• Relevant admionistration officer</li> </ul>
Semester 1 Weeks 1 - 7	Preparing Research Proposal	<ul style="list-style-type: none"> <li>• Literature research</li> <li>• Seek advice on approach, design, methods, analysis etc. for your study</li> <li>• Review progress on ethics permissions</li> <li>• Hurdle assessment: Finalise research proposal and submit to Course Coordinator for evaluation (Week 3)</li> <li>• Complete Supervisory Agreement, including at least two (2) research training requirements, list of coursework units selected,</li> </ul>	<ul style="list-style-type: none"> <li>• Student</li> <li>• Supervisor</li> <li>• Course coordinator provides evaluation</li> </ul>

		<p>other workshops as required, meeting schedule etc.</p> <ul style="list-style-type: none"> <li>Finalise ethics approvals, if required</li> <li>Confirm project timeline</li> <li>Hurdle assessment: Present proposal seminar (Weeks 4-6)</li> <li>Course requirement: Commence coursework unit (s)</li> </ul>	
Semester 1 Weeks 3 - 15	Research	<ul style="list-style-type: none"> <li>Work on project</li> <li>Regular meetings with supervisor(s)</li> <li>Regular review of project timeline</li> <li>Attend workshops as per supervisory agreement</li> <li>Start thinking about thesis structure</li> <li>Enrol in second course work unit</li> </ul>	<ul style="list-style-type: none"> <li>Student</li> <li>Supervisor</li> </ul>
Semester 2 Weeks 1 - 10	Research	<ul style="list-style-type: none"> <li>Work on project</li> <li>Regular meetings with supervisor(s)</li> <li>Regular review of project timeline</li> <li>Attend workshops as per supervisory agreement</li> <li>Work on thesis structure</li> <li>Write thesis</li> </ul>	<ul style="list-style-type: none"> <li>Student</li> <li>Supervisor</li> </ul>
Semester 2 Weeks 10 - 15	Submission preparation	<ul style="list-style-type: none"> <li>Write Thesis</li> <li>Research assessment item: Final project presentation</li> <li>Potential seminar markers invited to seminar by supervisor (CC notified) ; seminar arranged and promoted by SEnv; at least 5 examiners required</li> <li>Potential thesis examiners identified and names provided to Course Coordinator</li> </ul>	<ul style="list-style-type: none"> <li>Student</li> <li>Supervisor</li> </ul>
Semester 2 Week 15	Submission	<ul style="list-style-type: none"> <li>Integrate feed-back from seminar (as appropriate), collate and submit thesis.</li> <li>Research assessment item: Thesis submission on the Monday of Week 15 of semester</li> </ul>	<ul style="list-style-type: none"> <li>Student</li> <li>Supervisor</li> </ul>
After submission	Examination, Submission of grades	<ul style="list-style-type: none"> <li>Thesis dispatched to examiners</li> <li>Completion of hurdle assessments confirmed</li> <li>Coursework marks collated from unit coordinators</li> <li>Seminar marks collated from final presentation</li> <li>Thesis marks collated from examiners reports</li> </ul>	<ul style="list-style-type: none"> <li>Course Coordinator</li> </ul>

		<ul style="list-style-type: none"> <li>• Finals course mark and Class calculated (and moderated by appropriate academic staff), according to CDU Grading Policy and submitted to ALU</li> <li>• Graduat Selection Report submitted to Academic Liaison Unit (ALU)</li> <li>• Student, supervisor notified of final result</li> <li>• Student permission sought regarding thesis lodgement in eSpace</li> </ul>	
	Consider publication	<ul style="list-style-type: none"> <li>• In some cases an honours project may be suitable for publication. Students are strongly encouraged to discuss this with their supervisor and, if the research is appropriate, to make a plan for how to progress the work toward publication in collaboration with the supervisor following Honours.</li> </ul>	<ul style="list-style-type: none"> <li>• Student and Supervisor</li> </ul>



### APPENDIX 3: Process and criteria for evaluation of Honours Project Proposals

The proposal document and proposal seminar are hurdle assessments in the Honours program. Although not marked, this means that they must be completed to the satisfaction of the Honours Research Units coordinator, before the student will be recommended to continue with their project. During the preparation of the proposal document and presentation, the supervisor is expected to assist the student with advice, regarding:

- Project structure, including aim and objectives,
- Key references,
- Methods and approach to be used,
- Editing required on the proposal document, and
- Design and content of the proposal seminar presentation, including attending at least one rehearsal.

