Tasmanian School of Business & Economics (TSBE) (School)

College of Business and Economics (College)

BEA140
QUANTITATIVE METHODS
SHOU

12.50 Credit points

Semester 1, 2019

Unit Outline

Unit Coordinator
Stephen Thollar
CONTACT DETAILS

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WHAT IS THE UNIT ABOUT?

Unit description

BEA140 Quantitative Methods is a foundation unit in business statistics and the mathematics of finance, and is a core unit in the Bachelor of Economics (BEc) and Bachelor of Business (BBus) degrees. It is also a nominated elective in a wide range of other programs throughout the University of Tasmania.

This unit is intended to provide a background capacity in mathematics of finance and statistical description and analysis, appropriate for a business student. The focus of the unit is on the practical use of data in business and economic decision environments, especially in an environment of risk and uncertainty. The unit is an introduction to the exciting world of applying mathematics and statistics to business problems.

By studying a variety of examples based on real world problems, the unit highlights the application of quantitative methodologies to assist managers, and decision makers, in dimensioning and communicating risks and opportunities.

Intended Learning Outcomes

On completion of this unit, you will be able to:

1. Explain the basic concepts of the time valuation of money, and be able to apply these concepts to common situations in business/personal finance.
2. Demonstrate sound practices in sampling, data description and presentation in a business environment.
3. Apply basic probability concepts, distributions and statistical inference as an aid to business decision making.
4. Interpret and communicate output from quantitative models.
Graduate Quality Statement

Successful completion of this unit supports your development of course learning outcomes, which describe what a graduate of a course knows, understands and is able to do. Course learning outcomes are available from the Course Coordinator. Course learning outcomes are developed with reference to national discipline standards, Australian Qualifications Framework (AQF), any professional accreditation requirements and the University of Tasmania’s Graduate Statement.

The University of Tasmania experience unlocks the potential of individuals. Our graduates are equipped and inspired to shape and respond to the opportunities and challenges of the future as accomplished communicators, highly regarded professionals and culturally competent citizens in local, national, and global society. University of Tasmania graduates acquire subject and multidisciplinary knowledge and skills, and develop critical and creative literacies and numeracies and skills of inquiry. They demonstrate the ability to apply this knowledge in changing circumstances. Our graduates recognise and critically evaluate issues of social responsibility, ethical conduct and sustainability, are entrepreneurial and creative, and are mindful of their own wellbeing and that of the community. Through respect for diversity and by working in collaborative ways, our graduates reflect the values of the University of Tasmania.

Alterations to the unit as a result of student feedback

The traditional formula sheet attached to the end of year exam paper has been abandoned in favour of allowing students to take hand written notes into the exam.

The linear regression topic has been refocussed away from a calculation laden formula driven approach towards one of use and interpretation of standard regression outputs, such as from MSExcel.

Prior knowledge &/or skills

BEA140 Quantitative Methods has a formal pre-requisite of either:

- TCE MTM215114 Mathematics Methods Foundation 2 (or equivalent), or
- Either TCE MTA315114 Mathematics Applied 3, OR a higher level Mathematics subject OR equivalent studies as accepted by the School of Economics and Finance and/or by the Faculty of Business OR a bridging mathematics unit (Either UPP090 or BEA109)

A basic proficiency in English language skills and basic calculator skills are assumed.
Assessment schedule

<table>
<thead>
<tr>
<th>Assessment task</th>
<th>Date due</th>
<th>Percent weighting</th>
<th>Links to Intended Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online quiz 1</td>
<td>Week 3</td>
<td>5</td>
<td>LO1</td>
</tr>
<tr>
<td>Assignment 1</td>
<td>Week 4</td>
<td>10</td>
<td>LO1, LO4</td>
</tr>
<tr>
<td>Online quiz 2</td>
<td>Week 6</td>
<td>5</td>
<td>LO2</td>
</tr>
<tr>
<td>Assignment 2</td>
<td>Week 7</td>
<td>10</td>
<td>LO2, LO4</td>
</tr>
<tr>
<td>Online quiz 3</td>
<td>Week 10</td>
<td>5</td>
<td>LO3</td>
</tr>
<tr>
<td>Assignment 3</td>
<td>Week 11</td>
<td>10</td>
<td>LO3, LO4</td>
</tr>
<tr>
<td>Optional Make Up Assignment</td>
<td>Week 13</td>
<td></td>
<td>LO3, LO4</td>
</tr>
<tr>
<td>Final Examination</td>
<td>Not Yet Determined</td>
<td>55</td>
<td>LO1, LO2, LO3, LO4</td>
</tr>
</tbody>
</table>

