UtahState University

Geography Major

Human-Environment Geography Emphasis
Geographical Analysis and Bioregional Planning Emphasis
Physical Geography Emphasis

Interdepartmental Undergraduate Degree
Department of Environment and Society and
Department of Watershed Sciences
College of Natural Resources

Published August 2009 **Effective for students beginning degree Summer Sem. 2009 thru Spring Sem. 2010**

Admission Requirements For This Major

1. New freshmen admitted to USU in good standing qualify for admission to this major.
2. Transfer students from other institutions or from other USU majors need a 2.5 total GPA for admission to the Geography Major.

The Program

The Geography degree is designed to provide a broad education built around new tools and new knowledge in geography that will be critical for a student's future success. Students choose one of three areas of emphasis: Human-Environment Geography, Geographical Analysis and Bioregional Planning, and Physical Geography. These emphases represent three important directions of geography in the twenty-first century. All students complete a common core of 15-16 credits, and also complete *two courses* from *each of the other two emphasis cores*, ensuring a broad and meaningful geography education.

The **Human-Environment Geography** emphasis provides a broad overview of the relationships between humans and their environments across different cultures, economies, and geographic locations around the globe. Special attention is given to human-environment relations and environmental issues in the Global South, within the context of world systems. This emphasis draws upon the social science offerings within the Environment and Society Department, as well as from course offerings within related departments.

The **Geographical Analysis and Bioregional Planning** emphasis assists students in gaining a solid foundation of geographic information analysis skills. Students learn to apply planning tools and approaches to large-scale issues extending beyond city, county, or other jurisdictional boundaries.

The **Physical Geography** emphasis focuses on physical processes on a landscape scale. Students gain proficiency in geographic information sciences and are exposed to processes of landscape geomorphology and hydrology. Students completing this emphasis will have strong quantitative skills, will be versed in spatial analysis, and will gain an understanding of the interactions of the physics, chemistry, and biology inherent in earth ecosystems. This emphasis draws upon the disciplinary strengths of the Watershed Sciences Department.

Career Opportunities

Graduates will be well-prepared to take positions in state and federal natural resource agencies, to enter graduate programs in the geographic and natural resources disciplines, and to take positions working with consulting firms, nongovernmental organizations, and land-planning companies and organizations.

These potential employers need two types of students with geographic skills. First, there is a need for employees having technical skills in spatial analysis and geographic information systems. Students attaining the BS in Geography with an emphasis in Physical Geography or Geographical Analysis and Bioregional Planning will become competent in state-of-the-art technologies for conducting spatial and geographic analyses concerning a variety of natural resources. The second need expressed by potential employers is for employees who understand, analyze, and model changing demographics in the state, region, and globally. Students in the Human-Environment Geography emphasis will be well-positioned to meet these needs.

Degrees and Programs Offered Through These Departments

Watershed Sciences Department:

Fisheries and Aquatic Sciences: Bachelor of Science (BS)
Geography: BS (offered jointly with Environment and Society Department)
Watershed and Earth Systems: BS
Fisheries Biology: Master of Science (MS) and Doctor of Philosophy (PhD)
Areas of Specialization: **Aquatic Ecology**, **Conservation Biology**, **Fisheries Management**
Ecology: MS and PhD
Area of Specialization: **Aquatic Ecology**
Natural Resources: Master of Natural Resources (MNR)
Watershed Science: MS and PhD

Environment and Society Department:

Environmental Studies: BS
Geography: BS (offered jointly with Watershed Sciences Department) MS, Master of Arts (MA)
Recreation Resource Management: BS, MS, and PhD
Bioregional Planning: MS
Human Dimensions of Ecosystem Science and Management: MS, PhD
Ecology: MS, PhD
Natural Resources: MNR

Academic Advisement

All students should contact their academic advisor for assistance with course selection, program planning, and meeting graduation requirements. If they do not know who their advisor is, students should contact the Department of Environment and Society (NR 201), the Department of Watershed Sciences (NR 210), or the College of Natural Resources Academic Service Center (NR 120). Students in the Human-Environment Geography and Geographical Analysis and Bioregional Planning emphases will be assigned an advisor in the Environment and Society Department. Students in the Physical Geography emphasis will be assigned an advisor in the Watershed Sciences Department.

