



COURSE IMPLEMENTATION DATE: January 2002
COURSE REVISED IMPLEMENTATION DATE: September 2013
COURSE TO BE REVIEWED: September 2018
(six years after UEC 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

Table with 3 columns: COURSE NAME/NUMBER (GEOG 470), FACULTY/DEPARTMENT (Geography), UFV CREDITS (5). Includes COURSE DESCRIPTIVE TITLE: Advanced Field Studies in Geography.

CALENDAR DESCRIPTION:

In this capstone course of intensive field study, students will apply concepts and techniques attained in their previous human and physical geography courses to the study of a region outside of Southwest British Columbia. Students will define and formulate research questions, collect and analyze appropriate data from primary and secondary sources, and communicate their findings for both academic and general audiences.

PREREQUISITES: 60 credits including GEOG 250 or 253, and at least 4 credits of upper-level Geography; application to an acceptance in study tour or field school.

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: 92

STRUCTURE OF HOURS: Lectures: 12 Hrs, Seminar: Hrs, Laboratory: Hrs, Field experience: 50 Hrs, Student directed learning: 30 Hrs, Other (specify): Hrs

TRAINING DAY-BASED INSTRUCTION:

Length of course:
Hours per day:

OTHER:

Maximum enrolment: Variable; up to 18 with 3 instructors
Expected frequency of course offerings: Annually
(every semester, annually, every other year, etc.)

WILL TRANSFER CREDIT BE REQUESTED? (upper-level requested by department)

Form with checkboxes: Yes/No for both Will Transfer Credit and Transfer Credit Exists in BCCAT Transfer Guide.

TRANSFER CREDIT EXISTS IN BCCAT TRANSFER GUIDE:

Approval table with columns for Course designer(s), Department Head, Supporting area consultation, Curriculum Committee chair, Dean/Associate VP, Undergraduate Education Committee (UEC) approval, Date approved, Date of meeting.

LEARNING OUTCOMES:

Upon successful completion of this course, students will be able to:

1. Critically define and discuss the geographic character and regional boundaries of a region under study;
2. Identify field problems and develop testable hypotheses for purposes of further research;
3. Identify the larger significance of case study and field research, as well as the transferability of this research designs and findings, to new research situations;
4. Maintain a field journal, make relevant observations, and support the journal with appropriate visual evidence collected in the field;
5. Identify and use a range of appropriate research techniques (e.g. mapping, statistical analysis, GIS, participant observation, etc.) needed for completing a field-based research project;
6. Combine primary and secondary source information into visual and written presentations for both academic and non-academic audiences;
7. Work effectively and collaboratively in a non-local and potentially foreign environment.

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

GEOG 470 is designed in support of geography study tours, including both the 5-6 day *Adventures in Geography* study tours, and the 2-3 week study tours further afield. Students completing a longer study tour will take GEOG 470 in conjunction with other courses. GEOG 470 requires the completion of field research in combination with library and online research, almost all of which takes place outside of the traditional classroom setting. Each day, students gain an understanding from direct field observations, landscape interpretation, on-site presentations from instructors, field measurements, and other activities. Students are expected to complete field exercises while on the tour.

During a typical field study, students can expect to:

- Participate in a variety of field experiences, whether urban, rural, or occasionally wilderness. Some exercises require physical exertion, but the instructors make the best efforts to make activities as all-abilities as practical;
- Work together in groups (on certain assignments) to solve general or particular research problems in the field;
- Answer questions posed by instructors in the field that address specific geographic patterns;
- Participate further in group discussions on topics and issues associated with locations on the tour.