Assessment details

Assessment Task 1: Online Quiz

Task description
Online Test (Maths of Finance)
You will undertake the online test in your own time during a window of availability in week 3. The test will be randomised (i.e., all students will be tested on the same topics but each student will receive a unique set of questions).

Criterion Number | Criterion Description | Measures ILO:
1                 | All questions require you to recognise the type of problem, and select, populate and evaluate the appropriate formula. | LO1 |

Task Length 10-15 multi-choice questions
Due by date Week 3
### Assessment Task 2: Assignment

**Task description**
Assignment (Mathematics of Finance)
The assignment will require you to prepare answers to a variety of problems, with workings and procedures shown, and for which part marks may be awarded for incorrect answers. The assignment is to be prepared and submitted by individual students, not groups. This assessment should be submitted through MyLO dropbox before the due date.

<table>
<thead>
<tr>
<th>Criterion Number</th>
<th>Criterion Description</th>
<th>Measures ILO:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>An assessment rubric for the assignment is provided as an attachment to the assignment question sheet.</td>
<td>LO1, LO4</td>
</tr>
</tbody>
</table>

**Task Length**
1 to 3 multi part written answer questions

**Due by date**
End of Week 4

### Assessment Task 3: Online Quiz

**Task description**
Online Test (Data and Summary Statistics)
You will undertake the online Test in your own time during a window of availability in week 6. The test will be randomised (i.e., all students will be tested on the same topics but each student will receive a unique set of questions).

<table>
<thead>
<tr>
<th>Criterion Number</th>
<th>Criterion Description</th>
<th>Measures ILO:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>All questions require you to recognise the type of problem, and select, populate and evaluate the appropriate formula.</td>
<td>LO2</td>
</tr>
</tbody>
</table>

**Task Length**
10-15 multi-choice questions

**Due by date**
Week 6
### Assessment Task 4: Assignment

#### Task Description
Assignment (Data and Summary Statistics)
The assignment is in two parts. The first part will require you to work with a dataset in Excel and use the PivotTable table tool to prepare a table to address specific questions about the data set. The tools required to perform this task are covered in the computing activity sheets. The second part of the assignment will require you to conduct and interpret a regression analysis. The assignment is to be prepared and submitted by individual students, not groups. This assessment should be submitted through MyLO dropbox before the due date.

<table>
<thead>
<tr>
<th>Criterion Number</th>
<th>Criterion Description</th>
<th>Measures ILO:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>An assessment rubric for the assignment is provided as an attachment to the assignment question sheet.</td>
<td>LO2, LO4</td>
</tr>
</tbody>
</table>

#### Task Length
2 Multi part written answer questions

#### Due by date
End of Week 7

### Assessment Task 5: Online Quiz

#### Task Description
Online Test (Probability)
You will undertake the online test in your own time during a window of availability in week 10. The test will be randomised (i.e., all students will be tested on the same topics but each student will receive a unique set of questions).

<table>
<thead>
<tr>
<th>Criterion Number</th>
<th>Criterion Description</th>
<th>Measures ILO:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>All questions require you to recognise the type of problem, and select, populate and evaluate the appropriate formula</td>
<td>LO3</td>
</tr>
</tbody>
</table>

#### Task Length
10-15 multi-choice questions

#### Due by date
Week 10
### Assessment Task 6: Assignment

<table>
<thead>
<tr>
<th>Task Description</th>
<th>Assignment (Probability)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The assignment will require you to prepare answers to a variety of problems, with workings and procedures shown, and for which part marks may be awarded for incorrect answers. The assignment is to be prepared and submitted by individual students, not groups. This assessment should be submitted through MyLO dropbox before the due date.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Criterion Number</th>
<th>Criterion Description</th>
<th>Measures ILO:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>An assessment rubric for the assignment is provided as an attachment to the assignment question sheet.</td>
<td>LO3, LO4</td>
</tr>
</tbody>
</table>

