School of Civil and Environmental Engineering

Term2, 2020

GMAT4220 GEOSPATIAL INFORMATION SCIENCE

COURSE DETAILS		
Units of Credit	6	
Contact hours	6 hours per week	
Class	Wednesday, 14:00 ±16:00	online
Workshop	Wednesday, 16:00 ±17:00	online
Lab	Thursday, 12:00 ±15:00	online

GMAT4220 is designed for students to learn principles, algorithms, techniques and applications in geospatial ³ 6 F L ⅠⅠⅠQ FZ K H U H D P E QV QV Q> ˆpYRXBëò ñ c 8 0 ˆpYRXBëò ñ cQ9 0 6“n!¦†6< fnÃh6ã$ci> ˆpYR

- x the skills to locate, evaluate and use relevant information (Information Literacy) : Significant
- x the capacity for enterprise, initiative and creativity : Significant
- x an appreciation of and respect for, diversity : Significant
- x a capacity to contribute to, and work within, the international community : Some
- x the skills required for collaborative and multidisciplinary work : Significant
- x an appreciation of, and a responsiveness to, change : Significant
- x a respect for ethical practice and social responsibility : Some

TEACHING STRATEGIES

COURSE PROGRAM

Term 2 2020

Date	Topic	Lecture Content	Demonstration Content

Details of each assessment component, the marks assigned to it, the criteria by which marks will be assigned, and the dates of submission are set out below.

Assessment criteria

Assessment of on-site lab work (3%) will be based on the following criteria:

- No output 0%
- Partial output 1%
- Full output but with incorrect results 2%
- Complete results 3%

Assessment of LIS report (30%) will be based on the following criteria:

- Written presentation 6%
- Review of other work 6%
- Quality of project work 6%
- Results 6%
- Interpretation & conclusions 6%

Credit	65-74	Work of solid quality showing competent understanding of subject matter and appreciation of main issues, though possibly with some lapses and inadequacies; arguments clearly developed and supported by references, though possibly with minor red herrings and loose ends; some evidence of creative ability; well prepared and presented.
Pass	50-64	Adequate answers; reasonably relevant and accurate. Sufficient to merit a bare pass to safe pass mark.
Fail	<50	

References

Biggs, J. (2003) Teaching for Quality Learning at University, second edition. Society for Research into Higher Education & Open University Press, Buckingham, UK.

,Q WHUPV RI %LJJV¶ 62/2 WD[RQRP\ D +LJK 'LVWLQFWLRQ LV ([WHQGHG
More generally, to achieve a pass you must implement the models as instructed and show that you understand what you have done. To achieve a High Distinction you must have implemented some innovations of your own (gone beyond the instructions). Very well written reports that clearly show an understanding of what has been done, but that contain no innovations, will receive a maximum grade of Distinction.

Throughout your assignment report you are expected to demonstrate an understanding of:

1. the me

Learning how to use this software will make writing assignments much easier, and will solve most of your problems with referencing formats (so long as your database is correct). Most online databases now allow you to export references directly into EndNote, so constructing a database is reasonably simple.

Be careful when using web sites as a source of information. If they summarise another piece of work, then you should read and cite the original piece of work (the primary reference). This applies to lecture notes ± DO NOT USE LECTURE NOTES AS REFERENCES. Use the references provided in them. In general, you should not use web sites unless they are an official publication. Wikipedia is a good example here. It is an excellent resource for locating further information, but it is not a primary reference. The same principle applies to any printed encyclopaedia.

Supplementary Examinations for Term 2 2020 will be held on Monday 7th September ± Friday 11th September (inclusive) should you be required to sit one. You are required to be available during these

(inclb be required t Tf 8.04 /F1 10 Tf q 0 q 0 G [(ET O /F1 10 Tf 1 0 0 1 235.35 623.17 Tm 0 q 0 G [( )] TJ ET O q 0.00000

ASSESSMENT OVERVIEW

Item	Length	Weighting	Learning outcomes assessed	Assessment Criteria	Due date and submission requirements	Deadline for absolute fail	Marks returned
1. 8x lab exercises	24 hours	24%	GIS skills	Basic GIS techniques and practical applications	Weeks 1-5, 7-9. Show the results to the lab supervisor	After 7 days	Immediately
2. Black Bart assignment	40 hours	30%	Spatial analysis	Writing skills, analytical and laboratory work	Electronic copy report due 4pm Friday Week 10	[redacted]	

Appendix A: Engineers Australia (EA) Competencies

Stage 1 Competencies for Professional Engineers

	Program Intended Learning Outcomes
PE1: Knowledge and Skill Base	PE1.1 Comprehensive, theory-based understanding of underpinning fundamentals
	PE1.2 Conceptual understanding of underpinning maths, analysis, statistics, computing
	PE1.3 In-depth understanding of specialist bodies of knowledge
	PE1.4 Discernment of knowledge development and research directions
	PE1.5 Knowledge of engineering design practice
	PE1.6 Understanding of scope, principles, norms, accountabilities of sustainable engineering practice
PE2: Engineering Application Ability	PE2.1 Application of established engineering methods to complex problem solving
	PE2.2 Fluent application of engineering techniques, tools and resources
	PE2.3 Application of systematic engineering synthesis and design processes
	PE2.4 Application of systematic approaches to the conduct and management of engineering projects
PE3: Professional and Personal Attributes	PE3.1 Ethical conduct and professional accountability
	PE3.2 Effective oral and written communication (professional and lay domains)
	PE3.3 Creative, innovative and pro-active demeanour
	PE3.4 Professional use and management of information
	PE3.5 Orderly management of self, and professional conduct
	PE3.6 Effective team membership and team leadership