

## Course Outline

**Code: TPP104**

**Title: Mathematics**

<b>School:</b>	Tertiary Access
<b>Teaching Session:</b>	Semester 2
<b>Year:</b>	2019
<b>Course Coordinator:</b>	Judi Warmerdam Email: <a href="mailto:jwarmerd@usc.edu.au">jwarmerd@usc.edu.au</a>
<b>Course Moderator:</b>	Dr Robert McDougall

Please go to the USC website for up to date information on the teaching sessions and campuses where this course is usually offered.

### **1. What is this course about?**

#### **1.1 Description**

This course is designed to upgrade your mathematical skills for entry into academic programs at the University of the Sunshine Coast. It has been specifically designed to be inclusive of those who may not have undertaken senior high school mathematics, or for those who may wish to refresh knowledge and understanding of the discipline. This course sets out to nurture a growth mindset for students around basic mathematical concepts. The flexible teaching environment allows for student's concerns around the course concepts to be voiced, questions to be asked and confidence to be built.

### **2. What level is this course?**

100 level Introductory - Discipline knowledge and skills at foundational level, broad application of knowledge and skills in familiar contexts and with support. Normally associated with the first full-time year of an undergraduate program.

### **3. What is the unit value of this course?**

12 units

#### 4. How does this course contribute to my learning?

<b>Specific Learning Outcomes</b> On successful completion of this course, you should be able to:	<b>Assessment tasks</b> You will be assessed on the learning outcomes in task/s:	<b>Graduate Qualities</b> Completing these tasks successfully will contribute to:
Demonstrate basic techniques and strategies used in the field of mathematics as developed in the course.	Examinations Assignment	Empowered
Identify and employ relevant mathematical approaches to demonstrate proficiency of the key threshold concepts of the course, such as solving simple algebraic equations.	Quizzes Examinations Assignment	Knowledgeable
Employ authentic skillsets such as proficiency with a scientific calculator and graphing to solve mathematical problems.	Quizzes Examinations	Empowered
Communicate effectively using mathematical conventions and symbols to justify mathematical reasoning.	Assignment Examinations	Engaged

#### 5. Am I eligible to enrol in this course?

Refer to the [USC Glossary of terms](#) for definitions of “pre-requisites, co-requisites and anti-requisites”.

##### 5.1 Enrolment restrictions

Student must be enrolled in TP000 or XE001

##### 5.2 Pre-requisites

Nil

##### 5.3 Co-requisites

Nil

##### 5.4 Anti-requisites

Nil

##### 5.5 Specific assumed prior knowledge and skills (where applicable)

Nil

#### 6. How am I going to be assessed?

##### 6.1 Grading scale

Standard – High Distinction (HD), Distinction (DN), Credit (CR), Pass (PS), Fail (FL)

##### 6.2 Details of early feedback on progress

Weekly quizzes (immediate feedback) and Task 1b in week 4 will provide feedback on early course progress. Weekly problem sets will allow you to track your own progression of the concepts covered in the course.

### 6.3 Assessment Tasks

Task No.	Assessment Product	Individual or Group	Weighting %	What is the duration / length?	When should I submit?	Where should I submit it?
1	Weekly Quizzes Online quizzes	Individual	Formative	30 mins each	Online weekly	Quiz (Online Test)
2a	Examination	Individual	10%	60 mins	Week 3	In Class
2b	Examination	Individual	20%	60 mins	Week 7	In Class
3	Assignment	Individual	20%		Monday 5pm Week 11	Assignment Box
4	Final Examination	Individual	50%	1 hour 45 min	Week 13	In Class
			100%			

#### Assessment Task 1: Quizzes

<b>Goal:</b>	The goal of this task is for you to practice your understanding of relevant weekly material formatively in preparation for the summative assessment items of the course. Opportunity to attempt the quizzes as practice will be available all semester.
<b>Product:</b>	Weekly Quizzes
<b>Format:</b>	Task quizzes are formative. Students can attempt the quizzes as many times as they choose to gain mastery of the topics. Quizzes will be available <b>each week</b> of the course except when another assessment item is occurring. Quizzes assist students through practice for tasks 2, 3, 4.
<b>Purpose:</b>	Practice will develop these learning outcomes: <ol style="list-style-type: none"> <li>1. Identification and use of relevant mathematical approach to answer questions</li> <li>2. Solution of mathematical problems through use of a scientific calculator</li> </ol>

