



School of Engineering and ICT

Discipline of Information and Communication Technology

Unit Outline

KIT102 Introduction to Data Science

Semester 1, 2017

Sandy Bay Campus, Hobart
Newnham Campus, Launceston

Unit Coordinator

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UNIT OVERVIEW

Introduction

This unit will explain the relationship between data, information and knowledge and introduce a number of different methods/tools for managing, storing, securing, modelling, visualizing and analyzing. This unit will provide an understanding of how data can be manipulated to meet the needs of users. Changing data into information can be accomplished with a range of tools, including XML, SQL, spreadsheeting and data visualisation. This unit introduces the techniques to enable the students to use these tools for managing data, creating information and allowing knowledge development. Overarching the whole unit is the importance of data security and how it can be achieved. This unit concludes by introducing the concepts behind managing big data in response to global trends of capturing all available data due to inexpensive storage.

Prerequisites

None

Unit Weight

12.5% of one academic year

Learning expectations

The University is committed to high standards of professional conduct in all activities, and holds its commitment and responsibilities to its students as being of paramount importance. Likewise, it holds expectations about the responsibilities students have as they pursue their studies within the special environment the University offers.

The University's Code of Conduct for Teaching and Learning states:

Students are expected to participate actively and positively in the teaching/learning environment. They must attend classes when and as required, strive to maintain steady progress within the subject or unit framework, comply with workload expectations, and submit required work on time.

Attendance/performance requirements and teaching and learning strategies

In this unit, your engagement will be monitored in the following way:

1. Completion of weekly tutorial quizzes
2. Attendance at weekly tutorials

If you do not demonstrate evidence of having engaged actively with this unit by attending tutorials and completing the associated tutorial quizzes by Week 4 of semester, your enrollment may be cancelled or you may be withdrawn from the unit.

Communication

News and announcements will be posted to MyLO News, and students will be expected to be aware of the content of such posts within 48 hours of them being posted.

Important announcements will also be emailed to students' University of Tasmania email address. In this case, students will be expected to be aware of the content of such emails within 24 hours of them being sent.

The unit coordinator is highly responsive to email, so if you have any questions, please send an email at any time to Matthew.Springer@utas.edu.au

Teaching Pattern

Lectures: 1hr/wk
Tutorials: 2hrs/wk

Students will also need to do about 5 hours of self study a week.

Unit Content

There are modules on the following topics:

- Introduction
- Big Data
- Data Visualisation
- Probability and Statistics
- Clustering and Classification
- XML 01
- XML 02
- Data Models
- SQL 01
- SQL 02
- Personal Data and Security
- Applying Data Management to Business
- Exam and Review

Each module 2-12 contains a lecture, a tutorial - with an associated assessment task - and additional material, which may be a reading, a video or other activity. Students should stay up to date with all of this material throughout the semester because everything is examinable.

For more information see the section titled 'Content' on the unit website.

Learning Outcomes

On successful completion of this unit, you will be able to:

Students should be ICT professionals with the abilities and skills to:

1. adapt and apply techniques for acquiring, converting, transmitting, storing, managing and analysing data, information and knowledge
2. monitor the changing direction of ICT and evaluate and communicate the likely utility of emerging ICT to support business processes and decision making
3. identify and analyze user needs and take them into account in the design, implementation, or evaluation of an ICT interface or component to meet desired needs.

Students should acquire attitudes needed by an ICT professional to:

4. apply a user-centered approach when designing an ICT-based solution;
5. take initiative and work independently; and
6. use abstraction and computational, creative and critical thinking to problem solve.

Generic graduate attributes

Successful completion of this unit supports your development of course learning outcomes, which describe what a graduate of a course knows, understands and is able to do. The course learning outcomes for all the ICT degrees can be found via: <http://www.utas.edu.au/ict/new-courses>. Course learning outcomes are developed with reference to national discipline standards, Australian Qualifications Framework (AQF), any professional accreditation requirements and the University of Tasmania's Graduate Quality Statement.

The University of Tasmania experience unlocks the potential of individuals. Our graduates are equipped and inspired to shape and respond to the opportunities and challenges of the future as accomplished communicators, highly regarded professionals and culturally competent citizens in local, national, and global society. University of Tasmania graduates acquire subject and multidisciplinary knowledge and skills and develop creative and critical literacies and skills of inquiry. Our graduates recognise and critically evaluate issues of social responsibility, ethical conduct and sustainability. Through respect for diversity and by working in individual and collaborative ways, our graduates reflect the values of the University of Tasmania.

