



MMBA8160

Information and Decision Analysis

MGSM term 3, Special circumstance, Other 2020

Department of Actuarial Studies and Business Analytics

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General Information

Unit convenor and teaching staff

Brad Smith

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Angela Chow

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Credit points

10

Prerequisites

Admission to MBA or PGDipMgt or GradDipMgt or MSocEntre or GradCertSocEntre

Corequisites

Co-badged status

Unit description

This unit provides quantitative/statistical research tools, data analysis and computer modelling necessary to help the modern business manager with strategic planning, tactical decision-making, and resolving business problems. It also covers the efficient use of all resources to enhance management effectiveness. The overall aim is to improve the reliability of decisions made and to develop better strategy through the use of scientific method.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

Learning Outcomes

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

ULO1: Evaluate disparate data and information using appropriate quantitative tools to evidence and formulate well-informed and robust strategic business decisions.

ULO2: Use appropriate quantitative research tools, evaluate and synthesise quantitative data to help assess the implications of strategic decisions from a whole of entity perspective, and across a wide spectrum of stakeholders.

ULO3: Critically assess and integrate ethical, social and environmental factors into business decision-making and management practices that are also commercially viable

from a quantitative point of view.

ULO4: Apply a range of research tools and models of business performance and productivity to measure and track sustainable value creation across organisational processes and projects.

Assessment Tasks

Name	Weighting	Hurdle	Due
Individual Assignment	40%	No	26/07/2020
Final Exam	60%	No	08/08/2020

Individual Assignment

Assessment Type ¹: Programming Task

Indicative Time on Task ²: 30 hours

Due: **26/07/2020**

Weighting: **40%**

Students will be required to practice what they have learned by completing the assignment.

On successful completion you will be able to:

- Evaluate disparate data and information using appropriate quantitative tools to evidence and formulate well-informed and robust strategic business decisions.
- Use appropriate quantitative research tools, evaluate and synthesise quantitative data to help assess the implications of strategic decisions from a whole of entity perspective, and across a wide spectrum of stakeholders.
- Critically assess and integrate ethical, social and environmental factors into business decision-making and management practices that are also commercially viable from a quantitative point of view.
- Apply a range of research tools and models of business performance and productivity to measure and track sustainable value creation across organisational processes and projects.

Final Exam

Assessment Type ¹: Examination

Indicative Time on Task ²: 20 hours

Due: **08/08/2020**

Weighting: **60%**

An open book three hour online exam will be held during the University Examination Period.

On successful completion you will be able to:

- Evaluate disparate data and information using appropriate quantitative tools to evidence and formulate well-informed and robust strategic business decisions.
- Use appropriate quantitative research tools, evaluate and synthesise quantitative data to help assess the implications of strategic decisions from a whole of entity perspective, and across a wide spectrum of stakeholders.
- Critically assess and integrate ethical, social and environmental factors into business decision-making and management practices that are also commercially viable from a quantitative point of view.
- Apply a range of research tools and models of business performance and productivity to measure and track sustainable value creation across organisational processes and projects.

¹ If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the [Writing Centre](#) for academic skills support.

² Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

Delivery and Resources

Croucher, John. S. (2020). Quantitative Analysis for Management, 6th edition. McGraw-Hill Education. ISBN: 9781760425029

You should bring this textbook to all lectures as it is also a workbook.

Please note: Students should only attain the 6th edition of this textbook, which is the only edition this class will be taught from. Furthermore, this course relies heavily on the learning material provided in the textbook (which also acts as an exercise book for in-class demonstration and activities). It is highly advised that students attain the required textbook as soon as possible and familiarise themselves with the textbook material, especially before the start of each class session for sessions with specific allocated chapters (which is made available in the unit schedule below as well as the class iLearn page).

Where to purchase the textbook?

McGraw Hill Education Australia – Online store: This textbook is also available for order via the publisher's online store. For information on textbook prices and online ordering, please refer to the McGraw Hill Education Australia online store at <https://www.mheducation.com.au/quantitative-analysis-for-management-6e-9781760425029-aus>

Additional Recommended Text

The text listed below are optional only. It is not compulsory to attain a copy.