METHODS OF OBTAINING PRIOR LEARNING ASSESSMENT RECOGNITION (PLAR):

Examination(s) Portfolio assessment Interview(s)

Other (specify): Presentation of equivalent research or course work that demonstrates completion of research project in geography

TEXTBOOKS, REFERENCES, MATERIALS: [*Textbook selection varies by instructor. Examples for this course might be:*]

Highly variable, depending on nature of the research project and/ or study tour. Readings include a combination of assigned materials and additional research materials. Below are some of the materials used to support GEOG 470J on the Yellowstone-Glacier (Montana) study tour:

Journals and online resources:

- Glacier National Park website
- *Montana: A Magazine of Western History*
- National Park Service, *Geology Field notes* (Glacier National Park)
- USGS website
- *Yellowstone Science*
- Yellowstone National Park Archives
- Yellowstone National Park Spatial Analysis Centre
- Yellowstone Science Bibliography (maintained by Washington State University):
<http://www.wsulibs.wsu.edu/yellowstone/>

Articles:

- Barrack, KA. 2010. Protecting the geyser basins of Yellowstone National Park: toward a new national policy for a vulnerable environmental resource. *Environmental Management* 45: 192-202.
- Binnema, Ted, and Melanie Niemi. 2006. "Let the Line Be Drawn Now": Wilderness, Conservation, and the Exclusion of Aboriginal People from Banff National Park in Canada" *Environmental History* 11: 724-50.
- Bottomly-O'Looney, J. and D. Shaw. 2010. Glacier National Park: People, a Playground, a Park. *Montana: A Magazine of Western History*

Textbooks, references, materials continued:

- Dilsaver, Larry. 2010. Yellowstone and the Snowmobile: Locking Horns over National Park Use. *Montana: A Magazine of Western History* 60 (1): 79-81.
- Hall M.H. and Fagre, D.B. 2003. Modeled Climate-Induced Glacier Change in Glacier National Park, 1850–2100. *BioScience* 53: 131–140
- Halofsy, Josh, et al., 2008. Recoupling fire and aspen recruitment after wolf reintroduction in Yellowstone National Park, USA. *Forest Ecology and Management* 256 (8): 1004-1008.
- Harper, Andrew. 2010. Conceiving Nature: The Creation of Montana’s Glacier National Park. *Montana: A Magazine of Western History* 60(2): 3-24.
- Kellert, S., Black, M., Rush, C., and A. Bath. 1996. Human Culture and Large Carnivore Conservation in North America. *Conservation Biology* 10 (4): 977-990. Available on-line.
- Kendall, Katherine, et al., 2008. Grizzly Bear Density in Glacier National Park, Montana. *Journal of Wildlife Management* 72 (8): 1693-1705.
- Kilpatrick, A. Marm. 2009. Wildlife–livestock conflict: the risk of pathogen transmission from bison to cattle outside Yellowstone National Park. *Journal of Applied Ecology*
- Man, AY. 2011. Julius Seyler and the Blackfeet: An Impressionist at Glacier National Park. *American Indian Culture and Research Journal* 35 (2): 212-217.
- Mansfield, Carol, et al. 2008. Preferences for Public Lands Management under Competing Uses: The Case of Yellowstone National Park. *Land Economics* 84(2): 282-305.
- Millspaugh, Sarah, and Cathy Whitlock. 1995. A 750-year fire history based on lake sediment records in central Yellowstone National Park, USA. *Holocene* 5(3): 283-292.
- Nash, Roderick. 1970. The American Invention of National Parks. *American Quarterly* 22 (3): 726-35.
- Painter, Luke, and William Ripple. 2011. Effects of bison on willow and cottonwood in northern Yellowstone National Park. *Forest Ecology and Management* 46 (2): 476-485.
- Power, Thomas Michael. 1991. Ecosystem Preservation and the Economy in the Greater Yellowstone Area. *Conservation Biology* 5 (3): 395-404. Available through JSTOR.
- Ripple, William, and Robert Beschta. 2011. Trophic cascades in Yellowstone: The first 15years after wolf reintroduction. *Biological Conservation*.
- Varley, J. and P. Schullery. 1994. The reality and opportunity in the Yellowstone fires of 1988, in *The Greater Yellowstone Ecosystem: Redefining America’s Wilderness Heritage, reissue ed.*, edited by R. Keiter, 105-122. New Haven, CT: Yale University Press.
- Wicks, C., Thatcher, W., Dzurisin, D. and J. Svarc. 2006. Uplift, thermal unrest, and magma intrusion at Yellowstone caldera: *Nature* 440: 72-75. Available on-line.

