METROPOLITAN STATE COLLEGE OF DENVER
Omnibus Course Syllabus

School of Letters, Arts and Sciences

Department: Earth and Atmospheric Sciences  Instructor: Beth Simmons
Prefix and Course Number: GEG 150E  Semester/year offered: Summer, 2001
Banner Number (for Academic Affairs use): CL: GEL 150E

Course Title: Mining Ghost Towns of Colorado

Credit Hours: 3 + 0  Contact Hours-students: 45  Total Other Hours*: ______
Contact Hours-faculty: 45

Meeting Times/Dates: Five Friday evening classroom lectures (June 1, 8, 15, 22, and 29),
3.5 hours each
Four all-day field lectures (June 2, 9, 16, and 23)

Grading Mode(s): L  Schedule Type(s): L

Prerequisites/Corequisites: GEL 1010 or GEG 1100, or permission of instructor

Required Reading Materials (author, title, publisher, copyright date):
Will be provided through instructor or bookstore
B. Mosch, Alvin, The Lamartine History, 2001 (rough draft).
C. Digerness, David, The Mineral Belt: Georgetown and the Colorado Central Railroad,
D. Sampson, Joanna, Walking through History on Marshall Mesa, Boulder Open Space
Department, 1995.
F. Selected readings provided by instructor.

Evaluation of Student Performance:
A. Two 100-point examinations, total 200 points
B. Class project (an individual portion of a class research paper on the history of the town site
of Freeland in the Trail Run District, Clear Creek County), 200 points
C. Participation in four field-lectures, 25 points each, total 100 points
Specific (measurable) Student Behavioral Learning Objectives: Upon successful completion of this course, students should be able to:

1. identify the major events of gold, coal, and molybdenum discoveries in Colorado by location and time;
2. plot on a map the movement of gold prospectors in the state throughout the late 1800's;
3. explain historical and current settlement patterns of Boulder and Clear Creek Counties;
4. identify 10 major ores, mineral-bearing rocks, and their sources in Colorado;
5. discuss the roles of major players in gold, silver, and coal discovery, transportation, and production and their impacts on the development of Colorado;
6. identify early mining and processing equipment and explain relationships between technology and mining history;
7. explain the relationships between the development of mining, lumber, and cattle ranching and the development of railroads throughout Colorado;
8. explain the relationship of the patterns of railroad development to the beginnings of the tourist industry;
9. explain processes of town site development and dissolution; and
10. conduct a joint research project on the history of a town site.

Detailed outline of course content (major topics and subtopics) or outline of field experience/internship (experience, responsibilities and supervision):

A. History of Gold discoveries in Colorado
   1. Clear Creek County
      a. George Jackson
      b. John Gregory
   2. Boulder County
      a. Aikens – Gold Hill
      b. Langley – Deadwood Diggins

B. Early Transportation by First Settlers
   1. Beasts of burden
   2. Types of wagons, stages
   3. Early trade routes and trails

C. Development of Coal Fields
   1. Marshall Mesa
   2. Rooney Valley
   3. South Park
   4. Importation of miners

D. Development of Supply Towns
   1. Denver and Auraria
      a. William Greenberry Russell – Auraria
      b. Easter party – St. Charles
      c. Larimer – Denver
      d. Sopris - Arapahoe City
      e. Golden and Jackson – Golden City
E. Immigration of Miners
   1. Home countries and customs
   2. Patterns of settlement
   3. Late arrivals

F. Development of Mining Districts
   1. Mining laws and claims
   2. Ownership of claims

G. Early Placer Deposits and Ore Bodies
   1. Spanish Bar
   2. Gregory Lode
   3. Freeland/Lamartine Veins

H. Mining and Milling Equipment
   1. Panning, hydraulics, Arrastras
   2. Mill development and construction
      a. Stamp mills, crushers
      b. Smelters
      c. Concentration mills
      d. Mill site claims and development
   3. Mining technology
      a. Black powder, dynamite
      b. Ore carts, rail and tram systems
      c. Carbide lamps
      d. Electricity

I. Railroad History – Routes and Roles
   1. Colorado and Southern
   2. Denver and Rio Grande
   3. Colorado Midland
   4. Moffat Tunnel
   5. Argentine Central
   6. Georgetown Loop

J. Military History of State
   1. Fremont Surveying party and Gilpin
   2. Gunnison Massacre
   3. Wm. Bent
   4. Sopris in Arapahoe City
   5. Colorado National Guard in coal mining history
   6. Military role in gold mining strike

K. Group Research Project
Approved - Omnibus course:

<table>
<thead>
<tr>
<th>Department Chair</th>
<th>Date</th>
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<tbody>
<tr>
<td>James M. Cormett</td>
<td>11/10/00</td>
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<tr>
<th>Dean of School</th>
<th>Date</th>
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<tr>
<td>Deanne Miller-Hardy</td>
<td>11/13/00</td>
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<tr>
<th>Associate Vice President for Academic Affairs</th>
<th>Date</th>
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<tr>
<td>Frida Kast-Holley</td>
<td>11/15/00</td>
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**Approved - Field Experience/Internship Only:**

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<tr>
<th>Location of Internship</th>
<th>Date</th>
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<tr>
<th>Faculty Evaluation Group</th>
<th>Date</th>
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<tr>
<th>Field Supervisor**</th>
<th>Date</th>
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**Approval by the Field Supervisor is required and must be indicated by the original signature of that supervisor on the syllabus.**

Guidelines as set forth in the omnibus course section of the Bulletin must be followed. An accurate copy of each course syllabus must be on file in the Office of Academic Affairs prior to the listing of such course in any semester schedule.
COURSE CROSSLISTING AGREEMENT FORM
The Metropolitan State College of Denver

This is to confirm that the undersigned have met, discussed, and agreed that the following course be crosslisted as follows:

Original/Standing Course:

<table>
<thead>
<tr>
<th>Department Prefix</th>
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<tr>
<td>GE4</td>
<td>150E</td>
<td>Mining Ghost Towns of Colorado</td>
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Course to be crosslisted with (one or more courses):

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<tbody>
<tr>
<td>GE1</td>
<td>150S</td>
<td>Mining Ghost Towns of Colorado</td>
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beginning 2001/0 (semester and year).

Approved:

[Signature]
Department Chair/Institute Director
Date 11/12/00

[Signature]
Department Chair/Institute Director
Date 11/12/00

[Signature]
Dean
Date 11/13/00

[Signature]
V. P. for Academic Affairs
Date 11-15-00

Please forward the completed form to the Office of Academic Affairs for processing and recordkeeping (CN 318, Box 48). It will remain in force until rescinded by one of the parties using the Crosslisting Termination Form.
METROPOLITAN STATE COLLEGE OF DENVER
Omnibus Course Syllabus

School of Letters, Arts and Sciences

Department: Earth and Atmospheric Sciences         Instructor: Beth Simmons
Prefix and Course Number: GEG 150             Semester/year offered: Summer, 2001
Banner Number (for Academic Affairs use): C.L. G.E.L 50.T

Course Title: Volcanic Landforms of Colorado

Credit Hours: 3 + 0          Total Other Hours*: ___
Contact Hours-students: 45
Contact Hours-faculty: 45

Meeting Times/Dates: Four Friday evening classroom lectures (July 13, 20, 27, and
August 3), 3 hours each
Five all-day field lectures (July 14, 21, 28, 29, and August 4)

Grading Mode(s): L           Schedule Type(s): L

Prerequisites/Corequisites: GEL 1010 or GEG 1100, or permission of instructor

Required Reading Materials (author, title, publisher, copyright date):
A. Taylor, Andrew, Guide to the Geology of Colorado: Cataract Lode Mining Company, Golden,
B. Volcanic information provided by instructor
C. USGS publications
D. Reading and question handouts provided by instructor
E. Information from the Internet and Museum resources

Evaluation of Student Performance:
A. Two 100-point examinations
   1. Before two-day field lecture
   2. Final
B. Four 25-point quizzes, given in field, total of 100 points
C. A 5- to 6-page paper relating the geologic history of a volcanic site in Colorado, 100 points

Specific (measurable) Student Behavioral Learning Objectives: Upon successful completion of
this course, students should be able to:
1. identify at least 20 different volcanic rock types and associated minerals;
2. identify the sources of volcanic rock types;
3. Identify types of volcanic environments which occurred in Colorado;
4. Identify types of plutonic environments in Colorado;
5. Identify erosional remnants of volcanic environments on aerial photos and topographic maps;
6. Discuss the volcanic history of the Front Range;
7. Discuss the volcanic and paleontological history of the Florissant Fossil Beds National Monument; and
8. Discuss the volcanic history of the San Juan Mountains and LaGarita Caldera.

Detailed outline of course content (major topics and subtopics) or outline of field experience/internship (experience, responsibilities and supervision):

A. Introduction to the Geological Time Scale
   1. History of the time scale
   2. Times of volcanic activity

B. Classification of igneous rocks and minerals
   1. Magma composition and chemistry
   2. Naming of igneous rocks and origin of rock types

C. Evolution of volcanoes
   1. Hot spot type volcanism
   2. Vent type volcanism
   3. Subduction type volcanism

D. Preservation of and dating volcanic material
   1. Introduction to volcanic processes
   2. Types of dateable minerals
   3. Methods of dating volcanic materials

E. Precambrian volcanism and igneous intrusions
   1. Types of Precambrian volcanics in the Rocky Mountains
   2. Locations of Precambrian landforms and volcanic rocks
   3. Possible origins of Precambrian volcanics

F. Paleozoic volcanism in Colorado
   1. Locations of Paleozoic igneous intrusions and associated volcanic rocks

G. Mesozoic volcanism in Colorado
   1. Plate tectonic activity in Colorado during the Mesozoic
   2. Types and ages of Mesozoic volcanoes and intrusions
   3. Locations of Mesozoic volcanics in western North America
   4. Influence of volcanism on Colorado area
   5. Laramide orogeny in the Rocky Mountains

H. Cenozoic volcanism in Colorado
   1. Tertiary volcanic episodes up to 2 million years ago
   2. Quaternary volcanic episodes and mechanisms during the last 2 million years

I. Field-lecture sites:
   1. Florissant Fossil Beds National Monument
   2. Ruby Mountain at Nathrop
   3. Thirty-nine mile field at Guffey
4. Rio Grande Rift –San Luis Valley
5. Summer Coon Volcano in the San Juan Field
6. Capulin National Monument, New Mexico
7. Curecanti National Recreation Area
8. La Veta Rhyolite dome
9. Spanish Peaks
10. Del Norte Volcanic field
11. Raton Mesa
12. North and South Table Mountain, Golden
13. Finger Rock, Middle Park

J. Summary of volcanism in Colorado

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Approved - Omnibus course:

Department Chair

Date

Dean of School

Date

Associate Vice President for Academic Affairs

Date

Approved - Field Experience/Internship Only:

Location of Internship

Date

Faculty Evaluation Group

Date

Field Supervisor**

Date

**Approval by the Field Supervisor is required and must be indicated by the original signature of that supervisor on the syllabus.

Guidelines as set forth in the omnibus course section of the Bulletin must be followed. An accurate copy of each course syllabus must be on file in the Office of Academic Affairs prior to the listing of such course in any semester schedule.
COURSE CROSSLISTING AGREEMENT FORM
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beginning 2001/10 (semester and year).

Approved:

Department Chair/Institute Director

Date

Department Chair/Institute Director

Date

Dean

Date

Dean

Date

V. P. for Academic Affairs

Date

Please forward the completed form to the Office of Academic Affairs for processing and recordkeeping (CN 318, Box 48). It will remain in force until rescinded by one of the parties using the Crosslisting Termination Form.
REQUEST FOR GENERAL STUDIES DESIGNATION (2010-11)
GLOBAL DIVERSITY

Please review the Course Selection Criteria for this category for assistance in completing this form, particularly as it relates to the percentages associated with each Student Learning Outcome.

This form should always accompany a Request form for another course category so most of the course information will be found on that form.

<table>
<thead>
<tr>
<th>Prefix</th>
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<tr>
<td>GEG</td>
<td>1000</td>
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A. Course content and Student Learning Outcomes

Describe the specific ways in which this course addresses each of these Student Learning Outcomes, providing students opportunities to develop the skills and abilities and/or acquire the knowledge. Include reference to readings, discussions, lectures, and other pedagogical tools which will be used.

22. Exhibit knowledge of one or more regions or countries outside the United States including aspects such as the historical, political, social, cultural, legal, or business contexts' of these regions or countries. (50%)

Through lecture, readings, and discussions in particular, students will be given the physical background of each major world region. The main emphasis however will then be on the distinctive human geography of the region including its ethnic and cultural diversity, population patterns, urban and political patterns, economic structure, and contemporary geographic issues. Assigned exercises and/or written reports or presentations will also emphasize the regions distinctive human geography.

23. Describe the implications of global interdependence including its impact on societies from a governmental, technological, institutional, organizational, or individual context. (25%)

Starting with chapter 1 where the concept of globalization is defined, students discover the main physical and human spatial patterns of each world region and how those patterns are not only interrelated within each region, but to the rest of the world as well. For example, in the Chapter on North Africa and the Middle East time is spent analyzing the importance of oil in developing the area locally, but also on how dependence of oil from this region affects the of rest of the world as well.
B. Assessment of Student Learning:

Identify and describe at least one specific form of assessing student achievement of each Student Learning Outcome which will be a regular part of the course. Examples include specified test questions, specified problem sets, written paper prompts and scoring guide or rubric, projects with assignment sheet and scoring guide or rubric, etc. Include attachments as applicable. A single piece of student work may be used to assess student achievement of more than one Student Learning Outcome.

22. Exhibit knowledge of one or more regions or countries outside the United States including aspects such as the historical, political, social, cultural, legal, or business contexts of these regions or countries.

A combination of examinations, exercises, and country reports will be used to assess this outcome. (see Attachments 2, 3, and 4)

23. Describe the implications of global interdependence including its impact on societies from a governmental, technological, institutional, organizational, or individual context.

A combination of examinations, exercises, and country reports will be used to assess this outcome. (see Attachments 2, 3, and 4)

C. Course Selection Guidelines

Briefly describe how the course meets the course selection guidelines

The course has demonstrable breadth because it includes SLOs and course content that relate to at least three of the following aspects of societies outside the United States: Political, Social, Business, Cultural, Historical, and/or Legal

This course covers major world regions including North America, Europe, Asia, Africa and South America familiarizing students with other parts of the world emphasizing such topics as a region’s varying physical background, ethnic diversity, population patterns, political patterns and economic endeavors as well as a discussion of contemporary geographic issues in each region.
Approvals:

Robert Wagon 8/10/11

Department Curriculum Committee / Date

Tamara Englin 8/11/11

Department Chair or Program Director / Date

Chief E. Rangel 11/2/11

School Curriculum Committee / Date

Sandra Leyo-Perez 11/3/11

Dean or Associate Dean / Date

Nell Brewer 11/22/11

Chair, General Studies Committee / Date

Sheila A. Thompson 2/16/12

Associate Vice President, Academic Affairs / Date
REQUEST FOR GENERAL STUDIES DESIGNATION (2010-2011)
SOCIAL and BEHAVIORAL SCIENCES I

Please review the Course Selection Criteria for this category for assistance in completing this form, particularly as it relates to the percentages associated with each Student Learning Outcome.

If this course is also being submitted for the Global Diversity Category, check here ☐, and complete and attach the separate Global Diversity Studies Designation request.

Date: 8/10/11
School: LAS
Department: Earth & Atmospheric Sciences

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Title: World Regional Geography

Prerequisite(s): Minimum performance standard scores on reading, writing, and mathematics placement tests
Corequisite(s): None
Banner enforced prerequisite(s) and/or corequisite(s): None
Recommended maximum enrollment per section: 45
A. Student Learning Outcomes

Describe the specific ways in which this course addresses each of these Student Learning outcomes, providing students opportunities to develop the skills and/or acquire the knowledge. Include reference to readings, discussions, lectures, and other pedagogical tools which will be used. See Criteria Table for examples.

2. Demonstrate the ability to locate sources when information is needed, and to evaluate the authenticity, validity, and reliability of resources applied to a specific purpose (10%)

Students will be required to gather information for exercises and/or written reports or presentations about an area or region of the world. Students must demonstrate that the sources they use for the information presented are reliable and that the data presented is valid.

6. Analyze texts, sources and argumentation, identify relationships and recognize fallacies of argument. (10%)

Students will be expected to:
- Use readings, maps, air photographs and other remotely sensed data to identify natural and human (cultural) spatial patterns and spatial relationships
- Identify the factors that affect the development of these spatial relationships and how spatial patterns affect each other and are modified through time
- Analyze a region's changing cultural and environmental trends and distinguish the factors causing them

7. Use and document sources and evidence in an ethical manner (10%)

Students will be required to gather information for exercises and/or written reports or presentations about an area or region of the world. Students must use standard methods of citation and must demonstrate that the sources they use are appropriate and reliable and that the data presented is valid. Students will be held to ethical standards of presentation.

10. Describe how the methods of science are used to generate new knowledge (10%)

Through lecture, discussions, readings, exercises and/or written reports or presentations, students will become familiar with the science of geography including major geographical concepts (e.g., spatial interaction, distance decay, location, scale) and theories e.g., (Central Place Theory), data collection, and data analysis.

17. Describe the forms and impacts of geographical conditions or social, economic, financial or political practices on the human experience using analytical methods appropriate to the field. (80%)

Through lecture, readings, and discussions in particular, students will be given the physical background of each major world region. The main emphasis however will then be on the distinctive human geography of the region including its ethnic and cultural diversity, population patterns, urban and political patterns, economic structure, and contemporary geographic issues. Assigned exercises and/or written reports or presentations will also emphasize the regions distinctive human geography.
B. Assessment of Student Learning

Identify and describe at least one specific form of assessing student achievement of each Student Learning Outcome which will be a regular part of the course. Include attachments as applicable. A single piece of student work may be used to assess student achievement of more than one Student Learning Outcome. See the Criteria Table for potential data for use in assessment.

2. Demonstrate the ability to locate sources when information is needed, and to evaluate the authenticity, validity, and reliability of resources applied to a specific purpose. (10%)

- Written reports on a particular country or world topic will require students to research and demonstrate the reliability and validity of resources their reports are based on as well as familiarizing them with the geography of world regions or contemporary world problems (see Attachment 2). The written report will be used to evaluate the student learning outcome.
- Online assignments will allow students to locate sources and evaluate data as a way to show human geographical patterns and trends (see attachment 2). Map assignments and discussion questions based on these maps will be used to assess the student learning outcome.

6. Analyze texts, sources and argumentation, identify relationships and recognize fallacies of argument. (10%)

- Written reports on a particular country or world topic will require students to research texts, journals and other sources, identify geographic relationships and observe different points of view on chosen topics including contemporary world problems (see Attachment 2). The written report will be used in assessing this part of the student outcome.
- Online assignments will familiarize students with analyzing sources, recognizing different viewpoints and drawing conclusions. Answers to the assignments questions will be used to assess this part of the student outcome. (see Attachment 3)

7. Use and document sources and evidence in an ethical manner. (10%)

- The written reports on a particular country or world topic will be analyzed for proper notation and documentation. (see Attachment 2)

10. Describe how the methods of science are used to generate new knowledge. (10%)

- The written report on a particular country or world topic (See Attachment 2) will be used to assess the ability of students to apply the methodologies of geographical analysis in terms of physical geography, climate and vegetation, history, demographics, and economic development.