- Croucher, John S. (2016). Introductory mathematics and statistics for business (6th edition- revised). McGraw-Hill.
- Render, B., Stair, R., Hanna, M.E. and Hale, T.S. (2018). Quantitative analysis for management (13th edition). Pearson.
- Bowerman, B.L., O'Connell, R. and Murphree, E. (2016). Business statistics in practice (8th edition). McGraw-Hill

Calculator

A basic calculator with specific keys shown below is required in this unit since it will be used in all class tests and final exam. You may find it useful, but it is not necessary, to have a statistical calculator that has in-built statistical functions. There are several types of these:

- The lowest level statistical calculator has function keys such as the mean and standard deviation but no other statistical function keys.
- The next level above also has function keys for correlation and linear regression. An example is one of the Casio *fx* series such as the 82 or 100 series, but there are many others.

In any case, your calculator should include the following keys:

$x!$ e^x ${}^n C_r$

You need to bring your calculator to every session class.

Access to Technology

Access to a personal computer and internet connection is required to access learning material/resources online on Macquarie University's online learning management system called iLearn.

Students will also be required to gain access to statistical software called Minitab 16. While the text refers to Minitab 16, version 17 & 18 may be used. Further instructions are provided in the class iLearn page.

Unit Schedule

MMBA8160 Information and Decision Analysis

Remote Delivery Mode - Timetable

Unit Convenor – Brad Smith

The course timings and pre-work for each Zoom class is below. Further information about the zoom 'live' sessions will be provided prior to the first class on the Friday 3rd July 2020.

Students should do the pre-work prior to attending the "live" Zoom sessions scheduled at the times below. (* Note: Finish time for Zoom sessions is approximate and will be driven by student demand and involvement.)

Completion of the Class worksheets is optional, before the Zoom session. Some time will be provided in the Zoom sessions for you to do them and the answers will be detailed in these sessions.

BLOCK 1

Friday 3 rd July 2020	6:00 pm -7:30pm Hong Kong time (via zoom) (8:00 pm- 9:30 pm – Sydney time)
Session 1	Course Introduction and Assessments Descriptive Statistics

<p>Pre-work:</p>	<p>Powerpoint Videos - (Links also in i-Learn)</p> <p>Session 1.0 Introduction</p> <p>https://macquarie.zoom.us/rec/share/_vZIMrPZ2XFIX4HftF7RdJc9PZXdX6a81Sca8vsLyB2B6D6vWQeJkY1I_xn eYw6 ?startTime=1585452259000</p> <p>Session 1.1 Course Introduction</p> <p>https://macquarie.zoom.us/rec/share/_dReCu777TpJTKfhuUTFYKs5EZ3YT6a81XNL-vllmhkPPgW12WJavprigO 2noWsC?startTime=1585472900000</p> <p>Session 1.2: Introduction and Course Overview - Why Study IDA?</p> <p>https://macquarie.zoom.us/rec/share/4NMuF6jw915lQreS7k-Ac_cJY3VX6a81iEbrPoLzx5mTk2PIGCvhfaBStlvP 5DL?startTime=1585532197000</p> <p>Session 1.3 : Introduction to Statistics, Sampling Procedures and Visually Summarising Data</p> <p>https://macquarie.zoom.us/rec/share/wd0lDe-p8nFJaK_M526YA6xiLo_Jeaa8gSdl_qUKyU0XACLa_iNvgiMjr8le vTxL?startTime=1585542996000</p> <p>Session 1.4 : Introduction to Statistics Numerical Summaries of Data-Central Tendency</p> <p>https://macquarie.zoom.us/rec/share/z-NEBrTy9HxLcoXS52PuRa4RP8PBeaa80ChPg_AOnUxCct7VKrmEm12 z-NIA7bT-?startTime=1585608114000</p> <p>Session 1.5 : Introduction to Statistics Numerical Summaries of Data Quartiles and Boxplots</p> <p>https://macquarie.zoom.us/rec/share/v8lvP4z173NLGKfDsHjBQZUEGY3Zeea80XcZ_PdfxRqDwjbeDi4NO6KmQ Blj_yQ6?startTime=1585613487000</p> <p>Session 1.6 : Introduction to Statistics-Numerical Summaries of Data-Variation</p> <p>https://macquarie.zoom.us/rec/share/5vVLBKnhHxJAa-O2kPyQL4rPIvlaaa8g3Uc-PsFxUseOVk8HVanHTnh6k cL5qA8?startTime=1585626337000</p> <p>Text book Readings</p> <ul style="list-style-type: none"> • Introduction to statistics - ch 1.1 • Sampling procedures - ch 1.2 - 1.3 • Summarising data - ch 1.4 - 1.7 • Measures of centre - ch 1.8 - 1.14 • Other statistical measures - ch 1.13 - 1.14, 1.16, 1.18 - 1.19 • Measures of variation - ch 2.1 - 2.3, 2.5-2.7
<p>Class Worksheets (Optional Pre-work)</p>	<ul style="list-style-type: none"> • Session 1 Handout Download Speeds

