Unit study package code: CMPE2004
Mode of study: Internal
Tuition pattern summary: Note: For any specific variations to this tuition pattern and for precise information refer to the Learning Activities section.
Lecture: 1 x 1 Hours Weekly
Computer Laboratory: 1 x 3 Hours Weekly
This unit does not have a fieldwork component.
Credit Value: 25.0
Pre-requisite units:
1920 (v.0) Object Oriented Program Design 110 or any previous version
OR
310207 (v.0) Engineering Programming 100 or any previous version
OR
COMP1001 (v.0) Object Oriented Program Design or any previous version
OR
COMP1004 (v.0) Engineering Programming or any previous version
Co-requisite units: Nil
Anti-requisite units: Nil
Result type: Grade/Mark
Approved incidental fees: Information about approved incidental fees can be obtained from our website. Visit fees.curtin.edu.au/incidental_fees.cfm for details.
Unit coordinator:
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Teaching Staff:
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Location: Building: 314 - Room: Level 4
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Phone: Nil
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Location: Building: 314 - Room: Level 3
Administrative contact:
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Phone: 9266 7428
Email: M.Cutinha@curtin.edu.au
Location: Building: 314 - Room: 340
Learning Management System: Blackboard (lms.curtin.edu.au)
Acknowledgement of Country

We respectfully acknowledge the Indigenous Elders, custodians, their descendants and kin of this land past and present.

Syllabus


Introduction

This unit attempts to enhance students’ knowledge and skill in developing programs for solving engineering problems. The lecture sessions discuss approaches and knowledge to design programming solutions. The laboratory sessions provide a platform for students to practice programming skills, and to develop and implement programs. By the end of this unit, students are expected to have more knowledge and advanced skills in developing and implementing programs for solving engineering problems.

Unit Learning Outcomes

All graduates of Curtin University achieve a set of nine graduate attributes during their course of study. These tell an employer that, through your studies, you have acquired discipline knowledge and a range of other skills and attributes which employers say would be useful in a professional setting. Each unit in your course addresses the graduate attributes through a clearly identified set of learning outcomes. They form a vital part in the process referred to as assurance of learning. The learning outcomes tell you what you are expected to know, understand or be able to do in order to be successful in this unit. Each assessment for this unit is carefully designed to test your achievement of one or more of the unit learning outcomes. On successfully completing all of the assessments you will have achieved all of these learning outcomes.

Your course has been designed so that on graduating we can say you will have achieved all of Curtin’s Graduate Attributes through the assurance of learning process in each unit.

<table>
<thead>
<tr>
<th>On successful completion of this unit students can:</th>
<th>Graduate Attributes addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Design, implement and test programs</td>
<td>📝udit  📣larity  📦nformation</td>
</tr>
<tr>
<td>2 Interpret and evaluate code for inclusion in standard packages</td>
<td>📝udit  📣larity  📦nformation</td>
</tr>
<tr>
<td>3 Sketch what is needed for real-time analysis and safety critical features</td>
<td>📝udit  📣larity  📦nformation</td>
</tr>
<tr>
<td>4 Discriminate between the precision of standard libraries and custom implementations</td>
<td>📝udit  📣larity  📦nformation</td>
</tr>
<tr>
<td>5 Apply best Engineering practices in software development</td>
<td>📝udit  📣larity  📦nformation</td>
</tr>
</tbody>
</table>

Curtin’s Graduate Attributes

- Apply discipline knowledge
- Thinking skills (use analytical skills to solve problems)
- Information skills (confidence to investigate new ideas)
- Communication skills
- Technology skills
- Learning how to learn (apply principles learnt to new situations) (confidence to tackle unfamiliar problems)
- International perspective (value the perspectives of others)
- Cultural understanding (value the perspectives of others)
- Professional Skills (work independently and as a team) (plan own work)

Find out more about Curtin’s Graduate attributes at the Office of Teaching & Learning website: ctl.curtin.edu.au
Learning Activities
We will have the following formal teaching and laboratory hours:
One 1-hour lecture per week - attempts to discuss approaches and knowledge to design programming solutions.
One 3-hour computer laboratory per week - attempts to practical the programming skills.
You will need to use your own time to pre-read the teaching material, and to do the laboratory exercises if you cannot finish the exercises in the laboratory sessions.

Learning Resources
Recommended texts

You do not have to purchase the following textbooks but you may like to refer to them.

- Lecture material covers the programming examples, operations and mechanisms for this unit.
- Despite the lecture material, students are expected to practical with the computers, as this is more effective to learn programming by practicing. The C code solutions for each laboratory will be uploaded onto the blackboard, a week after each laboratory session. Also the programs in each Chapter of the lecture material are available on the blackboard. Students are expected to understand all those programs.