Knowledge

- use a wide range of academic skills (research, analysis, synthesis etc) to problem-solve an ICT-related issue;
- understand the limitation of, and have the capacity to evaluate, their current knowledge;
- develop a broad knowledge base and respect the contribution of other disciplines or professional areas relating to ICT;
- identify, evaluate and implement personal learning strategies;
- learn both independently and cooperatively;
- learn new skills and apply learning to new and unexpected situations; and
- recognise opportunities.

Communication Skills

- demonstrate oral, written, numerical and graphic communication;
- use the medium and form of communication appropriate for a given situation;
- present well-reasoned arguments, using technology as appropriate;
- access, organise and present information, particularly through technology-based activity; and
- listen to and evaluate the views of others.

Problem-solving Skills

- identify critical issues in the discipline or professional area;
- conceptualise problems and formulate a range of solutions;
- work effectively with others; and
- find, acquire, evaluate, manage and use relevant information in a range of media.

Global Perspective

- demonstrate an awareness of the local and global context of the ICT discipline or professional area; and
- function in a multicultural or global context

Social Responsibility

- acknowledge the social and ethical implications of their actions;
- appreciate the impact of social change;
- be committed to access and equity principles in the ICT discipline or professional area, and society in general; and
- demonstrate responsibility to the local community, and society generally.

Alterations to the unit as a result of student feedback

In response to eVALUate feedback and student success rates, the tutorials have been redesigned to include weekly assessment tasks. The major assignments have been changed.

UNIT ASSESSMENT

Assessment Pattern

Internal(50%), Exam(50%)

Assessment Summary

Component	Weight	Due Date
Weekly Tutorial Test	27%	Due by the end of student's assigned tutorial
Data Modelling Assignment	23%	Week 13, Monday 29 May 11:55pm
Exam	50%	The final exam is conducted by the Student Centre in the formal examination period. See the Examinations and Results page: http://www.utas.edu.au/exams/ on the University's website, or access your personal exams timetable by logging into the eStudent Centre - Personal Exams Timetable: http://www.studentcentre.utas.edu.au/eStudentCentre/exams/timetable.aspx for specific date, time and location closer to the examination period.

Assessment Items

Item 1 **Title:** Weekly Tutorial Test
Type: In-Semester - test
Task Length: Up to 50 minutes per test
Weighting: 27%
Links to Learning Outcomes: 1-7
Due: Due by the end of student's assigned tutorial
How To submit: All submissions are through MyLO.
Description: In the first half of each tutorial, tutors will teach the practical tutorial contents.

Students are required to complete an online MyLO quiz in the second half of each tutorial.

These quizzes will assess the theoretical and practical content associated with the module for that week. In-tutorial tests will start in Week 2 during the first tutorial.

The quiz must be completed within the student's assigned tutorial.

There will be quizzes on the following topics:

Week 2 - Big Data
Week 3 - Data Visualisation
Week 4 - Probability and Statistics
Week 5 - Clustering and Classification
Week 6 - XML 01
Week 7 - XML 02
Week 8 - Data Models
Week 9 - SQL 01
Week 10 - SQL 02

Item 2 **Title:** Data Modelling Assignment
Type: In-Semester - individual assignment
Task Length: not applicable
Weighting: 23%
Links to Learning Outcomes: 1-7
Due: Week 13, Monday 29 May 11:55pm
How To submit: All submissions are through MyLO.
Description: The major data modelling assignment will assess the application of a range of content from the unit, including data modelling, visualisation and SQL.
Complete specifications are available on MyLO.

Please note that the weeks 11 and 12 tutorials will be dedicated to working on the Data Modelling Assignment. Your tutors will be available to offer some assistance during this time.

Item 3**Title:** Exam**Type:** Formal Examination**Task Length:** 2 Hours**Weighting:** 50%**Links to Learning Outcomes:** 1,2, 7

Due: The final exam is conducted by the Student Centre in the formal examination period. See the Examinations and Results page: <http://www.utas.edu.au/exams/> on the University's website, or access your personal exams timetable by logging into the eStudent Centre - Personal Exams Timetable: <http://www.studentcentre.utas.edu.au/eStudentCentre/exams/timetable.aspx> for specific date, time and location closer to the examination period.

Description: 2hr closed book examination

See the 'Assessment' section in unit website for more detailed information about assessment items.

