Curtin College

in association with

Curtin University

UCP1000 - UNIX and C Programming

UNIT OUTLINE

Semester 1, 2016

ESSENTIAL ADMINISTRATIVE INFORMATION

Unit Code:	UCP1000
Unit Title:	UNIX and C Programming
Credit Value:	25
Pre-Requisite:	OOPD1001 and ISEN1000
Co-Requisite:	DSA1002
Additional Requirements:	NIL
Unit Status	Note: if you fail this unit three times then you may be terminated as per Progress and Attendance Policy.
Ancillary Fees and Charges	All fee information can be obtained through: • the Curtin College website or • Curtin Brochure • Level 1 Reception.
Unit Website	Moodle via the Student Portal is the unit's website. Students can access the Student Portal via the College's website: www.curtincollege.edu.au
Tuition Pattern	Three (3) hours of Lecture per week Two (2) hours of Tutorial per week
Study Load	It is expected that a student will spend 12 hours per week (total 144 hours) on this unit. Allowing for lectures and practicals, students should spend a minimum of 7 hours study in their own time.
Mobile Phones	Mobile phones must be switched off when you are in a class.

TEACHING STAFF

Lecturer's Name:	**Shalini Christabel Stephen**
Email Address:	shte@study.curtincollege.edu.au

Your lecturer will assist you with your learning and any problems or difficulties you may be experiencing while undertaking this unit. They will mark your assignments and provide feedback in relation to your progress in this unit. You will be able to contact your lecturer through the Student Portal. Your lecturer is also available for an extra hour per week for individual consultation. Please check with your lecturer for their availability.
Consultation times are also listed on Moodle under the unit name.

UNIT COORDINATOR / PROGRAM MANAGER

Every unit also has a person who is responsible for the overall administration of that unit. This person is the Unit Coordinator. If you cannot contact the person who is teaching you (named above) or if you have

further queries about this unit, you may wish to contact the Unit Coordinator for this unit or the Program Manager for the Course. Their contact details are below:

Unit Coordinator's Name:	**Shalini Christabel Stephen**
Email Address:	shte@study.curtincollege.edu.au

Program Manager's Name:	Robert Ball
Email Address:	Robert.Ball@curtincollege.edu.au

INTRODUCTION

Welcome to Unix and C programming. Computing professional are often required to maintain legacy C code, and work in a Unix/Linux environment.

UNIT SYLLABUS

This unit introduces students to the Unix environment and the C language; and the related concepts and tools used to design, implement, test and debug C programs. Topics covered include: Commands in Unix, C Fundamentals, functions and program structure, designing programs with derived types, pointers, abstract data types, strings, streams and input/output (I/O). Dynamic memory allocation and C programming utilities for program construction and diagnosis.

LEARNING OUTCOMES

On successful completion of this unit the expected learning outcomes for a successful student and the associated Curtin graduate attributes developed or assessed in this unit are summarized in the tables below

	LEARNING OUTCOMES
LO1	Implement algorithms in the C programming language.
LO2	Write and interpret standard C pointer expressions.
LO3	Implement C code which dynamically allocates/de-allocates memory.
LO4	Employ standard Unix/C tools to diagnose program faults.
LO5	Employ standard Unix/C tools to build software.

	GRADUATE ATTRIBUTES								
Assessments / learning outcomes	**Discipline Knowledge**	**Thinking Skills**	**Information Skills**	**Comm. Skills**	**Technology Skills**	**Learning to Learn**	**International Perspective**	**Cultural Understanding**	**Professional Skills**
LO1	✓				✓	✓			

LO2	✓	✓			✓				
LO3	✓	✓			✓				
LO4	✓	✓	✓		✓				✓
LO5	✓	✓			✓		✓		✓

LEARNING ACTIVITIES

There will be a 5 hour class each week, where the teacher will explain the concepts as per the lecture notes and the unit study calendar, and the students will then put these concepts into practice.

