Pathways and Academic Learning Support Centre

EPPREP 980: Introduction to Programming

Callaghan
Summer 2 - 2024

The Pathways and Academic Learning Support Centre recognises and respects the unique history and culture of Aboriginal and Torres Strait Islander peoples and their unbroken relationship with the lands and the waters of Australia over millennia. We are dedicated to reconciliation and to offering opportunities for Aboriginal and Torres Strait Islander peoples to access and succeed in higher education. The Centre is committed to providing a culturally safe and inclusive environment for all.

OVERVIEW

Course Description

With the appropriation of digital technologies across all industries, the use of programming knowledge and computational thinking has become a requirement within tertiary studies.

This course introduces programming concepts and Python syntax applied to intuitive, real-world scenarios. It aims to highlight key skills such as:

- Abductive reasoning
- Critical and logical thinking
- Professional communication
- Documentation
- Design, and
- Teamwork

Students will experience Integrated Development Environments (IDE) and formulate an understanding of the System Development Life Cycle (SDLC) as a standardised approach for application to a wide range of varying disciplines.

Academic Progress Requirements

Nil

Contact Hours

Lecture
Face to Face On Campus
2 hour(s) per day for 5 day(s) starting Week 1

Self-Directed Learning
Self-Directed
1 hour(s) per day for 5 day(s) starting Week 1

Tutorial
Face to Face On Campus
1 hour(s) per day for 5 day(s) starting Week 1

Unit Weighting

5

Workload

Students are required to spend on average 20 hours of effort (contact and non-contact) including assessments per 5 unit course.

COURSE OUTLINE

CONTACTS

Course Coordinator

Ms Kate Mcalpine
Kate.Mcalpine@newcastle.edu.au
Consultation: Please email to schedule an appointment.

Teaching Staff

Other teaching staff will be advised on the course Canvas site.

School Office

Callaghan
Ground Floor, General Purpose Building (GP)
Ph: 02 4921 5558
enabling@newcastle.edu.au

Ourimbah
HO 168, Humanities Building
Ph: 02 4348 4076
enabling@newcastle.edu.au

SYLLABUS

Course Content

To support digital technology familiarisation and programming fundamental understanding for success in their program studies, students will undertake activities to:

- Familiarise themselves with Integrated Development Environments
- Identify key information to successfully analyse and deconstruct real-world scenarios into logical communication
- Familiarise themselves with programming documentation
- Apply abductive reasoning and critical thinking to design a solution
- Communicate professionally within a team environment
- Successfully apply programming concepts, Python syntax and troubleshooting methods to designed solutions
- Develop their confidence in further self-directed learning within their programs

Course Learning Outcomes

On successful completion of this course, students will be able to:

1. Understand the System Development Life Cycle (SDLC) and how it fits into any project design process
2. Understand Integrated Development Environments (IDE)
3. Analyse and deconstruct briefs into a logical simplification
4. Design solutions using logical communication
5. Apply Python syntax and appropriate communicative documentation to designed solutions
6. Test and troubleshoot developed programs

Course Materials

A non-programmable calculator is recommended but not required. All other course materials will be provided on the course Canvas site. Students are not required to purchase a textbook.

ASSESSMENTS

This course has 5 assessments. Each assessment is described in more detail in the sections below.

	Assessment Name	Due Date	Involvement	Weighting	Learning Outcomes
1	Programming Concepts, Basic Syntax and Functions	Sunday 18th February 11:59pm	Individual	20%	1, 2, 3, 4, 5, 6
2	1D Arrays and Vectorisation	Sunday 18th February 11:59pm	Individual	20%	3, 4, 5, 6
3	Plotting and CSV Files	Sunday 18th February 11:59pm	Individual	20%	3, 4, 5, 6
4	2D Matrix and Image Processing	Sunday 18th February 11:59pm	Individual	20%	3, 4, 5, 6
5	3D Matrix and Image Processing	Sunday 18th February 11:59pm	Individual	20%	3, 4, 5, 6

Late Submissions

Completion of each assessment item is necessary for a pass grade in this course. Extensions of time may be granted in consultation with your Course Coordinator.

Assessment 1 - Programming Concepts, Basic Syntax and Functions

Assessment Type	Quiz
Description	This 60 minute quiz is comprised of 10 multiple choice questions on programming concepts, basic syntax and functions. The quiz will open at 12:01am on Monday 12th February and must be completed by 11:59pm on Sunday 18th February. The quiz can be reattempted infinite times.
Weighting	20%
Due Date	Sunday 18th February 11:59pm
Submission Method	Online
Assessment Criteria	Correct answers
Return Method	Online
Feedback Provided	Feedback will be provided in Canvas upon completion of the quiz.

Assessment 2 - 1D Arrays and Vectorisation

Assessment Type	Quiz
Description	This 60 minute quiz is comprised of 10 multiple choice questions on 1D arrays and vectorisation. The quiz will open at 12:01am on Tuesday 13th February and must be completed by 11:59pm on Sunday 18th February. The quiz can be reattempted infinite times.
Weighting	20%
Due Date	Sunday 18th February 11:59pm
Submission Method	Online
Assessment Criteria	Correct answers
Return Method	Online
Feedback Provided	Feedback will be provided in Canvas upon completion of the quiz.