<p>Sat 4th July 2020</p>	<p>2:00 pm -3:30pm Hong Kong time (via zoom) (4:00 pm- 5:30 pm – Sydney time)</p>
<p>Session 2</p>	<p>Probability, discrete probability distributions, expected values and decision trees</p>
<p>Pre-work:</p>	<p>Powerpoint Videos - (Links also in i-Learn)</p> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>Session 2.1: Probability Risk and Decisions</p> <p>https://macquarie.zoom.us/rec/share/9ZRYJLX-0nJLBYXdq0aEfPYeBJEX6a8hyRNrKYMMyU6enO0moA5JZes4sSlwPY5E?startTime=1585694558000</p> </div> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>Session 2.2: Independent and Conditional Probability</p> <p>https://macquarie.zoom.us/rec/share/6tdINLG31m5LRqfwuW_kAI88PbvAaaa81HdL-voFzdT4S5UzyALHQBbg3VEMzIM?startTime=1585697173000</p> </div> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>Session 2.3: Probability – Discrete Random Variables and Expected Value</p> <p>https://macquarie.zoom.us/rec/share/1esrCq6zp0BOXqfRzED2WfYBPKr9aaa81SFIqfslmRIRABAWfxsaWYbqCpXr2vYh?startTime=1585703017000</p> </div> <div style="border: 1px solid black; padding: 5px; margin: 5px 0;"> <p>Session 2.4: Decision Trees</p> </div> <p>https://macquarie.zoom.us/rec/share/-s1EFLb99kRLRKN5WLI5w5H97veaa82yBP8vUNnUumX1hMVacIGUdsugaBv2Rq?startTime=1585708371000</p> <p><u>Text book Readings</u></p> <ul style="list-style-type: none"> • Independence – ch -10.1 • Conditional Probability – ch 10.11 • Random variables with Applications - ch. 3.13 - 3.16
<p>Class Worksheets (Optional Pre- work)</p>	<ul style="list-style-type: none"> • Session 2 Probability Distribution Questions • Session 2.1 Random Variable and Expected Value Questions