- **Task Length**: 2-4 multi-part written answer questions
- **Due by date**: End of Week 11

### Assessment Task 7: Make Up Assignment

<table>
<thead>
<tr>
<th>Task Description</th>
<th>Make Up Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>The assignment will consist of preparing answers to a variety of problems, with workings and procedures shown, and for which part marks may be awarded for incorrect answers. The make-up assignment is an individual assignment, and MAY NOT be submitted by teams. The make-up assignment is an optional assignment which allows you to replace the worst 5% of your internal assessments with the mark received for the make-up assignment. A detailed description of how marks for the makeup assignment contribute to internal assessment will appear as an attachment to the make-up assignment.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Criterion Number</th>
<th>Criterion Description</th>
<th>Measures ILO:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>An assessment rubric for the assignment is provided as an attachment to the assignment question sheet.</td>
<td>LO3, LO4</td>
</tr>
</tbody>
</table>

- **Task Length**: 2 multi-part written answer questions
- **Due by date**: End of Week 13
Assessment Task 8: Final Examination

<table>
<thead>
<tr>
<th>Task Description</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Examination The first section of the exam will consist of multiple choice questions worth a total of 20 marks. The second section will consist of multi-part questions. You should attempt six out of ten multi-part questions, worth a total of 160 marks. Answers should contain your workings and procedures. Part marks may be awarded for incorrect answers. The standard of questions and answers can be gauged from copies of previous years’ exams and solutions which are available on MyLO.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Criterion Number</th>
<th>Criterion Description</th>
<th>Measures ILO:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The key assessment criteria will be Assumptions, Methodology, Evaluation and Interpretation/Reflection, as described in the rubric attached to the assignments.</td>
<td>LO1, LO2, LO3, LO4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task Length</th>
<th>Due by date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Three (3) hours</td>
<td>Not Yet Determined</td>
</tr>
</tbody>
</table>

How your final result is determined

To pass this unit, you need to demonstrate your attainment of each of the Intended Learning Outcomes.

Your grade will be determined in the following way:

Your overall mark in this unit will be determined by combining your results from each assessment task. These marks are combined to reflect the percentage weighting of each task. You need to achieve an overall score of at least 50% to successfully complete this unit. It is expected that you will seek help well before the due date, if you are unclear about the requirements for an assessment task.

- PP (pass) at least 50% of the overall mark but less than 60%
- CR (credit) at least 60% of the overall mark but less than 70%
- DN (distinction) at least 70% of the overall mark but less than 80%
- HD (high distinction) at least 80% of the overall mark

All grades are provisional, until confirmation by the Assessment Board at the end of semester.
Submission of assignments

The act of submitting your assignment will be taken as certification that it is your own work.

Assignments must be submitted electronically through the relevant assignment tab in MyLO. You must ensure that your name, student ID, unit code, tutorial time and tutor’s name (if applicable) are clearly marked on the first page. If this information is missing, the assignment will not be accepted and, therefore, will not be marked.

Where relevant, Unit Coordinators may also request you to submit a paper version of your assignment. You will be advised by the Unit Coordinator of the appropriate process relevant to your campus.

Please remember that you are responsible for lodging your assessment items on or before the due date and time. We suggest you keep a copy. Even in a perfect system, items sometimes go astray.

Requests for extensions

Requests for extensions must be received before the due date, and ideally as early as possible. There will be no departure from the published assessment schedule without a request accompanied by appropriate third party supporting documentation, say a medical certificate for example. Contact the unit co-ordinator if you are unsure as to what might constitute appropriate documentation.

Penalties

The standard penalty applied to late assessments is ten percent (10%) per day to a maximum of a week, after which the assessment will not be accepted.

Review of results and appeals

If you have any concerns about a piece of assessment, you should contact the unit co-ordinator.

Academic referencing

Before starting your assignments, you are advised to familiarise yourself with the following electronic resources.