How your Final Grade will be determined

Overall assessment will be based on the student's performance throughout the semester as well as in a formal examination. In order to achieve a pass (or better) result, a student must obtain:

1. at least 45% of the total mark for in-semester assessment items
2. at least 45% of the mark for the formal examination
3. at least 50% of the overall mark

UNIT RESOURCES

Unit Web Site

This unit is Web Dependent: content & communication. This means that you will need to use the Web for this unit. The unit website contains unit information and resources.

MyLO is the online learning environment at the University of Tasmania. This is the system that will host the online learning materials and activities for this unit.

It is important that you are able to access and use MyLO as part of your study in this unit. To find out more about the features and functions of MyLO, and to practice using them, visit the Getting Started in MyLO unit.

For access to information about MyLO and a range of step-by-step guides in pdf, word and video format, visit the [MyLO Student Support page](#) on the University website.

The unit website is accessed from <http://www.utas.edu.au/coursesonline/>. You will need to use your university email pop account username and password to log on to the MyLO system. Once authenticated by the system your personalised MyLO Learning Online area will be displayed. It contains links to the websites that you have permission to access - including the website for this unit.

If you are not able to access the unit website, please contact the University IT help desk:

Entrance Level, Morris Miller Library, Sandy Bay Campus;

Entrance Level, Launceston Campus Library, Newnham Campus.

Telephone: 6226 1818 and 1300 304 903.

The 1300 number is a local call from within Tas, with the exception of mobiles.

Email: servicedesk@utas.edu.au

Website: <http://www.utas.edu.au/servicedesk/student/index.html>

Prescribed Text

None

Readings

Relevant readings will be made available through the MyLO Website.

Software

The software that you will need to access the unit website and to study this unit, including general purpose software such as word processors, is provided on the computers in the Discipline's computing labs. If you intend to use software on other computers please check that the versions are compatible.

The unit will use Unix-hosted SQL databases, text editors for XML and Microsoft Excel.

GENERAL RESOURCES

School Website

Discipline of ICT, School of Engineering and ICT - Faculty of Science, Engineering, and Technology.
<http://www.utas.edu.au/ict>

Faculty Website

Information and Resources for Faculty of Science, Engineering and Technology students are available on the faculty website at: <http://www.utas.edu.au/scieng>

University Website

Information and Resources for 'Current Students' are available on the university website at:
<http://www.utas.edu.au/students/>

School Help Desk

Contact the ICT Help Desk if you have any queries or problems with accessing, using, or printing from the computers in the Discipline of ICT labs.

In Hobart the Help Desk is located on level 3 in the Centenary Building, and is open from 10:00am-12:00pm, and 2:00pm-4:00pm Monday-Friday. The phone number is 6226 2929.

In Launceston the Help Desk is located near the entrance to the computing labs and is open from 10:00am-12:00pm, and 2:00pm-4:00pm Monday-Friday. The phone number is 6324 3447.

Both help desks will accept queries over the phone outside the standard opening hours.

The computer labs at the Cradle Coast Campus are maintained by ITR - please contact the University Help Desk for assistance with these computers.

Computing Facilities

The Discipline of ICT has PC labs (running Windows 8.1), Mac labs (running Mac OS X 10.10), and special purpose Networking labs at the Newnham and Sandy Bay campuses. All students are provided with logins for Windows, Macintosh and Unix environments. If you have not used these facilities before please contact the ICT Help Desk to collect your account details. If you would like to access these facilities after hours please contact the ICT Help Desk.

In Hobart, there are 4 PC Labs, 2 Mac Labs, and 1 Networks Lab in the Centenary Building. In Launceston, there are 2 PC Labs, 1 Mac Lab, 1 Networks Lab, and one Multipurpose Lab in Building V.

Use of Facilities

Use of computing facilities provided by the Discipline of ICT is subject to the Discipline's Ethics Guidelines, details of which are posted at <http://www.utas.edu.au/ict/resources/ethics-guidelines>. Copies of the guidelines are also available in all ICT labs. The Discipline's facilities may only be used for study-related purposes, and may not be used for personal gain. Anti-social behaviour in labs such as game playing, viewing pornography, loud discussion, audio without the use of head-phones, etc is strictly prohibited in all labs at all times. Eating, drinking, and smoking is not permitted in the labs. Before being granted access to the Discipline's facilities, you will be required to sign a declaration that you have read and understand these guidelines, and that you will abide by them. Disciplinary action may be taken against students who violate the guidelines.