<p>Sat 4th July 2020</p>	<p>6:00 pm -7:30pm Hong Kong time (via zoom) (8:00 pm- 9:30 pm – Sydney time)</p>
<p>Session 3</p>	<p>Normal distribution, estimation and confidence intervals</p>
<p>Pre-work:</p>	<p>Powerpoint Videos - (Links also in i-Learn)</p> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p>Session 3.1 The Normal Distribution – Introduction</p> <p>https://macquarie.zoom.us/rec/share/tJYuAZHV2E5JH6fs5nvAZoVxIb_LT6a80Xla-qcJxBv4v2c4TnkqgB-8x6SnhkM_?startTime=1585732803000</p> </div> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p>Session 3.2: The Normal Distribution - Determining Probability Under the Curve</p> <p>https://macquarie.zoom.us/rec/share/5lstDZ7t9WhOetLx1lrEyf4jRYPKT6a8gCIWqfJmk5Q0Y7L5KHmnW_OqpASW6ew?startTime=1585783085000</p> </div> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p>Session 3.3 The Normal Distribution-Some Applications</p> <p>https://macquarie.zoom.us/rec/share/4uY2ELvdy1pIX5WT9wKPV4wbNlbaeaa80SVlrvILzE6f5toNtrRiXfDw7kCC8fc?startTime=1585800303000</p> </div> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p>Session 3.4 Inferential Statistics Estimation and Confidence Intervals</p> <p>https://macquarie.zoom.us/rec/share/wMUylrip81hJX6vt427QYL8zOaP3aaa81Hcf_ZYyh0Uz9BpT4rsgYHlaidl3xV-?startTime=1585829925000</p> </div> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p>Session 3.5 The Central Limit Theorem</p> <p>https://macquarie.zoom.us/rec/share/tdVnEO7Xz19lepHJr2LVZa89Lp7eaaa8hChN-vpezhrllnVeizx2ryMRgu0b5Km?startTime=1585832371000</p> </div> <p>Text book Readings</p> <ul style="list-style-type: none"> • Normal distribution - ch. 2.13 • Areas under the normal curve - ch. 2.14 - ch. 2.18 • Applications - ch. 2.19 • Estimation - ch 3.1 - 3.3 • Confidence intervals - ch 3.4 - 3.10
<p>Class Worksheets (Optional Pre-work)</p>	<ul style="list-style-type: none"> • Session 3 Activity Normal Curve Calculations • Session 3.1 Activity Central Limit Calculations

Sun 5th July 2020	9:00 am -10:30 am Hong Kong time (via zoom) (11:00am- 12:30am – Sydney time)
Session 4	Regression and time series forecasting

<p>Pre-work:</p>	<p>Powerpoint Videos - (Links also in i-Learn)</p> <p>Session 4.1 Regression Analysis - Correlation and Forecasting</p> <p>https://macquarie.zoom.us/rec/share/z_xJD-vrz0ROcpXu5kr9e4EOOprXaaa81ylc_KUEzB6uWgL0otr03FiiOw1byv1v?startTime=1585890450000</p> <p>Session 4.2 Regression Basics</p> <p>https://macquarie.zoom.us/rec/share/5e1RI7Ti90FJQp2U-HzFBKQAMNzXT6a80SIYrvINxRvaBZIC0m5ZfcbM_nmztc2N?startTime=1585903012000</p> <p>Session 4.3: Regression Analysis Leverage Points Outliers and Residual Analysis</p> <p>https://macquarie.zoom.us/rec/share/_d12DevqsWZIX5HnxE6GRqAvG6TJaaa81CUYr_YFnUhZ9tA1qy2Y7cQoB0E4IYoX?startTime=1585909846000</p> <p>Session 4.4 Regression Analysis Multiple Regression and Associated Issues</p> <p>https://macquarie.zoom.us/rec/share/wfZ_JrXO9EBObbPg6k38AFMMQo3Geaa81nBMr6YFyk5PbeDPWsqSceIF60HUPTKZ?startTime=1586043174000</p> <p>Session 4.5 Regression Analysis Wine Aroma Example</p> <p>https://macquarie.zoom.us/rec/share/xvB2KpDM2lpL.comW0mrhQYN6NLjgaaa823VI_PIEykwZ4JbMI-H7SmW3yPm07ohc?startTime=1586054007000</p> <p>Session 4.6 Time Series Analysis</p> <p>https://macquarie.zoom.us/rec/share/w5MpP6Pdxm5OWqPmxECOZe0CT5v5X6a82iVP8vUExRyTtGqWS8a8M2O4RJ3q7TmV?startTime=1586059009000</p> <p>Text book Readings</p> <ul style="list-style-type: none"> • Correlation - ch 4.1 - 4.8 • Regression models - ch 4.12 - 4.19 • Exponential smoothing models - 4.23 - 4.28 • Time series models - ch 4.9 - 4.11 • Seasonal data - 4.29 - 4.30 • Lag effects - 4.31 - 4.33
<p>Class Worksheets (Optional Pre-work)</p>	<ul style="list-style-type: none"> • • Session 4 Linear Regression Analysis Handout