The first is the Harvard Referencing System Style Guide, which can be accessed from the UTAS library: http://utas.libguides.com/content.php?pid=27520&sid=199808. The Harvard style is the appropriate referencing style for this unit and the guide provides information on presentation of assignments, including referencing styles. In your written work you will need to support your ideas by referring to scholarly literature, works of art and/or inventions. It is important that you understand how to correctly refer to the work of others and maintain academic integrity.
Failure to appropriately acknowledge the ideas of others constitutes academic dishonesty (plagiarism), a matter considered by the University of Tasmania as a serious offence.

The second is the Tasmanian School of Business and Economics’ Writing Assignments: A Guide, which can be accessed at: http://www.utas.edu.au/business-and-economics/student-resources. This guide provides you with useful information about the structure and style of assignments in the TSBE.

In your written work you will need to support your ideas by referring to scholarly literature, works of art and/or inventions. It is important that you understand how to correctly refer to the work of others, and how to maintain academic integrity.

The University provides information on presentation of assignments, including referencing styles and should be referred to when completing tasks in this unit.

Please read the following statement on plagiarism. Should you require clarification please see your unit coordinator or lecturer.

**Plagiarism**

Plagiarism is a form of cheating. It is taking and using someone else's thoughts, writings or inventions and representing them as your own; for example, using an author's words without putting them in quotation marks and citing the source, using an author's ideas without proper acknowledgment and citation, copying another student’s work.

If you have any doubts about how to refer to the work of others in your assignments, please consult your lecturer or tutor for relevant referencing guidelines. You may also find the Academic Honesty site on MyLO of assistance.

The intentional copying of someone else’s work as one’s own is a serious offence punishable by penalties that may range from a fine or deduction/cancellation of marks and, in the most serious of cases, to exclusion from a unit, a course or the University.

The University and any persons authorised by the University may submit your assessable works to a plagiarism checking service, to obtain a report on possible instances of plagiarism. Assessable works may also be included in a reference database. It is a condition of this arrangement that the original author’s permission is required before a work within the database can be viewed.

For further information on this statement and general referencing guidelines, see the Plagiarism and Academic Integrity page on the University web site or the Academic Honesty site on MyLO.
**Academic misconduct**

Academic misconduct includes cheating, plagiarism, allowing another student to copy work for an assignment or an examination, and any other conduct by which a student:

a. seeks to gain, for themselves or for any other person, any academic advantage or advancement to which they or that other person are not entitled; or

b. improperly disadvantages any other student.

Students engaging in any form of academic misconduct may be dealt with under the Ordinance of Student Discipline, and this can include imposition of penalties that range from a deduction/cancellation of marks to exclusion from a unit or the University. Details of penalties that can be imposed are available in [Ordinance 9: Student Discipline](#) – Part 3 Academic Misconduct.

**Student Behaviour**

The University Behaviour Policy sets out behaviour expectations for all members of our University community including students and staff.

The aim in doing so is to ensure that our community members are safe, feel valued and can actively contribute to our University mission.

It is expected that community members behave in a manner that is consistent with our University values – respect, fairness and justice, integrity, trust, responsibility and honesty. There are also certain behaviours that are considered inappropriate, such as unlawful discrimination, bullying and sexual misconduct.

The accompanying University Behaviour Procedure sets out the process and avenues that University community members can access to resolve concerns and complaints regarding inappropriate behaviour by a University community member. Wherever possible, the focus will be on early intervention and a ‘restorative’ approach that creates awareness of inappropriate behaviour and its impact on others. However, in some cases, students who engage in inappropriate behaviour may be subject to disciplinary proceedings, which may impact upon continuation of their studies.

Students can seek support and assistance from the Safe and Fair Community Unit [SaFCU@utas.edu.au](mailto:SaFCU@utas.edu.au) or ph: 6226 2560.

Matters are dealt with in confidence and with sensitivity.
WHAT LEARNING OPPORTUNITIES ARE THERE?

MyLO

MyLO is the online learning environment at the University of Tasmania. This is the system that will host the online learning materials and activities for this unit.

