UNIVERSITY OF THE **FRASER VALLEY**

COURSE IMPLEMENTATION DATE: January 1996
COURSE REVISED IMPLEMENTATION DATE: September 2010
COURSE TO BE REVIEWED: January 2014
(four years after UPAC approval) *(month, year)*

OFFICIAL UNDERGRADUATE COURSE OUTLINE INFORMATION

Students are advised to keep course outlines in personal files for future use.
Shaded headings are subject to change at the discretion of the department – see course syllabus available from instructor

GEOG 352	Geography	4
COURSE NAME/NUMBER	FACULTY/DEPARTMENT	UFV CREDITS
	Explanation in Geography: Quantitative Methods	
	COURSE DESCRIPTIVE TITLE	

CALENDAR DESCRIPTION:

This course focuses on the use of numbers as an aid to problem-solving in geographical analysis. Students will be introduced to methods in the collection, description, analysis and mapping of quantitative data. Techniques in the collection and recording of primary and secondary data will be covered and methods of statistical description, inference and display will be surveyed. This course makes extensive use of computer software.

PREREQUISITES: GEOG 253, and one of MATH 104, 106, or PSYC 110, or other acceptable statistics course.

COREQUISITES:
PRE or COREQUISITES:

SYNONYMOUS COURSE(S):
(a) Replaces:
(b) Cross-listed with:
(c) Cannot take: for further credit.

SERVICE COURSE TO: *(department/program)*

TOTAL HOURS PER TERM: 75
STRUCTURE OF HOURS:

Lectures:	**45**	Hrs
Seminar:		Hrs
Laboratory:	**30**	Hrs
Field experience:		Hrs
Student directed learning:		Hrs
Other (specify):		Hrs

TRAINING DAY-BASED INSTRUCTION:
Length of course:
Hours per day:

OTHER:
Maximum enrolment: **25**
Expected frequency of course offerings: Once every year
(every semester, annually, every other year, etc.)

WILL TRANSFER CREDIT BE REQUESTED? (lower-level courses only) ☐ Yes ☒ No
WILL TRANSFER CREDIT BE REQUESTED? (upper-level requested by department) ☒ Yes ☐ No
TRANSFER CREDIT EXISTS IN BCCAT TRANSFER GUIDE: ☐ Yes ☒ No

Course designer(s): **Dr. John Belec**	
Department Head: **Dr. Ken Brealey**	Date approved: **November 2009**
Supporting area consultation (Pre-UPAC)	Date of meeting: **November 27, 2009**
Curriculum Committee chair:	Date approved: **January 2010**
Dean/Associate VP: **Dr. Jacqueline Nolte**	Date approved: **January 2010**
Undergraduate Program Advisory Committee (UPAC) approval	Date of meeting: **January 29, 2010**

LEARNING OUTCOMES:

Upon successful completion of this course, students will be able to:
- Provide an understanding of basic descriptive statistics and regression methods as they apply to problem-solving in Geography.
- Review quantitative data management techniques through the use of spreadsheets.
- Ability to convert geographical questions into testable propositions.
- Develop a basic working ability with relevant computer software e.g., Excel, SPSS and/or Arc View.
- Ability to apply statistical methods to a spatial setting.

METHODS: *(Guest lecturers, presentations, online instruction, field trips, etc.)*

Lecture: 2 hours/week
Computer lab: 3 hours/week.

METHODS OF OBTAINING PRIOR LEARNING ASSESSMENT RECOGNITION (PLAR):

☐ Examination(s)   ☐ Portfolio assessment   ☐ Interview(s)

☐ Other (specify):

☐ PLAR cannot be awarded for this course for the following reason(s):

TEXTBOOKS, REFERENCES, MATERIALS:

[Textbook selection varies by instructor. An example of texts for this course might be:]

David Ebdon, Statistics in Geography 2e, Blackwell, 1985
T.W. Pavkov and K.A. Pierce, Ready, Set, Go: A Student's Guide to SPSS 11.0 for Windows, Mc-Graw Hill, 2003
K. N. Berk and P. Carey, Data Analysis with Microsoft Excel, Thomson, 2004.
R.A.Donnelly, The Complete Idiot's Guide to Statistics, Alpha, 2004.

SUPPLIES / MATERIALS:

STUDENT EVALUATION:

[An example of student evaluation for this course might be:]

Assignments   30%
Tests   30%
Final exam   40%

COURSE CONTENT:

[Course content varies by instructor. An example of course content might be:]

Week
1. Exploring the nature of geographical questions and the role of quantitative data.
2. What is quantitative data and where does it come from: issues of scale, measurement and collection.
3. Samples, sampling, probability, and hypothesis testing.
4. Devising testable propositions in Geography.
5. How to build and manage a database for geographical analysis.
6. Applications of descriptive statistics and descriptive spatial statistics in geographical problem solving.
7. Searching for spatial relationships: applications of correlation and regression.
8. Mapping pattern: overview and capabilities of GIS as an analytical tool.
9. Review of cartographic techniques: from earth to map.
10. Database methods in GIS.
11. Choropleth mapping in GIS: regression residuals.
12. GIS map design issues and techniques.
13. Putting it all together: the role of spatial techniques in the pursuit of geographical knowledge.