Videos:

- Hawes-Davis, Doug, dir. 2011. *Facing the Storm: The Story of American Bison*. High Plains Films.

Books:

- Barker, R. 2005. *Scorched Earth: How the fires of Yellowstone changed America*. Island Press/ Shearwater Books.
- Barringer, M. 2002. *Selling Yellowstone: Capitalism and the Construction of Nature*. University Press of Kansas.
- Butler, David, Malanson, George, Walsh, Stephen, Fagre, Daniel, ed. (2009). *The Changing Alpine Treeline, Volume 12: The Example of Glacier National Park, MT, USA*. Elsevier Science.
- Corbin, Annalies. 2010. *Historical Archaeology of Tourism in Yellowstone National Park*. Springer.
- *Ecological Dynamics on Yellowstone’s Northern Range*. 2002. National Academy Press.
- Hungry Wolf, Adolf. 1971. *Good Medicine in Glacier National Park: Inspirational Photos and Stories from the Days of the Blackfoot People*. Good Medicine Books.
- Johnson, Jerry. 2010. *Knowing Yellowstone: Science in America’s First National Park*. Taylor Trade Publishing.
- Kinsey, Joni. 2006. *Thomas Moran’s West: Chromolithography, High Art, and Popular Taste*. University Press of Kansas.
- Meagher, Margaret. 1998. *Yellowstone and the Biology of Time: Photographs Across a Century*. University of Oklahoma Press.
- Meyer, Judith. 1996. *The Spirit of Yellowstone: The Cultural Evolution of a National Park*. Rowan and Littlefield.
- Nabokov, P, and L. Loendorf. 2004. *Restoring a Presence: American Indians and Yellowstone National Park*. University of Oklahoma Press.
- National Park Service. 2011. *Yellowstone Resources and Issues Handbook*, or latest edition.
- Prato, Tony, and Dan Fagre, ed. 2007. *Sustaining Rocky Mountain Landscapes – Science, Policy, and Management for the Crown of the Continent Ecosystem*. Washington D.C.: Resources for the Future.
- Schullery, P. 2004. *Searching for Yellowstone: Ecology and wonder in the last wilderness*. Helena, MT: Montana Historical Society Press.

Textbooks, references, materials continued:

- Siegel, L. 2000. *Windows into the Earth: The Geologic Story of Yellowstone and Grand Teton National Parks*. Oxford University Press.
- Smith, D., and G. Ferguson. 2005. *Decade of the Wolf: Returning the Wild to Yellowstone*. The Lyons Press.
- Wallace, Linda. 2004. *After the Fires: Ecology of Change in Yellowstone National Park*
- Webb, Robert. 2010. *Repeat Photography: Methods and Applications in the Natural Sciences*. Island Press.
- Wondrak, Alice. 2006. *Do Not Feed the Bears: The Fitful History of Tourists and Wildlife in Yellowstone National Park*. University of Kansas Press.

SUPPLIES / MATERIALS:

Additional trip fee is required, and is dependent on location and numbers of students and instructors.