17. Describe the forms and impacts of geographical conditions or social, economic, financial, or political practices on the human experience using analytical methods appropriate to the field. (SBS 1 80%)

- A combination of examinations, exercises, and written assignments will be used to assess this student outcome. (see Attachments 2, 3, and 4).
C. Conformation with Course Selection Guidelines

Briefly describe how the course meets the course selection guidelines

- To demonstrate breadth, describe the different areas of the Social Science I examined within the course. Course content must address at least two major areas or domains in a discipline.
  - This course covers major world regions including North America, Europe, Asia, Africa and South America familiarizing students with other parts of the world emphasizing such topics as a region’s varying physical background, ethnic diversity, population patterns, political patterns and economic endeavors as well as a discussion of contemporary geographic issues in each region.
  - The course uses major geographic concepts such as location, scale, spatial interaction, spatial distribution and the region to describe the geographic impacts on the human experience. The course uses major geographic tools such as maps, GIS (Geographic Information Systems), air photos and other remotely sensed data to elicit and help explain the world’s varying spatial patterns in the topics mentioned above.

Approvals

Richard Wynn 8/10/11

Department Curriculum Committee / Date

Department Chair or Program Director / Date

David E. wallett 11/2/11

School Curriculum Committee / Date

Linda Yang-Pennel 11/3/11

Dean or Associate Dean / Date

Nelle Howard 11/22/11

Chair, General Studies Committee / Date

Sheila A. Thompson 3/16/12

Associate Vice President, Academic Affairs / Date
REGULAR COURSE SYLLABUS
GENERAL STUDIES

School of: LAS
Department: EAS
Prefix & Course Number: GEG 1000 Crosslisted With*: N/A
Course Title: World Regional Geography
Check All That Apply: Required for Major: ___ Required for Minor: ___ Specified Elective: x
Required for Concentration: ___ Elective: x Service Course: ___
Credit Hours: 3 (3+0)
Total Contact Hours per semester (assuming 15-16 week semester):
Lecture 45 Lab 0 Internship 0 Practicum 0 Other (please specify type and hours): 0
Schedule Type(s): L Grading Mode(s): L
Variable Topics Courses (list restrictions, including the maximum number of hours that can be earned**): N/A
** NOTE: This information must be included in the course description.
Restrictions (Variable Topics Course): N/A
Prerequisite(s): Minimum performance standard scores on reading, writing, and mathematics placement
tests
Corequisite(s): None
Prerequisite(s) or Corequisite(s): None
Banner Enforced:
Prerequisite(s): None
Corequisite(s): None
Prerequisite(s) or Corequisite(s): None
Catalog Course Description: This course presents the study of the formation, behavior, and interaction of
social, political, cultural, and economic regions throughout the world.

APPROVED:

Department Chair OR Program Director
Date

Dean OR Associate Dean
Date

Associate VP, Academic Affairs
Date

*If crosslisted, attach completed Course Crosslisting Agreement Form
Prefix and Course Number: GEG 1000

Required Reading and Other Materials will be equivalent to:

Course Category and Related Student Learning Outcomes:
General Studies: Social and Behavioral Sciences I
2. Demonstrate the ability to locate sources when information is needed, and to evaluate the authenticity, validity, and reliability of resources applied to a specific purpose (10%)
6. Analyze texts, sources, and argumentation, identify cause and effect relationships and recognize fallacies of argument (10%)
7. Use and document sources and evidence in an ethical manner (10%)
10. Describe how the methods of science are used to generate new knowledge (10%)
11. Describe the forms and impacts of geographical conditions or social, economic, financial, or political practices on the human experience using analytical methods appropriate to the field.

General Studies: Global Diversity
22. Exhibit knowledge of one or more regions or countries outside the United States including aspects such as the historical, political, social, cultural, legal, or business contexts of these regions or countries. The course must include content related to at least three of the six aspects referenced in this outcome. (50%)
23. Describe the implications of global interdependence including its impact on societies from a governmental, technological, institutional, organizational, or individual context. (25%)

Specific, Measurable Student Behavioral Learning Objectives:

Upon completion of this course students will be able to:

1. locate places and regions on the earth’s surface identifying, describing and explaining: (17)
a. geographic grid systems
b. absolute and relative location as it is involved in spatial interaction

2. demonstrate an understanding of human and physical relationships within places and regions by describing and explaining: (2, 6, 7, 17, 22, 23)
a. human use of the environment at various scales and levels of generalization
b. the spatial patterns of human development as related to environmental spatial patterns

3. explain the increasing spatial interaction between and among people and places and regions (globalization) by locating, describing, and differentiating: (2, 6, 7, 10, 17, 22, 23)
a. cultural regions of the world
b. types of spatial relationships
c. causes of human spatial patterns
d. consequences of and potential changes in spatial interaction
e. spatial diffusion of cultural phenomena

4. use basic geographical tools of research and analysis including: (2, 7, 10)
a. atlases, maps, aerial photographs and other remotely sensed images, geographic information systems (GIS), graphs and globes
b. data sources such as census materials and surveys
c. basic scientific skills including sampling and inductive and deductive reasoning
Prefix and Course Number: GEG 1000

Detailed Outline of Course Content (major Topics and Subtopics)

I. Foundations of World Regional Geography (2, 6, 10, 17)
   A. The Basics of Contemporary Geography
      1. Human and Physical Geography
      2. Geographic tools
   B. Globalization and Localization
   C. The Concept of Regions
      1. Environmental Regions
      2. Cultural Regions
   D. Religions and Politics
   E. Economies (Wealth, Poverty, Development, and Human Rights)

II. Europe (2, 6, 7, 10, 17, 22, 23)
   A. Defining the Region
   B. Europe’s Distinctive Physical Geography
   C. Europe’s Distinctive Human Geography
      1. Ethnic and Cultural Diversity
      2. Population—Patterns and Trends
      3. Urbanization
      4. Evolving Political Patterns
      5. Europe’s Economies—Agricultural, Industrial, and Service
   E. Contemporary Geographic Issues

III. Russia and Neighboring Countries (2, 6, 7, 10, 17, 22, 23)
   A. Defining the Region
   B. The Region’s Distinctive Physical Geography
   C. The Region’s Distinctive Human Geography
      1. Ethnic and Cultural Diversity
      2. Population—Patterns and Trends
      3. Urban Patterns
      4. Evolving Political Patterns
      5. Economic Patterns—Agricultural, Industrial, and Service
   D. Contemporary Geographic Issues

IV. East Asia (2, 6, 7, 10, 17, 22, 23)
   A. Defining the Region
   B. East Asia’s Distinctive Physical Geography
   C. East Asia’s Distinctive Human Geography
      1. Ethnic and Cultural Diversity
      2. Population—Patterns and Trends
      3. Urban Patterns
      4. Varying Political Patterns
      5. Varying Economies—Agricultural, Industrial, and Service
   D. Contemporary Geographic Issues
Prefix and Course Number: GEG 1000

V. Southeast Asia (2, 6, 7, 10, 17, 22, 23)
   A. Defining the Region
   B. Southeast Asia’s Distinctive Physical Geography
   C. Southeast Asia’s Distinctive Human Geography
      1. Ethnic and Cultural Diversity
      2. Population—Patterns and Trends
      3. Urban Patterns
      4. Varying Political Patterns
      5. Varying Economies—Agricultural, Industrial, and Service
   D. Contemporary Geographic Issues

VI. South Asia (2, 6, 7, 10, 17, 22, 23)
   A. Defining the Region
   B. South Asia’s Distinctive Physical Geography
   C. South Asia’s Distinctive Human Geography
      1. Ethnic and Cultural Diversity
      2. Population—Patterns and Trends
      3. Urban Patterns
      4. Varying Political Patterns
      5. Varying Economies—Agricultural, Industrial, and Service
   D. Contemporary Geographic Issues

VII. Northern Africa and Southwestern Asia (2, 6, 7, 10, 17, 22, 23)
   A. Defining the Region
   B. North Africa and Southwestern Asia’s Distinctive Physical Geography
   C. North Africa and Southwest Asia’s Distinctive Human Geography
      1. Ethnic and Cultural Diversity
      2. Population—Patterns and Trends
      3. Urban Patterns
      4. Varying Political Patterns
      5. Varying Economies—Agricultural, Industrial, and Service
      6. The Importance of Oil locally and Globally
   D. Contemporary Geographic Issues

VIII. Africa South of the Sahara (2, 6, 7, 10, 17, 22, 23)
   A. Defining the Region
   B. The Region’s Distinctive Physical Geography
   C. The Region’s Distinctive Human Geography
      1. Ethnic and Cultural Diversity
      2. Population—Patterns and Trends
      3. Urban Patterns
      4. Varying Political Patterns
      5. Varying Economies—Agricultural, Industrial, and Service
   D. Contemporary Geographic Issues

IX. Oceania: Australia, New Zealand and the Pacific (2, 6, 7, 10, 17, 22, 23)
   A. Defining the Region: The Influence of the Sea
   B. Oceania’s Distinctive Physical Geography
   C. Oceania’s Distinctive Human Geography
      1. Ethnic and Cultural Diversity
      2. Population—Patterns and Trends
Prefix and Course Number: GEG 1000

3. Urban Patterns
4. Political Characteristics
5. Varying Economies—Agricultural, Industrial, and Service

D. Contemporary Geographic Issues

X. Latin America (2, 6, 7, 10, 17, 22, 23)
   A. Defining the Region
   B. Latin America’s Distinctive Physical Geography
   C. Latin America’s Distinctive Human Geography
      1. Ethnic and Cultural Diversity
      2. Population—Patterns and Trends
      3. Urban Patterns
      4. Political Characteristics
      5. Varying Economies—Agricultural, Industrial, and Service
   D. Contemporary Geographic Issues

XI. North America (2, 6, 7, 10, 17, 22, 23)

   A. Defining the Region
   B. North America’s Distinctive Physical Geography
   C. North America’s Distinctive Human Geography
      1. Ethnic and Cultural Diversity
      2. Population—Patterns and Trends
      3. Urban Patterns
      4. Political Characteristics
      5. Varying Economies—Agricultural, Industrial, and Service
   D. Contemporary Geographic Issues

Evaluation of Student Performance

1. A minimum of 3 major exams counting for a minimum of 50% of the class grade
2. Outside of class paper on a World Region or Topic
3. Any other written assignments, presentations or exercises as required by the instructor
SECTION-A: COUNTRY REPORT

OBJECTIVE
1. Research a country in general and Millennium Development Goal's achieved in particular.
2. Analyzing and comparing country of choice with the United States of America.

RESEARCH QUERIES
1. Develop a written profile of a country to understand the physical, socio-economic and political setting.
2. Research various aspects of progress made by your county with respect to MILLENNIUM DEVELOPMENT GOALS.

INSTRUCTIONS:
1. Research about at least one MDG and choose/identify a country of your interest where you think the MDG's have been achieved or at least progress has been made.
2. Address the following questions in your report:
   a. What are MDG's?
   b. What are the eight goals of MDG's?
   c. What is the purpose of MDG's?
   d. Identify the country's most apparent problem or crisis that could affect positive change in the future
3. Conclude your report by suggesting strategies to mitigate the problems and promote future development in your country.

ABOUT THE MILLENNIUM DEVELOPMENT GOALS (MDGS):
• MDG's aims to reduce poverty and hunger promote gender equality; achieve education and environmental sustainability in different parts of the world by 2015. There are eight major goals:
1. GOAL 1: ERADICATE EXTREME HUNGER AND POVERTY
2. GOAL 2: ACHIEVE UNIVERSAL PRIMARY EDUCATION
3. GOAL 3: PROMOTE GENDER EQUALITY AND EMPOWER WOMEN
4. GOAL 4: REDUCE CHILD MORTALITY
5. GOAL 5: IMPROVE MATERNAL HEALTH
6. GOAL 6: COMBAT HIV/AIDS, MALARIA AND OTHER DISEASES
7. GOAL 7: ENSURE ENVIRONMENTAL SUSTAINABILITY
8. GOAL 8: DEVELOP A GLOBAL PARTNERSHIP FOR DEVELOPMENT
WRITTEN REPORT:
The written report must have the following headings:
1. Physical Geography
2. Climate/Vegetation
3. History
4. Demographics
5. Economic development
6. Contemporary issues
7. Introduction and explanation of the MDG

INSTRUCTIONS & GUIDELINES FOR THE FORMAT:
The report must be well-written, typed and logically structured and must follow the given format:
1. One inch margins (Corners/indents).
2. 11 Font size (Arial) or 12 Font size (Times New Roman).
3. 1.5 Space (no double space)
4. Major headings should be bold and underlined.
5. Pay careful attention in your paper to grammar and editing.
6. Use maps, tables/charts to present statistical data and information.
7. There is no page limit but the report should not be less than 20 pages.
8. The written version of your country should be typed; it must include bibliography/references of at least two books, three newspaper articles, and three scholarly journals.
9. Do not use information from Wikipedia (you will lose points for using it).
10. Do not plagiarize. *Plagiarism refers to the use of another person's work without giving proper credit to it. Please use appropriate citation format when (a) copying verbatim another person's work (i.e., words, phrases, sentences, or entire passages); (b) paraphrasing another person's work (i.e., borrowing but rewording that person's facts, opinions, or ideas); and (c) summarizing another's work (i.e., use of one's own words to condense longer passages into a sentence or two). *Failure to comply with the aforementioned requirements may result in a failing grade.
11. Bibliography/References: MLA format is mandatory.
12. Type, print and submit the assignments personally to me in the classroom (do not email and submit hand written assignment).
13. 25 April 2011 is the last date to submit the assignment (late assignment will not be accepted under any circumstances).
14. The oral presentations will be held on 4 MAY, 2011.

Note: Failure to conform to the prescribed format, instructions and late submission may result in deduction of points.

ORAL PRESENTATION:
1. Mention the most important points about your country regarding MDG’s
2. You will be graded both on the clarity of your presentation and its contents.
3. The oral presentation should not be less than ten minutes.
4. You can use the visual aids for your presentation.
5. A rubric for oral presentation will be provided in the class.
SECTION-B: COUNTRY WORKSHEET

1. Fill out the information in the country worksheet, compare the data/information of your country with United States and submit it with your country report (do not mention the MDG’s for USA in the worksheet).
2. You must submit your country report and the country worksheet together on the due date.

IMPORTANT WEBSITES:

GROUP: ______________

NAME OF THE STUDENTS: ____________________________________________

NAME OF THE COUNTRY: ____________________________

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>UNITED STATES</th>
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</table>

1.) PHYSICAL GEOGRAPHY:

a) AREA
(Miles/Kms): ____________________________

b) NEIGHBOURING COUNTRIES:
____________________________________
____________________________________
____________________________________

C) CLIMATE:
____________________________________
____________________________________
____________________________________

d) VEGETATION:
____________________________________
____________________________________
____________________________________
2.) DEMOGRAPHIES:

<table>
<thead>
<tr>
<th>COUNTRY</th>
<th>UNITED STATES</th>
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<tbody>
<tr>
<td>a) POPULATION:</td>
<td></td>
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<td>b) INFANT MORTALITY RATE:</td>
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<td>c) LIFE EXPECTANCY:</td>
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<td>d) HIV/AIDS %:</td>
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</table>

3.) CULTURE:

a.) List the major language/languages (%age if available) and attach a map (quote a source) with the worksheet.

1. 
2. 
3. 
4. 

b.) List the major religions (% if available) and attach a map (quote a source) with the worksheet.

1. 
2. 
3. 
4. 

4.) HISTORY:

List at least three important events/ dates and specify why they are important?

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<tr>
<th>EVENT/ DATE</th>
<th>WHY IS IT IMPORTANT?</th>
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**ECONOMIC DEVELOPMENT:**

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<tr>
<th>COUNTRY</th>
<th>UNITED STATES</th>
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<tr>
<td>a) PER CAPITA GDP: $______________</td>
<td>$______________</td>
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<tr>
<td>b) HDI RANKING: ________________</td>
<td>________________</td>
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<tr>
<td>c) PERCENTAGE OF WORKFORCE INVOLVED IN:</td>
<td></td>
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<tr>
<td>c.1) AGRICULTURE: ________________</td>
<td>________________</td>
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<tr>
<td>c.2) INDUSTRY: ________________</td>
<td>________________</td>
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<tr>
<td>c.3) SERVICES: ________________</td>
<td>________________</td>
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<tr>
<td>d) Development status (In general, what do you think your country is developing or least developed, why is it so?)</td>
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6.) **MAJOR ISSUES:** (What are the major issues your country is facing currently?)

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7.) **SOURCES CITED:**

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ATTACHMENT 3
5.1 Census Tools for Mapping Ethnic Diversity

In Exercise 3.2, you used an online mapping tool of the U.S. Census, American FactFinder, to explore some basic population numbers in two cities. In this exercise, we will return to more fully explore the data and tools freely available at this Web site while increasing our understanding of the geography of ethnicity across the United States.

**Step 1** Launch your Web browser, and navigate to the "American Factfinder" link under Exercise 5.1 in the "Exploring Human Geography with Maps" section of the Human Mosaic Web site. This will take you to the main page for American FactFinder, shown here.

FactFinder allows you to explore a myriad of socioeconomic data by tables, maps, or both. Occupation, number of foster children in the family, travel time to work, and language spoken at home, are just some of the variables accessible here. Which particular data is available depends on the geographic scale that you are viewing (for example, state, county, or metropolitan areas) and whether the type of display you would like to view is a table or a map.

For this exercise, we will focus on the mapping function to help visualize spatial differences in ethnic groups.

**Step 2** Click on “Maps” in the left column and select “Thematic Maps (data).” Under the “People” heading, choose “Persons per Square Mile: 2008.” You are now at the main mapping page of FactFinder.

To get to the ethnicity data, you first need to change the data set displayed in the map. Notice in the upper-left corner of the Web page, there is a line that begins “You are here” and displays the path that resulted in your map of population density. FactFinder allows you to browse a number of different census data sets. Each data set shows different kinds of population information.

**Step 3** From the “You are here” menu bar in the left corner of the screen, select the “Data Sets with Thematic Maps” step in the path. Doing so will take you to a list of data sets available for mapping. You can get a list of themes within each data set by selecting one and clicking on the “What’s This?” button.

For this exercise, we want to look at the ancestry themes, which are in the data set “Census 2000 Summary File 3 (SF 3)—Sample Data.”

**Step 4** Choose “Census 2000 Summary File 3 (SF 3)—Sample Data” and click the “Next” button.

Next you need to specify where in the United States you would like to view this data. We’ll start with the country as a whole.

**Step 5** From the “Select Geography” Web page, leave the selection method at its default of “list.” For geographic type, select “Nation.” For geographic area, select “United States,” then click the “Next” button. You should now be at the “Select Theme” Web page.

**Step 6** Choose “by subject” as the theme selection method and go to the “Population Totals—Race and Ethnic Groups” subject category. Choose “Ancestry” and click “Search.” The search will return a list of all available ancestry themes to portray in the map.
Step 7 Scroll through the list of themes and choose one that is most interesting to you. When you have selected it from the list, click the “Show Result” button.

You should now be looking at the distribution of the ancestry group by state for the whole United States.

Ethnic Homelands and Ethnic Islands
One aspect of ethnic geography that we can explore from here is the existence of ethnic homelands and ethnic islands. Examine the generalized map you have created with FactFinder. The map probably shows some regional differentiations, but because the data is presented at the state level, it is not a very good source for analyzing the locations of ethnic homelands and islands. For better detail, you want to change the enumeration unit from states to counties.

“Enumeration unit” is a term used to describe the geographic unit (such as county, zip code, or census tract) at which data has been collected.

Step 8 Centered just above the map you will see a menu indicating that you have chosen to “Display map by: State.” From the pull-down arrow, change the selection to “County” and wait for the map to redraw.

Step 9 Begin exploring the map for evidence of an ethnic homeland or ethnic islands for this ancestry group.

Tips for exploring: If the black lines of the county boundaries are interfering, try zooming in using the Zoom buttons above the map. You can then pan around the map using the pan arrows at the edges of the map or with the tool available above the map.

If the roads or water features are also interfering, you can turn off these features by going to the left side of the page, above the Legend, and clicking on “Change... Boundaries and features.” Select the “Features” tab and turn off the features you don’t want, and press “Update” in the upper-right corner.

To identify a particular county, click on the Identify tool, symbolized by the letter “i,” and then click on the county you want to identify.

Step 10 Analyze the spatial pattern that you observe in the map.

