

STA101 Business Statistics

Learning Guide Semester 2 2021

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1. GENERAL INFORMATION

Credit points	Prerequisites	Corequisites
12.5	None	None

1.1 Subject description

Business statistics utilises predictive analytics to make assumptions about the economic and financial positioning of organisations within broader markets as well as manage risk, optimise organisational performance, and make informed business decisions. This unit introduces students to the techniques used for descriptive and inferential statistics. Students will also learn time-series forecasting and regression to understand the relationship between variables.

1.2 Staff details

Subject Coordinator: Dr. Nitya Karmakar

Location: Gateway Business College - Sydney

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Teaching Staff: Dr Nitya Karmakar

1.3 Important Academic Dates

Classes Start: Monday 26th July 2021

Census Date: Monday 9th August 2021 (Last day to withdraw from subjects without academic or financial penalty)

Last day of Lectures: Friday 15th October 2021

Examination period: Wednesday 20th October – Saturday 30th October 2021

Further information about important academic dates including deadlines for withdrawing from subjects are available on the Moodle page for this subject.

2. SUBJECT LEARNING OUTCOMES

The Subject Learning Outcomes (SLOs) are what you should be able to demonstrate by the end of this subject if you participate fully in learning activities and successfully complete the assessment items.

The following table list the SLOs and shows where each SLO is assessed:

Table 1

Subject Learning Outcome	Assessment Item
<i>On successful completion of the course, you should be able to:</i>	<i>This learning outcome will be assessed in the following items:</i>
1. Apply methods of regression and correlation analysis in problem solving.	Class Participation Mid-Term Test(individual) Final exam (individual)
2. Investigate relationships between statistical inferences and different statistical distribution.	Class Participation Mid-Term Test(individual) Final exam (individual)
3. Examine statistical and non-statistical information of international firms' long-term economic and organisational forecasting.	Class Participation Mid-Term Test(individual) Final exam (individual)
4. Verify and critically evaluate statistical analysis performed by conventional authoritative sources to interpret their accuracy.	Class Participation Mid-Term Test(individual) Final exam (individual)
5. Use a variety of statistical approaches to analyse financial and investment data.	Class Participation Final exam (individual)

3. ASSESSMENT TASKS FOR THIS SUBJECT

The table below lists the assessment tasks, their percentage of the final mark, when they are due and which SLOs are assessed by each.

Table 2 - Assessment tasks

Assessment type	When assessed – week of semester	Weighting (% of total marks for subject)	Learning outcomes assessed
Class participation (in discussion, questions asked, ideas brought in with solutions)	Every Week	10	1, 2,3 4, 5
Mid-trimester exam* (Exact date, time and duration of the test will be provided on Moodle as well as in the class)	Week 7	30	1,2, 3, 4
Final exam (2 hours + 10 Minutes Reading Time)	Exam Period	60	1, 2,3 4, 5

4. SCHEDULE OF LEARNING AND TEACHING ACTIVITIES

Semester 2 – 26 July 2021 to 15 October 2021

Table 3

Week (One x 1.5 hour lecture and One x 1.5 hour Tutorial each week)		Topic	Readings
Week	Start of Week		
1	26 July	<ul style="list-style-type: none"> Overview of the Subject: ULOs, assessment, feedback mechanism, policies, and procedures, highlighting the importance of working independently and working together, reading widely, and participating in classroom activities actively. Introduction: business statistics and analytics 	Chapter .1 Lecture Notes
2	2 Aug	Descriptive statistics: displaying data	Chapter 2 Lecture Notes
3	9 Aug	Descriptive statistics: numerical methods	Chapter 3 Lecture Notes
4	16 Aug	Probability: discrete and continuous	Chapter 4 Lecture Notes
5	23 Aug	Random variable: discrete and continuous	Chapter 6 Chapter 7 Lecture Notes
6	30 Aug	Sampling and sampling distribution	Chapter 8 Lecture Notes
7	6 Sep	Confidence intervals	Chapter 9 Lecture Notes
8	13 Sep	Hypothesis testing	Chapter 10 Lecture Notes
9	20 Sep	Chi-Square Test	Chapters 11 & 12 Lecture Notes
10	27 Sep	Simple regression and correlation	Chapter 14 Lecture Notes
11	4 Oct	Time-series forecasting and index number	Chapter 17 Lecture Notes
12	11 Oct	Statistics for business decision-making/Revision	Chapter 19 Lecture Notes

13 - 14	Examination Period	Wednesday 20th October – Saturday 30 th October	
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5. LEARNING RESOURCES

Further details and additional resources are available on the Moodle page for this subject. Explore weekly slides and tutorials on Moodle. Look at the tutorial guide for weekly tutorial questions.