<p>Sun 5th July 2020</p>	<p>1:00 pm -2:30 pm Hong Kong time (via zoom) (3:00pm- 4:30 pm – Sydney time)</p>
<p>Session 5</p>	<p>Categorical Variables</p>
<p>Pre-work:</p>	<p>PowerPoint Videos</p> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p>Session 5.1 Analysis of Categorical Data Hypotheses Testing</p> <p>https://macquarie.zoom.us/rec/share/uPBQAqHJ521OE4nMxUPkfr4jG77qaaa8gCcd-QPxBx-Fgp3WcPN7VCuoXc-RF7e?startTime=1586142493000</p> </div> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p>Session 5.2 Categorical Data Single Categorical Variables</p> <p>https://macquarie.zoom.us/rec/share/2PJqLoy1FOf5Hn2lvNU74vJ4bkaa8gyYYqKlJnkz7AsrU9i-zrCWxGt-XSrnI?startTime=1586147815000</p> </div> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p>Session 5.3 Analysis of Categorical Data-Contingency Tables</p> <p>https://macquarie.zoom.us/rec/share/yMVKCe_K3ZiBa_mr1DeXv4aN5rZX6a8gyUY_KVbn00vTkzd_j_FbgHNaZqPrgVY?startTime=1586165447000</p> </div> <p>Text book Readings</p> <ul style="list-style-type: none"> • Introduction to hypothesis testing - ch 6.1 - 6.5 • Categorical data - ch 5.1 - 5.3 • Single variable data - ch 5.4 - 5.7 • Contingency tables - 5.8 - 5.10
<p>Class Worksheets (Optional Pre-work)</p>	<ul style="list-style-type: none"> • Session 5 Analysis of Categorical Data 1 • Session 5.1 Analysis of Categorical Data 2

Block 2

<p>Friday 10th July 2020</p>	<p>6:00 pm -7:30pm Hong Kong time (via zoom) (8:00 pm- 9:30 pm – Sydney time)</p>
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Session 6	One Sample Testing
Pre-work:	<p>Powerpoint Videos</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>Session 6.1 One Sample Tests z-Tests</p> <p>https://macquarie.zoom.us/rec/share/9-FWfY_W629OW7ftuGvvY4dxR5r8T6a80CMY-PAEyBnmylEKt4EltYmnhOJnj462?startTime=1586170191000</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p>Session 6.2: One Sample Tests t-Tests p-value tests and confidence intervals</p> <p>https://macquarie.zoom.us/rec/share/-OpkAr3r_GVOAbPvw2v9UPZxAd6-X6a823Ua-Ptcmk61Uw3xHAX9RF7my4JZSagE?startTime=1586216259000</p> </div> <p>Text book Readings</p> <ul style="list-style-type: none"> • One-sample tests - ch 6.7 - 6.12 • Using Minitab - ch 6.13 - 6.16
Class Worksheets (Optional Pre-work)	<ul style="list-style-type: none"> • Session 6 One Sample Testing

Sat 11 th July 2020	<p>2:00 pm -3:30pm Hong Kong time (via zoom)</p> <p>(4:00 pm- 5:30 pm – Sydney time)</p>
Session 7	Analysis of Variance (ANOVA)

<p>Pre-work:</p>	<p>PowerPoint Videos</p> <p>Session 7.1 Analysis of Variance (ANOVA) Introduction and Single Variable Applications</p> <p>https://macquarie.zoom.us/rec/share/7MoyP6Ggz35IRrPw6WaDAKwOIX7eaa8hnQb_vcJyh70IsHaomPc5WyzII MifaqL?startTime=1586477449000</p> <p>Session 7.2: Analysis of Variance (ANOVA) Multiple Comparisons</p> <p>https://macquarie.zoom.us/rec/share/wNVTMpvUxEBIHqfRt2PzYL4tElvraaa8hyleqPYJzlxQrkOqfoEAYEbSefSY9TH?startTime=1586485257000</p> <p>Session 7.3 Analysis of Variance (ANOVA) Two Way ANOVA</p> <p>https://macquarie.zoom.us/rec/share/3tRqP47f6mZJaa_U613-A_QYN6n7T6a8g3dlrKJemB0HVE5ZRuLAPe-fr2W PkoO-?startTime=1586490933000</p> <p>Session 7.4 Analysis of Variance (ANOVA) Two Way ANOVA With Replication</p> <p>https://macquarie.zoom.us/rec/share/4_xlFZX0qGdLT53t92faUYwLFJrPeaa8g3dP-PcNnkyXwx08iwkCJqmUfqP kc6nR?startTime=1586503510000</p> <p>Text book Readings</p> <ul style="list-style-type: none"> • Analysis of variance (one-way) - ch 8.1 - 8.7, 8.12 • Multiple comparisons - ch 8.8 - 8.11 • Analysis of variance (two-way) - ch 8.13 - 8.17 • Using Minitab - ch 8.19
<p>Class Worksheets (Optional Pre-work)</p>	<ul style="list-style-type: none"> • Session 7 One-way ANOVA Download Speeds • Session 7 One-way ANOVA Example Executive Salaries • Session 7 One-way ANOVA Example • Session 7 Two-way ANOVA Example