Question 1: Which ancestry group did you choose? Does this population appear to have an ethnic homeland? If so, describe its location. If you don’t think there is an ethnic homeland evident, what characteristic about the spatial pattern in the map gives you that impression?

Question 2: Where are the ethnic islands for this ancestry group? Describe their size and whether they appear to be associated with urban or rural regions.

Close-up on Florida
In this next exercise, we will focus on ethnic patterns in Florida using FactFinder to explore differences in spatial distributions.

Step 11 Using the Zoom and Pan tools, center your map over Florida. If you have not done so already, display the map by counties so that you have a more fine-grained view of the state. You can do this by clicking on the “Display map by: ...” drop-down arrow and selecting “Counties.”
Step 12  In order to change the ancestry group to Greek Americans choose “Themes” from the “You are here:” pathway and select the “by subject” tab. As you did in Step 6, choose the “Population Totals—Race and Ethnic Groups” subject category, select “Ancestry,” and click “Search.” From the list of available ancestries, choose “Percent of Persons of Greek Ancestry: 2000” and then “Show Result.”

Question 3: Describe the spatial distribution that you see for Greek ancestry. Where are the ethnic islands located?

Step 13  Continue to explore the ancestry distribution by creating and interpreting maps for three additional ancestry categories: West Indian Ancestry, Italian Ancestry, and United States Ancestry. To change the ancestry theme, follow the instructions in Step 12.

Step 14  Analyze the spatial patterns for West Indian, Italian, and United States ancestries.

Tips for analyzing the spatial patterns: When making comparisons between groups, be sure to take into account the different proportions of each ancestry group.

Notice that the themes are classified differently in each map; for example, dark green may represent 2 percent of the population in one map and 40 percent of the population in another.

If it helps remind you of the distributions, you can print a copy of each map using the “Print / Download” menu from the blue toolbar in the upper-right corner of the page.

Also, if the map is too crowded to read, you can turn map features on or off to assist with your interpretation.

Question 4: How do the spatial patterns of these next three ancestry groups compare to the first? In what ways are they different or the same?

5.2  Hiding and Finding Ethnic Neighborhoods with the Choropleth

Each of the maps you created in Exercise 5.1 is a choropleth map. As you learned in Chapter 3, a choropleth map symbolizes data over an area using a color or pattern. The choropleth is a popular mapping tool because it is simple to construct digitally and easy for general audiences to read. Choropleths are ideally suited to mapping data aggregated by enumeration unit (such as county, zip code, or census tract). As a result, it is often the map chosen by geographers to show population characteristics such as income, age, gender, and ethnicity.

Throughout this workbook, we will be using the choropleth map more than any other map. This is not because the choropleth is the best thematic map for human geography. Rather, it reflects the state of technology because the choropleth is easier to automate than other thematic map types. With rare exceptions, Web map applications overwhelmingly use the choropleth map over all other thematic map types.

A choropleth map assigns one color to an area, as if that area were actually a point. Only one data value can be portrayed in
ATTACHMENT 5
Multiple Choice

(2pts each)

1. Geography is unique in its perspective of study. While there are a number of definitions of Geography, all definitions agree that the perspective of all geographic study is:
   A. spatial
   B. geological
   C. functional
   D. temporal
   E. environmental

2. Which of the following is not one of the major concepts or viewpoints of Geography?
   A. scale
   B. spatial interaction
   C. theme of the region
   D. classification

3. In geography, relative location refers to:
   A. local physical characteristics of a place
   B. longitude and latitude of a place
   C. predominant location
   D. the position of a place in relation to another place
   E. A and B are correct

4. A region arranged around a central core (usually an urban core) is known as a:
   A. primate region
   B. variable region
   C. formal region
   D. functional region

5. Which is most nearly correct?
   A. regions are most nearly defined by their physical characteristics
   B. International boundaries form the most clear cut regions
   C. regions are mental constructions useful for organizing the spatial complexities of the world
   D. boundaries of regions are clearly visible in the landscape
6. The type of map projection you would most likely use for a general purpose map such as one in an atlas is:
   A. a conformal projection
   B. an azimuthal projection
   C. an equidistant projection
   D. an equal area projection
   E. none of the above

7. Which of the following is the largest scale?
   A. 1: 25,000
   B. 1: 250,000
   C. 1: 5,000,000
   D. 1: 1,000,000

8. An example of a functional region is:
   A. the Chicago retail trade area
   B. the tundra vegetative zone
   C. the Corn Belt
   D. the state of Colorado

9. We suggested that the earth is actually a smooth object. The vertical difference between the earth’s highest mountain peak and its greatest ocean depth is:
   A. 5,280 feet
   B. 66,800 feet
   C. 36,630 feet
   D. 29,028 feet

10. The terms weather and climate are both related to time and place. How do they differ?
    A. Climate covers a much larger area.
    B. Weather covers a much larger area.
    C. Climate describes an average condition, whereas weather describes a momentary one.
    D. Weather moves rapidly across the earth’s surface, whereas climate is absolutely stable.

11. The earth’s atmosphere obtains most of its heat energy from:
    A. scattering of the sun’s rays
    B. terrestrial radiation
    C. atmospheric diffusion
    D. absorption of the incoming sun’s energy
12. An isobar is:
   A. a line on a map drawn to indicate a high-pressure cell
   B. any two places on the earth’s surface with the same barometric (air) pressure
   C. a line on a map connecting places with the same barometric (air) pressure
   D. an isolated area of low pressure

13. The northeast trade winds are found in the:
   A. Northern Hemisphere and blow to the northeast
   B. Southern Hemisphere and blow to the northeast
   C. Northern Hemisphere and blow from the northeast
   D. Southern Hemisphere and blow from the northeast

14. The term front refers to:
   A. a cold air mass
   B. the contact zone between a cold air mass and the ground
   C. the contact zone between dissimilar air masses
   D. the mid-latitude part of the world where cold and warm air masses meet

15. Orographic precipitation occurs when:
   A. moist air is forced to rise over a high land barrier
   B. moist air flows over any coastal area
   C. warm, moist air collides with a stable, cold air mass
   D. desert air is heated enough to rise

16. Which type of weather would you associate with subtropical high pressure systems.
   A. moist humid conditions all year around
   B. wet in winter but dry in summer
   C. dry in winter but wet in summer
   D. dry conditions all year around

17. Which of the following is not associated with one of the world’s 3 largest population concentrations.
   A. South Asia
   B. Europe
   C. eastern Africa
   D. East Asia

18. The first stage of the demographic transition is marked by:
   A. high birth rates and low and stable death rates
   B. high birth rates and high but fluctuating death rates
   C. declining birth and death rates
   D. high birth rates and declining death rates
19. The theory of the demographic transition holds that:
   A. death rates increase but birth rates decrease with urbanization
   B. birth rates increase but death rates decrease with urbanization
   C. both birth and death rates increase with urbanization
   D. both birth and death rates decrease with urbanization

20. Which of the following does NOT describe a characteristic of world population distribution?
   A. people congregate in lowlands
   B. people congregate along continental margins
   C. the majority of the world’s population is rural
   D. the majority of the world’s population lives in countries of the Southern Hemisphere

21. A broad base population pyramid suggests that a country is in what stage of the demographic transition?
   A. stage 1
   B. stage 2
   C. stage 3
   D. stage 4

22. The crude death rate for wealthy Western Europe is much higher than that for Central America because:
   A. foreign aid and free medical services are widely available in Central America
   B. higher urbanization in Western Europe increases the incidence of infectious diseases
   C. Western Europe has a higher proportion of old people
   D. tropical areas, including Central America, generally have healthier climates than northern latitude regions

23. An expression of population pressure exerted on agricultural land is:
   A. physiological density
   B. arithmetic density
   C. aggregate density
   D. agricultural density

24. Meridians are__________________.
   A. arcs of great circles
   B. lines running East and West but measuring North and South
   C. approximately 69 miles in length
   D. all of the above
25. The 0 degree meridian is the same thing as the _________ meridian.
   A. Equator
   B. International Date Line
   C. Tropic of Cancer
   D. Prime
   E. Perihelion

26. Which statement below best characterizes the concept of culture?
   A. A civilized pattern of behavior, including an appreciation of serious music and good food
   B. Learned patterns of thought and behavior characteristic of a population or society
   C. An expression of the artistic qualities in a nation, such as painting and other fine arts
   D. A combination of habits relating to the human body, including washing, eating methods, and cleanliness
   E. None of the above are related to the concept of culture

27. According to your text, the second world:
   A. is comprised of UDC’s only
   B. is comprised of the poorest countries
   C. is the capitalistic world
   D. contains countries considered by the World Bank to be candidates for economic slow down
   E. is the socialist world

28. Which of the following is not contained within the European Realm?
   A. Russia
   B. Scandinavia
   C. Iceland
   D. The Alps
   E. England

29. Which of the following is not a major world realm (as mentioned in the text)?
   A. Middle America
   B. The United States
   C. Subsaharan Africa
   D. South America
   E. East Asia

30. The two sides of geography are:
   A. regional and global
   B. cartography and statistics
   C. urban and rural
   D. regional and systematic
   E. right and left
31. The major mountain chains of Europe are found in the:
   A. Central Uplands and Plateaus
   B. Alpine System
   C. European Plain
   D. Northwest Highlands

32. Most of Europe’s high population densities are found in the:
   A. Central Uplands and Plateaus
   B. Northwestern Highlands
   C. Alpine System
   D. Central Lowlands

33. The Most important river of Europe is:
   A. Muese
   B. Elbe
   C. Rhine
   D. Rhone

34. Among the features of the New European Common Market is (are)
   the unimpeded international movement of:
   A. raw materials and fuels
   B. Manufactured goods
   C. Electric energy
   D. Labor
   E. All of these

35. The latitude of most of Europe is:
   A. north of the latitude of the United States
   B. about the same as that of the United States
   C. south of the latitude of the United States
   D. west of the latitude of the United States

36. Short rivers, irregular coastlines, poor soil with significant amounts of bare crystalline
    rocks at the surface, and many lakes and swamps, best describes:
   A. the Northwest Highlands
   B. the Central Lowlands (European Plain)
   C. the Alpine System
   D. the Central Uplands and Plateaus

37. Greece is located at the tip of the:
   A. Iberian Peninsula
   B. Jutland Peninsula
   C. Balkan Peninsula
   D. Yucatan Peninsula
38. Which of the following was not an objective of mercantilism?
   A. establishing Christianity through the world
   B. the rapid accumulation of wealth
   C. acquisition of overseas colonies
   D. developing international trade ties
   E. all of the above were objectives of mercantilism

39. As Europe developed during the Renaissance, new spatial patterns developed. These patterns were presented in the form of models. One of the first, involving agriculture was produced by Johann Henrich von Thunen. In his model, he argued that five belts of agricultural activity would develop around the central town or city. The first or nearest of these is:
   A. a belt of forest, still used for timber and firewood
   B. a broad zone of increasingly extensive field crops
   C. a zone of manufacturing and handicrafting
   D. a zone of intensive agriculture and dairying
   E. a belt in which ranching prevails and animal products are generated

40. ___________forces tie a nation together.
   A. Iridescent
   B. Charismatic
   C. Centripetal
   D. Centrifugal
   E. none of the above

41. A country's leading urban center, disproportionately large and exceptionally expressive of national feelings, such as Paris is to France, is known as the country's:
   A. capital city
   B. functional region
   C. nodal point
   D. primate city
   E. central place

42. Which of the following is not an example of European supranationalism?
   A. Benelux
   B. COMECON
   C. the Common Market
   D. the European Parliament
   E. the solidarity labor movement

43. The Treaty of European Unity was signed at:
   A. Berlin
   B. Maastricht
   C. Paris
   D. Geneva
   E. London
Essay

Answer one of the following:

1. Europe since the turn of the Century, has seen a decline in its global importance. Discuss the factors that account for this decline. Do you see any indication that Europe may regain some of its importance in the future? Explain.

2. European Religions have a unique spatial arrangement. Discuss this arrangement. Can you relate these patterns to any other geographical elements in the European scene? Explain. Be sure to support your answer with examples.

3. Discuss the distribution of the world's population. Where are the major areas of concentration? Where are the areas of population voids? Do the main areas of population concentration have any similarities? Differences? Explain.
# World Regional Geography (1000 005)  
**(Spring 2011)**

## Importance of World Regional Geography
This course intends to familiarize students with basic concepts in geography and helps to understand world regions in the global system and underlying forces of historic and contemporary events.

## Course Description:
This course emphasizes on globalization and levels of development in ten world regions. These world regions will be examined with respect to physical characteristics, socio-economic, cultural, political and contemporary issues.

## Course Objectives:
The objectives of this course is to:
- Develop an understanding of basic concepts and tools of geography.
- Understand geographical regions of the world with respect to spatial patterns, distribution and regional differences of socio-economic, environmental and political arena of each world region.

## About Your Instructor:
Originally, I am from India and I have a Ph.D. in Geography from Jawaharlal Nehru University, India. I have taught variety of Geography disciplines at the University of Delhi for two years. I came to USA in 2005 and joined Metropolitan State College in 2006. I teach Human Geography, World Regional Geography & Oceanography. During the semester we will get to know each other through meetings and class discussions.

## Attendance & Class Rules:
- The instructor will take the attendance regularly.
- Be courteous to others- Please refrain from using cell phone, internet browsing, texting, sleeping & talking in the class (If you think these things are more important than class, please stay home).
- The instructor reserves the right to ask a student to leave the class due to the disruptive behavior.

**The instructor will not provide any study guide in written format, thus proper focus, attention and regularity is mandatory for this course.**

## Required Text:
### MAKE-UP EXAMS:

- **MAKE-UP EXAMS** would be given only in case of documented personal or medical emergencies. In such case a written statement (hard copy only, no emails please) should be provided to the instructor before missing the exam.

- **Other than emergency situations no make-up exams will be given.**

Note: There won’t be a make-up exam for the final. Absence in the final exam will count towards zero point.

There will be **NO EXTRA-CREDIT EXAMINATION.**

### EXAMINATION TYPE:

- The class lectures and the textbook reading will be the basis of examination.
- The exams will consist of multiple-choice, true-false, map-work (location quiz, Questions.

### METHOD OF EVALUATION:

- The students performance will be evaluated based on:
  1. Quizzes 160 Points (8X20)
  2. Story Behind the Picture (pop-up) 50 Points (5x10)
  4. Exam I 30 Points
  5. Exam II 30 Points
  6. Exam III (Final) 100 Points

Total Points 400 Points

- **Story behind the picture:** I will lecture and explain for 5 to 7 minutes about a map, figure or image. You are expected to write a 30 words summary for the image shown and explained in the class. If you skip/miss that class you may lose points.

(Note: It will be a pop-up/surprise in-class assessment of your ability to understand, grasping power, and attentiveness.)

### GRADING SYSTEM:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>370 to 400 Points</td>
<td>Excellent</td>
</tr>
<tr>
<td>B</td>
<td>369 to 340 Points</td>
<td>Very Good</td>
</tr>
<tr>
<td>C</td>
<td>339 to 310 Points</td>
<td>Good</td>
</tr>
<tr>
<td>D</td>
<td>309 to 280 Points</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>F</td>
<td>Below 279 Points</td>
<td>Poor/Fail</td>
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</table>

### ACADEMIC INTEGRITY

Any student found guilty of **plagiarism or cheating** in any form will automatically receive a grade of “F” and possible disciplinary action (suspension or expulsion) will be taken.

Plagiarism refers to the use of another person’s work without giving proper credit to that person. A student must give proper credit through the use of appropriate citation format when (a) copying verbatim another person’s work (i.e., words, phrases, sentences, or entire passages); (b) paraphrasing another person’s work (i.e., borrowing but rewording that person’s facts, opinions, or ideas); and (c) summarizing another’s work (i.e., use of one’s own words to condense longer passages into a sentence or two).

### WRITING CENTER

In order to avoid **plagiarism**, students are advised to take help of the writing center located in **King Center, room 310** to accomplish their assignments & projects. Students can access the experts from Monday through Friday via, **Email: www.mscd.edu/~writectr or Phone: 303-556-6070**
| AMERICANS WITH DISABILITIES ACT (ADA) POLICY STATEMENT: | The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. This legislation provides opportunity for learning environment and reasonable accommodation to the students with disabilities. Students who qualify under the ADA (American with Disabilities Act) must go to the Access Center located in the Auraria Library for Disability Accommodation, to be certified. The instructor will work with you and the Access Center to provide reasonable accommodations to ensure a fair opportunity to perform in this class. Please advice the instructor of such disability and the desired accommodations at the first class attended. |

PLEASE FEEL FREE TO DISCUSS ANY QUESTIONS OR PROBLEMS THAT YOU MAY HAVE WITH THE COURSE MATERIAL FROM LECTURE OR THE TEXTBOOK OR ANY OTHER MATTER THAT YOU WOULD LIKE TO DISCUSS. I WILL BE GLAD TO TRY TO HELP YOU FIND SOLUTIONS. YOU CAN SEND ME AN E-MAIL REGARDING THE SAME.

"LET'S TRAVEL & EXPERIENCE THE WORLD IN A SEMESTER"
## TENTATIVE CLASS SCHEDULE:

<table>
<thead>
<tr>
<th>WEEK</th>
<th>DATE</th>
<th>TOPIC</th>
<th>QUIZZES &amp; EXAMS</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>March 14</td>
<td>Orientation to the course &amp; Essentials of World Regional Geography (Chapter-1) Continue Chapter-1....</td>
<td>Quiz-1 (Chapter-1) Story behind the Picture -1</td>
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<tr>
<td></td>
<td>March 16</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>...SPRING BREAK... (March 21 to March 27)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>March 28</td>
<td>Europe (Chapter-2) Movie... Blue Danube</td>
<td>Exam-1 (Chapters-1)</td>
</tr>
<tr>
<td>3</td>
<td>March 30</td>
<td>Russia &amp; Neighboring Countries (Chapter-3)</td>
<td>Quiz-2 (Chapter-2)</td>
</tr>
<tr>
<td>4</td>
<td>April 4</td>
<td>East Asia (Chapter-4)</td>
<td>Quiz-3 (Chapter-3) Story behind the Picture-2</td>
</tr>
<tr>
<td></td>
<td>April 6</td>
<td>...Continue Chapter-4.... (Movie...GL Forward)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>April 11</td>
<td>Southeast Asia (Chapter-5) Movie...Pol Pot South Asia (Chapter-6) Movie...Untouchables</td>
<td>Quiz-4 (Chapter-4) Quiz-5 (Chapter-5) Story behind the Picture-3</td>
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<td>April 13</td>
<td></td>
<td></td>
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<tr>
<td>6</td>
<td>April 18</td>
<td>...Continue Chapter-6.... North Africa &amp; Southwest Asia (Chapter-7)</td>
<td>Quiz-6 (Chapter-6) Exam-11 (Chapters-3&amp;4), Story behind the Picture-4</td>
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<td>April 20</td>
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<tr>
<td>7</td>
<td>April 25</td>
<td>...Continue Chapter-7.... Latin America (Chapter-10)</td>
<td>Country Report Due Quiz-7 (Chapter-7)</td>
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<td></td>
<td>April 27</td>
<td></td>
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<tr>
<td>8</td>
<td>May 2</td>
<td>North America (Chapter-11)</td>
<td>Quiz-8 (Chapter-10) Story behind the Picture-5</td>
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<tr>
<td></td>
<td>May 4</td>
<td>Country Report Presentations</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>May 7</td>
<td>Last day of the Class</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>May 9- May 14</td>
<td>...Final Exam Week... Final Exam (Comprised of Exam I &amp; II)</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>May 20</td>
<td>....FINAL GRADES AVAILABLE ON WEB....</td>
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</tr>
</tbody>
</table>

**Note:** Instructor reserves the right to change the daily teaching schedule to facilitate learning, understanding and critical thinking.
REQUEST FOR GENERAL STUDIES DESIGNATION (2010-11)
NATURAL AND PHYSICAL SCIENCES

Please review the Course Selection Criteria for this category for assistance in completing this form, particularly as it relates to the percentages associated with each Student Learning Outcome.