Getting help with MyLO

It is important that you are able to access and use MyLO as part of your study in this unit. To find out more about the features and functions of MyLO, and to practice using them, visit the Getting Started in MyLO unit. For access to information about MyLO and a range of step-by-step guides in pdf, word and video format, visit the MyLO Student Support page on the University website. If something is not working as it should, contact the Service Desk (Service.Desk@utas.edu.au, phone 6226 1818), or Request IT Help Online.

Resources

Required readings

There are no prescribed texts for this unit. Lecture overviews for Modules 1 to 4 are available via MyLO. Additional material, including videos, will also be available on MyLO.

Recommended readings

You may find it useful to consult alternative references as part of your study program. You may wish to take advantage of one of these as an additional source of worked examples, and for an alternate presentation of the material:


NB – Other editions of these references are also acceptable. You should note that notation may vary between references, and that, in some cases, even different formulae may be used. You should not concern yourself with any material covered in these references that is beyond what is covered by the lecture notes. In all cases, the lecture notes should be considered the primary reference for any topic.

**Reading Lists**

Each week the “In Context” section of the MyLO web page for the week will contain a link to a web page which explores a real life application of the week’s topic. Reading the “In Context” will help improve understanding of how BEA140 skills can be used in the real world.

**Other Required Resources**

**CALCULATORS**

It is essential to have a calculator with the ability to take square roots, raise to powers and with a memory. It is advantageous, but not necessary, to have a calculator with basic inbuilt statistical functions. It is possible to obtain a calculator for less than $30 that will suffice. If in doubt, check with a tutor. **It is essential that you are competent in basic calculator operation.** It is probably wise to avoid buying a second hand calculator if the original owner has lost the instruction manual. Any handheld battery powered calculator may be used in the end of year exam, providing it does not have communications capability. i.e. calculators with Wi-Fi, GSM, Bluetooth or NFC are not permitted. You may not use a smart phone or smart watch as a calculator in the examination, nor may you use a tablet.

**MICROSOFT EXCEL**

You will be instructed and provided with some learning resources on how to use aspects of Excel. The ability to interpret a standard Excel regression output is examinable. You may find Excel a quick and convenient way to check your calculations in assignments and practice problems. Spreadsheet skills are very transferable, both to other subjects and to the workplace.
Activities

Learning expectations

The University is committed to high standards of professional conduct in all activities, and holds its commitment and responsibilities to its students as being of paramount importance. Likewise, it holds expectations about the responsibilities students have as they pursue their studies within the special environment the University offers.

Students are expected to participate actively and positively in the teaching/learning environment. They must attend classes when and as required, strive to maintain steady progress within the subject or unit framework, comply with workload expectations, and submit required work on time.

Details of teaching arrangements

Lecture/Tutorial Mode

Modules 1 and 4 (weeks 1-3 and 11-13) will mainly be delivered in traditional lecture mode, with some supporting videos. There will be two-hour lectures weekly during the semester commencing in Week 1. Lectures will cover the core examinable material in the unit. Detailed lecture outlines will be available on MyLO. These on their own are not a complete substitute for attending lectures and taking your own lecture notes. It is recommended that you take a copy of the lecture outlines with you to class and use these as a basis for your own note-taking or annotation.

Face-to-face lectures will be recorded and will be available on MyLO.

Workshop sessions will be held for one hour per week commencing in Week 2. These will involve working through recommended practice exercises with aim of consolidating students' understanding of material and methods introduced in lectures. Students should attempt practice exercises before their workshop.

Voluntary (non-compulsory) tutorial sessions will be held for one hour per week commencing in Week 2. These are primarily for students in need of additional assistance. Typically, you will come to tutorials with specific topics or problems that are causing you difficulty, and the tutor will work through these with you during the tutorial session. Some tutorial sessions will be focussed on particular skill sets, for example, an introduction to basic Excel skills. Times and venues for the tutorial sessions will be advised when demand has been assessed.

Blended Learning Mode

Each week, in modules 2 and 3 (weeks 4-6 and 8-10), you will spend around one hour viewing content delivered though short pre-recorded videos, and one hour in face to
Face lectures. You will be expected to have viewed these videos before you attend the corresponding face-to-face lectures.

