



GEOGRAPHY FINAL COURSE OUTLINE: SUMMER 2009

GEOGRAPHY 795.41 GIS Multicriteria Analysis

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Course Content

Decision making in natural resource management requires the analysis of multiple variables; it is characterized by uncertainty and sometimes conflicting management objectives. The decision making process requires information about alternative management scenarios. A diversity of methods and techniques exist to assist in information processing, which ultimately may lead to better decisions. GIS Multi-Criteria analysis (GIS/MCA) is a set of methods and procedures by which concerns about multiple, spatially conflicting criteria can be formally incorporated into the management planning process. GIS/MCA provides the opportunity for decision makers to include their own judgements in the decision making process without limiting the criteria necessary for good management decisions.

The aim of this course is to introduce the set of MCA tools and methods allowing the comparison of different alternatives according to many criteria, often conflicting, to guide the decision maker towards a judicious choice. Students will learn how to use GIS/MCA to generate information for spatial-decision making, and understand the limitations of the different approaches. The course includes the theory and methods involved in spatial analysis, GIS modeling and MCA. The practical component involves the use of ArcGis 9.2 modules and ancillary programs to solve practical issues.

Blackboard

If blackboard is being used as a course tool: <http://blackboard.ucalgary.ca>

Required text

There is no required textbook used in class. Students may wish to acquire: Malczewski J. 1999. *GIS and Multicriteria Decision Analysis*. John Wiley & Sons, Inc 392p
Instead, students will read articles from peer-review journals. These articles will be available in pdf format at the Blackboard of the course.

Readings/Manuals

Copies of articles and manuals will be compiled into a reading kit Grading (weighting)
It is not essential to pass all elements to pass this course.

Prerequisite

Basic skills on ArcGis 9.2 and the spatial statistical modules

Supplementary Fees - None

Grading system

The official grading scheme of the university will be used (Course Information Section in the University Calendar):

A+ 4.00 Outstanding performance

A	4.00	Excellent-superior performance, showing comprehensive understanding of subject
A-	3.70	↑ Good - clearly above average performance
B+	3.30	
B	3.00	
B-	2.70	↑ Satisfactory performance – basic understanding of the subject
C+	2.30	
C	2.00	
C-	1.70	
D+	1.30	
D	1.00	Minimal Pass-marginal performance
F	0	Fail - - poor performance

Plagiarism

Academic dishonesty is not an acceptable activity at the University of Calgary and students are **strongly advised** to read the Student Misconduct section in the University Calendar. Quite often, students are unaware of what constitutes academic dishonesty or plagiarism. The most common are 1) presenting another student's work as your own 2) presenting an author's work or ideas as your own without proper referencing and 3) using work completed for another course. This activity will not be tolerated in this course and students conducting themselves in this manner will be dealt with according to the procedures outlined in the calendar.

Disability Resource Centre Accommodations

It is the student's responsibility to request academic accommodations. If you are a student with a documented disability who may require academic accommodation and have not registered with the Disability Resource Centre, please contact their office at 220-8237. Students who have not registered with the Disability Resource Centre are not eligible for formal academic accommodation. You are also required to discuss your needs with your instructor no later than fourteen (14) days after the start of this course.

Re: Posting of Grades and Picking-up of Assignments

- All assignments will be handles on Blackboard.
- Their own grades will be available to each student on Blackboard by password access. Grades will **not** be available at Geography's main office.

Contact Information for Student and Faculty Representation

- SU VP Academic Phone: 220-3911 and e-mail: suypaca@ucalgary.ca
- SU Faculty Rep. Phone: 220-3913 and e-mail: socialscirep@su.ucalgary.ca

Campus Safewalk

Campus Security, in partnership with the Students' Union, provides the Safewalk service, 24 hours a day, to any location on Campus including the LRT, parking lots, bus zones and University residences. Contact Campus Security at 220-5333 or use a help phone, and Safewalkers or a Campus Security officer will accompany you to your Campus destination.