Prescribed and recommended reading:

Prescribed Text:

Bruce L. Bowerman, Anne M. Drougas, William M. Duckworth, Amy G. Froelich, Ruth M. Hummel, Kyle B. Moninger, Patrick J. Schur, (2019). *Business Statistics in Practice*, 9th Edition, McGraw-Hill, (ISE eBook Online Access)

LINK FOR TEXT PURCHASE

All students are expected to buy a copy of the textbook. The links to purchase the book (hard copy and e-book) are shown below:

EBook: <https://www.mheducation.com.au/ise-ebook-online-access-for-business-statistics-in-practice-9781260289626-aus>

Recommended Reading:

Black, K., Asafu-Adjaye, J., Burke, P., Khan, N., King, G., Perera, N., Papadimos, A., Sherwood, C., Wasimi, S. and Verma, R. (2015). *Australasian Business Statistics*. 4th ed. Australia: Wiley.

Bowerman, B., O'Connell, R., Murphree, E. and Orris, B. (2014). *Essentials of Business Statistics*. 5th ed. New York: McGraw-Hill.

Berenson, M. Levine, D. Watson, J. Jayne, N. and O'Brien, M(2015). *Basic business statistics: Concepts and applications*. 3rd edition, Pearson

Jaggia, S. and Kelly, A. (2020). *ISE Essentials of Business Statistics*. 2nd ed. New York: McGraw-Hill.

Selvanathan, E.A., Selvanathan,S.(2014). *Business Statistics*,6th ed.(Australia/New Zealand),Cengage Learning, Australia.

Reference Journals

Australian and New Zealand Journal of Statistics
Journal of Business and Economic Statistics
Review of Economics and Statistics
Case Studies in Business, Industry and Government Statistics

Useful Websites

Institute of mathematical statistics <http://www.imstat.org/>
Key Centre for Statistical Science <http://www.buseco.monash.edu.au/centres/kcss/>
National library of Australia statistics <http://www.nla.gov.au/oz/stats.html>
National Statistics Service <http://www.nss.gov.au/>
Statistical Clearing House <http://www.nss.gov.au/nss/home.nsf/pages/About+SCH>
Statistical society of Australia <http://www.statsoc.org.au/>

6. CONSULTATION TIMES

Consultations before or after the class or by appointment through e-mail

7. STUDENT RESPONSIBILITIES AND CONDUCT

Students are expected to be familiar with and adhere to Gateway Business College policies in relation to class attendance and general conduct and behaviour, including maintaining a safe, respectful environment; and to understand their obligations in relation to workload, assessment and keeping informed. Information and policies on these topics can be found on the Gateway Business College website.

7.1 Workload

It is expected that you will spend at least ten to twelve hours per week studying for a subject. This time should be made up of reading, research, working on exercises and problems, online activities and attending classes. In periods where you need to complete assignments or prepare for examinations, the workload may be greater. Over-commitment has been a cause of failure for many students. You should take the required workload into account when planning how to balance study with employment and other activities.

We strongly encourage you to connect with your Moodle course websites in the first week of semester.

7.2 Attendance

Your regular and punctual attendance at lectures and seminars or in online learning activities is expected in this subject. Gateway Business College reserves the right to refuse final assessment to those students who attend less than 80% of scheduled classes especially where attendance and participation is required as part of the learning process (e.g., tutorials, flipped classroom sessions, seminars, labs, etc.).

7.3 General Conduct and Behaviour

You are expected to conduct yourself with consideration and respect for the needs of your fellow students and teaching staff and comply with all appropriate Gateway policies. Conduct which unduly disrupts or interferes with a class, such as ringing or talking on mobile phones, is not acceptable and students may be asked to leave the class.

7.4 Health and Safety

Gateway Health and Safety Policy requires each person to work safely and responsibly, in order to avoid personal injury and to protect the safety of others.

7.5 Keeping Informed

You should take note of all announcements made in lectures, tutorials or on the course Moodle site. From time to time, Gateway will send important announcements to your College e-mail address. You will be deemed to have received this information.

Visa regulations require all international students to keep Gateway informed of their address and contact details and to notify Gateway of any changes within 2 weeks of the change.

8. GENERAL ASSESSMENT INFORMATION

Detailed information on assessment tasks, including specific submission and assessment dates and marking rubrics will be supplied via Moodle.

