

1. General Course Information

1.1 Course Details

| Course Code: | FND115 | |
|------------------------------------|-------------------|--|
| Course Name: General Mathematics A | | |
| Trimester: | Trimester 3, 2021 | |
| Program: | Foundation | |
| Credit Points: | 10 | |
| Course Coordinator: | Jesse Rostagno | |
| Document modified: | 13 September 2021 | |

Course Description

This course is designed for students who require a general mathematics background suitable for studies in business, health sciences, IT, science and engineering. It includes Consumer Arithmetic, Algebra, Linear Functions, Matrices, Shape and Measurements, Trigonometry and Univariate Data Analysis. This course aligns with the QCAA General Mathematics Units 1 and 2. This course is also a pre-requisite (assumed knowledge) to FND105 Advance Mathematics.

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 | jesse.rostagno@griffithcollege.edu.au |

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 learning experiences. 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

Upon completion of this course students will be able to justify and apply mathematic concepts and techniques. Students will be able to communicate effectively statical and financial mathematic concepts and provide in depth mathematical reasoning. This course aims to give students a general understanding of mathematical facts, rules and definitions that can be further applied to problem solving and modelling.



2.2 Learning Outcomes

After successfully completing this course you should be able to:

- 1. Use facts, rules, definitions of mathematical concepts and techniques to solve conceptual problems.
- 2. Communicate statistical and financial mathematic concepts and be able to reflect upon findings.
- 3. Justify procedures by explaining mathematical reasoning.
- 4. Apply mathematical concepts and techniques for problem solving and modelling.



2.3 Generic Skills and Capabilities

For further details on the Generic Skills please refer to the <u>Graduate Generic Skills and</u> <u>Capabilities policy</u>.

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 | \bigcirc | ~ | ~ | ~ |
| Social responsibility and ethical awareness | Ţ | | | |
| Cultural competence and awareness in a culturally diverse environment | ††† † | | | |



3. Learning Resources

3.1 Required Learning Resources

The textbook used is **Cambridge General Mathematics for Queensland, Units 1 & 2**. Your teacher will give you more information on how to access and use these resources in class.

Non-programmable scientific calculator.

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.

<u>Digital Library</u> – 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.

Griffith College is committed to ensuring academic integrity is understood and maintained by all staff and students. All students learn about academic integrity through engagement with the weighted Epigeum to Academic Integrity online modules within the suite of Academic and Professional Studies courses.

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.

<u>Jobs and Employment</u> 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'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 Learning Content, Learning Experiences and Learning Activities. Learning Content will be engaged with prior to the scheduled Learning Experience (your weekly class). This will ensure you are prepared for the scheduled Learning Experience by being aware of the content to be covered and therefore will be able to actively participate in the session. Learning Activities are accessed after the scheduled session for purposes of review, consolidation of learning, and preparation for the Evidence of Learning tasks (assessment) in the course.

In addition, **Anytime Anywhere** learning material is provided in the course. This learning material provides support, interactive tools and directions for students who occasionally cannot attend the weekly scheduled Learning Experience (either in person or on Zoom) perhaps due to illness or other commitments. The Anytime Anywhere learning material should also be used in conjunction with Learning Content and Learning Activities resources.

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

4. Learning Content, Learning Experiences and Learning Activities

4.1 Modules for Learning and Weekly Learning Content, Learning Experiences and Learning Activities

| | Learning Content | Learning Experiences (Classwork) | Learning Activities (Homework) | Evidence of learning | Learning outcome |
|---|---|---|--|---|---------------------|
| | Module 1 | • | | | |
| 1 | Consumer Arithmetic: Personal Finance | Online Zoom Class Course Introduction Salary and Wages Overtime, Penalty rates and Allowances Commission, Piecework and Royalties Incomes from the Government Comparison using the Unit Cost Method Currency and Exchange Rates Budgeting | Chapter 1 e-text Interactive Activities 1A – 1H | | 1, 2 |
| 2 | Consumer Arithmetic: Loans and Investments | Online Zoom Class Percentages and Applications Simple Interest Rearranging the Simple Interest Formula Compound Interest Inflation Shares and Dividends | Chapter 2 e-text Interactive Activities 2A – 2G | Instruction for Assignment (Due Week 3) | 1, 2 |
| 3 | Shape and Measurement | Online Zoom Class Pythagoras Theorem Mensuration Circles, Prisms and Other Solids Perimeter and Area Similar Triangles and other solid shapes | Chapter 3 e-text Interactive Activities 3A – 3K | Assignment 20% Due | 1, 4 |
| 4 | Linear Equations and Graphs | Online Zoom Class Solving Linear Equations with an unknown Linear Equations from Word Problems Developing a Formula with two unknowns Straight Line Graphs Slope of a Straight Line Slope Intercepts Equation of a Straight Line | Chapter 4 e-text Interactive Activities 4A – 4h | | 1, 3, 4 |
| 5 | Linear Equations and Graphs | Online Zoom Class Further Linear Modelling | Chapter 4 e-text Continued | | 1, 3, 4 |