If this course is also being submitted for the Global Diversity Category, check here , and complete and attach the separate Global Diversity General Studies Designation request.

Date: 04/15/11

School: LAS

Department: EAS

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Course Number</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEG</td>
<td>1100</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Title: Introduction To Physical Geography

Prerequisite(s): Minimum performance standard scores on reading, writing, and mathematics preassessment tests

Corequisite(s): None

Banner enforced prerequisite(s) and/or corequisite(s): None

Recommended maximum enrollment per section: 30

A. Course content and Student Learning Outcomes

Describe the specific ways in which this course addresses each of these Student Learning Outcomes, providing students opportunities to develop the skills and/or acquire the knowledge. Include reference to readings, discussions, lectures, and other pedagogical tools which will be used.

1. Demonstrate effective use of technologies appropriate to the task and discipline. (10%) Students will learn to combine digital maps, elevation models, video and images to visualize Earth morphology and processes. Students will also learn the instruments (seismometers, barometers, sling psychrometers, etc.) that are used to acquire data describing climate, weather, and geomorphic process.

2. Demonstrate the ability to locate sources when information is needed, and to evaluate the authenticity, validity, and reliability of resources applied to a specific purpose. (10%)
Students will develop practical skills in data assimilation and analysis to answer specific geographic research questions. They will receive instruction in collecting, evaluating, and analyzing geographic data and sources of information from agencies such as the World Meteorological Organization at the global level and national agencies such as the US Geological Survey at the local level, to scientific journals such as Nature Geoscience and popular sources such as Earth, Discover and Scientific American.

10. Describe how the methods of science are used to generate new knowledge. (30%)

The scientific method forms the foundation for all of topics presented in Introduction to Physical Geography. Building upon that backbone, each topic is presented within the context of how observations of the natural world have lead to acquisition of knowledge with specific instrumentation and experimental design which is then subject to verification and validation within the scientific discipline.

12. Use graphical, symbolic and statistical methods to organize, analyze and interpret data in a manner appropriate to the discipline. (25%)

Through lecture, readings, discussions and assignments students will learn to recognize common graphical representations of Earth processes data. Through assignments students will learn to search published sources to compile data and then construct climographs, seismographs, and hydrographs to aid in visualization and interpretation of Earth surface processes.

19. Describe the foundational knowledge and impacts of a field of science using analytical tools appropriate to the field. (60%)

Topics in this course are introduced through the perspective of interconnected systems. Presented with the organizational template of the hydrosphere, atmosphere, lithosphere, and biosphere, students learn to combine the elements of weather (temperature, precipitation, humidity, wind and cloud cover) and atmospheric dynamics to describe climate and the spatial variability of climate and climate change on Earth. Students also learn how the creation, transformation, relocation and weathering of crustal components provide materials for landforms, sediment transport, mass movement, soil development and the spatial differentiation of Earth’s physiographic provinces and biomes. Basic natural laws are an integral part of the course. These include such laws as the laws of thermodynamics, energy and heat laws, earth magnetism, earth rotation/revolution, condensation/evaporation, wind movement, coriolis force, isostacy, wave motion, wave lengths, etc.

Students are expected to analyze, evaluate, and integrate foundational concepts and theories to address the following crucial geographical issues and concepts:

a. The four spheres that constitute the physical Earth and their interactions within a systematic conceptual framework.
b. The spatial and temporal variability of climate and Earth processes.
c. The influence of human activity on Earth processes and environmental change.
d. The potentially catastrophic effect of Earth processes on increasing human development and infrastructure.

20. Use knowledge and observations to formulate hypotheses, identify relevant variables and design experiments to test hypotheses. (10%)

Lecture presentations, readings and assignments emphasize the scientific method as the foundation for the creation of knowledge. Classroom discussions and course assignments require students to approach problems from the perspective of the scientific method to formulate hypotheses, identify relevant variables and design experiments to test hypotheses.

21. Develop concepts of accuracy, precision, and the role of repeatability in the acquisition of scientific data. (10%)

Through readings, lecture presentations, and assignments students are required to acquire, assess and interpret data with attention to the accuracy, precision and repeatability of those data. For example, students learn to critically evaluate temperature records and atmospheric gas concentration data used to assert human influence in global warming.

**B. Assessment of Student Learning**

Identify and describe at least one specific form of assessing student achievement of each Student Learning Outcome which will be a regular part of the course. Examples include specified test questions, specified problem sets, written paper prompts and scoring guide or rubric, projects with assignment sheet and scoring guide or rubric, etc. Include attachments as applicable. A single piece of student work may be used to assess student achievement of more than one Student Learning Outcome.

1. Demonstrate effective use of technologies appropriate to the task and discipline.

**Online Exercise:** Students will use on-line Earth visualization software (Google Earth, Bing, etc.) to compare current with historical imagery, elevation and location data to examine the effect of recent catastrophic earthquakes, landslides, volcanic eruptions, tsunami and floods. Students will use embedded tools to measure size and scale of landscape transformation, and attach ancillary imagery and reports to characterize the magnitude of change. Specific exercises used in 2011 include examination of the effects of the Mar. 11, 2011 earthquake and tsunami in Japan. Evaluation will be based on accuracy of information presented. (Attachment 2)

2. Demonstrate the ability to locate sources when information is needed, and to evaluate the authenticity, validity, and reliability of resources applied to a specific purpose.

**Online Exercise:** Students will be provided with the knowledge to understand and work with online data from international (Intergovernmental Panel on Climate Change) to local (USGS) sources to answer specific questions related to the global to local effects of global climate change.
Executive Summary Assignment: Students are assigned to review an article in a non-scientific publication (e.g. The New York Times) and then to compare the information in that article with publications on that topic in the scientific literature. (Attachment 3)

10. Describe how the methods of science are used to generate new knowledge.

Class Group Discussion: Students will analyze case studies of the Earth-surface processes and use the scientific approach to make sense of them. Students will read brief articles on current or recent catastrophic events from the New York Times, Earth, Discovery, Scientific American, etc. They will identify and discuss with classmates the following questions:

1. What are the driving forces behind this/these events?
2. How are these forces and events related within a systems framework?
3. What are the temporal and spatial dimensions of these forces and events?
4. What are adverse human and natural consequences?

Evaluation is based on qualitative assessment of individual student participation: How well does the student use accessible information to support their discussion and how does student discussion reflect understanding of the scientific process and methods as they apply to this case.

11. Use graphical, symbolic and statistical methods to organize, analyze and interpret data in a manner appropriate to the discipline.

Students will be required to analyze maps, graphs, and diagrams in both assigned readings and lecture materials. Assessment will be based on quantitative exercises which require analysis of various types of maps, charts, graphs, and mathematical notation. (Attachment 4)

19. Describe the foundational knowledge and impacts of a field of science using analytical tools appropriate to the field.

Written quizzes and examinations address the content and conceptual knowledge. (Attachment 5)

Course Research Project: Students should develop a research paper and a class presentation about a specific topic or issue they want to learn more about. The issue should relate to one of the following themes: (1) natural vs. anthropogenic causes of global climate change, or (2) the magnitude and effect of an Earth surface process (volcanism, earthquake, tsunami, hurricane, landslide, etc.). The objective of this exercise is to introduce students to the process of research in the physical sciences, and explore the impacts of physical processes. (Attachment 6)

20. Use knowledge and observations to formulate hypotheses, identify relevant variables and design experiments to test hypotheses.
After the components of the scientific method are discussed and modeled in lecture, an exercise will ask students to design an experiment using the scientific method. (Attachment 4)


Exercises which utilize real geographic data ask students to identify the precision and accuracy of measurements. (Attachment 4)

C. Conformance with Course Selection Guidelines

Briefly describe how the course meets the course selection guidelines

The course must meet the full requirements of the Student Learning Outcomes, or must be paired with a corequisite lab course that, as a pair complete the outcomes.

This is a stand-alone course with no required lab. The course satisfies all of the required student learning outcomes and uses appropriate assessments to evaluate student learning.

Approvals:

[Signatures and dates]

Department Curriculum Committee / Date

Department Chair or Program Director / Date

School Curriculum Committee / Date

Dean or Associate Dean / Date

Chair, General Studies Committee / Date

Associate Vice President, Academic Affairs / Date
REGULAR COURSE SYLLABUS
GENERAL STUDIES

School of: LAS
Department: EAS
Prefix & Course Number: GEG 1100 Crosslisted With*: N/A
Course Title: Introduction to Physical Geography
Check All That Apply: Required for Major: _____ Required for Minor: _____ Specified Elective: x
Required for Concentration: _____ Elective: x Service Course: x
Credit Hours: 3 (3+0)

Total Contact Hours per semester (assuming 15-16 week semester):
Lecture 45 Lab 0 Internship 0 Practicum 0 Other (please specify type and hours): 0
Schedule Type(s): L Grading Mode(s): L
Variable Topics Courses (list restrictions, including the maximum number of hours that can be earned**):
N/A
** NOTE: This information must be included in the course description.
Restrictions (Variable Topics Course): N/A
Prerequisite(s): Minimum performance standard scores on reading, writing, and mathematics preassessment placement tests.
Corequisite(s): None
Prerequisite(s) or Corequisite(s): None

Banner Enforced:
Prerequisite(s): Minimum performance standard scores on reading, writing, and mathematics preassessment placement tests.
Corequisite(s): None
Prerequisite(s) or Corequisite(s): None

Catalog Course Description:
This course explores the various elements of the physical environment and interactions between the elements. The course emphasizes the atmosphere (weather and climate), the lithosphere (soils, geology, and landforms), and the hydrosphere (oceans, streams, and groundwater).

APPROVED:

Department Chair OR Program Director

Dean OR Associate Dean

Associate VP, Academic Affairs

*If crosslisted, attach completed Course Crosslisting Agreement Form
Prefix and Course Number: GEG 1100

**Required Reading and Other Materials will be equivalent to:**

**Course Category and Related Student Learning Outcomes:**

- Natural and Physical Sciences

  1. Demonstrate effective use of technologies appropriate to the task and discipline.
  2. Demonstrate the ability to locate sources when information is needed, and to evaluate the authenticity, validity, and reliability of resources applied to a specific purpose.
  10. Describe how the methods of science are used to generate new knowledge.
  11. Use graphical, symbolic and statistical methods to organize, analyze and interpret data in a manner appropriate to the discipline.
  19. Describe the foundational knowledge and impacts of a field of science using analytical tools appropriate to the field.
  20. Use knowledge and observations to formulate hypotheses, identify relevant variables and design experiments to test hypotheses.

**Specific, Measurable Student Behavioral Learning Objectives:**

Upon completion of this course the student should be able to

  1. identify the components of the scientific method and explain the importance of the scientific method in obtaining knowledge (10, 20, 21)
  2. analyze and interpret geographical data presented in graphs, maps, charts, and statistical tables (1, 2, 11, 21)
  3. use various types of maps and identify the basic components of maps such as scale and legend (1, 11, 19)
  4. utilize basic knowledge of atmospheric processes to explain weather phenomena, climate systems and climate change (1, 10, 19);
  5. discuss the components of the hydrologic cycle, including surface water and groundwater (1, 19)
  6. describe soil-forming processes and soil characteristics (19);
  7. discuss the Earth’s interior, including its components, structures, and processes (1, 19, 20)
  8. explain the relationship between plate tectonics, earthquakes, and volcanoes (10, 19)
  9. recognize and describe landforms created by running water, waves, glaciers, and wind and the inherent processes responsible for those landforms (1, 10, 19)
  10. explain the significance of interrelationships between the atmosphere, lithosphere, hydrosphere, and biosphere (10,19)

**Detailed Outline of Course Content** (Major Topics and Subtopics)

I. Introduction to Earth
   A. Environmental Spheres
   B. Geographic grid
   C. Earth movements
   D. Annual march of seasons
   E. Global time

II. Portraying Earth
   A. Nature of maps
   B. Map projections
   C. Global positioning systems
   D. Geographic information systems
   E. Remote sensing

III. Introduction to the Atmosphere
   A. Composition and vertical structure of the atmosphere
   B. Human-induced atmospheric change
C. Weather and climate

IV. Insolation and Temperature
A. Solar energy
B. Heating aid cooling the atmosphere
C. Spatial and seasonal variations in heating
D. Global warming and the greenhouse effect
E. Global temperature patterns

V. Atmospheric Pressure and Wind
A. Atmospheric pressure and wind
B. Global barometric pressure system
C. Global distribution of near-surface winds

VI. Atmospheric Moisture
A. Hydrologic cycle
B. Humidity, saturation, and temperature
C. Precipitation
D. Global distribution of precipitation

VII. Transient Atmospheric Flows and Disturbances
A. Causes of precipitation
B. Air masses
C. Fronts
D. Atmospheric disturbances

VIII. Climatic Zones and Types
A. Factors controlling major climatic types
B. Global distribution of major climatic types

IX. The Hydrosphere
A. Hydrologic cycle
E. Surface water, including oceans
C. Groundwater
D. Pollution

X. Soils
A. Soil-forming processes
B. Soil properties, chemistry, and profiles
C. Soil classifications

XI. The Internal Processes
A. Evidence for plate tectonics
B. Theory of plate tectonics
C. Characteristics of plate boundaries
D. Volcanism and earthquakes
E. Earth’s structures, including folds and faults
F. Mountain building and orogenesis
G. Geologic time

XII. Weathering, Erosion, and Mass Wasting
A. Weathering processes
B. Erosional agents
C. Mass Wasting and associated landforms

XIII. Fluvial Processes
A. Fundamental concepts
B. Work of streams
C. Erosional and depositional landforms
D. Theories of landform development

XIV. Eolian (Wind) Processes
A. Work of wind
B. Erosional and depositional landforms

XV. Coastal Processes
A. Work of waves
B. Erosional and depositional landforms

XVI. Glacial Processes
A. Work of ice
B. Erosional and depositional landforms

Evaluation of Student Performance
1. a minimum of two examinations
2. a minimum of one researched writing assignment
3. quantitative exercises using maps, charts and/or graphs
ATTACHMENT 2 – Example Google Earth Exercise

LARGE-SCALE LANDFORMS

Large-scale landforms are those that cover large portions of the Earth's surface. One good test to determine landform scale is to decide whether the landform can be viewed from outer space, generally agreed upon to begin approx. 100 km above Earth’s surface. The largest topographic features are the continents and the ocean basins. Google Earth provides an excellent platform from which to view large-scale landforms.

1. Open Google Earth and center your image on North America at an Eye altitude of about 7,500 km (For this exercise you will want to go to Google Earth Preferences and set the units to metric.) Go to the Layers control on the lower left side of the page and check to turn on Geographic Features (within that layer you can individually control ‘Mountain’ and ‘Water Bodies’).

2. From this elevation you should be able to see very large portions of the Earth and the differences between the continents and the ocean basins. Note the different patterns of texture and color between the eastern and central parts of the N. America. The west is dominated by mountains, the middle by the flatter Great Plains. Using the hand tool rotate the globe to center on South America and note the same patterns of mountains along the west coast. This is the long, linear chain of the Andes mountains called a cordillera. This cordillera stretches the full length of the west coast of S. America. Now rotate the globe to examine the narrow strip of land connecting South to Central America. This is an isthmus, the Isthmus of Panama. Other famous isthmuses can be found connecting Africa to Asia (the Isthmus of Suez), and Peloponnesse with the rest of Greece (the Isthmus of Corinth).

3. Keep rotating the globe southward so that you are again centered on N. America. Notice as you go that mountain ranges stretch northward through North America. This is the cordillera of the Rocky Mountains. Cordillera are often made up of a number of smaller mountain ranges.

4. Use the zoom tool to go to an Eye altitude (lower right-hand corner) to approximately 5000 km (3000 miles.).

From this altitude several large-scale landforms are immediately visible: the peninsulas of Florida and Baja California, the large water bodies of the Great Lakes and Hudson Bay, and the Caribbean islands of Cuba and Hispaniola. Move your cursor to locate the southern tip of Florida and record the Latitude and Longitude shown at the bottom of the screen(set your Preferences to Decimal degrees). For consistency, use the tip of the index finger on the hand.

Lat. ________________
Long. ________________

How accurate can you really be from this elevation? Zoom in to the lower limits of space, 100 km, and now place the hand tool at the Lat and Long you recorded above (you may need to rotate the globe to get that location into view). Are you still at the southern tip of Florida?

Before you go on take note of the large-scale features that dominate the image, especially
the light-blue margins of the continent. We will explore these continental shelves in a later chapter.

5. Use the hand to grab the image and rotate N. America until you are centered over the Great Lakes. (Don’t know where the Great Lakes are? You might try using the “Fly To” box and type in Great Lakes...what a mess!) The Great Lakes are the largest group of freshwater lakes in the world and hold 22% of all of the surface fresh water on Earth. Zoom in slowly to approximately 700 km (Eye alt) and observe as smaller scale details emerge. Note the irregular borders of the lakes called coves and bays. Can you locate Green Bay? On what Great Lake is Green Bay located?

_________________________ What island lies in the approximate center of Green Bay? ___________________________. Find the narrow passage, known as a strait, that connects Lake Michigan to Lake Huron. What is it called?

_________________________. Just east of the strait is the largest island in the Great Lakes, and east of that is Main Channel connecting Lake Huron with Georgian Bay. The terms strait and channel both refer to narrow bodies of water connecting two larger bodies. The English Channel and the Strait of Gibraltar are famous examples.

6. Zoom back out to an Eye alt of 1000 km and move to the Four Corners (if you use the Fly To tool the Eye alt gets much closer.) Zoom in to about 500 km and locate the San Juan river system that drains off to the west. The dark, spidery image further west is Lake Powell, an artificial lake created by the Glen Canyon Dam. Notice that the river system and Lake Powell are located in an area that is much lighter in color than the surrounding regions. You are seeing the vast golden and white sandstones of the Colorado Plateau. A plateau is a relatively flat (low relief) area that is elevated high above sea level. How can you tell that this region is relatively flat? Zoom down to about 4 km and then use the tilt tool to tilt the image until your perspective is horizontal. Use the compass tool to face west (set the N to the right side of the circle). Notice how flat the terrain is? Use the top Navigator arrow in the lower circle to fly forward. Fly west as far as you want and notice the flat terrain of the Colorado Plateau. If you go far enough you’ll find the deep incision of the Grand Canyon. Zoom out to 200 km. Can you still see the Grand Canyon? Can you see it from 500 km? Is the Grand Canyon a Large-scale feature?

Click on the KMZ file Colorado Plateau to see the “flight” from the Four corners to the Grand Canyon. Note how the plateau is mostly flat with occasional canyons and hills.

7. North and west of the Grand Canyon the landscape from 500 km up looks to be covered by a series of wooly caterpillars crawling north. Between them lie patches of light tan or white. This is the Basin and Range province, a region of small mountain ranges separated by lower-elevation basins. Basins are depressions and in this area many of them have no outlet for water that flows into them. The white is actually salt evaporated from lakes that once filled these basins. The largest white patch visible is Bonneville Salt Flats and the Great Salt Lake desert. Use the Ruler tool to measure the distance in km from the Grand Canyon to the center of the Great Salt Lake desert where Interstate -80 crosses from east to west. ________________ km.

8. Zoom back down to about 15 km eye altitude and have fun flying through the basin and range province.
ATTACHMENT 3

Writing Assignment: The following article (A Shift in the Debate Over Global Warming) appeared in the New York Times on April 6. It is an analysis of articles that appeared in two journals, Nature and Scientific American. Your assignment is:

1) Read the article from the New York Times. Summarize the most important message/ideas.

http://www.nytimes.com/2008/04/06/weekinreview/06revkin.html

2) Verify that the NYT article is an accurate analysis of the two articles in Nature and Scientific American. So that means you have to read them, find the relevant parts of those articles that were cited by the NYT, and decide if they were fairly represented. Also, discuss whether the two journal articles cited are opinion or only factual.