This assistance is provided via regular collegial discussion and meetings. It is expected that the student and supervisor discuss the project generally well before the first semester of enrolment.

The Honours Course Coordinator will determine if a student is ready to pursue their research project, based upon:

- Advice of the student,
- Advice of the supervisor,
- Advice of other members of the relevant discipline (if required)
- The quality of the seminar presentation, and assessment of the quality of the project proposal.

Criteria for evaluating the quality of the proposal and the student's readiness to undertake the research project, and potential to successfully complete it, are:

1. Hypothesis/Aim and objectives that are clear, logical, achievable and well justified,
2. Adequacy of resources (financial, physical, human, supervisory) to successfully complete the project,
3. Appropriateness of proposed methods for the project aims,
4. Appropriateness of the scope of the project for the time and other resources available to an Honours student,
5. Animal or human ethics clearance, or the likelihood of securing it within suitable time frame,
6. The student's ability to demonstrate appropriate conceptual and logical reasoning skills to successfully complete the project, with an appropriate level of independence, and
7. The student's ability to demonstrate a suitable level of written and oral communication skills to successfully complete the project.

The Honours Coordinator will make one of the following recommendations, based on this evaluation:

1. The student has a feasible project, is prepared, and is **advised to proceed** with the project as presented, OR
2. The student has a feasible project, but is not yet prepared and is **advised to undertake further preparation**, while enrolled and according to an agreed new timeline; this may include requiring a second presentation and /or proposal, OR
3. The student has an unfeasible project, or is not likely to be prepared within the framework of their current enrolment and is **advised to withdraw without academic penalty** – the student may be advised about an alternative course or professional experience.

As required, the Honours Course Coordinator will seek discipline-specific advice on the feasibility, appropriateness of methods etc. before making a recommendation.

## APPENDIX 4: Application for Extension to submission date

This is an extract of the full application form, which is available at [EITAdmin@cdu.edu.au](mailto:EITAdmin@cdu.edu.au)

<h3>Application for Assignment Extension – BSCI Honours</h3> <p><i>Submit completed application to Honours Course Coordinator via email.</i></p> <p><i>Supporting documentation should be attached. See overleaf for detail relevant to submitting an application.</i></p>		 <p><b>CHARLES DARWIN UNIVERSITY</b></p> <p><b>College of Engineering IT &amp; Environment</b>          Charles Darwin University          Casuarina NT 0909          08 8946 6781  <a href="mailto:EITAdmin@cdu.edu.au">EITAdmin@cdu.edu.au</a></p>	
Student Name		Student Number	
Confirm CDU contact details are up to date.	<input type="checkbox"/>		
Unit Code			
Unit Name			
Lecturer's Name			
Assessment Title			
Due Date:			
Proposed adjusted due date:			
Reason (see overleaf for information on an application for extension and evidence required)			
Medical Condition	<input type="checkbox"/>	Other	<input type="checkbox"/>
Supporting evidence attached	<input type="checkbox"/>		
Details of other reasons:			
<i>I certify that the information contained in this application is true and correct.</i>			
Student Signature		Date:	

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- Runners: [http://commons.wikimedia.org/wiki/File:Marathon\\_Runners.jpg](http://commons.wikimedia.org/wiki/File:Marathon_Runners.jpg)
- Sample tubes: “Art Explosion”, Nova Development Corporation.