Graduation Requirements: BS Degree in Geography

Minimum University Requirements*

Total credits 120
Grade point average (most majors require higher GPA) . . . . . 2.00 GPA
Credits of *C*- or better 100
Credits of upper-division courses (#3000 or above) 40
USU credits 30
(20 of which must be upper division, including 10 required by major)
Completion of approved major program of study . . . . . See department
Credits in minor (if required by department) 12
Credits in American Institutions (ECN 1500; HIST 1700, 2700, or 2710; POLS 1100; or USU 1300) 3
University Studies requirements . . . . . See below

*Colleges and departments may require more credits or a higher GPA. See requirements on this sheet.

University Studies Requirements for Geography Major

Note: Approved University Studies courses and requirements are listed in the *General Catalog*. The most current listings are shown online at: **http://www.usu.edu/generalcatalog/**

General Education Requirements (30-34 credits)

Competency Requirements (9-10 credits)

Communications Literacy (CL1 and CL2) (6 credits)

ENGL 1010 (CL1) (3 credits) or satisfactory AP, CLEP, IBO, ACT, or SAT score

AND

ENGL 2010 (CL2) (3 credits) or satisfactory IBO score

Quantitative Literacy (QL) (3-4 credits) (see emphasis requirements)

MATH 1050 (4 credits)

OR

One MATH or STAT course requiring MATH 1050 as a prerequisite

OR

Satisfactory AP, CLEP, IBO, ACT, or SAT score

Computer and Information Literacy (0 credits)

Passing grade on six computer and information literacy related examinations. Students must pass all six examinations before earning 37 USU semester credits. (Effective Spring Semester 2010, students must fulfill this requirement prior to enrolling in ENGL 2010.)

Breadth Requirements (18-20 credits)

Select at least one approved course from each of the following six categories: **American Institutions (BAI), Creative Arts (BCA), Humanities (BHU), Life Sciences (BLS), Physical Sciences (BPS),** and **Social Sciences (BSS)**. (CLEP or AP credit may be used.) At least two of the six breadth courses must be University Studies courses with a **USU prefix** (excluding USU 1000, 1010, 1100, 3330, 4900, and 6900). GEOG 1000 (BPS) and GEOG 1300 (BSS) may be used toward this requirement.

Exploration Requirement (3-4 credits)

Choose an additional class from one of the following General Education categories: QL, BAI, BCA, BHU, BLS, BPS, or BSS. An additional BPS course (such as GEO 1110 or PHYS 2220) **or** an additional BSS course (such as ANTH 2010 or ENVS 2340), if chosen as an elective, will meet this requirement.

Depth Education Requirements

Communications Intensive (CI) (2 courses)

Two courses having a CI designation (such as ENVS 4500, GEOG 4200, HIST 3950, SOC 3110, SCED 3210, SCED 4200, and WATS 3700) will meet this requirement.

Quantitative Intensive (QI) (1 course)

One course having a QI designation (such as ENVS 3500, PHYS 2210, PHYS 2220, SOC 3120, STAT 2000, STAT 3000, or WATS 3820) will meet this requirement.

Depth Course Requirements (4 credits minimum, including 2 credits minimum completed in *each* of two courses)

Complete at least 2 credits in approved 3000-level or above courses from each of the following two categories: **Humanities and Creative Arts (DHA)** and **Life and Physical Sciences (DSC)**. HIST 3950 (DHA) or PHIL 3510 (DHA) **and** ENVS 3600 (DSC) may be used toward this requirement.

Departmental Requirements

All courses required for the major must be taken on an *A-B-C-D-F* basis. A grade of *C*- or better is required for all ENVS, GEOG, or WATS courses taken to meet the requirements for the major. The grade point average for all courses taught by the College of Natural Resources must be 2.5 or higher.