Learning Strategies

If you need assistance in preparing for study please refer to your tutor or lecturer. For additional information refer to the Learning Development website: <http://www.utas.edu.au/learndev/>

If you will be using MyLO for the first time and would like some information on how to use MyLO refer to the following website: <http://www.utas.edu.au/coursesonline/mylo-support.htm>

Some of the units you will study use videoconferencing to deliver lectures and tutorials. To enable you to get the best out of a videoconference please refer to the following guide: <http://www.its.utas.edu.au/videoconf/vcstudentguide.pdf>

Help resolving concerns about this unit

In the first instance you should contact your lecturer. If the matter is not resolved then you should contact the Head of School. If the matter is still unresolved and you would like to know who to contact or the procedures for resolving your concern refer to the following website: http://acserv.admin.utas.edu.au/complaints_info.html

The Tasmanian University Union (TUU) may also be able to assist.

The School reserves the right to alter the details contained in this Unit Outline. Students will be advised of changes to the outline via their University email account and it remains the responsibility of the student to check their email for such changes.

Occupational Health and Safety

The University is committed to providing a safe and secure teaching and learning environment. In addition to specific requirements of this unit you should refer to the University's Work Health and Safety website - <http://www.utas.edu.au/work-health-safety/> and policy.

The University recognises that hazard identification, risk assessment and controls are a critical part of everyday work. Figure 1 shows the risk management process.

Prior to commencing any laboratory and/or field activity on or off campus in this unit you are required to;

- identify hazards - find out what could cause harm
- assess risks if necessary - understand the nature of the harm that could be caused by the hazard, how serious the harm could be and the likelihood of it happening
- control risks - implement the most effective control measure that is reasonably practicable in the circumstances
- review control measures to ensure they are working as planned.

A formal Risk Assessment must be completed as part of any project proposal/plan prior to commencing any practical activities. Your supervisor will assist you in identifying potential hazards and assessing risks for your project and will assist you with sign off on any documentation.

Use the Risk Assessment template contained within the UTAS Project and Task Risk Management Minimum Standard. A word version of this form is available from the UTAS WHS webpage and in MyLO. Note that risk assessments (RA) are not required for activities that are considered routine and a current Safe Work Procedure (SWP) is already in place to manage the project/task.

For additional advice and assistance see the local WHS Contact or Health and Safety Representative (HSR) within your School/Institution, and/or consult with other staff.



Figure 1. The risk management process (How to Manage Work Health and Safety Risks, Code of Practice, Safe Work Australia)

GENERAL ASSESSMENT

Approach to Learning

The University is committed to high standards of professional conduct in all activities, and holds its commitment and responsibilities to its students as being of paramount importance. Likewise, it holds expectations about the responsibilities students have as they pursue their studies within the special environment the University offers.

The University's Code of Conduct for Teaching and Learning states:

Students are expected to participate actively and positively in the teaching/learning environment. They must attend classes when and as required, strive to maintain steady progress within the subject or unit framework, comply with workload expectations, and submit required work on time.

You are expected to spend about 130 hrs studying in this unit - this includes attendance at scheduled teaching sessions. (For a 13 week semester this is, on average, 10 hr/wk.) This is the amount of study time that the 'typical' student will need to reach the level of competence and understanding required to fulfil the unit objectives. You are expected to:

- attend all scheduled teaching sessions, unless otherwise notified by the unit coordinator
- prepare for, and actively participate in all scheduled teaching sessions
- complete the assigned learning tasks
- review what has been learnt
- complete assessment items and submit them on time
- access and be familiar with the information and resources available on the unit website
- seek help from teaching staff if you have any questions or difficulties in studying this unit

You are encouraged to read the university's Code of Conduct for Teaching and Learning. Part A describes the 'Responsibility of the University to Students' and part B describes the 'Responsibilities of Students to the University'.
http://www.utas.edu.au/_data/assets/pdf_file/0020/214661/code_conduct-teaching-and-learning1.pdf

It is expected that students will familiarise themselves with access and use of the MyLO system operated by the University for the electronic delivery of course materials, and for various forms of communication.

It is expected that students will consult email sent to their University email address at least twice a week for notices relating to the administration of the unit, and for notification of the results of assignments.

It is expected that students will read the background material specified in the course curriculum, will actively attend and participate in tutorials, and be prepared to discuss relevant issues arising with tutors, lecturers and fellow students.

Student Expectations of the Unit

Students enrolled in this Unit may reasonably expect the following:

1. To be able to contact a lecturer or tutor by electronic mail, to raise issues arising in the unit, either relating to content or student performance within the unit.
2. Subject to availability, to be able to discuss such issues in person with the lecturer or tutor.
3. That assignments will be marked and the marks will normally be returned within 3 weeks of due dates.
4. That all relevant notices regarding the administration of the unit, including any necessary changes, will be communicated to all students enrolled in the unit via email.