Assessment 3 - Plotting and CSV Files

Assessment Type	Quiz
Description	This 60 minute quiz is comprised of 10 multiple choice questions on plotting and CSV files. The quiz will open at 12:01am on Wednesday 14th February and must be completed by 11:59pm on Sunday 18th February. The quiz can be reattempted infinite times.
Weighting	20%
Due Date	Sunday 18th February 11:59pm
Submission Method	Online
Assessment Criteria	Correct answers
Return Method	Online
Feedback Provided	Feedback will be provided in Canvas upon completion of the quiz.

Assessment 4 - 2D Matrix and Image Processing

Assessment Type	Quiz
Description	This 60 minute quiz is comprised of 10 multiple choice questions on 2D matrix and image processing. The quiz will open at 12:01am on Thursday 15th February and must be completed by 11:59pm on Sunday 18th February. The quiz can be reattempted infinite times.
Weighting	20%
Due Date	Sunday 18th February 11:59pm
Submission Method	Online
Assessment Criteria	Correct answers
Return Method	Online
Feedback Provided	Feedback will be provided in Canvas upon completion of the quiz.

Assessment 5 - 3D Matrix and Image Processing

Assessment Type	Quiz
Description	This 60 minute quiz is comprised of 10 multiple choice questions on 3D matrix and image processing. The quiz will open at 12:01am on Friday 16th February and must be completed by 11:59pm on Sunday 18th February. The quiz can be reattempted infinite times.
Weighting	20%
Due Date	Sunday 18th February 11:59pm
Submission Method	Online
Assessment Criteria	Correct answers
Return Method	Online
Feedback Provided	Feedback will be provided in Canvas upon completion of the quiz.

ADDITIONAL INFORMATION

Grading Scheme

This course is graded as follows:

Grade	Description
Ungraded Pass (UP)	There are no marks associated with this result and you have met the level requirements to pass the course.
Fail (FF)	Failure to satisfactorily achieve assessment objectives or compulsory course requirements. A fail grade may also be awarded following disciplinary action.

Communication Methods

Email is the principal form of communication at the university and within this course. Always use your student email (NUmail), rather than a private email address, and check this regularly. As Course Coordinator I will try to respond to your email within three (3) working days. I will not normally respond to emails over the weekends. Please be courteous in your email communication and in the online space. The University of Newcastle has a Code of Conduct that covers all communications in the University for staff and students.

Canvas is used to distribute course material, announcements and other information. It is also used for online quizzes and to allow students to track their individual progressive assessment results via Grades.

Discussions forums in Canvas can be used to ask questions about minor issues. Students are strongly encouraged to use these to communicate with each other, discuss issues relating to the course, and solve minor problems.

Adverse Circumstances

The University acknowledges the right of students to seek consideration for the impact of allowable adverse circumstances that may affect their performance in assessment item(s). Applications for Adverse Circumstances must be lodged via the online Adverse Circumstances system for all individual assessment items worth 30% or greater **by 11:00pm on the day the assessment is due**. For assessment items less than 30%, you will need to contact your Course Coordinator by 11:00pm on the due date of the assessment item.

Before applying you must refer to the Adverse Circumstances Affecting Assessment Items Procedure and the Adverse Circumstances Affecting Assessment Items Policy.

Please note that students must submit their adverse circumstances application via the online Adverse Circumstances system by 11:00pm on the due date of the assessment item, even if you are using a Reasonable Adjustment Plan (RAP) as your supporting documentation.

Academic Misconduct

All students are required to meet the academic integrity standards of the University. These standards reinforce the importance of integrity and honesty in an academic environment. Academic Integrity policies apply to all students of the University in all modes of study and in all locations. Please refer to the Student Academic Integrity Policy.

Workplace Health and Safety Requirements

There are no specific WH&S requirements for this course.

Important Policy Information

The Help button in the Canvas Navigation menu contains helpful information for using the Learning Management System. Students should familiarise themselves with the policies and procedures that support a safe and respectful environment at the University.

Course Evaluation

Each year feedback is sought from students and other stakeholders about the courses offered in the University for the purposes of identifying areas of excellence and potential improvement.

Timetable

Your timetable for this course is available via the myUni Student Portal and can also be found here.

Software	Free Microsoft Office software is available to enrolled students here and includes 5 TB of free cloud storage with OneDrive.
Written Assessment Word Limits	Word limits for your written assessments includes headings, sub-heading, in-text citations, quotes and referencing but does not include the list of references, appendices and footnotes. You will not receive a penalty for exceeding the word limit (there is a tolerance of up to 10%), but any work after the maximum word limit may not be included within the allocation of marks.

This course outline was approved by the Director, PALS. No alteration of this course outline is permitted without Director approval. If a change is approved, students will be notified and an amended course outline will be provided in the same manner as the original.