There are two recommended textbooks. You do not have to purchase the following textbooks but you may like to refer to them.
## Assessment

### Assessment schedule

<table>
<thead>
<tr>
<th>Task</th>
<th>Value %</th>
<th>Date Due</th>
<th>Unit Learning Outcome(s) Assessed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory Work I</td>
<td>25 percent</td>
<td>Week: 10 Day: Your assigned lab session Time: Your assigned lab session</td>
<td>1,2,5</td>
</tr>
<tr>
<td>Laboratory Work II</td>
<td>25 percent</td>
<td>Week: 13 Day: Your assigned lab session Time: Your assigned lab session</td>
<td>1,4,5</td>
</tr>
<tr>
<td>Test x 2</td>
<td>20 percent</td>
<td>Week: 9 Day: Lecture session (Friday) Time: 9 am to 10 am</td>
<td>2,3,4</td>
</tr>
<tr>
<td>Examination</td>
<td>30 percent</td>
<td>TBA</td>
<td>2,4,5</td>
</tr>
</tbody>
</table>

### Detailed information on assessment tasks

1. Please refer to Lab Test I on the blackboard.
2. Please refer to Lab Test II on the blackboard.
3. Please refer to the Lecture Handouts (Chapter one to Chapter six).
4. All the teaching material.

### Pass requirements

To pass the unit, you must score at least 50% in the overall assessment AND at least 50% in the final examination.

### Fair assessment through moderation

Moderation describes a quality assurance process to ensure that assessments are appropriate to the learning outcomes, and that student work is evaluated consistently by assessors. Minimum standards for the moderation of assessment are described in the Assessment and Student Progression Manual, available from policies.curtin.edu.au/policies/teachingandlearning.cfm

### Late assessment policy

This ensures that the requirements for submission of assignments and other work to be assessed are fair, transparent, equitable, and that penalties are consistently applied.

1. All assessments students are required to submit will have a due date and time specified on this Unit Outline.
2. Late submission of assessments is not accepted in this unit. Students will receive a zero mark for any assessment item submitted late.

### Assessment extension

A student unable to complete an assessment task by/on the original published date/time (eg examinations, tests) or due date/time (eg assignments) must apply for an assessment extension using the Assessment Extension form (available from the Forms page at students.curtin.edu.au/administration/) as prescribed by the Academic Registrar. It is the responsibility of the student to demonstrate and provide evidence for exceptional circumstances beyond the student’s control that prevent them from completing/submitting the assessment task.
The student will be expected to lodge the form and supporting documentation with the unit coordinator before the assessment date/time or due date/time. An application may be accepted up to five working days after the date or due date of the assessment task where the student is able to provide an acceptable explanation as to why he or she was not able to submit the application prior to the assessment date. An application for an assessment extension will not be accepted after the date of the Board of Examiners’ meeting.

Deferred assessments
If your results show that you have been granted a deferred assessment you should immediately check your OASIS email for details.

Supplementary assessments
Supplementary assessments are not available in this unit.

Referencing style
The referencing style for this unit is Chicago.
More information can be found on this style from the Library web site: http://libguides.library.curtin.edu.au/referencing.

Copyright
© Curtin University. The course material for this unit is provided to you for your own research and study only. It is subject to copyright. It is a copyright infringement to make this material available on third party websites.

Academic Integrity (including plagiarism and cheating)
Any conduct by a student that is dishonest or unfair in connection with any academic work is considered to be academic misconduct. Plagiarism and cheating are serious offences that will be investigated and may result in penalties such as reduced or zero grades, annulled units or even termination from the course.

Plagiarism occurs when work or property of another person is presented as one’s own, without appropriate acknowledgement or referencing. Submitting work which has been produced by someone else (e.g. allowing or contracting another person to do the work for which you claim authorship) is also plagiarism. Submitted work is subjected to a plagiarism detection process, which may include the use of text matching systems or interviews with students to determine authorship.

Cheating includes (but is not limited to) asking or paying someone to complete an assessment task for you or any use of unauthorised materials or assistance during an examination or test.

From Semester 1, 2016, all incoming coursework students are required to complete Curtin’s Academic Integrity Program (AIP). If a student does not pass the program by the end of their first study period of enrolment at Curtin, their marks will be withheld until they pass. More information about the AIP can be found at: https://academicintegrity.curtin.edu.au/students/AIP.cfm

Refer to the Academic Integrity tab in Blackboard or academicintegrity.curtin.edu.au for more information, including student guidelines for avoiding plagiarism.

Information and Communications Technology (ICT) Expectations
Curtin students are expected to have reliable internet access in order to connect to OASIS email and learning systems such as Blackboard and Library Services.

You may also require a computer or mobile device for preparing and submitting your work.

For general ICT assistance, in the first instance please contact OASIS Student Support: oasisapps.curtin.edu.au/help/general/support.cfm

For specific assistance with any of the items listed below, please contact The Learning Centre: life.curtin.edu.au/learning-support/learning_centre.htm
Additional information

Enrolment

It is your responsibility to ensure that your enrolment is correct - you can check your enrolment through the eStudent option on OASIS, where you can also print an Enrolment Advice.

