

**GEOGRAPHY 439  
H(3-2) Area III****Analytical Methods in Geography II**

**Timetable:** See current Infonet information at: <http://www.ucalgary.ca/InfoNet/>      **Catalogue #:** See current information on Infonet

**Instructor:** Stefania Bertazzon  
**Office:** ES 308  
**Office hours:** Wed and Fri, 14:00-15:00  
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**TA:** Julia Linke  
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**Official Course Description:**

Methods for the analysis of temporal, spatial and multivariate data sets. Emphasis is placed on data sets relating to geographic phenomena, resource utilization and environmental problems, with examples from the geographic literature. Examples will involve the use of computer packages.

**Prerequisite:**

Geography 339 or consent of the Department

**Supplementary Fees:** (*field trips etc*). N/A.

**Course Description:**

Methods for the analysis of temporal, spatial and multivariate data sets. Emphasis is placed on data sets relating to geographic phenomena, resource utilization and environmental problems, with examples from the geographic literature. Examples will involve the use of computer packages.

**Main topics that will be covered in the course:**

- Introduction to Statistical Analysis;
- Review of Matrix Algebra;
- Review of Distributions and Inference;
- Auto- and Cross-correlation;
- Time Series and AR/MA Models;
- 1 and 2-D interpolation;
- Principle Components Analysis;
- Factor Analysis;
- Discriminant Analysis;
- Cluster Analysis.

**Evaluation:**

8 labs,	5 % each;	40 % of course grade.
2 midterm tests,	20% each;	40% of course grade.
Term project		20% of course grade.
	Project proposal:	5%
	Written Report:	10%
	Oral presentation	5%

Class Participation is not formally graded, but students are strongly encouraged to share their ideas, contributions, and questions in class.

Lab exercises are due the week after the assignment (unless otherwise specified).

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The final project should be viewed as an opportunity to perform an insightful statistical analysis on a research topic chosen by each student.

A detailed guideline for the project completion will be provided in class.

**Letter grades**

	96 - 100%	A+		86 - 91.9	A-		76 - 80.9	B		66 - 70.9	C+		58 - 61.9	C-		50 - 53.9	D
	92 - 95.9	A		85.9 - 81 %	B+		71 - 75.9	B-		62 - 65.9	C		54 - 57.9	D+		< 50	F

**Late Policy:**

Lab assignments are due at the beginning of the lab sessions the week following the assignment and are to be handed in to the Teaching Assistant. There are no exceptions and those assignments handed in late will be subject to an immediate 10% penalty followed by a 10% reduction in grade for each day thereafter (weekend and holidays included). Medical related circumstances will require a note from a physician.

**Recommended Textbooks:**

Rogerson, P.A. (2001) *Statistical Methods for Geography* Sage Publications Ltd., London.

McGarigal, K., S. A. Cushman, and S. G. Stafford. 2000. *Multivariate Statistics for Wildlife and Ecology Research*. Springer-Verlag, New York.

Additional material will be suggested in class and made available in the collections room (ES 457) or on the Blackboard

Class notes will be posted on the Blackboard: <http://blackboard.ucalgary.ca/>

**For additional detailed course information posted by the Instructor see Blackboard at:**  
<http://blackboard.ucalgary.ca/>

### **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.

### **Re: Posting of Grades and Picking-up of Assignments**

- Assignments will be handed back only in class or by the Professor at pre-arranged time(s).
- To receive your assignment back via mail, please include an appropriately sized self-addressed, stamped envelope with your assignment when handing in to the professor.
- Posting of grades will be at the discretion of each Professor and, if posted, they will be scrambled. 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: [suvpaca@ucalgary.ca](mailto:suvpaca@ucalgary.ca)
- SU Faculty Rep. Phone: 220-3913 and e-mail: [socialscirep@su.ucalgary.ca](mailto: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.