8.1 Formal Requirements for Passing this Subject

To pass this subject, you need to demonstrate your attainment of each of the Learning Outcomes. Your overall mark in this subject will be determined by combining your results from each assessment task. You are expected to attempt all assessment requirements in the course. The marks for each assessment task 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 subject. It is expected that you will seek help (from the subject coordinator in the first instance), well before the due date, if you are unclear about the requirements for an assessment task.

8.2 Assessment Feedback

Feedback on student performance from assessment tasks will be provided to students in a timely manner. Assessment tasks completed within the teaching period of a course, other than a final assessment, will be assessed and students provided with feedback within 10 working days of submission, under normal circumstances.

8.3 Appealing assessment outcomes

Students are entitled to appeal an assessment task mark. In the first instance, they should speak to the Subject Coordinator. If an assessment task has been marked by two academic staff members as part of the appeals process, the second mark will be recorded as the final mark.

If a student remains unsatisfied, they may further their appeal according to the Student Complaints and Appeals Policy.

8.4 Marks and grades awarded for individual assessment tasks in a subject

Marks and grades for individual assessment tasks in a subject are awarded as described below.

The award of a Final grade will be accompanied by the student’s accumulated total mark /100 for the subject.

To be awarded a Final grade a student must:

- Have been properly enrolled in the subject and not withdraw or be excluded from the subject during the semester; and
- Have completed all assessment tasks for the subject

Students who have not completed any of the assessment tasks for a subject may be awarded the grade of ‘Absent Fail’.

Table 4 Marks and Grades for Assessment Items

GRADE	NOTATION / NOMENCLATURE	MARK	DEFINITION
HD	High Distinction	85 to 100	Student has demonstrated outstanding achievement of the criteria and standards for the assessment task
D	Distinction	75 to 84	Student has demonstrated superior achievement of the criteria and standards for the assessment task
C	Credit	65 to 74	Student has demonstrated good achievement of the criteria and standards for the assessment task
P	Pass	50 to 64	Student has demonstrated satisfactory achievement of the criteria and standards for the assessment task
PS	Pass-Supplementary Assessment	50	Awarded after passing an approved supplementary assessment
F	Fail	0 to 49	Student has demonstrated unsatisfactory achievement of the criteria and standards for the assessment task.
AF	Absent Fail	N/A	Student has not officially withdrawn from the subject and

			<p>cannot be awarded a mark or a grade because no assessment tasks were submitted.</p> <p>A student is not eligible for the award of a grade unless they complete all required assessments in a subject.</p> <p>Awarding an “Absent Fail” allows Gateway Business College to distinguish between students whose academic performance did not reach the required standard to pass a subject and those students who made no attempt to complete the subject and the assessments. This is important when reviewing and reporting student performance in a subject.</p>
W	Withdrawn (without academic penalty)	N/A	Evidence is provided by student of serious illness or misadventure experienced after the relevant census date warranting withdrawal and/or deferral without academic penalty.
WF	Withdrawn Fail	N/A	Indicates that a student has formally notified GATEWAY BUSINESS COLLEGE of their withdrawal from the subject after the census date and prior to the final day of teaching in that semester
RP	Result Pending	N/A	<p>Used as Interim grade when a student’s final grade and mark in a subject cannot be confirmed due to a Deferred Examination or Supplementary Assessment being approved by the Academic Board.</p> <p>‘Result Pending’ may also be used when a student’s final grade and mark in a subject cannot be confirmed due to other</p>

			circumstances beyond the control of the Course Coordinator.
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8.5 Grade Point Average

The Grade Point Average (GPA) is the average result of all the grades achieved throughout an award. The GPA is an important measure used across the higher education sector and can assist students applying for further coursework studies, higher degree research and Honours programs, scholarships, admission to other higher education providers, and entry into the employment market.

The GPA is calculated on a 7-point grading scale where 7 is the highest and 0 is the lowest achievement respectively. All types of 'Fail' grades (i.e. F, WF and AF) are included in the calculation. 'Withdrawn' grades (W) are not included.

Table 5 Grade Points

GRADE	NOMENCLATURE	GRADE POINTS
HD	High Distinction	7
D	Distinction	6
C	Credit	5
P	Pass	4
PS	Pass - Supplementary	3
F	Fail	0
AF	Absent Fail	0
WF	Withdrawn Fail	0

8.6 Special Consideration

Gateway Business College is committed to equity and fairness in all aspects of its learning and teaching. Should a student encounter extenuating or exceptional circumstances that may affect their ability to complete an assessment task, they should contact the Subject Coordinator or Course Coordinator for advice on deferment, or an extension to the assessment task due date. Special consideration may apply in instances of cultural or legal significance, illness, family bereavement or misadventure. Subject Coordinators must make all reasonable attempts to accommodate students who experience unexpected circumstances. Gateway Business College will ensure the provision of adequate support for students requiring special consideration.