#### Assessment Task 2a: Examination

<b>Goal:</b>	The goal is for you to demonstrate reliable calculator and problem-solving skills for mathematics and its applications as they are needed for whole number arithmetic and formulae including algebra, and to communicate clearly using reasoning and appropriate mathematical conventions and symbols.
<b>Product:</b>	Examination
<b>Format:</b>	Task 2a is a summative test covering topics from Weeks 1 & 2. The test will be comprised of two sections. Part A will require students to answer a selection of multiple-choice questions. Part B is short answer and will require students to demonstrate a deeper understanding by recording all working to get to the answer. Format: The test is one hour and will be conducted during tutorials <b>in week 3</b> of the semester.
<b>Criteria:</b>	Marks will be awarded for: <ol style="list-style-type: none"> <li>3. Demonstration of basic techniques and strategies to find the answer to questions</li> <li>4. Identification of relevant mathematical approach to working with formulae</li> <li>5. Solution of mathematical problems through use of a scientific calculator</li> <li>6. Communication using mathematical conventions (including sentences) and symbols to justify reasoning</li> </ol>

**Assessment Task 2b: Examination**

<b>Goal:</b>	The goal is for you to demonstrate reliable calculator and problem-solving skills to work with fractions and decimal arithmetic, percentages, algebra, exponents and logarithms, and to communicate clearly using reasoning and appropriate mathematical conventions and symbols including correct significant figures and rounding.
<b>Product:</b>	Examination
<b>Format:</b>	Task 2a is a summative test covering topics from Weeks 3-6. The test will be comprised of two sections. Part A will require students to answer a selection of multiple-choice questions. Part B is short answer and will require students to demonstrate a deeper understanding by recording all working to get to the answer. Format: The test is one hour and will be conducted during lectures/tutorials <b>in week 7</b> of the semester.
<b>Criteria:</b>	Marks will be awarded for: <ol style="list-style-type: none"> <li>1. Demonstration of basic techniques and strategies to find the answer to questions</li> <li>2. Identification of relevant mathematical approach to working with formulae</li> <li>3. Solution of mathematical problems through use of a scientific calculator</li> <li>4. Communication using mathematical conventions and symbols</li> </ol>

**Assessment Task 3: Assignment**

<b>Goal:</b>	The goal for you is to demonstrate conceptual understanding and skills development in solving routine problems covered from week 7-9 of the course. The assignment is designed for you to communicate your understanding through written and/or worked responses to questions.
<b>Product:</b>	Assignment
<b>Format:</b>	Task 3 is a summative written assignment covering course content from week 7-9.
<b>Criteria:</b>	Marks will be awarded for: <ol style="list-style-type: none"> <li>1. Demonstration of basic techniques and strategies to find the answer to questions</li> <li>2. Identification of relevant mathematical approach to solve trigonometric and geometric problems with knowledge of dimensional analysis</li> <li>3. Communication using mathematical conventions and symbols to justify reasoning</li> </ol>

**Assessment Task 4: Final Examination**

<b>Goal:</b>	The goal for you is to review and provide evidence of understanding of the entire course and to communicate your responses clearly using justifiable reasoning and appropriate mathematical conventions and symbols.
<b>Product:</b>	Final Examination
<b>Format:</b>	Task 4 is a summative 1hr 45 min examination <b>in week 13</b> of all the topics covered in the course. The test will be comprised of two sections. Part A will require students to answer a selection of multiple-choice questions. Part B is short answer and will require students to demonstrate a deeper understanding by recording all working to get to the answer.
<b>Criteria:</b>	Marks will be awarded for: <ol style="list-style-type: none"> <li>4. Demonstration of basic techniques and strategies to find the answer to questions</li> <li>5. Identification of relevant mathematical approach</li> <li>6. Solution of mathematical problems through use of a scientific calculator and graphing</li> <li>7. Communication using mathematical conventions and symbols to justify reasoning</li> </ol>

## 7. Directed study hours

The directed study hours listed here are a portion of the workload for this course. A 12 unit course will have total of 150 learning hours which will include directed study hours (including online if required), self-directed learning and completion of assessable tasks. Directed study hours may vary by location. Student workload is calculated at 12.5 learning hours per one unit.

Locations:	Directed study hours for location:
Sippy Downs Caboolture Gympie Fraser Coast Moreton Bay	Lectures: 13 x 1 hr per week; Tutorials: 13 x 2 hrs per week

## 8. What resources do I need to undertake this course?

Please note that course information, including specific information of recommended readings, learning activities, resources, weekly readings, announcements, etc. are available on the course Blackboard site. Please log in as soon as possible.

### 8.1 Prescribed text(s) or course reader

A digital version of the required Course Reader listed below is available on USC Blackboard.

A printed version can be ordered from USC Mail and Printing Services:

<https://www.usc.edu.au/learn/student-support/self-serve-printing/myprint-shop>

Author	Year	Title	Publisher
TPP104	2019	TPP104 Course Reader	USC Mail and Print Services

### 8.2 Specific requirements

It is recommended that you possess a good quality scientific hand-calculator. The Casio fx-82AU PLUS II is recommended and will be demonstrated in this course. You will not require a graphics, programmable or CAS calculator for this course and these are not recommended. It is your responsibility to learn to use your calculator properly.

