



## 1. General Course Information

### 1.1 Course Details

<b>Course Code:</b>	<b>FND104</b>
<b>Course Name:</b>	<b>Essential Mathematics</b>
<b>Trimester:</b>	<b>3, 2020</b>
<b>Program:</b>	Foundation
<b>Credit Points:</b>	10
<b>Course Coordinator:</b>	Jesse Rostagno
<b>Document modified:</b>	12 October 2020

### Course Description

This course is designed for students who require a general mathematics background suitable for studies in business, health sciences, IT and engineering. It includes basic arithmetic, algebra, functions and their graphs, logarithms, growth and decay, finance and trigonometry.

### Assumed Knowledge

There are no prerequisites for this course

### 1.2 Teaching Team

Your teacher can be contacted via the email system on the portal.

Name	Email
Jesse Rostagno	<a href="mailto:jesse.rostagno@griffithcollege.edu.au">jesse.rostagno@griffithcollege.edu.au</a>

## 1.3 Staff Consultation

Your teacher is available each week for consultation outside of normal class times. Times that your teacher will be available for consultation will be given in the first week of lectures. A list of times and rooms will be published on the Griffith College Portal under the "Support and Services/Teacher Consultation Times" link.

## 1.4 Timetable

Your timetable is available on the Griffith College Portal at Class Timetable in Student and Services.

## 1.5 Technical Specifications

All students must have access to a computer or suitable mobile device.

## 2. Aims, Outcomes & Generic Skills

### 2.1 Course Aims

This course aims to equip students with an increased knowledge and understanding of essential mathematics suitable for future studies in business, health sciences, IT and engineering.



### 2.2 Learning Outcomes

After successfully completing this course you should be able to:

1. Perform a range of basic arithmetic and algebraic techniques
2. Combine knowledge of mathematical processes to solve, and graph, Linear Equations and Functions
3. Solve both visual and written trigonometry problems
4. Logically solve logarithmic and index/indices applications
5. Use critical thinking to solve financial and consumer related scenarios



## 2.3 Generic Skills and Capabilities

For further details on the Generic Skills please refer to the Graduate Generic Skills and Capabilities policy.

Griffith College aims to develop graduates who have an open and critical approach to learning and a capacity for lifelong learning. Through engagement in their studies, students are provided with opportunities to begin the development of these and other generic skills.

Studies in this course will give you opportunities to begin to develop the following skills:

Generic Skills and Capabilities		Taught	Practised	Assessed
Acquisition of discipline knowledge and skills with critical judgement		✓	✓	✓
Communication and collaboration			✓	
Self-directed and active learning			✓	
Creative and future thinking			✓	✓
Social responsibility and ethical awareness				
Cultural competence and awareness in a culturally diverse environment				



## 3. Learning Resources

### 3.1 Required Learning Resources

There will be an interactive workbook for each module, downloadable from the course site directly at no cost.

Non-programmable scientific calculator.

There is no prescribed text for this course, all notes and exercises are available on the course site.

### 3.2 Recommended Learning Resources

N/A

### 3.3 College Support Services and Learning Resources

The College provides many facilities and support services to assist students in their studies. Links to information about College support resources that are available to students are included below for easy reference.

[Digital Library](#) – Databases to which Griffith College students have access to through the Griffith Library Databases.

MyStudy – there is a dedicated website for this course via MyStudy on the Griffith College Portal.

[Academic Integrity Tutorial](#) - this tutorial helps students to understand what academic integrity is and why it matters. You will be able to identify types of breaches of academic integrity, understand what skills you will need in order to maintain academic integrity, and learn about the processes of referencing styles.

Services and Support provides a range of services to support students throughout their studies including academic advice and assignment help from Student Learning Advisors, and personal and welfare support from Student Counsellors.

[Jobs and Employment](#) in the Student Hub can assist students with career direction, resume and interview preparation, job search tips, and more.

[IT Support](#) provides details of accessing support, information on s numbers and internet access and computer lab rules.

### 3.4 Other Information about your Learning

#### **Attendance**

You are expected to actively engage in all learning experiences and learning activities which underpin the learning content in this course. You are expected to engage with the learning content and learning activities outside of timetabled class times. This requires you to be an active agent of your learning. You are expected to bring all necessary learning resources to class such as the required textbook and /or Workbook. In addition, you are encouraged to BYOD (bring your own device) to class such as a laptop or tablet. This is not a requirement as computer lab facilities are available on campus, however, the use of such devices in the classroom is encouraged with appropriate and considerate use principles being a priority.