LEARNING RESOURCES

COURSE NOTES / MOODLE

Course notes, assessment details such as due dates, weighting of assessments and other details relating to course material are accessed via the Moodle tab on your Student Portal which can be accessed via the Curtin College website – www.curtincollege.edu.au

TEXT BOOK

You will need the following textbook in order to complete this unit:
There is a free book on C available via Moodle.

Recommended Texts:

You do not have to purchase the following textbooks but you may like to refer to them.
Hanly, J.R, & Koffman, E. B. (2013), Problem Solving and Program Design in C, 7th ed., Prentice Hall, ISBN 0132936496.

ASSESSMENT DETAILS

The assessment for this unit consists of the following items.

Assessment Tasks	Worth	Due	Unit Learning Outcome Assessed
Practical exercises	10%	Weekly	1, 2, 3 & 4
Test One	10%	Week 5	1 & 4
Test Two	10%	Week 10	2 & 3
Assignment	20%	Week 11	1, 2, 3 & 4
Final Examination	50%	TBA	1, 2, 3, 4 & 5

TOTAL	**100%**		

Unless otherwise indicated, all assessments are to be completed as **individual assessments**, not as group assessments.

Assessment One (Pre Tutorial Exercises)

Due Date: ***Weekly***
Weighting: ***10%***
Weekly exercises to be conducted individually, including the out of class hours exercises. These must be submitted via Moodle.

Marking Criteria
Practical exercises will be marked for correctness, completeness and originality.

Assessment Two (Test)

Due Date: ***During the lecture in Week 5***
Weighting: ***10%***
Test 1 will be conducted in the lecture in week 5. It will be based upon the tutorial exercises and lecture notes, so students should ensure that they are up to date with their tutorials and lectures. Students should also attempt the mock tests and seek feedback on them well before the actual test. NO MAKEUP (LATE/MISSED) TESTS WILL BE GIVEN.

Marking Criteria
The questions in this test will be marked for correctness and attention to detail. Marked tests will be handed back within two weeks.

Assessment Three (Test)

Due Date: ***During lecture in week 10***
Weighting: ***10%***
Test 2 will be conducted in the lecture in week 10. It will be based upon the tutorial exercises and lecture notes, so students should ensure that they are up to date with their tutorials and lectures. Students should also attempt the mock tests and seek feedback on them well before the actual test. NO MAKEUP (LATE / MISSED) TESTS WILL BE GIVEN.

Marking Criteria
The questions in this test will be marked for correctness and attention to detail. Marked tests will be handed back within two weeks.

Assessment Four (Assignment)

Due Date: ***Week 10, 11 and 12***
Weighting: ***20%***
The assignment will give students an opportunity to practice designing, implementing, testing and debugging a non-trivial C program. The assignment must be submitted electronically (via Moodle) in 3 stages.

Marking Criteria
The assignment will be marked for correctness, attention to detail, originality and knowledge of the assignment nuances.

Assessment Five (Examination)

Due Date: Examination Week
Weighting: 50%
The examination will cover all lectures, practical work and assignments. It may also include related subject matter from the textbook or suggested additional reading.

Marking Criteria
The exam questions will be marked both for correctness and completeness.

Passing Criteria

In order to pass the unit, a student must achieve at least:

- 45% of the total marks for the tests and examination, and
- 50% of the total marks for the unit.

GUIDELINES FOR ASSESSMENT SUBMISSION

All assignments must be accompanied by the Curtin College Assignment Coversheet which can be downloaded from the Student Portal – ***[Forms & Info/Forms and Documents/ Assignments]***

All assignments must be submitted by the time on the day of the week due as specified in the assignment requirements.

Assessments must be submitted in the specified format to Reception between 8.00am and 4.30pm (Monday – Thursday; 8.00am – 4.00pm on Friday) by the due date. Out of hours submissions should be left in the drop box in the second floor staffroom. The submission time is indicated by the date stamped by Reception on the assignment or the time that electronic submission is recorded.

Before submitting any assignment for marking, work through the following checklist to help ensure you are not plagiarising:

I HAVE:
- ✓ Provided in-text references for all information (including pictures, graphs, tables etc.) taken from sources.
- ✓ Included a reference list of all sources cited in my assignment.
- ✓ Shown the original wording of sources as quotations

I HAVE NOT:
- ✓ Used any other student's work in my assignment.
- ✓ Used information or material from the internet, databases or other sources without referencing.
- ✓ Copied any information from any source and presented it as my own.