Geography Major (74 credits minimum)

A. Geography Core (15-16 credits) **Credits**

☐ **ENVS 1990** Professional Orientation for Environment and Society (F) (2 cr) **or**
☐ **WATS 1020** Watershed Sciences Professional Orientation (F) (1 cr) . . . . . 1 or 2
☐ **ENVS 3330** Environment and Society (Sp) 3
☐ **GEOG 1000 (BPS)** Physical Geography (F,Sp) 3
☐ **GEOG 1005** Physical Geography Lab (F,Sp) 1
☐ **GEOG 1300 (BSS)** World Regional Geography (F) 3
☐ **WATS 2930** Introduction to Geographic Information Sciences (F) 4

B. Emphasis Area (60 credits)

Students majoring in Geography are required to select an emphasis from one of the following three areas to complement the disciplinary core: **Human-Environment Geography**, **Geographical Analysis and Bioregional Planning**, or **Physical Geography**. Students must file an approved emphasis plan prior to applying for graduation, but it is recommended that they meet with their faculty advisor to develop and gain approval for the emphasis *no later* than midway through the first semester of the junior year. Courses requiring prerequisites are marked with **; see course descriptions in the *General Catalog* for further information.

1. Human-Environment Geography Emphasis (60 credits)

a. Human-Environment Geography Core (36 credits) **Credits**

☐ **GEOG 4100** Geographic Approaches to the Human-Environmental Relationship (Sp) 3
☐ **GEOG 4120** Environment and Development in Latin America (F) . . . 3
☐ **GEOG 4140** Violent Environments: Linking Ecology and Conflict in Sub-Saharan Africa (Sp) 3
☐ **HIST 3950 (DHA/CI)** Environmental History 3
☐ **SOC 3110 (CI)**** Methods of Social Research (F,Sp) 3
☐ **SOC 5650 (DSS)** Developing Societies (F) 3
☐ **STAT 1040 (QL)**** Introduction to Statistics (F,Sp,Su) 3
☐ **WILD 2200 (BLS)** Ecology of our Changing World (F,Sp) 3
☐ Two courses chosen from the Geographical Analysis and Bioregional Planning core 6
☐ Two courses chosen from the Physical Geography core 6

b. Elective Courses (24 credits)

Complete 24 credits chosen from the following list:

☐ **ANTH 2010 (BSS)** Peoples of the Contemporary World (Sp) 3
☐ **ENVS 2340 (BSS)** Natural Resources and Society (F,Sp) 3
☐ **ENVS 3000** Natural Resources Policy and Economics (F) 4
☐ **ENVS 3500 (QI)**** Quantitative Assessment of Environment and Natural Resource Problems (F) 3
☐ **ENVS 3600 (DSC)** Living with Wildlife (Sp) 3
☐ **ENVS 4000 (DSS)**** Human Dimensions of Natural Resource Management (F) 3
☐ **ENVS 4500 (CI)** Wildland Recreation Behavior (F) 3
☐ **ENVS 5110** Environmental Education (Sp) 3
☐ **ENVS 5550** Sustainable Development (Sp) 3
☐ **ENVS 5570** Sustainable Living (Sp) 3
☐ **PHIL 3510 (DHA)** Environmental Ethics (Sp) 3
☐ **POLS 4820 (DSS)** Natural Resources and Environmental Policy: Political Economy of Environmental Quality (Sp) 3
☐ **SOC 3120 (QI)**** Social Statistics I (F,Sp,Su) 3

Credits

- ☐ **SOC 3200 (DSS)** Population and Society (F,Sp) . . . 3
- ☐ **SOC 3600** Sociology of Urban Places (F). . . . 3
- ☐ **SOC 3610 (DSS)** Rural Sociology (F) . . . 3
- ☐ **SOC 4620 (DSS)** Sociology of the Environment and Natural Resources (Sp) . . . 3

2. Geographical Analysis and Bioregional Planning Emphasis (60 credits)

a. Geographical Analysis and Bioregional Planning Core (36 credits)

- ☐ **ENVS 4130** Recreation Policy and Planning (Sp) . . . 3
- ☐ **ENVS 5570** Sustainable Living (Sp). . . . 3
- ☐ **HIST 3950 (DHA/CI)** Environmental History. . . . 3
- ☐ **STAT 2000 (QI)**** Statistical Methods (F,Sp) (3 cr) **or**
- ☐ **STAT 3000 (QI)**** Statistics for Scientists (F,Sp,Su) (3 cr) . . . 3
- ☐ **WATS 4930** Geographic Information Systems (F). . . . 3
- ☐ **WATS 5930**** Geographic Information Analysis (Sp) . . . 3
- ☐ **WILD 2200 (BLS)** Ecology of our Changing World (F,Sp) . . . 3
- ☐ **WILD 5750** Applied Remote Sensing (F). . . . 3
- ☐ Two courses chosen from the Human-Environment Geography core . . . 6
- ☐ Two courses chosen from the Physical Geography core . . . 6

b. Elective Courses (24 credits)