#### **Preparation and Participation in Learning**

In order to enhance your learning, you need to prepare before participating in the learning experiences. Absorb the learning content and complete the learning activities that are provided online before you attend the scheduled learning experiences. Make sure you complete the learning activities set each week, they are designed to support your learning. Active participation in your learning will enhance your success. Ask questions when something is unclear or when you want to bring some issue to your teacher or tutor's attention; respond to questions to test your knowledge and engage in discussion to help yourself and others learn.

#### **Consultation Sessions**

Teachers offer extra time each week to assist students outside the classroom. This is known as 'consultation time.' You may seek assistance from your teacher on email or in person according to how the teacher has explained this to the class. Attendance during consultation time is optional but you are encouraged to use this extra help to improve your learning outcomes.

#### **Course Learning Materials**

Learning materials are made available to you in MyStudy on the Griffith College Portal. The learning materials are arranged in Modules. In each Module you will find the learning content, learning activities and learning experiences. Actively working your way through these course learning materials together with your teacher or tutor will prepare you to succeed when completing the evidence of learning (assessment).

### **Self-Directed Learning**

You will be expected to learn independently. This means you must organise and engage with the course learning content even when you are not specifically asked to do so by your teacher or tutor. The weekly guide will be helpful to organise your learning. This involves revising the weekly course learning material and completing the learning activities. It also means you will need to find additional information to evidence your learning (assessment) beyond that given to you, and to construct your own response to a question or topic. All of this requires careful planning of your time. Expect to spend, on average, at least 10 hours per week including class time for each of your courses.

### **Program Progression**

You are reminded that satisfactory Program Progression requires that attendance in classes is maintained at equal to or greater than 80%, and that GPA is maintained at equal to or greater than 3.5 [please see Griffith College Policy Library - [Program Progression Policy](#) - for more information].


### **Teacher and Course Evaluation**

Your feedback is respected and valued by your teachers and tutors. You are encouraged to provide your thoughts on the course and teaching, both positive and critical, directly to your teacher and tutor or by completing course and teacher evaluations via Griffith College's evaluation tool whenever these are available.



## 4. Learning Content, Learning Activities and Learning Experiences

### 4.1 Modules for Learning and Weekly Learning Content, Learning Activities and Learning Experience

	Learning Content 	Learning activities 	Learning experiences 	Evidence of learning 	Learning outcome 
<b>Module 1 - Basic Arithmetic and Algebraic Techniques</b>					
1	Basic Arithmetic	Module 1 Workbook Activities	Online Zoom Class <ul style="list-style-type: none"> <li>• Introduction to Arithmetic</li> <li>• Order of Operations</li> <li>• Factors</li> </ul> Kahoot Quiz - Arithmetic		1
2	Basic Arithmetic	Module 1 Workbook Activities	Online Zoom Class <ul style="list-style-type: none"> <li>• Fractions</li> <li>• Surds</li> </ul>	Practice Moodle Quiz on Portal	1
3	Introduction to Algebra	Module 1 Workbook Activities	Online Zoom Class <ul style="list-style-type: none"> <li>• Introduction to Algebra</li> <li>• Expanding and Simplifying</li> <li>• Algebra Fractions</li> </ul> Kahoot Quiz - Algebra		1
4	Algebra	Module 1 Workbook Activities	Online Zoom Class <ul style="list-style-type: none"> <li>• Rearranging Equations</li> <li>• Solving for X</li> <li>• Simultaneous Equations</li> </ul>	<b>Quiz 1 – 20%</b>	1
<b>Module 2 - Linear Equations and Functions</b>					
5	Linear Equations and Functions	Module 2 Workbook Activities	Online Zoom Class <ul style="list-style-type: none"> <li>• Introduction to Functions</li> <li>• Substituting X into Functions</li> <li>• Gradients</li> </ul> Kahoot Quiz – Linear Equations		2
6	Linear Equations and Functions	Module 2 Workbook Activities	Online Zoom Class <ul style="list-style-type: none"> <li>• Gradients Continued</li> <li>• Distance Formula</li> <li>• Introduction to Graphing</li> </ul>	<b>Quiz 2 – 20%</b>	2
<b>Module 3 -Trigonometry</b>					
7	Introduction to Trigonometry	Module 3 Workbook Activities	Online Zoom Class <ul style="list-style-type: none"> <li>• Introduction to Triangles</li> <li>• Sin, Cos and Tan</li> </ul> Kahoot Quiz – Basic Trig		3
8	Trigonometry	Module 3 Workbook Activities	Online Zoom Class <ul style="list-style-type: none"> <li>• Sin, Cos, Tan for Problem Solving</li> <li>• Using the inverse functions for Sin Cos Tan</li> </ul>	<b>Quiz 3 – 20%</b>	3