Student Rights and Responsibilities

It is the responsibility of every student to be aware of all relevant legislation, policies and procedures relating to their rights and responsibilities as a student. These include:

- the Student Charter
- the University’s Guiding Ethical Principles
- the University’s policy and statements on plagiarism and academic integrity
- copyright principles and responsibilities
- the University’s policies on appropriate use of software and computer facilities

Information on all these things is available through the University’s "Student Rights and Responsibilities" website at: students.curtin.edu.au/rights.

Student Equity

There are a number of factors that might disadvantage some students from participating in their studies or assessments to the best of their ability, under standard conditions. These factors may include a disability or medical condition (e.g. mental illness, chronic illness, physical or sensory disability, learning disability), significant family responsibilities, pregnancy, religious practices, living in a remote location or another reason. If you believe you may be unfairly disadvantaged on these or other grounds please contact Student Equity at eesi@curtin.edu.au or go to http://eesi.curtin.edu.au/student_equity/index.cfm for more information.

You can also contact Counselling and Disability services: http://www.disability.curtin.edu.au or the Multi-faith services: http://life.curtin.edu.au/health-and-wellbeing/about_multifaith_services.htm for further information.

It is important to note that the staff of the university may not be able to meet your needs if they are not informed of your individual circumstances so please get in touch with the appropriate service if you require assistance. For general wellbeing concerns or advice please contact Curtin’s Student Wellbeing Advisory Service at: http://life.curtin.edu.au/health-and-wellbeing/student_wellbeing_service.htm

Recent unit changes

Students are encouraged to provide unit feedback through eVALUate, Curtin’s online student feedback system. For more information about eVALUate, please refer to evaluate.curtin.edu.au/info/.

To view previous student feedback about this unit, search for the Unit Summary Report at https://evaluate.curtin.edu.au/student/unit_search.cfm. See https://evaluate.curtin.edu.au/info/dates.cfm to find out when you can eVALUate this unit.

Recent changes to this unit include:

Nil
## Program calendar

<table>
<thead>
<tr>
<th>Week</th>
<th>Begin Date</th>
<th>Lecture/Seminar</th>
<th>Pre-readings</th>
<th>Laboratory</th>
<th>Assessment Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation</td>
<td>22 February</td>
<td>Orientation Week</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>29 February</td>
<td>Chapters 1 to 4</td>
<td>Chapters 1 to 4</td>
<td></td>
<td></td>
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<tr>
<td>2.</td>
<td>7 March</td>
<td>Chapters 1 to 4</td>
<td>Chapters 1 to 4</td>
<td>Lab 1 to Lab 4</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>14 March</td>
<td>Chapters 1 to 4</td>
<td>Chapters 1 to 4</td>
<td>Lab 1 to Lab 4</td>
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<tr>
<td>4.</td>
<td>21 March</td>
<td>Good Friday</td>
<td>Chapter 5</td>
<td>Lab 1 to Lab 4</td>
<td></td>
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<tr>
<td>5.</td>
<td>28 March</td>
<td>Tuition Free Week</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>6.</td>
<td>4 April</td>
<td>Chapter 5</td>
<td>Chapter 5</td>
<td>Lab 4 / Lab 5</td>
<td></td>
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<tr>
<td>7.</td>
<td>11 April</td>
<td>Chapters 6 to 7</td>
<td>Chapters 6 to 7</td>
<td>Lab 5 / Lab 6</td>
<td></td>
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<tr>
<td>8.</td>
<td>18 April</td>
<td>Tuition Free Week</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>9.</td>
<td>25 April</td>
<td>Mid-term test</td>
<td>Chapters 1 to 6</td>
<td>Lab 6</td>
<td>The end of the lecture session</td>
</tr>
<tr>
<td>10.</td>
<td>2 May</td>
<td>Chapters 7 to 8</td>
<td>Chapters 7 to 8</td>
<td>Lab Work I / Lab 7</td>
<td>The end of Lab Work I</td>
</tr>
<tr>
<td>11.</td>
<td>9 May</td>
<td>Chapters 8 to 9</td>
<td>Chapters 8 to 9</td>
<td>Lab 7 / Lab 8</td>
<td></td>
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<tr>
<td>12.</td>
<td>16 May</td>
<td>Chapter 10</td>
<td>Chapter 10</td>
<td>Lab 8 / Lab 9</td>
<td></td>
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<tr>
<td>13.</td>
<td>23 May</td>
<td>Chapter 10</td>
<td>Chapter 10</td>
<td>Lab Work II / Lab 10</td>
<td>The end of Lab Work II</td>
</tr>
<tr>
<td>14.</td>
<td>30 May</td>
<td>Revision</td>
<td>Chapters 1 to 10</td>
<td>Lab 10</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>6 June</td>
<td>Study Week</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>16.</td>
<td>13 June</td>
<td>Examinations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>20 June</td>
<td>Examinations</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>