These expectations are in addition to those specified in relevant University regulations.

Plagiarism

In your written work you will need to support your ideas by referring to scholarly literature, works of art and/or inventions. It is important that you understand how to correctly refer to the work of others, and how to maintain academic integrity. Failure to appropriately acknowledge the ideas of others constitutes academic dishonesty (plagiarism), a matter considered by the University of Tasmania as a serious offence.

Unless specifically stated in the specification of the assessment item provided on the unit website, it is required that:

- work submitted by a student is the work of that student alone OR
- where the assessment item is to be completed by a group of students, the work submitted by the group of students is the work of that group of students alone.

While students are encouraged to discuss the assignments in this unit and to engage in active learning from each other, it is important that they are also aware of the University's policy on plagiarism. Plagiarism is taking and using someone else's thoughts, writings or inventions and representing them as your own; for example downloading an essay wholly or in part from the internet, copying another student's work or using an author's words or ideas without citing the source.

"Plagiarism is a form of cheating. It is taking and using someone else's thoughts, writings or inventions and representing them as your own; for example, using an author's words without putting them in quotation marks and citing the source, using an author's ideas without proper acknowledgment and citation, copying another student's work.

If you have any doubts about how to refer to the work of others in your assignments, please consult your lecturer or tutor for relevant referencing guidelines. You may also find the Academic Honesty site on MyLO of some assistance.

The intentional copying of someone else's work as one's own is a serious offence punishable by penalties that may range from a fine or deduction/cancellation of marks and, in the most serious of cases, to exclusion from a unit, a course or the University. Details of penalties that can be imposed are available in the Ordinance of Student Discipline - Part 3 Academic Misconduct, see www.utas.edu.au/data/assets/pdf_file/0006/23991/Ordinance-9-Student-Discipline.pdf.

The University and any persons authorised by the University may submit your assessable works to a plagiarism checking service, to obtain a report on possible instances of plagiarism. Assessable works may also be included in a reference database. It is a condition of this arrangement that the original author's permission is required before a work within the database can be viewed."

It is important that you understand this statement on plagiarism. Should you require clarification please see your unit coordinator or lecturer. Useful resources on academic integrity, including what it is and how to maintain it, are also available at: <http://www.academicintegrity.utas.edu.au>

Academic misconduct

Academic misconduct includes cheating, plagiarism, allowing another student to copy work for an assignment or an examination, and any other conduct by which a student:

- a. seeks to gain, for themselves or for any other person, any academic advantage or advancement to which they or that other person are not entitled; or
- b. improperly disadvantages any other student.

Students engaging in any form of academic misconduct may be dealt with under the Ordinance of Student Discipline, and this can include imposition of penalties that range from a deduction/cancellation of marks to exclusion from a unit or the University. Details of penalties that can be imposed are available in Ordinance 9: Student Discipline http://www.utas.edu.au/data/assets/pdf_file/0006/23991/Ordinance-9-Student-Discipline.pdf - Part 3 Academic Misconduct.

Referencing

The preferred text referencing systems for the School is the Harvard system (also referred to as the author-date system). In your written work you will need to support your ideas by referring to scholarly literature, works of art and/or inventions. The University library provides information on presentation of assignments, including referencing styles and should be referred to when completing tasks in this unit. For information on presentation of assignments, including referencing styles: <http://utas.libguides.com/referencing>

It is important that you understand how to correctly refer to the work of others and maintain academic integrity. Failure to appropriately acknowledge the ideas of others constitutes academic dishonesty (plagiarism), a matter considered by the University of Tasmania as a serious offence. The university document on plagiarism contains information about referencing the work or ideas of others (see <http://www.utas.edu.au/plagiarism/>).

Submissions

The details of the submission method (paper, electronic or other) for each assignment will be supplied in a separate assignment specification sheet. All in-semester assignment submissions (including electronic submissions) are to include an Assignment Cover Sheet which includes a statement confirming that the submission is your own work. The Assignment Cover Sheet is available from the ICT Help Desk in Launceston and Hobart, and on the Discipline's web site: <http://www.utas.edu.au/ict/resources>.