<b>Module 4 – Exponents and Logarithms</b>					
<b>9</b>	Exponents/Indices and Logarithms	Module 4 Workbook Activities	Online Zoom Class <ul style="list-style-type: none"> <li>• Introduction to Exponents/Indices</li> <li>• Exponent/Indices Rules</li> <li>• Basic Logarithm</li> </ul> Kahoot Quiz - Indices		4
<b>10</b>	Logarithms	Module 4 Workbook Activities  Assessment Population Selection  Population Equation and Graph	Online Zoom Class <ul style="list-style-type: none"> <li>• Natural Log</li> <li>• Growth and Decay</li> <li>• Assignment design and examples in Microsoft Excel</li> </ul>	<b>Problem Solving Activity – 20%</b>	4
<b>Module 5 – Financial Mathematics</b>					
<b>11</b>	Introduction to Financial Mathematics	Module 5 Workbook Activities	Online Zoom Class <ul style="list-style-type: none"> <li>• Percentages</li> <li>• Interest – Simple, Compound and Annuities</li> </ul>		5
<b>12</b>	Financial and Consumer Mathematics	Module 5 Workbook Activities  Financial Assignment Investment Selection, Value Tracking	Online Zoom Class <ul style="list-style-type: none"> <li>• Practical Application of Savings/Interest/Investments</li> <li>• Online Platforms for Investments (cryptocurrency, shares, savings accounts etc)</li> </ul>	<b>Financial Assignment – 20%</b>	5



## 5. Evidence of Learning (Assessment Plan)

### 5.1 Evidence of Learning Summary

	 Evidence of learning	 Weighting	 Learning outcome	 Due Date
1	Module 1 Quiz	20%	1	Week 4
2	Module 2 Quiz	20%	2	Week 6
3	Module 3 Quiz	20%	3	Week 8
4	Module 4 Problem Solving Activity and Graph	20%	4	Week 10
5	Module 5 Financial Assignment	20%	5	Week 12

### 5.2 Evidence of Learning Task Detail

**Module Quizzes (Modules 1, 2 and 3 only)** – Online Moodle quiz at the end of each module, to show an application of knowledge based on the learning activities of the relevant module. Quizzes will be a combination of short answers and multiple choice.

**Module 4 Problem Solving Activity** – Students will be able to choose a real-world example population (human, animal or plant) and use logarithm growth or decay models to predict the population in a allocated amount of time in the future. This will include showing working for the 'k' constant, as well as using the growth/decay equation to predict population sizes or possible extinction rates. These findings will be used to create a graph (in Microsoft Excel) and submitted to the portal with a short paragraph explaining the trends of the graph as well as the potential outcome for the population selected.

**Module 5 Financial Assignment** – Students will conduct a short research assignment over the 2-week module period, tracking a real-world financial option (investments, shares, bitcoin, compound interest etc) on a financial decision they can make. Students can select an option of their choice, track the value of their investment/option for 2 weeks, and compile these values into a table and graph showing their values, and any profit or loss. A one paragraph 'reflection' should also be written about the reason the option was selected, any profit or loss, as well as any risks, and if after conducting the research, would they select the same option again. All tables, graphs and the reflection should be compiled into one document and uploaded to the portal.

### 5.3 Late Submission

An evidence of learning (assessment) item submitted after the due date, without an approved extension from the Course Coordinator, will be penalised. The standard penalty is the reduction of the mark allocated to the assessment item by 5% of the maximum mark applicable for the assessment item, for each working day or part working day that the item is late. Evidence of learning items submitted more than five working days after the due date are awarded zero marks.