How to do that? Go to the Auraria library link on the Metro Home Page. Use the Search engine to search for the journal titles. Follow the links until you get to the journals, then use the journal search engine to search for the journal articles (Hint: you can search by the authors [mentioned in the NYT article] or by the subject or the title.) You may find it easier to get to the Scientific American article directly through the link in the NYT article.

IMPORTANT: I want you to cite evidence from the original (Nature or Scientific American) articles to base your own report on. TELL ME THE PARAGRAPH NUMBER AND PAGE NUMBER THAT IMPORTANT FACTS ARE LOCATED ON.

These are my expectations:

- 2-3 pages. Typed. Double spaced or 1.5 space.
- A summary of the NYT news article (can be bullet points)
- A discussion of whether the article is accurate. Does it faithfully represent the information and conclusions of the Nature and Scientific American original papers? Does it leave anything out?
- A discussion of whether the article is accurate? Are there other sources of information that verify or contradict the article?
- A discussion of what this information means. What are the potential consequences of this information? How does it affect (you, me, us, our business, our country, etc. pick just one).
- Proper citations and references.

Your summary and arguments should not exceed two typed pages.

Due: April 28, 2011
Attachment 4: Sample Class Exercise

INTRODUCTION TO PHYSICAL GEOGRAPHY - GEG 1100

Exercise 1: Unit Conversions – Fall 2011

Name: __________________________

The purpose of this lab is to introduce students to units of measurement common to Physical Geography and to provide practice in the mathematics of converting units and measures. Students may use calculators for all mathematical operations.

1. Absolute location on Earth is indicated by points on one of several geographic grids, the most common being Latitude and Longitude. Each degree (°) latitude and longitude is subdivided into 60 minutes (′) per degree, and each minute further subdivided into 60 seconds (″) per minute. It is more common today to express location in decimal degrees of lat and long. Convert the following locations from degrees/minutes/seconds (dms) into decimal degrees.

Example: 30° 20’ 45” N, 100° 15’ 30” E

There are 3600 sec in a degree and 60 sec in a minute so we can rewrite this as:

30° [20x60′] + 45″ = 30° 1245″

Now convert sec into degrees

1245 sec / 3600 sec/degree = 0.345833°

30° 20′ 45″ N = 30.345833° N

The same can be done for longitude:

100° 15′ 30″ E = 100° [15x60]′ + 30″ = 100° 930″ = 100° 930″ [930/3600] = 100.258333° E

The decimal location is given as 30.345833° N 100.258333° E: NOTE: the designation for East or South is often given by the minus sign e.g 30.345833° -100.25833°.

Convert the following locations from dms to decimal degrees:

a. 39° 44′ 38″ N 105° 00′ 07″ W __________________________

b. 46° 17′ 59″ N 122° 12′ 45″ W __________________________

c. 25° 17′ 44″ S 131° 02′ 07″ E __________________________

d. 34° 10′ 12″ N 73° 14′ 34″ E __________________________

e. 13° 09′ 27″ S 72° 32′ 36″ W __________________________

After converting, you may want to enter these co-ordinates into Google Earth to see where on Earth they are.

2. Each degree of latitude is approximately 111.133 km on Earth’s surface. One km equals 0.6213712 miles. How many miles is one degree of latitude? __________________________

Convert 1° of latitude into meters (m) __________________________ and feet (ft.) __________________________
Attachment 4: Sample Class Exercise

3. If a point is given in degrees, minutes and seconds, what is the precision of those co-ordinates?
   Put another way, within how many meters or feet can you get by changing the coordinates by one second?
   
   One second (") = ____________ m
   
   One second (") = ____________ ft.

4. In example 1, decimal degrees are calculated out to the 6th decimal. How much more or less precise are decimal degrees than degrees/minutes/seconds?
   One second (") is precise to within ____________ m, one decimal degree is precise to within ____________ m.
   
   One second (") is precise to within ____________ ft, one decimal degree is precise to within ____________ ft.

5. Suppose you and your classmates use Google Earth to determine the location of the Science building on the Auraria campus. Each person reports the location as follows:
   
   39.745532° N 105.027001° W
   39.745547° N 105.001436° W
   39.739948° N 105.019141° W
   39.747394° N 105.021518 W
   39.742162° N 105.026998° W
   39.740183° N 105.027452° W
   39.747673° N 105.025431° W
   39.745608° N 105.026967° W
   39.745801° N 105.027121° W
   39.745499° N 105.027011° W

   What is the accuracy of these measurements? The accuracy can be calculated as the mean distance from the average measurement (or from a known reference point). What is the mean distance each measurement is off from the average of all ten coordinates?
   
   What is the average latitude? ________________ Longitude ________________?
   
   What is the mean difference from the average? ________________________
   
   Convert the mean difference to meters and feet. _________ m _________ ft.
Attachment 4: Sample Class Exercise

6. Suppose you were asked to explain your observation that each of your classmates came up with a slightly different location for the Science building. Is it because Google Earth gives a different location for different computers? Is it because each person chose a different point on the building as the location? Design an experiment to determine why there is some variation in their measurements. First posit a hypothesis, then detail a method by which you collect data. We will conduct the experiment in a further lab.
ATTACHMENT 5 – Research Paper Grading Rubric

<table>
<thead>
<tr>
<th>I. INTRODUCTION</th>
<th>POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Clearly defines topic and key concepts used</td>
<td></td>
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<tr>
<td>• Discusses the background of the case study</td>
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<tr>
<td>• Discusses the main idea of the paper (thesis statement)</td>
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<tr>
<th>II. ANALYSIS</th>
<th>POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Clearly states central question and discusses its importance (rationale)</td>
<td></td>
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<tr>
<td>• Uses evidence drawn from at least 3 academic sources</td>
<td></td>
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<tr>
<td>• Provides an answer to the research question (the evidence of the argument)</td>
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<tr>
<td>• Communicates informed personal ideas about the issue</td>
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</tbody>
</table>

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<tr>
<th>III. CONCLUSIONS</th>
<th>POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Clearly states conclusions arrived from analysis</td>
<td></td>
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</tbody>
</table>

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<tr>
<th>IV. STYLE</th>
<th>POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Communicates effectively the analysis with the use of graphic material.</td>
<td></td>
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<tr>
<td>• The executive summary is clearly written in the active voice</td>
<td></td>
</tr>
</tbody>
</table>

**Total Points:**

* Each bullet item is worth 10 points, for a total of 100 possible points.
Make sure that you fill in your name above and your initials at the top of each page. Read each question carefully. The test is worth a total of 100 points. Keep breathing, cessation of breathing for prolonged periods may have a negative effect on your performance.

Part 1: Multiple Choice: Please enter your answers on the Scantron form. There is only one best choice for each answer. Each of the following questions is worth 2 points.

1) When long wave radiation is trapped by carbon dioxide in the atmosphere it is called the:
   a. distribution factor  
   b. carbon cycle  
   c. heat wave  
   d. sub climate system  
   e. greenhouse effect

2) A device used to measure air pressure is the:
   a. anemometer  
   b. barometer  
   c. thermometer  
   d. wind vane  
   e. sling psychrometer

3) Land and sea breezes result from:
   a. equal pressure changes during the day and night  
   b. seasonal monsoons  
   c. unequal pressure changes over land and sea  
   d. daily reversal of relative insolation  
   e. Santa Ana chinook winds

4) Water vapor that changes state to form a cloud is an example of:
   a. troposphere  
   b. evaporation  
   c. sublimation  
   d. condensation  
   e. deposition

5) Pressure gradients drive winds to flow:
   a. parallel to isobars  
   b. from low pressure to high pressure  
   c. from high pressure to low pressure  
   d. both a and c  
   e. none of the above

6) In a convection cell, air:
   a. rises over a colder surface, creating low pressure there  
   b. rises over a colder surface, creating high pressure there  
   c. descends over a colder surface, creating low pressure there  
   d. descends over a colder surface, creating high pressure there  
   e. all of the above

7) The term “relative humidity” refers to:
   a. riding in the back seat with all of you cousins, aunts and uncles and the windows up  
   b. the amount of air in the atmosphere relative to how much it can hold  
   c. the amount of water vapor in a parcel of air relative to the water vapor capacity  
   d. the ratio of absolute humidity and temperature  
   e. the ratio of specific humidity and temperature

8) The process by which an air parcel expands and cools while gaining elevation is termed.  
   a. orographic  
   b. adiabatic  
   c. precipitation  
   d. convective uplift  
   e. Latent heat process

9) The two most abundant elements in Earth’s atmosphere are:
   a. oxygen and water vapor  
   b. oxygen and argon
10) In the northern hemisphere, the Coriolis effect causes winds and currents to veer to the:
   a. west   b. east   c. right   d. south   e. left

11) Dew-point is the temperature at which
   a. evaporation rates are most effective   b. condensation rates are minimized
   c. air holds the maximum amount of water vapor
   d. clouds will produce snowfall   e. clouds will produce dew on the grass

12) The plane of the earth's orbit about the Sun is called:
   a. the plane of the rotation   b. perihelion   c. the plane coordinate system
   d. the great orbital plain   e. the plane of the ecliptic

13) Which two gases are primarily responsible for the greenhouse effect because of their ability to absorb infrared energy?
   a. oxygen and hydrogen   b. ozone and dust   c. nitrogen and oxygen
   d. water vapor and carbon dioxide   e. all of the above

14) The elements that make up weather include
   a. temperature, precipitation, and vegetation   b. earth, wind, and fire
   c. precipitation, wind, humidity and temperature.
   d. temperature, wind, and soils.
   e. climate, moisture, and solar energy

15) Which of the following is NOT a greenhouse gas.
   a. CO₂   b. H₂O   c. CH₄   d. N₂   e. O₃

16) Parallels and meridians are elements of:
   a. the geographic grid   b. latitude and longitude
   c. orographic lifting   d. latent heat transfer   e. a and b

17) As heat is absorbed by a substance
   a. the molecules begin to move more rapidly   b. the molecules move more slowly
   c. molecules are not affected by heat   d. the pressure on the molecules increases
   e. the bonds between atoms get stronger.

18) Large scale maps are important in that they show:
   a. a detailed view of a small area   b. a generalized view of a large area
   c. the smallest area that can be drawn to scale on paper
   d. a and b only   e. none of the above

19) A land breeze generally occurs:
   a. at dawn in the mountains   b. at noon in the tropics   c. at night on the beach
   d. at solstice in the northern hemisphere   e. none of the above

20) What percentage of all of Earth's water is fresh water?
   a. 10.5%   b. 2.5%   c. 27.4%   d. 77.8%   e. 97.9%

21) What type of precipitation forms as rain freezes when passing through the atmosphere?
   a. snow   b. rain   c. sleet   d. slush   e. fog
22) Which of the following statements regarding insolation is TRUE?
   a. Insolation is measured in units of watts per meter squared (Wm\(^2\))
   b. Insolation keeps the Earth from getting too warm due to global warming
   c. Insolation is absorbed by greenhouse gases that are radiated from Earth
   d. Insolation travels to the Sun from Earth at the speed of sound
   e. All of the above are true.

23) Which of the following changes occur as you climb higher up a mountain?
   a. temperature declines  
   b. oxygen percentage declines  
   c. specific humidity increases
   d. all of the above  
   e. a and c only

24) What are the characteristics of cumulus clouds.
   a. cover large areas  
   b. high, thin wispy clouds drawn into streaks  
   c. vertical development – puffy clouds
   d. small dark clouds  
   e. lens-shaped

25) For water vapor to condense, it is necessary for:
   a. a small particle to act as a condensation nucleus
   b. the temperature to rise to the condensation elevation
   c. the process to include an undersaturated atmosphere
   d. the energy of latent heat will increase with temperature
   e. all of the above

26) Radiation fog is a product of:
   a. orogenesis  
   b. subduction  
   c. cooling at the ground level
   d. warming of the ground surface  
   e. all of the above

27) At what layer of the atmosphere does the Greenhouse effect occur?
   a. in the troposphere, where CO2 and H2O absorb infrared energy from Earth
   b. in the stratosphere, where CH4 and H2O absorb shortwave energy
   c. in the thermosphere, where the atmosphere warms from the Earth
   d. in the stratosphere, where ozone absorbs infrared energy from the Sun
   e. a and b

28) In North America an anticyclone is usually accompanied by:
   a. thunderstorms  
   b. fair weather  
   c. storm surge  
   d. tsunamis  
   e. kamikazes

29) A wind that blows parallel to isobars is termed
   a. isobaric wind  
   b. pressure gradient wind
   c. geostrophic wind  
   d. bariotropic wind  
   e. Hadley cell circulation

30) What are the characteristics of a cold front
   a. stratus clouds  
   b. high winds and strong storms
   c. chinook winds
   d. many days of rain  
   e. extended drought

PART 2: TRUE/FALSE Questions: Select TRUE if the statement is always true or FALSE if the is ever false. Indicate your answer on the Scantron sheet. Each of the following questions is worth 2 points.

31) Trade winds typically blow from north to south.
   TRUE  
   FALSE
32) Pressure gradients develop from unequal heating of the Earth’s surface.
   TRUE    FALSE

33) Cyclonic storms are created by high pressure due to excess air molecules
   TRUE    FALSE

34) Oxygen is the most abundant gas in our atmosphere.
   TRUE    FALSE

35) Sensible heat is a form of latent heat transfer.
   TRUE    FALSE

36) Parallels of latitude are all great circles.
   TRUE    FALSE

37) Storm surge is a sudden rise of sea level driven by hurricane winds.
   TRUE    FALSE

38) Relative humidity is a measure of the mass of water vapor in the atmosphere.
   TRUE    FALSE

39) Ocean currents are primarily the result of winds blowing across the water surface.
   TRUE    FALSE

40) A sling psychrometer is used to calculate relative humidity.
   TRUE    FALSE

PART 3: Short Essay Questions: Define the following terms in a sentence or two. Include diagrams whenever possible. (3 pts. ea.)

41) Mid-latitude cyclone.

42) Water vapor capacity
43) Cumulonimbus

44) The adiabatic principle.

45) Urban heat island.

**PART 4: SHORT ESSAY QUESTIONS:** Answer ONLY ONE of the following questions with a short paragraph and a DIAGRAM—5 pt. ea.

46) Explain why large water bodies heat and cool more slowly than land masses. Explain what effect this might have on daily and annual temperature cycles for coastal and continental locations.

47) Describe and DIAGRAM orographic lifting and the precipitation and air temperatures that result. EXPLAIN why temperatures are different at the different stages of orographic lifting.

48) Define and diagram the general pattern of atmospheric circulation.

49) Diagram and describe the shape, speed and size of a tsunami and how it differs from a normal wave.
Extra Credit: What concept did you study for the exam that wasn’t asked? Or, what concepts can you combine to explain some earth science phenomenon in detail? Include maps or sketches where appropriate. Up to 5 pts.
INTRODUCTION TO PHYSICAL GEOGRAPHY - GEG 1100-003

SPRING 2011 SYLLABUS

**Instructor:** Tom Davinroy

**Office Hours:** M-W 12:30 – 1:30, T-Th 9:30-11:30, and/or by appointment.

**Office:** 2025 Science Bldg

**Telephone:** (303) 352-4458

**E-mail:** tdavinro@mscd.edu

**COURSE DESCRIPTION:** This course is offered to provide a general introduction the basic concepts and themes of Physical Geography. The course is designed to provide students with a comprehensive foundation in the processes that govern Earth formation, tectonics, diastrophism, weathering and erosion, river systems, landforms, oceans, and glaciation. The course will also provide an introduction to the processes governing Earth-Sun relationships, global energy flows, weather and climate. Introduction to Physical Geography is designed to introduce students to the tools of geographic analysis, and will also introduce geographic perspectives through maps, geospatial tools and other techniques employed in geographic analysis.

**Learning Goals**

1. To provide students with the foundation to understand how our Earth and its physical characteristics formed and how processes transform and alter Earth’s surface;
2. To develop skills to observe elements of Earth’s surface and infer processes that have occurred to shape those elements;
3. To provide students with an understanding of the methods used to monitor and sample the physical Earth using modern technology and traditional techniques;
4. To develop competency in both understanding and presenting oral communication and scientific writing;
5. To build life-long learning skills and scholarly inquiry so that students can critically assess and evaluate issues pertaining to the physical Earth and become leaders in their discipline; and
6. To prepare students for employment or a graduate degree so that they can shape our future.


**ISBN-13:** 978-0-321-59521-8

**ADDITIONAL REQUIRED READING:** To be determined. Readings and other materials will often be posted on the **CLASS WEBSITE:** Log on to MetroConnects, select the MyCourses tab.

**GRADING:** The final course grade will be based on the following:

- 25% - Unannounced quizzes, assignments and class participation
- 15% - First exam
- 15% - Second exam
- 20% - Third exam
- 25% - Comprehensive Final Exam

**EXAMS:** Midterm and final exams will be based on material presented in lecture, assignments, and assigned readings. Attendance at lectures is essential because most lectures will include material not covered in the text. **NO MAKE-UP EXAMS ARE GIVEN.** Students who miss an exam without a documented and acceptable excuse (e.g. medical, family emergency) will receive a score of zero for the missed exam. Students with a valid documented reason for missing an exam will be given a score for the missed exam equal to the average score on other tests. Other valid schedule conflicts will be considered only if arrangements are made in advance. Pop quizzes will be given in the first ten minutes of selected classes and will cover reading assignments, lecture material and outside reading. **NO MAKE-UP OR LATE QUIZZES ARE GIVEN.**

**ADDITIONAL ASSIGNMENT(S):** There will be several assignments using Google Earth and Bing. These are on-line Earth visualization tools that are free to download and easy to use. These will require short reports and write-ups. Additional assignments may include an executive summary of one or more current articles about an ongoing Physical Geography issue. Students unfamiliar with these writing styles should inform themselves of them and seek additional resources to get assistance. The Writing Center, located in King Center 310, can help
you with any aspect of your writing, from generating ideas to supporting your arguments to organizing to editing for style. For the current schedule or to make an appointment, visit the Writing Center’s website: http://www.mscd.edu/~writectr/ or call 303-556-6070.

ATTENDANCE: Students are responsible for all material presented during lecture periods, in assigned readings, and posted on the course website. Attendance is essential for successful participation in the course. Attendance will be monitored by pop quizzes, exams, and returned materials.

CLASSROOM DECORUM: It is expected that the classroom is a place of cooperative education where respect is given to all for the opportunity to engage in learning without distraction, intimidation or embarrassment. To maintain the optimal environment for teaching and learning, the following guidelines for classroom behavior will be strictly enforced:

1. ALL CELL PHONES AND SIMILAR COMMUNICATION DEVICES WILL BE SET TO SILENT AND USED ONLY IN EXTREME EMERGENCY.
2. NO SENDING OR READING TEXT MESSAGES, TWEETS, BLOGS, VLOGS, ETC.
3. ALL CLASSROOM INTERACTIONS WILL BE CONDUCTED WITH COURTESY AND RESPECT.
4. LAPTOP COMPUTERS MAY BE USED ONLY FOR COURSE-RELATED WORK AND RESEARCH.

CLASS ATTENDANCE FOR RELIGIOUS OBSERVANCE:
According to the policy of the Metropolitan State College of Denver: Students at Metropolitan State College of Denver ("MSCD") who, because of their sincerely held religious beliefs, are unable to attend classes, take examinations, participate in graded activities or submit graded assignments on particular days shall, without penalty, be excused from such classes and be given a meaningful opportunity to make up such examinations and graded activities or assignments provided that advance written notice that the student will be absent for religious reasons is given to the faculty members during the first two weeks of the semester.

Nothing in the preceding paragraph of this policy shall require Metro State faculty members to reschedule classes, repeat lectures or other ungraded activities or provide ungraded individualized instruction solely for the benefit of students who, for religious reasons, are unable to attend regularly scheduled classes or activities. However, presentations, critiques, conferences and similar activities involving individual students shall be scheduled to avoid conflicts with such students’ religious observances or holidays provided that reasonable advance notice of scheduling conflicts is given to faculty members. Because classroom attendance and participation is an important aspect of learning, Metro State students should not register for courses if regularly scheduled classes or activities routinely conflict with their religious observances or holidays (e.g., conflicts resulting in weekly absences for an entire semester).