Complete 24 credits chosen from the following list:

- ☐ **ENVS 2340 (BSS)** Natural Resources and Society (F). . . . 3
- ☐ **ENVS 3000** Natural Resources Policy and Economics (F). . . . 4
- ☐ **ENVS 3500 (QI)**** Quantitative Assessment of Environmental and Natural Resource Problems (F) . . . 3
- ☐ **ENVS 4000 (DSS)** Human Dimensions of Natural Resource Management (F) . . . 3
- ☐ **ENVS 5300** Natural Resources Law and Policy (Sp) . . . 2
- ☐ **ENVS 5320** Water Law and Policy in the United States (Sp). . . . 3
- ☐ **ENVS 5550** Sustainable Development (Sp) . . . 3
- ☐ **GEOG 4200 (CI)** Regional Geography . . . 3
- ☐ **LAEP 2300** History of Landscape Architecture (F,Sp) . . . 3
- ☐ **LAEP 3700** City and Regional Planning (Sp). . . . 3
- ☐ **PHIL 3510 (DHA)** Environmental Ethics (Sp). . . . 3
- ☐ **POLS 4820 (DSS)** Natural Resources and Environmental Policy: Political Economy of Environmental Quality (Sp) . . . 3
- ☐ **SOC 3600** Sociology of Urban Places (F). . . . 3
- ☐ **SOC 3610 (DSS)** Rural Sociology (F) . . . 3
- ☐ **STAT 5410**** Applied Spatial Statistics (F). . . . 3
- ☐ **WATS 3700 (CI)** Fundamentals of Watershed Science (Sp) . . . 3
- ☐ **WILD 3800**** Wildland Ecosystems (Sp) . . . 3

3. Physical Geography Emphasis (60-61 credits)

a. Physical Geography Core (36-37 credits)

- ☐ **MATH 1100 (QL)**** Calculus Techniques (F,Sp,Su) (3 cr) **or**
- ☐ **MATH 1210 (QL)**** Calculus I (4 cr) . . . 3 or 4
- ☐ **SOIL 3000** Fundamentals of Soil Science (F) . . . 4
- ☐ **STAT 3000 (QI)**** Statistics for Scientists (F,Sp,Su) . . . 3
- ☐ **WATS 3700 (CI)** Fundamentals of Watershed Science (Sp) . . . 3
- ☐ **WATS 3820 (DSC/QI)**** Climate Change (Sp). . . . 3
- ☐ **WATS 4490**** Small Watershed Hydrology (F) . . . 4
- ☐ **WATS 4930** Geographic Information Systems (F). . . . 4
- ☐ Two courses chosen from the Human-Environment Geography core . . . 6
- ☐ Two courses chosen from the Geographical Analysis and Bioregional Planning core. . . . 6

b. Elective Courses (24 credits)

Complete 24 credits chosen from the following list:

- ☐ **BIOL 5010**** Biogeography (Sp) . . . 3
- ☐ **ENVS 3000** Natural Resources Policy and Economics (F). . . . 3
- ☐ **ENVS 5320** Water Law and Policy in the United States (Sp). . . . 3
- ☐ **GEO 1110 (BPS)** The Dynamic Earth: Physical Geology (F,Sp) 4
- ☐ **MATH 1220 (QL)**** Calculus II (F,Sp,Su) . . . 4
- ☐ **PHYS 2210 (QI)**** General Physics—Science and Engineering I . . . 4
- ☐ **PHYS 2220 (BPS/QI)**** General Physics—Science and Engineering II . . . 4
- ☐ **STAT 5410** ** Applied Spatial Statistics (F). . . . 3

Credits

- ☐ **WATS 3600**** Geomorphology (F) . . . 4
- ☐ **WATS 5150** Fluvial Geomorphology (F) . . . 3
- ☐ **WATS 5170** Fluvial Geomorphology Lab (F) . . . 2
- ☐ **WATS 5760** Remote Sensing: Modeling and Analysis (Sp) . . . 3
- ☐ **WATS 5930**** Geographic Information Analysis (Sp) . . . 3
- ☐ **WILD 5750** Applied Remote Sensing (F). . . . 3

C. General Electives (12 credits)

After meeting the University Studies, USU upper-division, and Geography Major requirements, students may take the remainder of their 120 required credits in any discipline and from any department.