Please refer to the Griffith College website - Policy Library > [Assessment Policy](#) for guidelines and penalties for late submission.



## 5.4 Other Information about Evidence of Learning

### Retention of Originals

You must be able to produce a copy of all work submitted if so requested. Copies should be retained until after the release of final results for the course.

### Requests for extension

To apply for an extension of time for an evidence of learning item, you must submit an [Application for Extension of Assignment](#) form to your teacher at least 24 hours before the date the assignment is due. Grounds for extensions are usually: serious illness, accident, disability, bereavement or other compassionate circumstances and must be able to be substantiated with relevant documentation [e.g. [Griffith College Student Medical Certificate](#)]. Please refer to the Griffith College website - [Policy Library](#) - for guidelines regarding extensions and deferred assessment.

### Return of Evidence of Learning Items

1. Marks awarded for in-trimester evidence of learning items, except those being moderated externally with Griffith University, will be available on the Student Portal within fourteen [14] days of the due date. This does not apply to the final evidence of learning item in this course (marks for this item will be provided with the final course result).
2. Students will be advised of their final grade through the Student Portal. Students can review their final exam papers after student grades have been published. Review of final exam papers will not be permitted after the final date to enrol.
3. Marks for **all** evidence of learning items including the final exam (if applicable) will be recorded in the Moodle Course Site and made available to students through the Moodle Course Site.

*The sum of your marks of evidence of learning items in this course does not necessarily imply your final grade for the course. Standard grade cut off scores can be varied for particular courses, so you need to wait for the official release of grades to be sure of your grade for this course.*

## 6. Policies & Guidelines

Griffith College assessment-related policies can be found in the [Griffith College Policy Library](#) which include the following policies:

[Assessment Policy](#), [Special Consideration](#), [Deferred Assessment](#), [Alternate Exam Sitings](#), [Medical Certificates](#), [Academic Integrity](#), [Finalisation of Results](#), [Review of Marks](#), [Moderation of Assessment](#), [Turn-it-in Software Use](#). These policies can be accessed within the [Policy Library](#)

**Academic Integrity** Griffith College is committed to maintaining high academic standards to protect the value of its qualifications. Academic integrity means acting with the values of honesty, trust, fairness, respect and responsibility in learning, teaching and research. It is important for students, teachers, researchers and all staff to act in an honest way, be responsible for their actions, and show fairness in every part of their work. Academic integrity is important for an individual's and the College's reputation.

All staff and students of the College are responsible for academic integrity. As a student, you are expected to conduct your studies honestly, ethically and in accordance with accepted standards of academic conduct. Any form of academic conduct that is contrary to these standards is considered a breach of academic integrity and is unacceptable.

Some students deliberately breach academic integrity standards with intent to deceive. This conscious, pre-meditated form of cheating is considered to be one of the most serious forms of fraudulent academic behaviour, for which the College has zero tolerance and for which penalties, including exclusion from the College, will be applied.

However, Griffith College also recognises many students breach academic integrity standards without intent to deceive. In these cases, students may be required to undertake additional educational activities to remediate their behaviour and may also be provided appropriate advice by academic staff.

As you undertake your studies at Griffith College, your lecturers, tutors and academic advisors will provide you with guidance to understand and maintain academic integrity; however, it is also your responsibility to seek out guidance if and when you are unsure about appropriate academic conduct.

In the case of an allegation of a breach of academic integrity being made against a student he or she may request the guidance and support of a Griffith College Student Learning Advisor or Student Counsellor.

Please ensure that you are familiar with the Griffith College Academic Integrity Policy; this policy provides an overview of some of the behaviours that are considered breaches of academic integrity, as well as the penalties and processes involved when a breach is identified.

For further information please refer to the Griffith College website - Policy Library > [Academic Integrity Policy](#)

### **Reasonable Adjustments for Assessment – The Disability Services policy**

The [Disability Services policy](#) (accessed within the [Policy Library](#)) outlines the principles and processes that guide the College in making reasonable adjustments to assessment for students with disabilities while maintaining academic robustness of its programs.

### **Risk Assessment Statement**

There are no out of the ordinary risks associated with this course.

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