NC / INCOMPLETE: See your Student Handbook for College guidelines on NC or Incomplete grades. You must request an NC by the end of the 10th week of the semester (online through MetroConnect). Incomplete grades will be issued ONLY in extreme cases on a case-by-case basis.

SPECIAL ACCOMMODATION:
The Metropolitan State College of Denver is committed to making reasonable accommodations to assist individuals with disabilities in reaching their academic potential. If you have a disability which may impact your performance, attendance, or grades in this class and are requesting accommodations, then you must first register with the Access Center, located in the Auraria Library, Suite 116, Phone: 303-556-8387.
Attachment 1: Sample Class Syllabus

The Access Center is the designated department responsible for coordinating accommodations and services for students with disabilities. Accommodations will not be granted prior to my receipt of your faculty notification letter from the Access Center. Please note that accommodations are never provided retroactively (i.e. prior to the receipt of your faculty notification letter.) Once I am in receipt of your official Access Center faculty notification letter, I will be happy to meet with you to discuss your accommodations. All discussions will remain confidential. Further information is available by visiting the Access Center website http://www.mscd.edu/~access.

Students requesting special accommodation for lectures or examinations are requested to contact me as soon as possible.

Family Educational Rights and Privacy Act

MSCD hereby gives notice that it has designated the following categories of personally identifiable information as directory information under section 438(a)(5)(b) of the Family Educational rights and Privacy Act of 1974 (FERPA). Subject to the Colorado Public Records Act, directory information concerning students as the college may be released without prior consent of the student as permitted by FERPA unless within ten days after registration as student had notified MSCD (Office of the Registrar) that such information should not be released without his or her consent. Directory information at MSCD is as follows:

Name/Address/Dates of Attendance/ Degrees Received

Requests for disclosure of the directory information must be submitted in writing to the MSCD Office of the Registrar. In the case of emergencies, directory information may be released without written request, at the college’s discretion. Prospective employers or their agents may request information concerning verification of student degrees received or dates of attendance directly from the MSCD Office of the Registrar without submitting a written request to the college.

GEG 1100 Spring 2011
INTRODUCTION TO PHYSICAL GEOGRAPHY
Lecture Schedule and Reading Assignments

<table>
<thead>
<tr>
<th>Meeting Date</th>
<th>Lecture Topic</th>
<th>Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 18</td>
<td>Course Introduction: Essentials Of Geography</td>
<td>Syllabus, Appendix C</td>
</tr>
<tr>
<td>Jan. 20</td>
<td>Essentials Of Geography</td>
<td>Ch 1, Appendix A</td>
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<tr>
<td>Jan. 25</td>
<td>Solar Energy, Seasons and the Atmosphere</td>
<td>Ch 2</td>
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<tr>
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<td>Solar Energy, Seasons and the Atmosphere</td>
<td>Ch 2</td>
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<td>Chapter</td>
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<tr>
<td>Feb. 1</td>
<td>Atmospheric Energy and Global Temperatures</td>
<td>Ch 3</td>
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<tr>
<td>Feb. 3</td>
<td>Atmospheric Energy and Global Temperatures</td>
<td>Ch 3</td>
</tr>
<tr>
<td>Feb. 8</td>
<td>Atmospheric and Oceanic Circulations</td>
<td>Ch 4</td>
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<tr>
<td>Feb. 10</td>
<td><strong>FIRST EXAMINATION (15%)</strong></td>
<td>See Above</td>
</tr>
<tr>
<td>Feb. 15</td>
<td>Atmospheric and Oceanic Circulations</td>
<td>Ch 4</td>
</tr>
<tr>
<td>Feb. 17</td>
<td>Atmospheric Water and Weather</td>
<td>Ch 5</td>
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<tr>
<td>Feb. 22</td>
<td>Atmospheric Water and Weather</td>
<td>Ch 5</td>
</tr>
<tr>
<td>Feb. 25</td>
<td>Atmospheric Water and Weather</td>
<td>Ch 5</td>
</tr>
<tr>
<td>Mar. 1</td>
<td>Atmospheric Water and Weather</td>
<td>Ch 5</td>
</tr>
<tr>
<td>Mar. 3</td>
<td>Water Resources</td>
<td>Ch 6</td>
</tr>
<tr>
<td>Mar. 8</td>
<td>Climate Systems and Climate Change</td>
<td>Ch 7, Appendix B</td>
</tr>
<tr>
<td>Mar. 10</td>
<td><strong>SECOND EXAMINATION (15%)</strong></td>
<td>See Above</td>
</tr>
<tr>
<td>Mar. 15</td>
<td>The Dynamic Planet, Tectonics, Earthquakes and Volcanoes</td>
<td>Ch 8, 9</td>
</tr>
<tr>
<td>Mar. 17</td>
<td>Weathering, Karst Landscapes and Mass Wasting</td>
<td>Ch 10</td>
</tr>
<tr>
<td>Mar. 22</td>
<td><strong>NO CLASS, SPRING BREAK</strong></td>
<td>HAVE FUN!!</td>
</tr>
<tr>
<td>Mar. 24</td>
<td><strong>NO CLASS, SPRING BREAK</strong></td>
<td>HAVE FUN!!</td>
</tr>
<tr>
<td>Mar. 29</td>
<td></td>
<td>Ch 10</td>
</tr>
<tr>
<td>Mar. 31</td>
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<td>Ch 11</td>
</tr>
<tr>
<td>Apr. 5</td>
<td></td>
<td>Ch 11, 12</td>
</tr>
<tr>
<td>Apr. 7</td>
<td>Weathering, Karst Landscapes and Mass Wasting</td>
<td>Ch 12</td>
</tr>
<tr>
<td>Apr. 12</td>
<td>Landforms Made by Running Water Fresh Water of the Continents, Landforms of Running Water</td>
<td>See Above</td>
</tr>
<tr>
<td>Apr. 14</td>
<td><strong>THIRD EXAMINATION (15%)</strong></td>
<td>Ch 13</td>
</tr>
<tr>
<td>Apr. 19</td>
<td>Landforms Made by Waves and Wind Glacial Landforms and the Ice Age</td>
<td>Ch 14</td>
</tr>
<tr>
<td>Apr. 21</td>
<td>Glacial Landforms and the Ice Age</td>
<td>Ch 14</td>
</tr>
<tr>
<td>Apr. 26</td>
<td>Global Soils</td>
<td>Ch 15</td>
</tr>
<tr>
<td>Apr. 28</td>
<td>Ecosystems and Biomes</td>
<td>Ch 16</td>
</tr>
<tr>
<td>May 3</td>
<td>Global Biogeography</td>
<td>Ch 17</td>
</tr>
<tr>
<td>May 5</td>
<td>Earth and Global Climate Change</td>
<td>Ch 7</td>
</tr>
<tr>
<td>May 12</td>
<td><strong>FINAL EXAM (25%)</strong></td>
<td>See Above</td>
</tr>
</tbody>
</table>

**Note:** Additional reserve readings and assignments will be assigned at lecture and on the course web site during the semester.

**IMPORTANT DATES**
## Spring 2011 Academic Calendar

### General

<table>
<thead>
<tr>
<th>Event</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority Spring 2011 Registration Begins</td>
<td>Monday, November 1, 2010</td>
</tr>
<tr>
<td>Institutional Registration Begins</td>
<td>Monday, January 3, 2011</td>
</tr>
<tr>
<td>Late Fee for Spring 2011 Registration Begins (Full-Time Classes Only)</td>
<td>Tuesday, January 4, 2011</td>
</tr>
<tr>
<td>Tuition Payment Deadline</td>
<td>Friday, January 14, 2011</td>
</tr>
<tr>
<td>Interinstitutional Application Deadline</td>
<td>Friday, January 14, 2011</td>
</tr>
<tr>
<td>Martin Luther King, Jr. Day (campus open, no classes)</td>
<td>Monday, January 17, 2011</td>
</tr>
<tr>
<td>Spring 2011 Classes Begin</td>
<td>Tuesday, January 18, 2011</td>
</tr>
<tr>
<td>Last Day to Drop Full Semester Classes with 100% Refund</td>
<td>Monday, January 24, 2011</td>
</tr>
<tr>
<td>Petitions for In-State Residency Due</td>
<td>Monday, January 24, 2011</td>
</tr>
<tr>
<td>Last Day to be Placed on a Wait List</td>
<td>Wednesday, January 26, 2011</td>
</tr>
<tr>
<td>Wait List Absorbed by Deans/Chairs</td>
<td>Thursday, January 27, 2011</td>
</tr>
<tr>
<td>Application for Graduation Deadline (Spring)</td>
<td>Friday, January 28, 2011</td>
</tr>
<tr>
<td>Students Check Final Wait List Status</td>
<td>Friday, January 28, 2011</td>
</tr>
<tr>
<td>Last Day to be Placed on a Wait List</td>
<td>Wednesday, February 2, 2011</td>
</tr>
<tr>
<td>Spring Break (campus open Monday-Friday, no classes)</td>
<td>Monday, March 21, 2011</td>
</tr>
<tr>
<td>Last Day to Withdraw (Full Semester Classes) and Receive &quot;NC&quot;</td>
<td>Tuesday, March 22, 2011</td>
</tr>
<tr>
<td>Grades Available Online</td>
<td>Wednesday, March 23, 2011</td>
</tr>
<tr>
<td>Spring 2011 Classes End</td>
<td>Thursday, March 24, 2011</td>
</tr>
<tr>
<td>Spring 2011 Final Exam Week</td>
<td>Friday, March 25, 2011</td>
</tr>
<tr>
<td>Last Day to Withdraw (Full Semester Classes) and Receive &quot;NC&quot;</td>
<td>Saturday, March 26, 2011</td>
</tr>
<tr>
<td>Grades Available Online</td>
<td>Sunday, March 27, 2011</td>
</tr>
<tr>
<td>Spring 2011 Commencement</td>
<td>Monday, April 4, 2011</td>
</tr>
<tr>
<td>Grades Due from Faculty at Noon</td>
<td>Tuesday, April 19, 2011</td>
</tr>
<tr>
<td>Spring 2011 Commencement</td>
<td>Saturday, May 7, 2011</td>
</tr>
<tr>
<td>Grades Due from Faculty at Noon</td>
<td>Monday, May 9, 2011</td>
</tr>
<tr>
<td>Spring 2011 Commencement</td>
<td>Tuesday, May 10, 2011</td>
</tr>
<tr>
<td>Grades Due from Faculty at Noon</td>
<td>Wednesday, May 11, 2011</td>
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<tr>
<td>Spring 2011 Commencement</td>
<td>Thursday, May 12, 2011</td>
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</tr>
<tr>
<td>Grades Due from Faculty at Noon</td>
<td>Sunday, May 15, 2011</td>
</tr>
<tr>
<td>Spring 2011 Commencement</td>
<td>Thursday, May 19, 2011</td>
</tr>
<tr>
<td>Grades Due from Faculty at Noon</td>
<td>Friday, May 20, 2011</td>
</tr>
</tbody>
</table>
METHODS FOR ACADEMIC SUCCESS

1. Read the textbook. Several times. You might read chapters entirely the first time through, then focus more closely on individual sections. Re-read sections until you are certain you've mastered the topic. I suggest that the first time you read, make sure to look up every new word you don't know and define every concept that is new to you. On subsequent readings, take notes that emphasize the topics covered in that section.

2. Use the textbook and publisher support materials. All textbooks we use have glossaries, lists of key terms, conceptual summaries, practice quizzes, practice exams and other support either in the text or on text specific websites.

3. Become intellectually curious. Explore more than the textbook to learn about the topic. There are literally thousands of other books, journals, websites and publications that you can use for reference, and they are more available than ever before.

4. Write questions. Make up a quiz for each section, and a test for each chapter. In addition to factual questions, write conceptual questions too. This will help you think about the topic as both a set of facts and how those facts are related.

5. DON'T MISS CLASS!!!. Take good notes during class and then rewrite your notes after class, comparing them to the notes you take from the textbook and other sources.

6. Ask questions. Ask questions in class, ask questions of your other students, ask questions of other faculty. If you don't know something and can't understand it after going through steps 1-5, then ask. Go to office hours and ask questions.

7. Make use of the support available to you through the Access Center and other campus support programs, including getting tutorial assistance.

8. Study every day. It takes many, many hours of real work and concentration to learn at the college level and thus requires considerable discipline and effort. It is nearly impossible to master a subject by merely attending class and skimming the text the night before the exam.

9. Form a study group and make sure you meet frequently. Ask you fellow students how they learn, how they study, and how they prepare for exams.

10. Try teaching the subject. Not just off the cuff but prepare a lesson plan on what you want to teach and how you will teach it. Think up hands-on exercises, worksheets, and other assignments that will help emphasize the lesson. Then gather an audience and teach. You might find an audience in your family, your study group, your friends, or co-workers. Or you can certainly find an audience at a senior center, nursing home, homeless shelter, or prison.

If you follow these general guidelines with dedication, commitment and perseverance I'm sure you can succeed in any course you take.
REGULAR COURSE SYLLABUS

School of: Letters, Arts and Sciences
Department: Earth and Atmospheric Sciences
CIP Code: 45.0701
Prefix & Course Number: GEG 1120
Course Title: Orienteering
Crosslisted With*: 

Check All That Apply: 
- Required for Major: 
- Required for Minor: X Specified Elective: 
- Required for Concentration: 
- Elective: X Service Course: 

Credit Hours: 1 (0 +2)

Total Contact Hours per semester (assuming 15-16 week semester):
- Lecture 0 
- Lab 30 
- Internship 0 
- Practicum 0 
- Other (please specify type and hours): 0

Schedule Type(s): L 
Grading Mode(s): L

Variable Topics Courses (list restrictions, including the maximum number of hours that can be earned*): N/A

*NOTE: This information must be included in the course description.

Restrictions (Variable Topics Course): N/A

Prerequisite(s): None
Corequisite(s): None

Prerequisite(s) or Corequisite(s): None

Banner Enforced:
- Prerequisite(s): None
- Corequisite(s): None
- Prerequisite(s) or Corequisite(s): None

Catalog Course Description: This course familiarizes students with the reading and interpretation of topographic maps and the use of the compass. Orienteering exercises are conducted in the field.

APPROVED:

Department Chair OR Program Director

Date

Dean OR Associate Dean

Date

Associate VP, Academic Affairs

Date
Prefix and Course Number:  GEG 1120

Required Reading and Other Materials will be equivalent to:

No text required. Maps of orienteering and compasses are provided.

Specific, Measurable Student Behavioral Learning Objectives:

Upon completion of this course the student should be able to:
1. demonstrate skills in map interpretation through the extensive use of field work;
2. recognize topographic features using contour maps;
3. locate exact planimetric positions of landforms and cultural features on topographic maps;
4. develop compass skills for field work;
5. identify declination problems when using a compass; and
6. develop accurate distance estimating techniques

Detailed Outline of Course Content (Major Topics and Subtopics or Outline of Field Experience/Internship (experience, responsibilities and supervision)):

I. Topographic Map Reading
   A. Identification of topographic and cultural features
   B. Planimetric location of topographic and cultural features
   C. Location of control points
   D. Definition of orienteering terrain terminology

II. Compass Use
   A. Bearings
   B. Orienting map and compass
   C. Pacing

III. Field Test
   A. Problems in setting up orienteering course
   B. Completion of prepared field traverse

Evaluation of Student Performance:

1. Field test examination
2. Conceptual examination
REGULAR COURSE SYLLABUS

School of:  Letters, Arts and Sciences

Department:  Earth and Atmospheric Sciences

CIP Code:  45.0701

Prefix & Course Number:  GEG 1220  Crosslisted With*:  

Course Title:  Map Use

Check All That Apply:  Required for Major:  X  Required for Minor:  X  Specified Elective:  

Required for Concentration:  

Credit Hours:  2 (1+2)

Total Contact Hours per semester (assuming 15-16 week semester):

Lecture  15  Lab  30  Internship  0  Practicum  0  Other (please specify type and hours):  0

Schedule Type(s):  L  Grading Mode(s):  L

Variable Topics Courses (list restrictions, including the maximum number of hours that can be earned*):  N/A

*NOTE:  This information must be included in the course description.

Restrictions (Variable Topics Course):  N/A

Prerequisite(s):  None

Corequisite(s):  None

Prerequisite(s) or Corequisite(s):  None

Banner Enforced:

Prerequisite(s):  None
Corequisite(s):  None
Prerequisite(s) or Corequisite(s):  None

Catalog Course Description:  This is an introductory course providing basic information on the use and interpretation of maps, map projections, map scale, map symbols, remote sensing, and Geographic Information Systems.

APPROVED:

[Signatures and dates]

Department Chair OR Program Director  Date

Dean OR Associate Dean  Date

Associate VP, Academic Affairs  Date
Prefix and Course Number: GEG 1220

Required Reading and Other Materials will be equivalent to:

Specific, Measurable Student Behavioral Learning Objectives:

Upon completion of this course the student should be able to:
1. explain the geographic concepts of location, place, and space;
2. discuss the basic earth facts of size, shape, magnetism, movement, and its relationship to the sun;
3. use a globe to demonstrate the above earth facts;
4. use a globe to demonstrate the characteristics and significance of great circles;
5. explain different coordinate systems;
6. state the characteristics of the system of latitude and longitude;
7. state the relationship of latitude and sun angle at different seasons;
8. state the relationship of longitude and time;
9. relate time at different places on the earth and particularly the role of the international dateline;
10. locate places utilizing the metes and bounds system of land survey;
11. locate and/or identify tracts of land utilizing the public land survey system;
12. list the basic components and characteristics of maps;
13. utilize map scale, in its different forms on a variety of maps;
14. identify different symbols used on maps;
15. explain the objectives of map projections and the basic types of map projections;
16. utilize a variety of GIS displays and interpret them;
17. explain the basic classification schemes used by GIS software;
18. utilize GPS location instruments for navigation;
19. state the characteristics of GPS location accuracy; and integrate the components of GPS and GIS.

Detailed Outline of Course Content (Major Topics and Subtopics or Outline of Field Experience/Internship (experience, responsibilities and supervision)):

I. The Meaning and Importance of Location, Place, Space
II. The Shape and Size and Magnetism of the Earth
III. The Use of Globes
   A. Great circles
   B. Coordinate systems of location
   C. Mathematical coordinates
IV. Latitude and Longitude
   A. Relationship of latitude and sun angles
   B. Relationship of longitude and time
V. Public Laws Survey Systems
VI. Basic Elements of Maps
   A. Map scale
   B. Map projections
   C. Map symbolization
   D. Techniques of map construction
VII. Types of Maps and Uses of Maps
VIII. Map Essay (Exercise)
   A. Identification of cultural features on topographical maps
   B. Identification of climatic information on topographical maps
   C. Identification of terrain features on topographic maps
   D. Inferences from accumulated information
IX. Global Positioning Systems (GPS)
   A. Relationship of GPS satellites to latitude and longitude
   B. Comparison of GPS instruments
   C. Altitude estimation using GPS
   D. Operation of GPS satellites for time verification
X. Geographic Information Systems
   A. Overview of computer cartography
   B. GIS analysis, retrieval, and display
C. Comparison of ARC/INFO, Map/Info, and other GIS software
D. Inferences for GIS map comparisons

Evaluation of Student Performance:

1. Minimum of two major exams
2. Minimum of five map exercises
3. Any other projects or papers, or publications as required by the instructor
REQUEST FOR GENERAL STUDIES DESIGNATION (2012-13)
GLOBAL DIVERSITY

Please review the Course Selection Criteria for this category for assistance in completing this form, particularly as it relates to the percentages associated with each Student Learning Outcome.

This form should always accompany a Request form for another course category so most of the course information will be found on that form.

