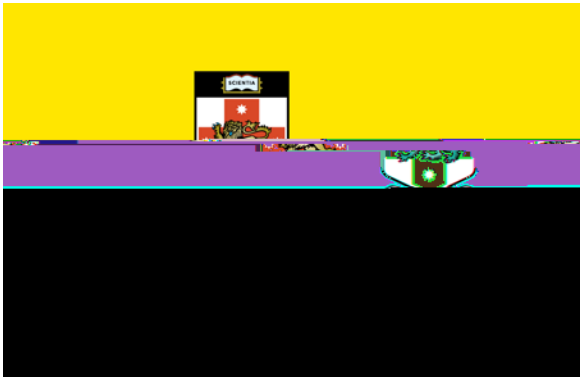

School of Ci il and En i onmen al Enginee ing

Te m 3, 2021

GMAT2120 S e ing and Geo pa ial Technolog

COURSE DETAILS			
Units of Credit	6 UoC		
Contact hours	6 hours per week		
Lecture	Monday,	3:00 – 5:00	O
	Wednesday,	4:00 – 6:00	

techniques, wave propagation in atmosphere, measurement of atmospheric parameters, coefficient of refraction, velocity corrections, geometric reductions, reductions of distances to the ellipsoid and analysis of errors will be exercised in the field. At the conclusion of this course students will gain an understanding of the impact specific field techniques and instrumentation have on the attainable precision when conducting terrestrial surveys.

During this course the following attributes will be exercised:

the skills involved in scholarly enquiry
an in-depth engagement with relevant disciplinary knowledge in its interdisciplinary context
the capacity for analytical and critical thinking and for creative problem solving
the ability to engage in independent and reflective learning
the skills to locate, evaluate and use relevant information (Information Literacy)
the capacity for enterprise, initiative and creativity
an appreciation of, and a responsiveness to change and the skills of effective communication

TEACHING STRATEGIES

The original material for this course was prepared by the previous lecturer, A/Prof Jean Rüeger and his expertise is acknowledged. The current material and the teaching methods have been modernised. Whilst using this material I will aim to engage you in an understanding of the topics and require you to read the text-based material in detail.

I have considered feedback from last year's students in this course and in response will continue to supply electronic teaching materials on Moodle. Due to COVID-19 restrictions and the smaller class size, I will present lectures live-online using Blackboard Collaborate (BBCU). I will endeavour to mark the reports

Workshops	Be guided by Demonstrators Practice solving set problems Ask questions

COURSE PROGRAM

Week start	Monday 3 – 5 pm Online	Wednesday 4 - 6pm Online	Friday 12 – 5 pm CE G7 – Survey store
1 **13/9**	**L1:**		

RELEVANT RESOURCES

Lecture Material (check the course website):

http://moodle.telt.unsw.edu.au

The Powerpoint lecture slides and other documents are available for download as PDF files at the course website.

Lectures can also be viewed as BBCU recordings.

Text and Reference Books

Text book:

Uren, J & Price, WF. "Surveying for Engineers", 5th edition, 2010

Available in bookshop – compulsory to purchase for BE(Surveying) and Dual award BE (Civil)/B Surv students only.

Reference book:

- Rüeger, JM. “Electronic Distance Measurement”, 4th edition, 1996 (on Moodle site)

- Uren, J & Price, WF. "Surveying for Engineers", 4th edition, 2006

- Schofield, W. "Engineering Surveying", 4th edition, 1993

- Bannister, A., Raymond, S. Baker, R. (1992) Surveying, 6th Edition, Pitman, London.

- Kavanagh, B.F. (2003) Surveying: Principles and Applications, 6th Ed, Prentice Hall, ISBN 0-13-099582-7

Computational Aids

Pocket calculators are required during lecturing hours, for workshops, field practicals as well as exams in this course. They must be hand-held, internally powered and silent. They must be brought to all lectures and practicals.

Students may bring their own calculators to the exam but they must be approved calculators. The list of "approved" calculators is the same as that published by the Board of Studies NSW at

https://student.unsw.edu.au/exam-approved-calculators-and-computers

Students must attain a tamper proof sticker from the Engineering Student Centre to guarantee that their calculator is approved for the final exam.

DATES TO NOTE

Refer to MyUNSW for Important Dates available at:

https://student.unsw.edu.au/dates

PLAGIARISM

Beware! An assignment that includes plagiarised material will receive a 0% Fail, and students who plagiarise may fail the course. Students who plagiarise are also liable to disciplinary action, including exclusion from enrolment.

ACADEMIC ADVICE

For information about:

Notes on assessments and plagiarism;

Special Considerations: student.unsw.edu.au/special-consideration;

General and Program-specific questions: The Nucleus: Student Hub

Year Managers and Grievance Officer of Teaching and Learning Committee, and CEVSOC/SURVSOC/CEPCA

Refer to Academic Advice on the School website available at:

https://intranet.civeng.unsw.edu.au/key-staff-to-contact-during-your-studies-at-unsw

Appendix A: Engineers Australia (EA) Competencies

Stage 1 Competencies for Professional Engineers