Face-to-face lectures will be recorded and will be available on MyLO.

**Specific attendance/performance requirements**

In this unit, your active engagement will be monitored in the following way:

1. Regular access to Mylo.
2. Participation and performance in assessment activities.

If you do not demonstrate evidence of having engaged actively with this unit by completing these two activities by Week 4 of semester, your enrolment may be cancelled or you may be withdrawn from the unit.

**Teaching and learning strategies**

The University is committed to a high standard of professional conduct in all activities and holds its commitment and responsibilities to its students as being of paramount importance. Likewise, it holds expectations about the responsibilities students have as they pursue their studies within the special environment the University offers. The University’s Code of Conduct for Teaching and Learning states:

Students are expected to participate actively and positively in the teaching/learning environment. They must attend classes when and as required, strive to maintain steady progress within the subject or unit framework, comply with workload expectations, and submit required work on time.

During the first four weeks of this semester, your participation and engagement in this unit will be monitored. If you do not demonstrate evidence of having engaged actively with this unit by Week 4 of semester, your enrolment may be cancelled, or you may be withdrawn from the unit.

Regardless of whether you are studying on campus or by distance, and whether material is being delivered in a Blended or Traditional lecture mode, an organized and conscientious approach to your study is a key to success.

In particular, you should:

- Keep up with the unit schedule to avoid the need for last minute rushes on assignments and last minute cramming for exams.
- Do the pre-work before classes. (Read notes and watch videos before lecture classes, and attempt practice problems before workshops.) This is will allow to identify any content which are not clear on and allow you to seek clarification in classes.
• Take advantage of the resources available, including all the MyLO content, the classes offered, lecturer and tutor access hours, the PASS program (if offered at your campus), and so on.

• Check MyLO announcements, and your UTas email regularly.

• Don’t be afraid to ask.

• If you need help, seek help early.

**Work Health and Safety (WHS)**

The University is committed to providing a safe and secure teaching and learning environment. In addition to specific requirements of this unit you should refer to the University’s [Work Health and Safety website](#) and policy.

**Communication**

**TO KEEP UP WITH ANNOUNCEMENTS REGARDING THIS UNIT**

Check the MyLO Announcement tool at least once every two days. The unit Announcement will appear when you first enter our unit’s MyLO site. Alternatively, click on the Announcement button (towards the top of the MyLO screen) at any time.

**WHEN YOU HAVE A QUESTION**

Other students may have the same question that you have. Please go to the Ask the Class Discussion forum on the unit’s MyLO site. Check the posts that are already there – someone may have answered your question already. Otherwise, add your question as a new topic. Students are encouraged to support each other using this forum – if you can answer someone’s question, please do. We will attempt to respond to questions within 48 business hours. If your question is related to a personal issue or your performance in the unit, please contact the appropriate teaching staff member by email instead.

**WHEN YOU HAVE AN ISSUE THAT WILL IMPACT ON YOUR STUDIES OR THE SUBMISSION OF AN ASSESSMENT TASK**

If you have a personal question related to your studies or your grades, please contact teaching staff by email. Wherever possible, use your UTas email address and include the unit code (BEA140) and your Student ID number.

For general questions about the unit, please add them to the Ask the Class Discussion forum on the unit’s MyLO site. This way, other students can also benefit from the answers.
Concerns and complaints

The University is committed to providing an environment in which any concerns and complaints will be treated seriously, impartially and resolved as quickly as possible. We are also committed to ensuring that a student may lodge a complaint without fear of disadvantage. If you have a concern, information about who to contact for assistance is available on the ‘How to resolve a student complaint’ page.

Further information and assistance

If you are experiencing difficulties with your studies or assignments, have personal or life-planning issues, disability or illness which may affect your course of study, you are advised to raise these with the unit coordinator in the first instance.

There is a range of University-wide support services available to you including Student Learning Support, Student Advisers, Disability Services, and more which can be found on the Student Support and Development page of the University website.