| | | Solving Simultaneous Linear Equations Using Algebra Solving Simultaneous Linear Equations Using Technology Problem Solving with Simultaneous Equations Piecewise Linear and Step Graphs | Interactive Activities 4I – 4N | | |
|----|--|---|---|--|---------|
| 6 | Module 1 Revision | Online Zoom Class Revision of Week 1 – 5 topics in preparation for Module 1 Exam Practise Quiz | Chapter 5 of e- text Interactive Revision Activities 5A – 5D | Module 1 Exam - 30% | 1, 4 |
| | Module 2 | | | | |
| 7 | Applied Trigonometry | Online Zoom Class Review of Basic Trigonometry Finding an unknown side in a Right-Angled Triangle Finding an Angle in a Right-Angled Triangle Right-Angled Triangles and Problem Solving Angles of Elevation and Depression Bearings and Navigation | Chapter 6 of e- text Interactive Activities 6A – 6F | | 1, 4 |
| 8 | Applied Trigonometry | Online Zoom Class Area of Triangle The Sine Rule The Cosine Rule Problem Solving and Modelling | Chapter 6 of e- text Continued Interactive Activities 6G – 6J | | 1, 4 |
| 9 | Algebra: Linear and Non-Linear Relationships | Online Zoom Class Substitution of Values into a Formula Constructing a Table of Values Transposition of Equations | Chapter 7 of e- text Interactive Activities 7A-7C | | 1, 4 |
| 10 | Matrices and Matrix Arithmetic | Online Zoom Class Matrix Basics Using Matrices to Model Practical Situations Adding and Subtracting Matrices Matrix Multiplication and Powers Communications and Connections Problem Solving and Modelling matrices | Chapter 8 of e- text Interactive Activities 8A – 8H | | 1, 3, 4 |
| 11 | Univariate Data Analysis | Online Zoom Class Types of Data Displaying and Describing Categorical Data Distributions Interpreting and Describing Frequency Tables and Bar Charts | Chapter 9 of e- text Interactive Activities 9A – 9J | Instruction for Assignment (Due Week 12) | 1, 3, 4 |

| | | Displaying and Describing Numerical Data Dot Plots, Stem and Leaf Plots, Boxplots Comparing Data for a Numerical Variable Problem Solving using the Statistical Investigation Process | | | |
|----|-------------------------|--|--|---|---------|
| 12 | Revision of Module 2 | Online Zoom Class • Revision of Weeks 7-11 • Practise Quiz | Chapter 10 of e- text Interactive Activities 10A – 10D | Final Exam – Exam Period – 30% Assignment 20% Due | 1, 3, 4 |



5. Evidence of Learning (Task Plan)

5.1 Evidence of Learning Summary

| | ₹ | | 00% | |
|---|------------------------|-----------|------------------|-------------|
| | Evidence of learning | Weighting | Learning outcome | Due Date |
| 1 | Module 1 Assignment | 20% | 2, 3 | Week 3 |
| 2 | Module 1 Quiz | 30% | 1, 4 | Week 6 |
| 3 | Module 2 Assignment | 20% | 2, 4 | Week 12 |
| 4 | Module 2 Exam | 30% | 1, 3, 4 | Exam Period |

5.2 Evidence of Learning Task Detail

Module 1 Assignment 20%– Students will conduct a short assignment over a 1 week period, tracking a realworld 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 1 week, 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. This assignment will assess learning outcome 2 and 3.

Module 1 Quiz 30% – Online Quiz at the end of Module 1, to show an application of knowledge based on the learning activities of the first 6 weeks. The Quiz will be a combination of short answers, multiple choices and problem solving/modelling questions and will assess the learning outcomes 1 and 4.

Module 2 Assignment 20% – Students will conduct a short research project over a 1-week period to show *Problem Solving Using Statistical Investigation Process.* Students will compile their own data set, sort, and interpret their data, as well as show an appropriate visual representation of their data (e.g. boxplot). Students should also include one paragraph discussing their methods of data collection, data interpretation and results. This assignment will assess learning outcomes 2 and 4.

Module 2 Exam 30% – Online Exam for Module 2, to show an application of skills based on the learning activities of the last 6 weeks. The Exam will be a combination of short answers, multiple choice, and problem solving/modelling questions. This assignment will assess learning outcomes 1, 3 and 4.

5.3 Late Submission

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

Please refer to the Griffith College website - Policy Library > <u>Assessment Policy</u> 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 task, you must submit an <u>Application for Extension</u> of <u>Assignment</u> 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. <u>Griffith College Student Medical</u> <u>Certificate</u>]. Please refer to the Griffith College website - <u>Policy Library</u> - for guidelines regarding extensions and deferred assessment.

Return of Evidence of Learning Tasks

- 1. Marks awarded for in-trimester evidence of learning tasks, 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 task in this course (marks for this task 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 tasks 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 tasks 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 <u>Griffith College Policy Library</u> which include the following policies:

Assessment Policy, Special Consideration, Deferred Assessment, Alternate Exam Sittings, 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, premeditated 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 teachers 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 Evidence of Learning – The Disability Services policy

The <u>Disability Services policy</u> (accessed within the <u>Policy Library</u>) outlines the principles and processes that guide the College in making reasonable adjustments to evidence of learning tasks 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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