<p>Sat 11th July 2020</p>	<p>6:00 pm -7:30pm Hong Kong time (via zoom) (8:00 pm- 9:30 pm – Sydney time)</p>
<p>Session 8</p>	<p>Logistic Regression</p>

<p>Pre-work:</p>	<p>Powerpoint Videos</p> <p>Session 8.1 Logistic Regression Introduction and Odds</p> <p>https://macquarie.zoom.us/rec/share/zPx3CLzlxFhLY8_A1BnidvA-E5rVX6a80CAc_PRZyU3S-pK5tD4qy0sxqelKjrsp?startTime=1586654501000</p> <p>Session 8.2 Logistic Regression – Simple Logistic Regression</p> <p>https://macquarie.zoom.us/rec/share/-_1yIzryFNJW5Xu6BniBekLGY_Heaa81SJKrvoOnh44CaE0rE060ARm0fjeL86j?startTime=158660193000</p> <p>Session 8.2.1 Simple Logistic Regression NASA Case Study</p> <p>https://macquarie.zoom.us/rec/share/pu9MNZXP811Ja5GXs2D6Sq88XaPLX6a81ygXrqcJy0zn98jcH3rs7huW4LkQNFzI?startTime=1586667900000</p> <p>Session 8.3 Logistic Regression - Multiple Logistic Regression</p> <p>https://macquarie.zoom.us/rec/share/wNQsK-qtzFILbNaTr336VooRWZX5eaa8hicYq6EEzBzeYOQHR288Y-zZf5gdfh2x?startTime=1586673909000</p> <p>Text book Readings</p> <ul style="list-style-type: none"> • Odds and probability - ch 9.1 - 9.3 • Odds ratios - ch 9.4 • Binary logistics regression - Single covariate - ch 9.5 - 9.7 • Using Minitab - ch 9.8 - 9.9 • Testing of parameters - ch 9.10 - 9.12 • Binary logistic regression - Multiple covariates - ch 9.13
<p>Class Worksheets (Optional Pre-work)</p>	<ul style="list-style-type: none"> • • Session 8 Log Regression Worksheet 1 • Session 8 Log Regression Worksheet

<p>Sun 12th July 2020</p>	<p>9:00 am -10:30 am Hong Kong time (via zoom) (11:00am- 12:30am – Sydney time)</p>
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Session 9	Queue Theory
Pre-work:	<p>Powerpoint Videos</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <p>Session 9.1 Queues Introduction and Single line single server (MM1) Queues</p> <p>https://macquarie.zoom.us/rec/share/y5JeA-r0piBIE6vE63_tA6kmM9j-aaa8hyQZr_QlyEzg1iIPCWtWwk1lcnMtBpJV?startTime=1586733718000</p> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;"> <p>Session 9.2 Queues-Introduction to Simulation</p> <p>https://macquarie.zoom.us/rec/share/585aH6nWqEFJXLP8sAbCYZQuB5y4aaa80XJM-vEEenkibKr3GwMpSo3bRbVkkcdXM?startTime=1586742908000</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p>Session 9.3 Queues Single Line Multiple Server (MMs) Queue Systems</p> <p>https://macquarie.zoom.us/rec/share/64ssK5fTyntLbrPBt1CHYr8sQ4G5aaa8hHMeq_MJzh2ZJhxE-6ieYpK0V2mG0T5O?startTime=1586748611000</p> </div> <p>Text book Readings</p> <ul style="list-style-type: none"> • Queueing systems - ch 12.1 • Definitions and parameters - ch 12.2 - 12.9 • A simple queue - ch 12.10 • Calculation of probabilities and outcomes - ch 12.11, 12.13 - 12.14 • Multiple server queues - 12.16 - 12.22
Class Worksheets (Optional Pre-work)	<ul style="list-style-type: none"> • Session 9 Activity 1 MGSM Phones Worksheet • Session 9 Activity 2 Fast Food Restaurant Worksheet • Session 9 Activity 3 Six Sigma Bank • Session 9 Activity 4 Telephone Ordering System
Sun 12 th July 2020	<p>1:00 pm -2:30 pm Hong Kong time (via zoom)</p> <p>(3:00pm- 4:30 pm – Sydney time)</p>
Session 10	Course Review, Assignment and Exam Q&A

