UNIVERSITY COLLEGE of the FRASER VALLEY

COURSE IMPLEMENTATION DATE: January 2008
COURSE REVISED IMPLEMENTATION DATE:
COURSE TO BE REVIEWED: February 2012
(Four years after UPAC final approval date) (MONTH YEAR)

OFFICIAL 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 and the material will vary - see course syllabus available from instructor

FACULTY/DEPARTMENT: **Geography**

GEOG 453		4
COURSE NAME/NUMBER	FORMER COURSE NUMBER	UCFV CREDITS

Remote Sensing
COURSE DESCRIPTIVE TITLE

CALENDAR DESCRIPTION:

Remote sensing is the art and science of studying Earth features from a distance. Students will learn the principles of remote sensing science and the characteristics of imagery collected from aircraft and satellite sensors. Students will use remote sensing to interpret and map geologic, hydrologic, vegetative, and urban features.

PREREQUISITES: GEOG 353, or GEOG 253 with permission of instructor
COREQUISITES:

SYNONYMOUS COURSE(S)
(a) Replaces: **N/A** *(Course #)*
(b) Cannot take: **N/A** *(Course #)* for further credit.

SERVICE COURSE TO:
(Department/Program)
(Department/Program)

TOTAL HOURS PER TERM: **60**
STRUCTURE OF HOURS:

Lectures:	**23**	Hrs
Seminar:		Hrs
Laboratory:	37	Hrs
Field Experience:		Hrs
Student Directed Learning:		Hrs
Other (Specify):		Hrs

TRAINING DAY-BASED INSTRUCTION
LENGTH OF COURSE:
HOURS PER DAY:

MAXIMUM ENROLLMENT: **25**
EXPECTED FREQUENCY OF COURSE OFFERINGS: Every other year

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

AUTHORIZATION SIGNATURES:

Course Designer(s): **Dr. Scott Shupe**
Chairperson:
Department Head: **Dr. Ken Brealey**
Dean: **Dr. Eric Davis**
UPAC Approval in Principle Date:
UPAC Final Approval Date: Feb. 1, 2008

Upon successful completion of this course the student should be able to:

1. demonstrate an understanding of electromagnetic energy and its interactions with earth features
2. distinguish active from passive remote sensing systems and ascertain the benefits and drawbacks of either
3. analyze the structure of major earth surface features with remote sensing technologies
4. critically evaluate the role of scale in the resolution of remote sensing imagery
5. illustrate the ways in which the visualizations of remotely sensed imagery influence culture

METHODS:

The course will be offered in a lecture/lab format.

PRIOR LEARNING ASSESSMENT RECOGNITION (PLAR):

Credit can be awarded for this course through PLAR (Please check:) ☒ Yes ☐ No

METHODS OF OBTAINING PLAR:

Exam and/or portfolio evaluation.

TEXTBOOKS, REFERENCES, MATERIALS:

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

Jensen, J.R. 2007. Remote Sensing of the Environment: An Earth Resource Perspective, Prentice Hall: Upper Saddle River, NJ, 592 pages

SUPPLIES / MATERIALS:

STUDENT EVALUATION:

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

Lab assignments and projects	40-60%
Exams	40-60%

COURSE CONTENT:

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

1. Principles of electromagnetic (EM) energy and surface-EM energy interactions
2. History and evolution of remote sensing systems
3. Elements of image interpretation and classification
4. Thermal infrared remote sensing
5. Radar remote sensing
6. LIDAR remote sensing
7. Remote sensing of water resources
8. Remote sensing of vegetation
9. Remote sensing of geomorphic surfaces
10. Remote sensing of the urban landscape