Supplies required will depend on the location and nature of study. For example, supplies required for the Mt. St. Helens and Channeled Scablands *Adventures in Geography* study tour included:

- Reading List
- Carry-on sized suitcase or backpack (approx. 55 cm x 23 cm x 40 cm)*
- Daypack (waterproof)
- TWO (2) water bottles (should be larger than 500ml)
- Rain jacket and rain pants
- Rite-in-rain books (available at UFV bookstore)
- Hiking boots (high-ankles are recommended)**
- Sleeping bag
- Small pillow
- Camera with extra batteries and film/memory card (cell phone photos are not acceptable)
- Sunscreen
- Insect repellent
- Passport for international travel or Driver's License for domestic travel AND birth certificate
- Photocopy of passport or driver's license and birth certificate
- Fleece jacket or similar
- Hat and gloves (could be chilly)
- Mess kit (non-breakable plate, bowl, mug and cutlery)
- Flashlight/lantern
- Personal gear (including medications etc.)
- Spending money (US funds)

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

Trip preparation: 15%

- Written responses (2) to core readings and videos (10%)
- Annotated bibliography (5%)

In the field: 50%

- Active participation in daily discussion and presentation of ideas and research (from complementary courses) while on the study tour or AIG; demonstrated ability to work in team for completing field work and daily tasks associated with travel (10%)
- Planning, execution, and presentation (post-trip) of field exercises (40%)
 - Journal records (10%)
 - Climate data analysis and discussion (5%)
 - Cultural landscape survey and analysis (5%)
 - Mapping exercise (5%)
 - Trail map and guide (15%)

Post-trip analysis and synthesis: 35%

- Topical field report or research analysis, with literature review (15%)
- Research poster (15%)
- Class presentation (5%)

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

Course content presented is highly generalized, and is presented both in the classroom and in the field. The list of topics below is based on content included in previous study tours:

Course content continued:

- Topic 1:** Introduction to regional studies and fieldwork in Geography; Introduction to the region to be visited
Topic 2: Techniques in the field; documenting the region; how to keep field notes, journaling, etc.
Topic 3: The Biophysical elements of regional landscapes; Understanding physical processes past and present; local ecology, landforms, and climate
Topic 4: Human Interaction with the physical environment; resource quality, use, and conservation
Topic 5: Demographic patterns and processes; history of settlement and patterns in the landscape today; rural and urban contrasts
Topic 6: Explorations and experiences in cultural, social, and economic geography, including agriculture, religion, ethnicity, political systems, foodways
Topic 7: Planning and preparation; dealing with natural hazards, appropriate development; wildlife management

Field studies are conducted in different world regions. GEOG 470 is designated with letters to indicate the subject region:

Course	Title
GEOG 470	Advanced Field Study in Geography
GEOG 470A	Advanced Field Study: South America
GEOG 470B	Advanced Field Study: British Columbia
GEOG 470C	Advanced Field Study: Hawaii and Pacific
GEOG 470D	Advanced Field Study: East Asia
GEOG 470E	Advanced Field Study: Pacific Northwest
GEOG 470F	Advanced Field Study: Australasia
GEOG 470G	Advanced Field Study: Europe
GEOG 470H	Advanced Field Study: American West/Hawaii
GEOG 470I	Advanced Field Study: South Asia
GEOG 470J	Advanced Field Study: National Parks
GEOG 470K	Advanced Field Study: Mexico and Central America
GEOG 470L	Advanced Field Study: Great Lakes/Central Canada
GEOG 470M	Advanced Field Study: Atlantic Canada
GEOG 470N	Advanced Field Study: United States
GEOG 470O	Advanced Field Study: Western Canada
GEOG 470P	Advanced Field Study: Western Europe
GEOG 470Q	Advanced Field Study: Southern Europe
GEOG 470R	Advanced Field Study: Eastern Europe
GEOG 470S	Advanced Field Study: Russia
GEOG 470T	Advanced Field Study: Southwest Asia/Middle East
GEOG 470U	Advanced Field Study: Southeast Asia
GEOG 470V	Advanced Field Study: Canada
GEOG 470W	Advanced Field Study: Sub-Saharan Africa
GEOG 470X	Advanced Field Study: East Africa
GEOG 470Y	Advanced Field Study: Circumpolar North/Canada's North

This lettering is consistent with GEOG 433.