Geography Minor (24 credits minimum)

All courses required for the Geography minor *must* be taken on an *A-B-C-D-F* basis. A grade of *C-* or better is required for all GEOG courses taken to meet requirements for the minor. In order to graduate, students must maintain a 2.5 or higher grade point average in all courses taken from offerings within the College of Natural Resources.

Credits

- ☐ **GEOG 1000 (BPS)** Physical Geography (F,Sp,Su) . . . 3
- ☐ **GEOG 1005** Physical Geography Lab (F,Sp) . . . 1
- ☐ **GEOG 1300 (BSS)** World Regional Geography (F) . . . 3
- ☐ **GEOG 1400 (BSS)** Human Geography (Sp) . . . 3
- ☐ **GEOG 4200 (CI)** Regional Geography (F,Sp,Su). . . . 3
- ☐ **GEOG 4850** Cartographic Design (Sp) . . . 3
- ☐ **WATS 2930** Introduction to Geographic Information Sciences (F). . . . 4
- ☐ **WATS 4930** Geographic Information Systems (F) . . . 4

Geography Teaching Major (90-106 credits)

The teaching major in geography consists of the geography courses (38 credits minimum, shown in sections *A*, *B*, and *C* below), a teaching minor (17-33 credits), and the Secondary Teacher Education Program (STEP) (35 credits). **A 2.75 or higher overall cumulative GPA in 90 credits is required for admission to the STEP. The 2.75 minimum overall cumulative GPA must be maintained for graduation.**

A. Geography Teaching Major Foundation Courses (24-25 credits)

Credits

- ☐ **ENVS 1990** Professional Orientation for Environment and Society (F). . 2
- ☐ **GEOG 1000 (BPS)** Physical Geography (F,Sp,Su) . . . 3
- ☐ **GEOG 1300 (BSS)** World Regional Geography (F) . . . 3
- ☐ **GEOG 1400 (BSS)** Human Geography (Sp) . . . 3
- ☐ **GEOG 4200 (CI)** Regional Geography (Utah) . . . 3
- ☐ **GEOG 4200 (CI)** Regional Geography (International Course) (F,Sp,Su) 3
- ☐ **GEOG 4850** Cartographic Design (Sp) (3 cr) **or**
- ☐ **WATS 4930** Geographic Information Systems (F) (4 cr). . . . 3 or 4
- ☐ **WATS 2930** Introduction to Geographic Information Sciences (F). . . . 4

B. Geography Education Pedagogical Methods Courses (4 credits)

- ☐ **SCED 3300** Clinical Experience I (F,Sp) . . . 1
- ☐ **SCED 3500** Teaching Social Studies (F,Sp). . . . 3

C. Geography Education Elective Courses (9-10 credits)

Students may select the remaining 9-10 credits in Geography from courses numbered 2000 or above. It is recommended that students take additional coursework in the following areas: regional, physical, and human geography; human-environment interaction techniques; technology in geography education; and classroom technology. All electives must be coordinated with a geography education advisor.

D. Teaching Minor (17-33 credits)

A teaching major in Geography also requires an approved teaching minor from another field of study acceptable to the Secondary Education Program of the School of Teacher Education and Leadership (TEAL).

E. Secondary Teacher Education Program (STEP) (35 credits)

Students must complete three levels in the STEP. All three levels of the STEP will be offered during fall and spring semesters, *not* during summers. Levels of the STEP are taken as a package, not piecemeal. Each level must be satisfactorily completed before a student is advanced to the next level. All courses must be completed with a minimum grade of *C-*. **Prior to admission to the STEP, students in the Geography Teaching Major *must* complete MATH 1050, unless their Math ACT score is 25 or higher.**

Students should consult with advisors in major and minor departments for scheduling of special methods classes at Levels 1 and 2. Although certain combinations of majors and minors require three special methods classes, only *two* clinical experiences (total) should be scheduled at Levels 1 and 2. These in-school experiences are coordinated by methods instructors.