Students must take responsibility for the correct submission of their assignments. Students are expected to adhere to the following procedure for submission:

- Submitted files MUST be checked by the student to ensure that correct submission of the file has been undertaken.
- Students are expected to notify the Lecturer WITHIN TWO HOURS of submission if their files have not been submitted correctly.
- Students must take responsibility for safely backing up of their own files during the academic year to ensure that no files are permanently lost.

Extensions

Assessment items will not be accepted after the due date except under the conditions stated in the Discipline policy on late assessment. http://www.utas.edu.au/_data/assets/pdf_file/0003/231960/ExtensionPolicy.pdf (PDF 100KB).

A request for an extension to the due date for an assessment task should be made in writing and submitted to the Unit Coordinator THREE (3) days before the assignment due date. Independent documentation (medical certificate, counsellor's report, etc.) in support of the application should be attached to the form OR a current Learning Access Plan may be used as supporting documentation, as appropriate.

If you are ill on the day of an examination or have other serious circumstances which prevent you from sitting an examination, you may apply for a deferred examination (see http://www.utas.edu.au/_data/assets/pdf_file/0006/314628/Application-for-a-Deferred-Examination-1.0.pdf (PDF 290KB) for form and further details). If you are ill, you should see a doctor on the day of the examination and the doctor must return the form to the Exams Office within 3 working days of the examination. Please note that having a medical certificate does not guarantee that a deferred examination will be approved.

Students who have completed an examination(s) and who feel that they have been disadvantaged due to illness or other circumstances affecting their study may request special consideration in the marking of their examination(s) (see http://www.utas.edu.au/_data/assets/pdf_file/0019/314623/Special-Consideration.pdf (PDF 143KB) for form). Forms should be submitted directly to the relevant school, accompanied by appropriate supporting documentation, as soon as possible after the completion of the examination(s) and no more than 3 working days after completion of the student's last examination. Granting of special consideration is at the discretion of the lecturer and school.

Review of Assessment and Appeals

1. It is expected that students will adhere to the following policy for review of any piece of continuous assessment.
 - a. Within 5 days of the release of the assessment result, the student should request an appointment with the Lecturer. The student should be prepared to discuss specifically which section of the marking criteria they are disputing and why they consider the mark is inappropriate.
 - b. Following this discussion, students may request a formal remark of the original submission (in accordance with Rule of Academic Assessment 111, clause 22.1). This remark will be undertaken, where practicable, by an alternative assessor.
2. Students may also request a review of the final result in a unit. The request and payment must be made within 10 days from the date of the result notification. Students are referred to Rule of Academic Assessment 111, clause 23 at <http://www.utas.edu.au/university-council/university-governance/rules> and http://www.studentcentre.utas.edu.au/examinations_and_results/results/result_review_results.htm.

Complaints Procedure

It is expected that students will adhere to the following policy for making any complaint or grievance directly related to a Unit:

- a. In the first instance, students are to approach the Lecturer or Unit Coordinator concerned and arrange a time to speak with them about their concern.
- b. If an issue remains unresolved, the student should approach the Head of School and arrange a time to speak with them about their concern.

If the School's internal policy of complaints is unable to resolve an issue, students should consult Ordinance 8 Student Complaints for further direction, see http://acserv.admin.utas.edu.au/complaints_info.html

Formal Examination

The formal examination is conducted by the University Registrar. The 'Current Students' section on the university website contains information about the conduct of, and timetable for, formal examinations.

Final Grade

Passing grades will be awarded based on the AVCC guidelines:

- PP at least 50% of the overall mark but less than 60%
- CR at least 60% of the overall mark but less than 70%
- DN at least 70% of the overall mark but less than 80%
- HD at least 80% of the overall mark

In order to comply with the benchmarks set by the Faculty of Science, Engineering & Technology for distribution of grades in units, both the in-semester and examination marks that students obtain may be adjusted either upwards or downwards. See <http://fcms.its.utas.edu.au/scieng/scieng/policies.asp> for details of the Faculty Assessment Guidelines.

Further information and assistance

If you are experiencing difficulties with your studies or assignments, have personal or life-planning issues, disability or illness which may affect your course of study, you are advised to raise these with the unit coordinator in the first instance.

There is a range of University-wide support services available to you including Student Learning Support (<http://www.utas.edu.au/student-learning/>), Student Advisers (<http://www.utas.edu.au/first-year/student-advisers>), Disability Services (<http://www.utas.edu.au/students/disability/students>), and more which can be found on the Student Support and Development page (<http://www.utas.edu.au/students/students/support-development>) of the University website.

Should you require assistance in accessing the Library, visit their website (<http://www.utas.edu.au/library/study>) for more information.