## 9. How are risks managed in this course?

Health and safety risks for this course have been assessed as low.

It is your responsibility as a student to review course material, search online, discuss with lecturers and peers, and understand the health and safety risks associated with your specific course of study. It is also your responsibility to familiarise yourself with the University's general health and safety principles by reviewing the [online Health Safety and Wellbeing training module for students](#), and following the instructions of the University staff.

## 10. What administrative information is relevant to this course?

### 10.1 Assessment: Academic Integrity

Academic integrity is the ethical standard of university participation. It ensures that students graduate as a result of proving they are competent in their discipline. This is integral in maintaining the value of academic qualifications. Each industry has expectations and standards of the skills and knowledge within that discipline and these are reflected in assessment.

Academic integrity means that you do not engage in any activity that is considered to be academic fraud; including plagiarism, collusion or outsourcing any part of any assessment item to any other person. You are

expected to be honest and ethical by completing all work yourself and indicating in your work which ideas and information were developed by you and which were taken from others. You cannot provide your assessment work to others. You are also expected to provide evidence of wide and critical reading, usually by using appropriate academic references.

In order to minimise incidents of academic fraud, this course may require that some of its assessment tasks, when submitted to Blackboard, are electronically checked through SafeAssign. This software allows for text comparisons to be made between your submitted assessment item and all other work that SafeAssign has access to.

## 10.2 Assessment: Additional requirements

### Eligibility for Supplementary Assessment

Your eligibility for supplementary assessment in a course is dependent of the following conditions applying:

- a) The final mark is in the percentage range 47% to 49.4%
- b) The course is graded using the Standard Grading scale
- c) You have not failed an assessment task in the course due to academic misconduct

## 10.3 Assessment: Submission penalties

Late submission of assessment tasks will be penalised at the following maximum rate:

- 5% (of the assessment task's identified value) per day for the first two days from the date identified as the due date for the assessment task.
- 10% (of the assessment task's identified value) for the third day
- 20% (of the assessment task's identified value) for the fourth day and subsequent days up to and including seven days from the date identified as the due date for the assessment task.
- A result of zero is awarded for an assessment task submitted after seven days from the date identified as the due date for the assessment task.

Weekdays and weekends are included in the calculation of days late.

To request an extension, you must contact your Course Coordinator and supply the required documentation to negotiate an outcome.

## 10.4 Study help

In the first instance, you should contact your tutor, then the Course Coordinator. Additional assistance is provided to all students through Academic Skills Advisers. To book an appointment or find a drop-in session go to [Student Hub](#).

Contact Student Central for further assistance: +61 7 5430 2890 or [studentcentral@usc.edu.au](mailto:studentcentral@usc.edu.au)

## 10.5 Wellbeing Services

Student Wellbeing Support Staff are available to assist on a wide range of personal, academic, social and psychological matters to foster positive mental health and wellbeing for your success. Student Wellbeing is comprised of professionally qualified staff in counselling, health and disability Services.

Ability Advisers ensure equal access to all aspects of university life. If your studies are affected by a disability, mental health issue, learning disorder, injury or illness, or you are a primary carer for someone with a disability, [AccessAbility Services](#) can provide assistance, advocacy and reasonable academic adjustments.

To book an appointment with either service go to [Student Hub](#), email [studentwellbeing@usc.edu.au](mailto:studentwellbeing@usc.edu.au) or [accessability@usc.edu.au](mailto:accessability@usc.edu.au) or call 07 5430 1226

## 10.6 Links to relevant University policy and procedures

For more information on Academic Learning & Teaching categories including:

- Assessment: Courses and Coursework Programs
- Review of Assessment and Final Grades
- Supplementary Assessment
- Administration of Central Examinations
- Deferred Examinations
- Student Academic Misconduct
- Students with a Disability

Visit the USC website:

<http://www.usc.edu.au/explore/policies-and-procedures#academic-learning-and-teaching>

## 10.7 General Enquiries

**In person:**

- **USC Sunshine Coast** - Student Central, Ground Floor, Building C, 90 Sippy Downs Drive, Sippy Downs
- **USC Gympie** - Student Central, 71 Cartwright Road, Gympie
- **USC Fraser Coast** - Student Central, Student Central, Building A, 161 Old Maryborough Rd, Hervey Bay
- **USC Caboolture** - Student Central, Level 1 Building J, Cnr Manley and Tallon Street, Caboolture
- **USC Moreton Bay** (Bray Hall, Petrie, for semester 2, 2019 only) - Student Central, Level 1 Building J, Cnr Manley and Tallon Street, Caboolture

**Tel:** +61 7 5430 2890

**Email:** [studentcentral@usc.edu.au](mailto:studentcentral@usc.edu.au)