<p>Pre-work:</p>	<p>PowerPoint Videos</p> <p>Session 10.1 Review-Introduction , Normal Curve and Estimation</p> <p>https://macquarie.zoom.us/rec/share/x51ZEPTI7GIJQJXntHnPbBQZN4fDeaa81ihL-PZYz0oLKPnTqgLAfXFgdJN16Bqx?startTime=1587430334000</p> <p>Session 10.2 Review Discrete Random Variables Expected Values Decision Trees and Categorical Data</p> <p>https://macquarie.zoom.us/rec/share/vsV3LrCr8W5IRYHu6GHWeKglR5-7eaa81yIY8qIjyUsp_L-o8FuwhLwhF04waiq7</p> <p>Session 10.3 Review ANOVA Linear and Logistic Regression and Queueing</p> <p>https://macquarie.zoom.us/rec/share/1dYscrOq92xOZbfBt2DBVo0nEaC8X6a8hnVM_fRbyU3tg1p-sn32tcltAepHY8T0</p> <p>Text book Readings</p> <ul style="list-style-type: none"> Review all previous readings
<p>Class Worksheets (Optional Pre-work)</p>	<ul style="list-style-type: none"> Session 10 Revision Activity 1 Normal Curve Session 10 Revision Activity 2 Estimation and Confidence Intervals Exercise Session 10 Revision Activity 3 Expected Value Calculations Session 10 Revision Activity 4 Analysis of Categorical Data Session 10 Revision Activity 4.3 One Sample Tests Session 10 Revision Activity 5 Linear Regression Analysis New TV Handout Session 10 Revision Activity 5 Single ANOVA Session 10 Revision Activity 6 Log Regression Session 10 Revision Activity 7 Queueing

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central\)](https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)
- [Academic Progression Policy](#)
- [Assessment Policy](#)
- [Fitness to Practice Procedure](#)
- [Grade Appeal Policy](#)

- [Complaint Management Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#) (**Note:** *The Special Consideration Policy is effective from 4 December 2017 and replaces the Disruption to Studies Policy.*)

Students seeking more policy resources can visit the [Student Policy Gateway](https://students.mq.edu.au/support/study/student-policy-gateway) (<https://students.mq.edu.au/support/study/student-policy-gateway>). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

If you would like to see all the policies relevant to Learning and Teaching visit [Policy Central](http://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central) (<http://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policy-central>).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: <https://students.mq.edu.au/study/getting-started/student-conduct>

Results

Results published on platform other than [eStudent](#), (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit ask.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to help you improve your marks and take control of your study.

- [Getting help with your assignment](#)
- [Workshops](#)
- [StudyWise](#)
- [Academic Integrity Module](#)

The Library provides online and face to face support to help you find and use relevant information resources.

- [Subject and Research Guides](#)
- [Ask a Librarian](#)

Student Services and Support

Students with a disability are encouraged to contact the [Disability Service](#) who can provide appropriate help with any issues that arise during their studies.

Student Enquiries

For all student enquiries, visit Student Connect at ask.mq.edu.au

If you are a Global MBA student contact globalmba.support@mq.edu.au

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](#). The policy applies to all who connect to the MQ network including students.