To avoid plagiarism, make sure you tick all 6 boxes.
All forms of cheating, plagiarism or collusion are regarded seriously and could result in penalties including loss of marks, exclusion from the unit or cancellation of enrolment.

If required to submit an electronic file it is the student's responsibility to check that the electronic file/s is/are:
a) readable
b) fully complete
c) in the required file format
d) clearly identified using the required file-naming convention e.g. student ID number.

LATE SUBMISSIONS AND REQUESTS FOR EXTENSIONS

Late work will be accepted without penalty if accompanied by a medical certificate for the relevant period or equivalent documentation in the case of a serious non-medical reason but you must contact your lecturer via email prior to the assignment due date.

Students will have 10% of the total assessment mark allocated for the assessment deducted for each calendar day the assessment is late without prior negotiation with your lecturer For example if an assessment item is worth 20 marks, 2 marks will be deducted from the student's mark awarded, for each calendar day late.

Assessments will not be marked if they are submitted more than 7 calendar days after the due date (or revised due date if an extension has been granted). Work not submitted after this time (due date plus 7 calendar days) may result in an NC (Fail – Incomplete) grade being awarded for the module.

Extensions must be negotiated prior to the assessment due date as they will not be granted after submission date. Extensions may be granted by the Lecturer or Unit Coordinator or Program Manager for:

- Medical grounds supported by a medical certificate;
- Psychological grounds supported by a letter from Curtin University Counselling or an appropriate registered health professional;
- Equity considerations as requested by a Counsellor (Disability) or Student Welfare;
- Compassionate grounds.

Any other extenuating circumstances require approval of the Unit Coordinator or Program Manager and will require additional supporting documentation.

Applications for extensions should be submitted via email to the lecturer, who will then notify the student of the outcome of the request by email.

REFERENCING STYLE

Students should use the **CHICAGO 16th Edition** referencing style when preparing assignments. More information can be found on this style from the Library web site:
http://library.curtin.edu.au/research_and_information_skills/referencing/index.html

ASSESSMENT MARKING

Students should allow a 2 week marking turnaround for written assessments.

SUPPLEMENTARY ASSESSMENTS

A supplementary assessment may be granted to a student by the Board of Examiners in order to provide an additional opportunity for a student to pass a unit. If a student passes a supplementary assessment their total mark will not change but their grade becomes a pass grade (PX – Pass with Supplementary). Supplementary assessments will be conducted in the orientation week of the next study period unless otherwise advised by the College and students must be available to sit the assessment at this time otherwise the offer will be withdrawn. Students who have qualified for a supplementary assessment will be notified by e-mail. The exception to this rule is where a supplementary assessment is offered for a service taught unit, in which case Curtin University will determine the date.

For more information please refer to the Curtin College's Supplementary Assessment Policy which is located under Policies and Procedures on the College's website: http://www.curtincollege.edu.au

ACADEMIC INTEGRITY AND PLAGIARISM

Curtin College is committed to ensuring that all students behave with academic integrity. Therefore, it is essential that students understand the principles underlying academic integrity and behave in a manner

according to these principles. It is expected that students act honestly when they undertake all learning and assessment tasks.

Students must be aware of the meaning of the following terms:

• **Plagiarism** refers to using the words, images and/or ideas of another person without acknowledging the source. Plagiarism is not permitted and considered an offence. Failure to acknowledge the sources students have used by using both in-text and end-text referencing will compromise the mark they receive and may result in a penalty.

• **Collusion** occurs when students produce the work together, but submit the work under individual names, giving the impression that the work is wholly that of the individual. If students lend/borrow assignments and use ideas from another student's assignment, this is deemed to be collusion. This is a deliberate attempt to deceive the lecturer or tutor. Collusion is not permitted and is considered plagiarism. ALL students involved will be penalised.

