

# Computing

## Pre-Masters



### Factfile

In Term 1, students on the three-term Pre-Masters will study two modules: English and Skills for University Study (ESUS) 1 and Improving Reading and Academic Vocabulary. Students joining in Term 2 for the two-term Pre-Masters will study ESUS 2 and 3 with the students from Term 1. All students will then take the route modules of their chosen route.

#### **English and Skills for University Study 1 (three-term only), 2 & 3**

Over these three modules you will develop your English communication skills and learn a range of study skills, including: writing and reading strategies, presentation and seminar participation, organisation of time and materials, meeting deadlines and responding to feedback.

When you have completed these modules you will be able to take notes and write essays in English. You should also have the confidence to give presentations, answer follow-up questions and contribute to seminar discussions.

#### **Improving Reading and Academic Vocabulary (three-term only)**

Reading academic texts can be difficult - this module will make it easier. It will improve your understanding of academic words and help you use them in your own work.

### Research Methods

The main aim of this course is to introduce and develop skills relating to research methods. The module will be focused on developing an understanding of the application, collection and limitation of a variety of techniques related to data and materials relevant to analysis within the chosen subject area. The students consider quantitative and qualitative methods of data collection, look at the various sources of information, both written and electronic and begin preparing for their Research Project.

### Introduction to Information Systems

The aim of the module is to provide students with an introduction to Information Systems and their main applications for both individual use and use in business, where they inform management decision-making and strategic thinking. Students are given the opportunity to apply the knowledge and understanding they gain through their studies in this module to a major practical assignment set during it.

### Programming 1 Fundamentals

The aim of this module is to introduce students to computer programming using a generic computer language. They will develop problem-solving skills and establish through these introductory studies a firm basis for later studies in Computer Science and Information Systems.

### Analytical Techniques and Problem Solving

The main aim of this module is to raise and develop students' awareness of the importance of acquiring and using an analytical approach towards their studies.

More specifically, this will involve students in understanding the importance of critical reasoning in evaluating materials and in constructing their own arguments.

They also explore a range of problem solving techniques and use these to devise their own.

### Individual Research Project

Students use what they have learned about research methods, selecting and deploying material appropriately and effectively, the style to be adopted in academic writing and the importance of following academic conventions, particularly in avoiding plagiarism and all other forms of academic impropriety to produce their extended project.

### Programming 2 – Data Structures and Algorithms

In this module students learn about the important properties of some data structures and algorithms that are of fundamental importance to modern computer science and IT. They also are presented with significant opportunities to develop new programming skills and practise these in order to be able to develop their own software solutions to straightforward problems.