1. Level 1 (15-week courses) (11 credits minimum) **Credits**

- ☐ **INST 3500** Technology Tools for Secondary Teachers (F,Sp,Su) 1
- ☐ **SCED 3100** Motivation and Classroom Management (F,Sp) 3
- ☐ **SCED 3210 (CI/DSS)** Educational and Multicultural Foundations (F,Sp) 3
- ☐ Clinical Experience I (30 hrs. minimum) (3300 in various departments) 1
- ☐ One or more methods courses in major (3-6 credits in minor—Social Studies Education) 3

2. Level 2 (15-week courses) (12 credits minimum)

- ☐ **SPED 4000** Education of Exceptional Individuals (may be taken anytime) (F,Sp,Su) 2
- ☐ **SCED 4200 (CI)** Reading, Writing, and Technology (F,Sp) 3
- ☐ **SCED 4210** Cognition and Evaluation of Student Learning (F,Sp) 3
- ☐ Clinical Experience II (30 hrs. minimum) (4300 in various departments) 1
- ☐ Special Methods II (major or minor) (taught in various departments) 3

3. Level 3 (includes 13 weeks of student teaching and 2 weeks of Student Teaching Seminar) (12 credits)

- ☐ **SCED 5500** Student Teaching Seminar (2 weeks) (F,Sp) 2
- ☐ **SCED 5630** Student Teaching in Secondary Schools (13 weeks, full-time) (F,Sp) 10

F. Electives

After meeting the University Studies, USU upper-division, and geography teaching major requirements, students may take the remainder of their 120 required credits in any discipline and from any department. ENVS 4990 (2 cr) and ENVS 5000 (3 cr) are recommended.

Teaching Minor in Geography (24 credits minimum)

Note: A teaching minor in Geography **requires** an approved teaching major in another subject. All courses required for the Geography Teaching minor *must* be taken on an *A-B-C-D-F* basis. A grade of *C-* or better is required for all GEOG courses taken to meet requirements for the minor. A minimum GPA of 2.5 is required for courses taken to complete the minor.

A. Geography Teaching Minor Foundation Courses (18-19 credits)

Credits

- ☐ **GEOG 1000 (BPS)** Physical Geography (F,Sp,Su) 3
- ☐ **GEOG 1300 (BSS)** World Regional Geography (F) 3
- ☐ **GEOG 1400 (BSS)** Human Geography (Sp) 3
- ☐ **GEOG 4200 (CI)** Regional Geography (Utah) 3
- ☐ **GEOG 4200 (CI)** Regional Geography (International Course) (F,Sp,Su) 3
- ☐ **GEOG 4850** Cartographic Design (Sp) (3 cr) **or**
- ☐ **WATS 2930** Introduction to Geographic Information Sciences (F) (4 cr) **or**
- ☐ **WATS 4930** Geographic Information Systems (F) (4 cr) . . . . . 3 or 4

B. Geography Education Courses (4 credits)

- ☐ **SCED 3300** Clinical Experience I (F,Sp) 1
- ☐ **SCED 3500** Teaching Social Studies (F,Sp) 3

C. Geography Electives (1-2 credits)

Requirement Changes

Graduation requirements shown on this sheet are subject to change. Students should check with their faculty advisor regarding possible changes or for additional information regarding degree requirements, course sequencing, and departmental specialization options and their related coursework.

Materials for Persons with Disabilities

This requirement sheet is available in digital format, recordings, or large print upon request to the USU Disability Resource Center.

For information contact

Environment and Society Department; Natural Resources 201;
Utah State University; 5215 Old Main Hill; Logan UT 84322-5215;
tel. (435) 797-1790; **http://www.cnr.usu.edu/envs**

Or

Watershed Sciences Department; Natural Resources 210;
Utah State University; 5210 Old Main Hill; Logan UT 84322-5210;
tel. (435) 797-2459; e-mail watershed@aggiemail.usu.edu;
http://www.cnr.usu.edu/wats

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