• **Collaboration** describes an activity in which students have been given permission to work together – such as a group report.

It is the student's responsibility to ensure that they are familiar with the rules covering collusion, collaboration and plagiarism. Failure to comply may result in serious penalties.

If you have any questions about this please contact your lecturer who will be pleased to explain or refer to the Curtin College's Academic Integrity Policy which is located under Policies and Procedures on the College's website: http://www.curtincollege.edu.au

Plagiarism Monitoring

Some (or all) assessments in this unit may be monitored for plagiarism using the Turnitin plagiarism detection service (see http://turnitin.com). Students who do not want assignments retained in the Turnitin database, must lodge a special request prior to the submission date. Please advise the Unit Coordinator if you do not wish to have your assignment retained.

APPEALING IN CLASS ASSESSMENTS (NOT FINAL EXAMS)

Upon notification of the mark awarded for an assessment item, a student who believes that their result is incorrect or unfair may submit an appeal against their mark. There is a four step process for appealing In Class Assessments

Note: In-Class assessments cannot be appealed at the end of the semester after the final results have been released.

Step One: Informal Appeal of Result.

Fill in an Application for an Informal Appeal of Result – In class Assessment form which can be downloaded from the Student Portal – [Forms & Info/Forms and Documents/ Appeals] and submit the form to the lecturer within 7 working days.
The lecturer will respond within 7 working days. First they may agree with the concerns, and make a change to results so that the mistake or marking problem is changed upwards or downwards. Second, they may explain why the marks addition is not in error, or why the marks awarded are fair; in that case they would recommend no change be made to the marks.

Step Two: Formal Appeal of Result
If the appellant is dissatisfied with the outcome from the Informal Appeal of Result (above), they may apply for a formal appeal by completing an Application for Formal Appeal of Result – In Class Assessment form which can be downloaded from the Student Portal – [Forms & Info/Forms and Documents/ Appeals].

Applications must be submitted within 7 days of receiving feedback from the Informal Appeal of Result process. All applications for a Formal Appeal of Result must be submitted to Curtin College Reception.

Step Three: Appeals Committee
When the appellant is unsatisfied with the outcome of Step One; and Step Two, then they may lodge a written appeal to the Appeals Committee (appeals@curtincollege.edu.au) within 7 working days of receiving the outcome of Step Two.

Step Four: External Agents
Where the appellant is unsatisfied with the outcome of the Step Three then they may lodge an appeal with the external agents.

Please refer to the Curtin College Appeals Policy – Section 5.1 - located under Policies and Procedures on the College's website: http://www.curtincollege.edu.au for more details.

APPEALING FINAL GRADE (INCLUDING EXAM MARK)

Upon notification of the final result, students who believe that their result is incorrect or unfair may submit an appeal against their mark. Students must be aware that when submitting an appeal, the results can be changed either upward or downward. There is a three step process for appealing the Final Result.

Please refer to the Curtin College Appeals Policy – Section 5.2 - located under Policies and Procedures on the College's website: http://www.curtincollege.edu.au for more details.

Note: It is too late at this stage to appeal any in-class assessments that were due before Week 11.

ACADEMIC LANGUAGE ENRICHMENT PROGRAM (ALEP)

Curtin College is committed to ensuring that all students have the necessary English language skills to be successful in their chosen academic field. Therefore, students will be assessed using a PELA (post enrolment language assessment) task to determine the proficiency of their written English language skills in week one or two of their course. The PELA will identify those students that require compulsory additional English language development (ALEPe). Students will be notified via their College email if they need to enroll in ALEP. Students may also self-select ALEPe. Students that are identified as requiring compulsory ALEPe must attend a minimum 80% of ALEPe classes as a co-requisite for Academic Communication.

Attendance for ALEPe is defined as:
- Punctual attendance to 80% (7.5) classes.
- Contributing to verbal discussions in every class
- Speaking in English during class time and during all class activities

STUDY SUPPORT

Academic Master Skills Workshops
The Academic Master Skills workshops are a great way to help you get more out of your studies at the College and later at Curtin. The workshops cover skills that are very useful to helping students get better grades and use time more efficiently. They run throughout the trimester and most importantly, they are free.