Should you require assistance in accessing the Library, visit their website for more information.
<table>
<thead>
<tr>
<th>DATE BEGINNING</th>
<th>TOPIC / MODULE / FOCUS AREA</th>
<th>ACTIVITIES</th>
<th>RESOURCES / READINGS / FURTHER INFORMATION</th>
<th>DATE BEGINNING</th>
</tr>
</thead>
</table>
| 1             | 2 September                 | Module 1 (Mathematics of Finance)  
Introduction to Unit. Introduction to mathematics of finance. Interest, present and future values of a single amount, solution for time and interest rate. Effective and equivalent rates. | Read Lecture Notes: Mod 1, pp. 1-10 |  |
| 2             | 9 September                 | Perpetuities. Introduction to simple annuities. Solving for R, N, i. Partial payments. | Mod 1, pp. 11-20 | Workshops and tutorials commence |
| 3             | 16 September                | Amortization & sinking funds (including dealing with changes in interest rate, missed/extra payments), ‘flat rate’ problems. | Mod 1, pp. 21-31 | Online Test 1 (5%) |
| 4             | 23 September                | Module 2 (Data & Summary Statistics)  
The statistical process. Sources of data. Sources of error and bias. Types of sampling. Types of variable.  
Computing activity: Excel basics | Videos, Mod 2, pp 1-9 | Assignment 1 due. (27 September) (10%) |
| 5             | 7 October                   | Univariate summary statistics (mean, median, mode, standard deviation, variance, range, IQR, percentiles).  
Plots for univariate data (pie-charts, bar-charts, stem and leaf plots, histograms). Measuring from grouped data.  
Computing activity: Pivot Tables in Excel | Videos, Mod 2, pp 10-24 |  |
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<tbody>
<tr>
<td>6</td>
<td>14 October</td>
<td>All material from first six weeks</td>
<td>Assignment 2 due. (25 October) (10%)</td>
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<tr>
<td>7</td>
<td>21 October</td>
<td>Module 3: Probability Probability - concepts, laws, trees and tables, independence, Bayes' rule.</td>
<td>Mod 3, pp. 1-16</td>
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<td>8</td>
<td>28 October</td>
<td>Discrete Probability Distributions - expectations, Poisson, binomial. Continuous Probability Distributions - normal, z-scores, approximations of the binomial and Poisson by the normal</td>
<td>Mod 3, pp. 17-36</td>
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<td>9</td>
<td>4 November</td>
<td>Sampling Distributions - sampling distribution of means, sampling of proportions, Central Limit Theorem, finite population correction factor, the Student’s t distribution.</td>
<td>Mod 3, pp. 37-48</td>
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<td>10</td>
<td>11 November</td>
<td>Module 4 - Estimation &amp; Inference Estimation - point &amp; interval estimates, determination of optimal sample size, Inference - one sample tests of mean and proportion, types of error, one and two tailed tests, significance</td>
<td>Online Test 3 (5%)</td>
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<td>11</td>
<td>18 November</td>
<td>Bi-variate Inference - Chi-squared test for independence. Tests for existence of linear relationship, confidence interval for slope.</td>
<td>Assignment 3 due. (22 November) (10%)</td>
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<td>12</td>
<td>25 November</td>
<td>Unit Review and Exam Preview</td>
<td>Optional make-up assignment due 6 December. (5%)</td>
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<td>13</td>
<td>2 December</td>
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<td>Examination Period</td>
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UNIVERSITY of TASMANIA

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BEA140 Quantitative Methods
ACCREDITATION

AACSB Accreditation

The Tasmanian School of Business and Economics (TSBE) is currently in the process of applying for business accreditation with the Association to Advance Collegiate Schools of Business (AACSB) – the lead program for accrediting business schools globally. AACSB seeks to connect educators, students, and business to achieve a common goal – to create the next generation of business leaders.

By joining AACSB and going through the accreditation process, TSBE is joining a global alliance committed to improve the quality of business education around the world, and to share the latest innovations in business education. Gaining Business Accreditation with AACSB is a multi-year process involving TSBE demonstrating our performance against the 15 accreditation standards.

Once complete, TSBE will join a select community of accredited business schools, with only 7% of all business schools globally having completed the AACSB process. This will further enhance the reputation of TSBE, and further enhance the global recognition of your qualifications. To find out more about AACSB click here.