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Course Number</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>GEG</td>
<td>1300</td>
<td>3</td>
</tr>
</tbody>
</table>

A. Course content and Student Learning Outcomes

Describe the specific ways in which this course addresses each of these Student Learning Outcomes, providing students opportunities to develop the skills and abilities and/or acquire the knowledge. Include reference to readings, discussions, lectures, and other pedagogical tools which will be used.

22. Exhibit knowledge of one or more regions or countries outside the United States including aspects such as the historical, political, social, cultural, legal, or business contexts' of these regions or countries. (50%)

Through lecture, readings, and discussions in particular, students become familiar with different regions of the world, studying the spatial variation in such cultural characteristics as language, religion, political framework, economic activity, and ethnicity. Assigned exercises and/or written reports or presentations will also emphasize human diversity over different regions of the world.

23. Describe the implications of global interdependence including its impact on societies from a governmental, technological, institutional, organizational, or individual context. (25%)

Starting with Chapter 1 where the concept of globalization is defined, succeeding chapters expand on the process of globalization discussing the cultural impacts of globalization in such areas as religion, language, identity (ethnicity, sexuality, and gender) political systems, urbanization, and economic activities.

B. Assessment of Student Learning:

Identify and describe at least one specific form of assessing student achievement of each Student Learning Outcome which will be a regular part of the course. Examples include specified test questions, specified problem sets, written paper prompts and scoring guide or rubric, projects with assignment sheet and scoring guide or rubric, etc. Include attachments as applicable. A single piece
of student work may be used to assess student achievement of more than one Student Learning Outcome.

22. Exhibit knowledge of one or more regions or countries outside the United States including aspects such as the historical, political, social, cultural, legal, or business contexts of these regions or countries.

A combination of examinations, exercises, written assignments and/or reports will be used to assess this outcome. (see attachments 1, 2, 3).

23. Describe the implications of global interdependence including its impact on societies from a governmental, technological, institutional, organizational, or individual context.

A combination of examinations, exercises, written assignments and/or reports will be used to assess this outcome. (see attachments 1, 2, 3).

C. Course Selection Guidelines

Briefly describe how the course meets the course selection guidelines

☐ The course has demonstrable breadth because it includes SLOs and course content that relate to at least three of the following aspects of societies outside the United States: Political, Social, Business, Cultural, Historical, and/or Legal

Approvals:

[Signature] 10/2/12
Department Curriculum Committee / Date

[Signature] 10/2/12
Department Chair or Program Director / Date

[Signature] 4/25/12
School Curriculum Committee / Date

[Signature] 12/14/12
Dean or Associate Dean / Date
METROPOLITAN STATE COLLEGE of DENVER

Richard Wagner  4/24/13

Chair, General Studies Committee / Date

Sheila Thompson  3/19/13

Associate Vice President, Academic Affairs / Date
REQUEST FOR GENERAL STUDIES DESIGNATION (2012-13)
SOCIAL and BEHAVIORAL SCIENCES I

Please review the Course Selection Criteria for this category for assistance in completing this form, particularly as it relates to the percentages associated with each Student Learning Outcome.

If this course is also being submitted for the Global Diversity Category, check here X, and complete and attach the separate Global Diversity General Studies Designation request.

Date: July 26, 2012

School: LAS

Department: EAS

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Course Number</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEG</td>
<td>1300</td>
<td>3</td>
</tr>
</tbody>
</table>

Title: Introduction to Human Geography

Prerequisite(s): Minimum performance standard scores on reading, writing, and mathematics pre-assessment tests

Corequisite(s): None

Banner enforced prerequisite(s) and/or corequisite(s): None

Recommended maximum enrollment per section: 50

A. Course content and Student Learning Outcomes

Describe the specific ways in which this course addresses each of these Student Learning Outcomes, providing students opportunities to develop the skills and/or acquire the knowledge. Include reference to readings, discussions, lectures, and other pedagogical tools which will be used.

2. Demonstrate the ability to locate sources when information is needed, and to evaluate the authenticity, validity, and reliability of resources applied to a specific purpose (10%)

Students will be required to gather information for exercises and/or written reports or presentations about an aspect of Human Geography (e.g., world religions, languages, world economies, folk cultures, world agriculture, world political systems, etc.). Students must demonstrate that the sources they use for the information presented are reliable and that the data presented is valid.
6. Analyze texts, sources, and argumentation, identify cause and effect relationships and recognize fallacies of argument (10%)

Students will be expected to:
- Use readings, maps, air photographs and other remotely sensed data to identify natural and human (cultural) spatial patterns and spatial relationships
- Identify the factors that affect the development of these spatial relationships and how spatial patterns affect each other and are modified through time
- Analyze a region's changing cultural and environmental trends and distinguish the factors causing them

7. Use and document sources and evidence in an ethical manner (10%)

Students will be required to gather information for exercises and/or written reports or presentations about an aspect of Human Geography as mentioned above in # 2. Students must use standard methods of citation and must demonstrate that the sources they use are appropriate and reliable and that the data presented is valid. Students will be held to ethical standards of presentation.

10. Describe how the methods of science are used to generate new knowledge (10%)

Through lecture, discussions, readings, exercises and/or written reports or presentations, students will become familiar with the science of geography including major geographical concepts (e.g., spatial interaction, distance decay, location, scale) and theories (e.g., migration theory, Central Place Theory, economic development theory, e.g., development through self-sufficiency vs international trade), data collection, and data analysis.

17. Describe the forms and impacts of geographical conditions or social, economic, financial, or political practices on the human experience using analytical methods appropriate to the field. (SBS I) (80%)

Through lecture, readings, and discussions in particular, students will become familiar with the basic concepts of geography and then systematically study the spatial patterns and consequences of human culture including population distribution and migration, religion, language, man's economic endeavors, political systems, and settlement patterns.

B. Assessment of Student Learning

Identify and describe at least one specific form of assessing student achievement of each Student Learning Outcome which will be a regular part of the course. Examples include specified test questions, specified problem sets, written paper prompts and scoring guide or rubric, projects with assignment sheet and scoring guide or rubric, etc. Include attachments as applicable. A single piece of student work may be used to assess student achievement of more than one Student Learning Outcome.
2. Demonstrate the ability to locate sources when information is needed, and to evaluate the authenticity, validity, and reliability of resources applied to a specific purpose (10%).

- Exercises and or written reports on specific aspects of Human Geography will require students to research and demonstrate the reliability and validity of resources used in the exercises and or reports.
- A term assignment will allow students to locate sources and evaluate data as well as become familiar with the human geography of a country other than their own (see attachment 4).

6. Analyze texts, sources, and argumentation, identify cause and effect relationships and recognize fallacies of argument (10%).

- Written reports and or exercises on specific topics will require students to research texts, journals, and other sources, identify geographic relationships and observe different points of view on chosen topics including contemporary world problems. The written report or exercise will be used in assessing this part of the student outcome.
- Lectures and discussions in class will present varying viewpoints on human geography topics and allow students to evaluate them and make their own conclusions. Exam questions, short written assignments or a combination of both will be used to assess this part of the student outcome.
- Exercises and or other assignments will familiarize students with analyzing sources, recognizing different viewpoints and drawing conclusions. Answers to the assignments and examination questions will be used to assess this part of the student outcome. (see attachment 3)

7. Use and document sources and evidence in an ethical manner (10%).

- Written reports and or exercises will be analyzed for proper notation and documentation.
- A lecture will discuss the methods of citation and plagiarism and exam questions will assess the student's knowledge of these topics.

10. Describe how the methods of science are used to generate new knowledge (10%).

- Examination questions and/or exercises and/or analysis of written reports will be used to assess this student outcome.

1. Describe the forms and impacts of geographical conditions or social, economic, financial, or political practices on the human experience using analytical methods appropriate to the field. (SBS I 80%)

- A combination of examinations, exercises, written assignments and reports will be used to assess this student outcome. (see attachments 1, 2, and 3).
C. Conformance with Course Selection Guidelines

Briefly describe how the course meets the course selection guidelines

☐ To demonstrate breadth, describe the different areas of the Social Sciences I examined within the course. Course content must address at least two major areas or domains in a discipline. Examples might be the historical context or theoretical and methodological approaches within a discipline.

- The objective of this course is to introduce the study of human geography by providing not only a body of knowledge about the creation of places and regions, but also an understanding of the interdependence of places and regions in a globalizing world. This course is a systematic coverage of the main aspects of man’s cultural patterns. First it looks at the distribution of the world’s population as well as the movement of people from place to place. It asks the question of why some places on earth have high concentrations of population and others do not. Second, this course looks at how different cultural groups are distributed and analyzes how man’s cultural trait and belief patterns have led to cultural diversity and impact of this diversity on everyday life. In particular, the three main elements of cultural identity: language, religion, and ethnicity are discussed, the reason for their particular distributions, and the importance of these in man’s daily life. Third, the course looks at how man makes a living. In particular, it discusses patterns of, agriculture, manufacturing and services, the reason for these distributions, changes in their spatial patterns and its significance to our lives. Fourth, the course looks at political differences and problems that result from cultural diversity and the importance of these differences for world peace. Finally, this course discusses the issues related to the use of the earth's natural resources focusing on the cultural problems resulting from the depletion, destruction, and inefficient use of the world’s natural resources.

- The course uses major geographic concepts such as location, scale, spatial interaction, spatial distribution and the region to describe the geographic impacts on the human experience. The course uses major geographic tools such as maps, GIS (Geographic Information Systems), air photos and other remotely sensed data to elicit and help explain the world’s varying spatial patterns in the topics mentioned above.

Approvals:

[Signature]  12/13/12

Department Curriculum Committee / Date

[Signature]  10/3/12

Department Chair or Program Director / Date

[Signature]  12/13/12

School Curriculum Committee / Date
METROPOLITAN STATE COLLEGE of DENVER

[Signature]
12/14/12
Dean or Associate Dean / Date

[Signature]
3/6/13
Chair, General Studies Committee / Date

[Signature]
3/12/13
Associate Vice President, Academic Affairs / Date
REGULAR COURSE SYLLABUS

School of: Letters Arts & Sciences

Department: Earth & Atmospheric Sciences

Prefix & Course Number: GEG 1300  Crosslisted With*: NA

Course Title: Introduction to Human Geography

Check All That Apply: Required for Major: ______ Required for Minor: X Specified Elective: ______
Required for Concentration: X Elective: X Service Course: ______

Credit Hours: 3 (3+0)

Total Contact Hours per semester (assuming 15-16 week semester):
Lecture 45 Lab 0 Internship 0 Practicum 0 Other (please specify type and hours): 0

Schedule Type(s): L  Grading Mode(s): L

Variable Topics Courses (list restrictions, including the maximum number of hours that can be earned**):
NA

** NOTE: This information must be included in the course description.

Restrictions (Variable Topics Course): NA

Prerequisite(s): Minimum performance standard scores on reading, writing, and mathematics pre-assessment pre-placement tests

Corequisite(s): None

Prerequisite(s) or Corequisite(s): None

Banner Enforced:
Prerequisite(s): None
Corequisite(s): None
Prerequisite(s) or Corequisite(s): None

Catalog Course Description: An introduction to geographic perspectives, concepts, and methods as they apply to the study of human activities. Emphasis is placed on explaining human spatial patterns and their consequences. Topics covered include population, migration, language, religion, folk and economic development, political systems, and resources.

Approved:

[Signatures]

Department Chair OR Program Director

[Signature]
Date

Dean OR Associate Dean

[Signature]
Date

Associate VP, Academic Affairs

[Signature]
Date
Prefix and Course Number:

Required Reading and Other Materials will be equivalent to:


Specific, Measurable Student Behavioral Learning Objectives:
Upon completion of this course the student should be able to:

1. demonstrate the value of geography as a discipline in explaining human spatial patterns through exposure to the basic themes/traditions of geography (location, place, human/environmental interaction, movement and spatial interaction as specified in the National Geography Standards (17)

2. use basic geographic tools of research and analysis including: (2,6,7,10,17)
   a. atlases, maps, aerial photographs, remotely sensed images and globes
   b. primary data sources such as census materials and surveys
   c. basic mathematical skills

3. Demonstrate an understanding of the diversity of human activities within and among places and regions by describing, analyzing and explaining human spatial patterns including those of: (2,6,7,10,17,22,23)
   a. population
   b. religion
   c. folk and popular culture
   d. political systems
   e. economic systems, including agriculture, industry and services
   f. rural and urban settlement systems
   g. human/environmental relationships

4. explain the consequences of changing human spatial patterns in an increasingly connected world (2,6,7,10,17,22,23)

Detailed Outline of Course Content (Major Topics and Subtopics) or Outline of Field Experience/Internship (experience, responsibilities and supervision)

I. Introduction to Human Geography
   A. Nature and Culture
   B. Cultural Landscapes and Regions
   C. Major Geographical Concepts
      1. Location and scale
      2. Spatial Distribution
      3. Spatial Interaction
      4. Globalization
      5. Spatial Diffusion
   D. Geographic Tools
      1. Maps
      2. Remote Sensing
      3. Global Positioning Systems
      4. Geographic Information Systems

II. Globalization and Cultural Geography
   A. Contemporary Globalization
   B. Cultural Impacts of Globalization
III. Population and Migration
   A. Population Fundamentals
      1. Population Distribution and Density
      2. Fertility and Mortality
      3. Life Expectancy and infant mortality
   B. Population Composition and Chance
      1. Population Pyramids
      2. Natural Increase
      3. The Demographic Transition
   C. Population-Environment Interactions
   D. Migrations
      1. Forced and Voluntary Migration
      2. Push and Pull Factors
      3. Patterns of Global Migration

IV. Geographies of Language
   A. Languages in the World
      1. Language Types
      2. Language Families
   B. Language Diffusion and Globalization
   C. Dialects and Toponyms

V. Geographies of Religion
   A. Major World Religions
      1. Universalizing Religions
      2. Ethnic Religions
   B. Religion, Society, and Globalization
   C. Religion, Nature, and Landscape
      1. Religious Views on Nature
      2. Religious Landscape
   D. Religious Conflict

VI. Geographies of Identity: Race, Ethnicity, Sexuality, and Gender
   A. Race and Ethnicity
      1. What is Race?
      2. What is Ethnicity
   B. Ethnicity in the Landscape
      1. Ethnic Interaction and Globalization
      2. Ethnic Conflict
   C. Sexuality and Gender
      1. Sexuality, Identity, and Space
      2. Geography and Gender

VII. Political Geographies
   A. Key Concepts in Political Geography
      1. The Development of the State and Sovereignty
      2. Nations vs States
3. Imperialism and Colonialism

B. Geographical Characteristics of States
   1. Shape and Extent of States
   2. State Boundaries
   3. Unitary vs Federal States

C. Internationalism and Supranational Organizations
   1. The United Nations
   2. The European Union

D. Global Geopolitics
   1. The Hartland Theory
   2. Globalization and Terrorism

E. Electoral Geography
   1. Reapportionment and Redistricting
   2. Gerrymandering

VIII. Geographies of Development
   A. Development: Definition
      1. Economic, Sociodemographic, and Environmental Indicators
      2. Development and Gender
   B. Development and Income Inequality
      1. Factors Affecting Income Distribution
      2. Globalization and Income Distribution
   C. Development Theory
      1. Classical Development Theory
      2. Dependency Theory
      3. World-System Theory
      4. The Neoliberal and Poverty Reduction Theories

IX. Industrial and Service Geographies
   A. Types of Industry
      1. Primary Industry
      2. Secondary Industry
      3. Tertiary Industry
   B. Evolution of Manufacturing
      1. Industrial Location Factors
      2. Major world Manufacturing areas
   C. Manufacturing Beyond the Core Areas
      1. New Industrial Economies
      2. Export Processing Zones
   D. Services
      1. Definition and location of Services
      2. Deindustrialization and Globalization and the Rise of Services

X. Urban Geographies
   A. Cities and Urbanization
      1. Urban Settlements vs Rural Settlements
      2. Urban Hierarchies and Globalization
      3. Urbanization
B. Urban Structure
   1. Urban Land Use
   2. Urban Structure in North America

C. Urban Dynamics
   1. Urban Land Use Change
   2. Urban Redevelopment
   3. Urban Planning

XI. Agricultural Geographies
A. Agriculture Origins and Revolutions
   1. The First and Second Agricultural Revolutions
   2. The Third Agriculture Revolution
B. Agricultural Systems
   1. Subsistence Agriculture
   2. Commercial Agriculture
   3. Spatial Variations in Agriculture (Von Thunen Model)
C. Agriculture, the Environment, and Globalization
   1. Sustainable Agriculture
   2. Globalization and Agriculture

XII. Environmental Challenges
A. Ecosystems
   1. Ecological Concepts
   2. Environmental Degradation
B. Nonrenewable Energy Resources
   1. Fossil Fuels
   2. Nuclear Energy
C. Renewable Energy Resources
   1. Biomass Energy
   2. Hydropower
   3. Solar and Wind Energy
   4. Geothermal Energy
D. Human-Environment Interactions
   1. Air Pollution
   2. The Greenhouse Effect and Global Warming
   3. Water Pollution
   4. Carbon Footprints

Evaluation of Student Performance

1. At least 2 major examinations that account for a minimum of 50% of the course grade.
2. Any written assignments, projects, presentations, or exercises.
4.1 Linguistic Regions and Ecology Online

In this section you will explore some of the concepts of linguistic geography using the language data at the National Atlas of Canada Online.

First published in 1906 and produced by the Canadian government, the National Atlas of Canada is a regularly updated source for visualizing both the physical and human geography of the country.

For the sixth edition, the atlas ceased to be a paper product and is now operated as an online, interactive atlas. One of the first electronic atlases to be freely available over the Web, this atlas also offers more mapping tools and data layers than most online atlases.

Bilingualism and Linguistic Culture Regions
Both English and French are considered the official languages of Canada, with about 90% of the population speaking English or French as their primary language at home, according to the 1996 census.

What does Canada's "linguistic duality" look like? Is bilingualism a separate region, or is it simply the relationship between two formal language regions? This exercise looks at the linguistic culture regions of the two official languages in detail.


Step 2 In the left column, under "See Our Maps," choose "People & Society - Official Languages - Knowledge of English." This will launch your first linguistic map of Canada.

Step 3 Study the map that results. The Legend to the right of the map explains the meaning of the colors and symbols used in the map.

(Notice that for this data set, the data is gathered only at populated areas; places without significant populations, and therefore no census data, are shown in grey.)

To get a closer look at the data set, you can zoom in and out using the zoom magnifying tool buttons on the tool bar above the map.

Question 1: Describe the core/periphery pattern of the formal culture region of English in Canada.

Step 4 Return to the list of available layers in the left column, and choose "People & Society - Official Languages - Knowledge of French."

This will redraw your map with "Knowledge of French" as the only visible layer.
Because the “Official Languages” data set is symbolized as a choropleth map each time, only one layer of data is visible at a time.

Step 5: Now, repeat the process from Step 4 above to add the layer “English-French Bilingualism,” and study the resulting map.

Question 3: How is English-French bilingualism regionally distributed?

Question 4: Is there a strong correlation between the core areas of bilingualism and the peripheral areas of French knowledge or English knowledge?

Question 5: Explore the map more closely, considering rural areas versus urban areas. Is there a correlation between the urban or rural character of a place and the level of bilingualism?

Question 6: Is the identity of a populated place as a coastal or inland place a factor in bilingualism? Is proximity to the United States a factor?

Linguistic Ecology and the Bivariate Map
The Atlas of Canada Online also allows us to look at different data sets simultaneously to see how different linguistic variables are related. This type of data comparison can be used, for example, to explore concepts of linguistic ecology. Although linguistic ecology sometimes refers to a wide range of contextual variables influencing language (such as community size and political issues), in this exercise we will explore it as the relationship between language and physical geography.

Question 2: Describe the core/periiphery pattern of the formal culture region of French. How is it different from the English culture region?
Step 6  Return to the list of layers in the left column, and select "People & Society – Aboriginal Languages – Aboriginal Languages by Community, 1996." The map that you see should look like the image on the right.