Workshops are available weekly and consist of a one hour sessions. Topics covered include how to manage your time, how to study effectively, how to research and reference, how to deliver oral presentations and how to write essays and reports.

Academic Drop-In Sessions
The Academic Drop in sessions are one on one consultation with a Communication Skills lecturer, who can help students with academic writing and reading skills, referencing assessments, structuring reports and essays, researching assessments, and English Language support. These sessions are available to all

students at Curtin college free of charge and do not require making an appointment. These sessions begin in week three of every trimester and students will be seen on a first come first served basis.

For more information on the Student Support available at Curtin College please visit the **Student Support** Section of the Student Portal.

EXPECTATIONS OF YOU AS A STUDENT

Curtin College is committed to high standards of professional conduct in all activities, and holds its commitment and responsibilities to its students as being of prime importance. Similarly, it holds expectations about the responsibilities students have as they pursue their studies within the environment the College offers.

Curtin College's Code of Conduct for Teaching and Learning states:

Students are expected to participate actively and positively in the teaching and learning environment. They must attend classes when and as required, strive to maintain steady progress within the subject, comply with workload expectations, and submit required work on time. If a significant assessment is not attempted the student may receive a fail – NC (not complete) grade.

For more information please refer to the Curtin College's Code of Conduct Policy which is located under Policies and Procedures on the College's website: http://www.curtincollege.edu.au

STUDENTS' 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 College's policy and statements on plagiarism and academic integrity and copyright,
- the College's policies on appropriate use of software and computer facilities,
- appeals and complaints resolution,
- student feedback,
- other policies and procedures.

Students are to take special note of the College's requirement that all students must regularly check their College e-mail accounts and must conduct e-mail correspondence with the College by only using this account. All students are deemed to be held responsible for checking their College e-mail accounts for important correspondence and consequently will be held solely responsible for failing to act upon any advice sent to this account.

For more information please refer to the Curtin College Policies which are located under Policies and Procedures on the College's website: http://www.curtincollege.edu.au

IMPROVEMENTS AND STUDENT FEEDBACK

From time to time students will be invited to participate in online surveys to provide feedback on the module and on the College. Curtin College values student feedback as one of the many ways to continuously inform improvements to the Unit. Students are encouraged to complete the UNIT SURVEY for this unit when it is made available online from Teaching Week 10.

Recent student feedback on this Unit is available on the Student Portal under 'What You SAID'.

ADDITIONAL INFORMATION

If you have a query relating to administrative matters such as:-

- requests for deferment of study

- difficulties with accessing online study materials
- obtaining assessment results

or wish to discuss your studies or personal issues, then please contact Level 1 Reception personally or call 9266 4888 to make an appointment.

UNIT STUDY CALENDAR

If you have a printed copy of this document, you may like to tear off this final page and keep the Study Calendar handy as you work through the unit.

Calendar Week	Teaching Week	Week Starting on:		Lecture	Tutorial Activity	Assessment Due
1	1	29 February		Basics	Basics	
2	2	7 March		Environments	Environments	
3	3	14 March		Pointers	Pointers	
4	4	21 March		Pointers and Arrays	Pointers and Arrays	
5	-	28 March	**Tuition Free Week: Study Week**			
6	5	4 April		Test 1 Pointers and Strings	Pointers and Strings	
7	6	11 April		Input and Output	Input and Output	
8	-	18 April	**Tuition Free Week: Study Week**			
9	7	25 April		Pointers and Structs	Pointers and Structs	
10	8	2 May		Shell Scripting	Shell Scripting	
11	9	9 May		Testing and Debugging 1	Testing and Debugging 1	
12	10	16 May		Test 2 Testing and Debugging 2	Testing and Debugging 2	
13	11	23 May		Other Data Types	Other Data Types	**Assignment**
14	12	30 May		Revision	Revision	
15	-	6 June	**Tuition Free Week: Study Week**			
16	***13***	***13 June***	***Exam Week***			
17	***14***	***20 June***	***Exam Week***			