8.7 Appealing assessment outcomes

Students are entitled to appeal an assessment task mark. In the first instance, they should speak to the Subject Coordinator.

If an assessment task has been marked by two academic staff members as part of the appeals process, the second mark will be recorded as the final mark.

If a student remains unsatisfied, they may further their appeal according to the Student Complaints and Appeals Policy.

9. ACADEMIC INTEGRITY

Academic Integrity is honest and responsible scholarship and learning. Terms like Academic Integrity, misconduct, referencing, conventions, plagiarism, academic practices, citations and evidence-based learning are all considered basic concepts that successful degree students understand. Learning how to communicate original ideas, refer sources, work independently, and report results accurately and honestly are skills that you will be able to carry beyond your studies.

The definition of academic misconduct is broad. It covers practices such as cheating, copying and using another person's work without appropriate acknowledgement. Incidents of academic misconduct may have serious consequences for students.

Examples of Academic misconduct

- submits an assessment task that demonstrates plagiarism
- submits an assessment task that is not their original work
- cheats in an examination
- does not comply with examination rules
- engages in collusion
- contracts someone else to write their assessment task
- fabricates research data.

9.1 Appropriate acknowledgement

A student's assessable work must demonstrate genuine original work, produced for the assessment for which it is submitted, supported by established scholarship and research.

Students are expected to attribute all work that is not their own to the original author(s) and source of the work. Correct referencing and citation practices must be applied in all assessable work.

9.2 Plagiarism

Plagiarism is when a student or staff member presents the work of another as their own. Plagiarism includes:

- adapting any part of a journal article, book, audio material, web content, visual imagery, or any other source without referencing the material through in-text citations in the assessable work (or footnotes or endnotes), and a reference list.
- the direct copying or paraphrasing of sections of any text or resource without acknowledging the original source.
- partially or wholly re-using the work of other students.
- obtaining materials from the internet, and presenting them, modified or not, as one's own work.
- presenting work that is partially or wholly derived from the work of another person, but which has been superficially modified, for example through rewording.
- any use of another person's concepts, experimental results and conclusion, or any conclusion that is derived from the analysis of evidence or arguments, without acknowledging the owner who is the originator of the work, ideas or conclusion.

9.3 Collusion

Collusion is when one or more students work together to submit an assessment task that requires they work individually. Collusion is classified as a form of cheating.

It is not collusion when students are required to collaborate on an assessment task, such as working in pairs or groups.

It is not collusion when students work or study together in preparation for an assessment task. However, students should at all times ensure that the work they submit is their own.

9.4 Cheating

Gateway Business College regards cheating as a form of academic misconduct. Cheating is knowingly submitting the work of others as their own and includes contract cheating (work produced by an external agent or third party that is submitted under the pretences of being a student's original piece of work). Cheating is not acceptable at Gateway Business College.

If you need to revise or clarify any terms associated with academic integrity you should explore the Academic Integrity Policy.

10. STUDENT SUPPORT

Gateway Business College provides a range of support services for students. For details, visit the GBC website.

Your lecturers and tutors will be your best first point of contact if you experience difficulties with your studies. Academic staff are experienced teaching practitioners in can identify learning differences and learning difficulties that can impact a student's achievement.

Teaching staff may refer you, where relevant, to any of the academic intervention services available at Gateway Business College, including consulting the Academic Skills Advisor.

10.1 Academic Language Support Services

These services are available to all students and will provide assistance to students in areas of English for academic purposes, including essay-writing skills, note-taking, and editing and proof-reading.

Additionally, Gateway Business College offers academic language support services exclusively for international students to address any academic issues that may arise amongst student for whom English is not a first language.

10.2 Academic Learning Services

Gateway Business College will offer additional academic support services designed to assist domestic and international students transition to higher education learning and achieve their academic potential. These services aim to strengthen student skills that include note-taking, referencing and time-management.

11. POLICIES AND PROCEDURES

- [Academic Integrity Policy](#)
- [Student Academic Misconduct Policy](#)
- [Examination Policy](#)
- [Student Complaints and Appeals Policy](#)
- [Award of grades Policy](#)
- [Academic Governance Policy](#)
- [Assessment Policy](#)
- [Teaching and Learning Policy](#)
- [Students at Risk and Unsatisfactory Progress Policy](#)
- [Academic Language and Learning Support Policy](#)
- [Admissions Policy](#)