Question 7: Study the linguistic differences shown in this small-scale map. What region of Canada has the greatest diversity of aboriginal languages? What region has the least diversity?

Question 8: Review the connection between landscape and linguistic diversity that you have learned in class and reading. What would you expect the landscape to be like in the region with the highest density of language families? the lowest density?

Step 7  Zoom in on any region of the map by clicking the "Zoom in" magnifying tool on the tool bar, and clicking your cursor on the map to activate the zoom. You will see that the point symbols show not only the language spoken, but also the number of speakers at that point.

The depiction of two data variables in one map is called a bivariate map. Any type of thematic map can be bivariate.

The bivariate symbols in this map are combining two major types of data: quantitative data, which is ranked or numerical, and qualitative data, which is categorically different and therefore cannot be ranked.

The size of the circle shows the quantitative data, in this case—the population size of the community. The color or hue of the point symbol shows the qualitative data, the major language family for that community. Both types of symbols are explained separately in the legend to the right of the map.

Step 8  Explore the aboriginal language geography by panning around the map. Compare some of the communities by clicking the “Get Statistics” button above the map, and clicking on one of the circles. This will take you to a pop-up window with data for the number of speakers in the community. If you click on the link for “Aboriginal Community Statistics” in the pop-up, you can delve into actual population numbers as well as socioeconomic data for the community.

As you explore, you will notice that there are strong regional differences in language families, community populations, and number of speakers.

Is there a close connection between linguistic regions, number of speakers, and physical geography? In the next section, we will explore this question by zooming in to the region of southern British Columbia and Alberta.
Although this atlas includes physical mapping layers such as relief and ecological information, these layers cannot be viewed simultaneously. To help you make comparisons, the data layers for Relief and Ecological Framework (from the “Environment-Land” section of the atlas) are provided in the two figures, above.

**Step 9** Zoom to the region of Southern British Columbia and Alberta. Explore the map using your pan and zoom tools.

**Question 8:** What are the majority language family or families in use in this region?

**Question 9:** Compare the geographic information that you see in the linguistic map with the maps of relief and ecological framework, left. Can you find evidence for a linguistic shatter belt? Explain your findings.

**Step 10** Analyze both the population and number of speakers information in this region by comparing the statistics for the larger communities with the statistics for the smaller communities. Compare your findings to the maps on the left.

**Question 10:** Is there a relationship between number of speakers and land relief? Between number of speakers and ecological framework?

**Question 11:** What is the relationship between number of speakers and size of the populated place? Why do you think this is?

**Question 12:** What seems to be the typical size of the populated place where an aboriginal language family is located?
Attachment 3
When we read a map for information about political boundaries and borders, we are dependent on the mapmaker’s skill with generalization. Generalization is simply the term used by cartographers for the process of deciding how much geographical detail is going to be shown in a map. All maps are generalizations, because all maps are scaled-down versions of reality.

The level at which a political boundary is generalized on a map depends on the scale of the map (How much room is there to show these boundary details?), the quality of the original data (How much detail was known about the boundary to begin with?), and the intentions of the cartographer (Whose political claim is being shown?).

The balance that is struck between these factors can be a precarious one. The omission of a detail about one curve in an international border may result in inaccurate decision making, or cause grave offense for one or both countries.

The border between Eritrea and Ethiopia is a good example of how cartographic generalization can affect the relations between countries. Until 1952, Eritrea was a colony of Italy. Eritrea became independent from Italy following the Second World War, and in 1962, Ethiopia annexed the region as its new, northern province.

The map below is from a world atlas published in 1952, when Eritrea was on the eve of independence from Italy.
In the map above, showing the same region in 1979, Ethiopia has been transformed by the 1962 annexation of Eritrea. The old international border is now a relic boundary.

Question 2: Compare the 1951 and 1979 maps of Ethiopia. How has the annexation changed Ethiopia’s geographical context in the Horn of Africa? What advantages or disadvantages can you see for the people of Ethiopia? For the people of Eritrea?

Question 3: Can you find any indication in the 1979 map that there used to be an international border at what is now the provincial border of Eritrea, Tigray, and Gonder?
Generalization and Interpretation

In 1993, Eritrea asserted its independence from Ethiopia. When this political independence extended to economic autonomy through the issuing of Eritrean currency in 1998, war broke out between the two countries.

The main dispute in the war centered on the delineation of the Eritrean-Ethiopian international border. The border was based on the old colonial boundaries of Eritrea as set by a 1900 Italian treaty, shown above. In the treaty, the border was described and graphically portrayed with a high degree of generalization, with the understanding that a more detailed map would be produced later.

Question 4: Study the treaty map above. How is the colonial boundary depicted? Is this a natural, ethno-geographic, or geometric boundary?
Despite its provisional nature, a less generalized map of the border was never produced, and the treaty map remained the primary description for the border. As a result, each country interpreted the specifics of the boundary location differently.

The conflicting interpretations are illustrated in these three maps from the Eritrea-Ethiopia Boundary Commission of the United Nations.

In the maps, the pink line represents Ethiopia's border claim, and the green line represents Eritrea's border claim.

**Question 5:** Which segments of the border seem to be under the greatest dispute between the two countries: the Western Sector, the Central Sector, or the Eastern Sector?

**Question 6:** Look back to the treaty map on page 81 and see if you can relate the sectors to the colonial illustration. Which aspects of the treaty map seem to be causing the greatest conflict?
After 80,000 lives were lost in this conflict, a peace agreement between the two countries was finally forged in December 2000, and a commission was established to make an objective ruling on the border. The Eritrea-Ethiopia Boundary Commission studied the treaty map and border description carefully, and in April 2002, released a more specific description of the border, divided according to the three sectors of the previous maps.

**In Search of a New Border**

For the last part of this exercise, imagine that you are in the boundary drawing seat of the commission, implementing the new boundary as mandated by the United Nations.

**Step 1** Photocopy the three blank base maps, for each of the three sectors, on pages 87-89.

**Step 2** For each sector, read the new description of the boundary as handed down by the commission, and plot the new delineation of the Eritrea-Ethiopia border on the corresponding base map of the region.

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**Question 7:** Analyze the three new sector maps you have created, and compare them to the old boundary map. Is this new international boundary more geometric? More natural?

**Question 8:** Will there be a new relic political boundary? If so, where?

**Question 9:** Compare the new boundary to the previous claims of Eritrea and Ethiopia. Where did Eritrea make concessions to Ethiopia? Did Ethiopia in turn make concessions to Eritrea?

You will notice that there are several turning points from the border description that remain vague. The final stage of setting a new political boundary, demarcation, consists in the actual marking of the boundary on the ground, and it is in this final stage when these last details are decided. Demarcation is the largest scale at which political boundaries are represented. It is the boundary mapped without generalization, at the scale of 1:1.
Decision

For the reasons set out above, the Commission unanimously decides that the line of the boundary between Eritrea and Ethiopia is as follows:

A. In the Western Sector

(i) The boundary begins at the tripoint between Eritrea, Ethiopia and the Sudan and then runs into the centre of the Setit opposite that point (Point 1).

(ii) The boundary then follows the Setit eastwards to its confluence with the Tomsa (Point 6).

(iii) At that point, the boundary turns to the northeast and runs in a straight line to the confluence of the Mareb and the Mai Ambessa (Point 9).

B. In the Central Sector

(i) The boundary begins at the confluence of the Mareb and the Mai Ambessa (Point 9).

(ii) It follows the Mareb eastwards to its confluence with the Belesa (Point 11).

(iii) Thence it runs upstream the Belesa to the point where the Belesa is joined by the Belesa A and the Belesa B (Point 12).

(iv) To the east and southeast of Point 12, the boundary ascends the Belesa B, diversing from that river so as to leave Tserona and its environs to Eritrea. The boundary runs round Tserona at a distance of approximately one kilometre from its current outer edge, in a manner to be determined more precisely during demarcation.

(v) Thereafter, upon rejoining the Belesa B, the boundary continues southward up that river to Point 14, where it turns to the southwest to pass up the unnamed tributary flowing from that direction, to the source of that tributary at Point 15. From that point it crosses the watershed by a straight line to the source of a tributary of the Belesa A at Point 16 and passes down that tributary to its confluence with the Belesa A at Point 17. It then continues up the Belesa A to follow the Eritrean claim line to Point 18 so as to leave Ford Cadorna and its environs within Eritrea. Point 18 lies 100 metres west of the centre of the road running from Adigrat to Zalambessa.

(vi) From Point 18, the boundary runs parallel to the road at a distance of 100 metres from its centre along its western side and
in the direction of Zalambessa until about one kilometre south of the current outer edge of the town. In order to leave that town and its environs to Ethiopia, the boundary turns to the northwest to pass around Zalambessa at a distance of approximately one kilometre from its current outer edge until the boundary rejoins the Treaty line at approximately Point 20, but leaving the location of the former Eritrean customs post within Eritrea. The current outer edge of Zalambessa will be determined more precisely during the demarcation.

(vii) From Point 20 the boundary passes down the Muna until it meets the Enda Dashim at Point 21.

(viii) At Point 21 the boundary turns to the northwest to follow the Enda Dashim upstream to Point 22. There the boundary leaves that river to pass northwards along one of its tributaries to Point 23. There the boundary turns northeasterly to follow a higher tributary to its source at Point 24.

(ix) At Point 24 the boundary passes in a straight line overland to Point 25, the source of one of the headwaters of a tributary of the Endeli, whence it continues along that tributary to Point 26, where it joins the Endeli.

(x) From Point 26, the boundary descends the Endeli to its confluence with the Muna at Point 27.

(xi) From Point 27, the boundary follows the Muna/Endeli downstream. Near Rendacoma, at approximately Point 28, the river begins also to be called the Ragali.

(xii) From Point 28, the line continues down the Muna/Endeli/Ragali to Point 29, northwest of the Salt Lake, and thence by straight lines to Points 30 and 31, at which last point this sector of the boundary terminates.

C. In the Eastern Sector

The boundary begins at Point 31 and then continues by a series of straight lines connecting ten points, Points 32 and 41. Point 41 will be at the boundary with Djibouti. Point 40, lies equidistantly between the two checkpoints at Bure.

— Eritrea-Ethiopia Boundary Commission,

International Boundary between
the State of Eritrea and
the Federal Democratic Republic of Ethiopia

WESTERN SECTOR

Mercator Projection
Datum: WGS-84
Scale: 1:1,000,000

Base map is taken from the 1:1,000,000 Vector Map Level 0 (VMAP 0) produced by the U.S. National Imagery and Mapping Agency, with supplemental data from the 1:100,000 Soviet Union topographic mapping series and satellite imagery acquired from SPOT and ASTER/TERRA. Place names are compiled by the Commission based on various sources (see "Technical Note Relating to Maps").

This map is produced for illustrative purposes only.

Reference Point

Eritrea-Ethiopia Boundary Commission
From the confluence of the Mard and the Mai Ambessa to Point 11, the boundary follows the Mard.
HUMAN GEOGRAPHY TERM ASSIGNMENT

During the course of the term you will develop a country profile. With consent of the instructor, you will pick a world country other than your own and develop a written profile of that country. The information gathered will relate to the chapter topics that we discuss in class. For example, when we are on the population chapter you will gather information on that country's population characteristics, when we discuss religion, your country's religious characteristics, when we are discussing religion, its economic characteristics when we discuss development (agriculture, industry, and services) its development characteristics and patterns, etc. The result at the end of the term will be a profile of the country that you picked or were assigned.

The country Profile should consist of the following:

1. Maximum of 15 pages excluding maps, diagrams and tables
2. Single spaced (unless otherwise instructed) 12 pt. type
3. In addition to material that may be in your text or mentioned in class about your specific country, you are expected to consult additional external sources to gather your country's information
4. A proper listing of references cited
5. Illustrations should be numbered and have captions that explain the illustrations
6. Pay close attention to grammar and sentence structure as well as spelling.

REMEMBER: The presentation of copyrighted material as you own work is PLAGIARISM and is illegal. Give credit where it is due. Cite the reference whether the material is a direct quotation or has been paraphrased.
## METROPOLITAN STATE COLLEGE OF DENVER
### DEPARTMENT OF EARTH AND ATMOSPHERIC SCIENCES

**FACULTY: DR. SANGEETA SINGH**  
**CLASS CRN: 34916**  
**CLASS TIME: 8:00 am - 10:50 am**  
**CLASS VENUE: CENTRAL CLASS ROOM: 213**  
**DAYS: TUESDAY & THURSDAY**  

**OFFICE LOCATION: SCIENCE BUILDING ROOM: 2052**  
**OFFICE HOURS: WEDNESDAY, 11:30 to 12:30**  
**EMAIL: ssingh7@mscd.edu**

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**INTRODUCTION TO HUMAN GEOGRAPHY (1300 003)  
(SPRING 2011)**

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### WELCOME TO HUMAN GEOGRAPHY!!!!!!

**IMPORTANCE OF HUMAN GEOGRAPHY:** Human Geography explores the spatial dimensions of human interaction with the natural environment. In recent times human geography has become more fascinating as it offers variety of employment opportunities in the field of urban planning & design, environmental management, economic development, geographic information science (GIS) as well as international studies.

**COURSE DESCRIPTION:** This course emphasizes to understand the relevance of geographic concepts and socio-political & economic diversity with reference to human problems in a spatial context. This is a Statewide Guaranteed Transfer Course (GT-SS2).

**COURSE OBJECTIVES:**

- This course will provide you with opportunities to improve in three areas of intellectual endeavor: i.e., Geographic literacy, knowledge & thinking:
  1. To learn classic works about human geography through geographic literature.
  2. To acquire a global perspective into important and often controversial topics dealing with human geography.

**This course is specifically designed to achieve the following goals:**
- To introduce geographical concepts and perspectives, particularly for students who may be unfamiliar with geography.
- To increase students' "geographical literacy" of the world and to encourage students to identify contrasts and connections between various parts of the world with respect to socio-economic, political & religious aspects.
- Finally, this course would help you to learn new things and keep you abreast with the recent happenings and current events in a geographical perspective.

**OUTCOME OF THE COURSE:** After the completion of this course, students will be able to answer the basic notions of Where & Why of Human Geography with an understanding of:
- The key concepts of geography, i.e., place, scale, map, region and location for analyzing patterns of human activity around the world.
- The social issue e.g. dynamics of population change, migration, folk/popular culture, different forms of spoken English in various regions, distribution of major language families of the world, religions in the world, and conflicts among various religious groups, difference between race, ethnicity and nationality and the ongoing conflicts between various ethnic groups and nations that has changed the world map drastically over the period of time.

**REQUIRED TEXT:** RUBENSTEIN, JAMES, M. THE CULTURAL LANDSCAPE: AN INTRODUCTION TO HUMAN GEOGRAPHY (10th EDITION), PEARSON PRENTICE HALL PUBLICATION. (ISBN: 9780321677358 or ISBN:9780321695208)
Originally, I am from India and have a Ph.D. in Geography from Jawaharlal Nehru University, India. I have taught variety of Geography disciplines at the University of Delhi for two years. I came to USA in 2005 and joined Metropolitan State College in 2006. I teach Human Geography, World Regional Geography & Oceanography. During the semester we will get to know each other through meetings and class discussions.

ABOUT YOUR INSTRUCTOR:

ATTENDANCE & CLASS RULES:

- The instructor will take the attendance throughout the semester.
- Be courteous to others and refrain from using cell phone, texting, internet browsing eating, sleeping & talking in the class if you feel these things are more important to you than class, please just stay home.

Note: Instructor reserves the right to ask a student to leave the class due to the disruptive behavior.

ORGANIZATION OF THE CLASS:

- The class lectures and the textbook reading will be the basis of examination.
- There will be three exams including the final, eight mini-quizzes, four group discussions, and a written assignment followed by an oral presentation.
- Attendance is mandatory for all the exams and absence in the final exam will count towards zero point.

* All the three exams and eight mini-quizzes will comprise of multiple-choice and true-false questions.

GRADING POLICY:

Final grade will be computed based on the following:

1.) Mini-Quizzes: 160 Points (8×20)
2.) Group Discussion 40 Points (4×10)
3.) Written Assignment + Oral 50 Points (30+20)
4.) Exam I: 50 Points
5.) Exam II: 50 Points
6.) Exam III(Final): 50 Points

Total Points: 400 Points

GRADING SYSTEM:

A.) The grade will be determined from the following scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>370 to 400</td>
<td>Excellent</td>
</tr>
<tr>
<td>B</td>
<td>369 to 340</td>
<td>Very Good</td>
</tr>
<tr>
<td>C</td>
<td>339 to 310</td>
<td>Good</td>
</tr>
<tr>
<td>D</td>
<td>309 to 280</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>F</td>
<td>Below 279</td>
<td>Poor/Fail</td>
</tr>
</tbody>
</table>

B.) Points will be earned from the following sources:

I do not give grades nor negotiate them; you earn them by paying attention in the class, participating in classroom discussions, reading the text and regularly coming to the class. These are a few tips to be successful in this course.

NOTE: INSTRUCTOR RESERVES THE SOLE RIGHT TO CURVE THE EXAMINATION GRADES OR THE CUMULATIVE CLASS GRADES IF SHE FEELS IT NECESSARY TO DO SO.

AMERICANS WITH DISABILITIES ACT (ADA) POLICY STATEMENT:

The Metropolitan State College of Denver is committed to making reasonable accommodations to assist individuals with disabilities in reaching their academic potential. If you have a disability which may impact your performance, attendance, or grades in this class and are requesting accommodations, then you must first register with the ACCESS CENTER, located in the Auraria Library, Suite 116 or contact by phone 303-556-8387. Further information is available by visiting the access center website www.mscd.edu/~access. After acquiring the official access center faculty notification letter inform the instructor of such disability and the desired accommodations at the first class attended.
Please feel free to discuss any questions or problems that you may have with the course material from lecture or the textbook or any other matter that you would like to discuss. I will be glad to try to help you find solutions. You can send me an e-mail regarding the same.

**HAVE FUN AND EXPLORE THE FASCINATING COMPLEXITIES OF THE REAL WORLD THROUGH HUMAN GEOGRAPHY**

**BEST WISHES FOR A FANTASTIC SEMESTER!!!!!!!!!!!!!!!**

### TENTATIVE CLASS SCHEDULE

<table>
<thead>
<tr>
<th>WEEK</th>
<th>DATE</th>
<th>TOPIC</th>
<th>QUizzes, Exams, Discussions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>March 15</td>
<td>Orientation to course &amp; Thinking Geographically (Chapter-1)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>March 17</td>
<td>Population (Chapter-2)</td>
<td>Quiz-1 (Chap-1) &amp; Group Discussion (1) Population Policies/food Crisis/Green Revolution</td>
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<td></td>
<td>March 17</td>
<td>SPRING BREAK .... (MARCH 21 to MARCH 27)</td>
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<td>2</td>
<td>March 29</td>
<td>Migration (Chapter-3)</td>
<td>Quiz-2 (Chap-2) &amp; Group Discussion (2) Migrant Population/Policies</td>
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<td>March 31</td>
<td>Folk &amp; Popular Culture (Chapter-4)</td>
<td>Quiz-3 (Chap-3)</td>
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<td>3</td>
<td>April 5</td>
<td>Language (Chapter-5)</td>
<td>Quiz-4 (Chap-4) &amp; Exam-1 (Chap-1&amp;2)</td>
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<td>April 7</td>
<td>Religion (Chapter-6)</td>
<td>Quiz-5 (Chapter-5) &amp; Movie Show</td>
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<td>4</td>
<td>April 12</td>
<td>Chapter-6 Continues...</td>
<td>Group Discussion (3) Caste system/Religious wars</td>
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<td>April 14</td>
<td>Ethnicity (Chapter-7)</td>
<td>Quiz-6 (Chap-6)</td>
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<td>5</td>
<td>April 19</td>
<td>Chapter-7 Continues...</td>
<td>Group Discussion (4) Apartheid/Caucasus/Sudan/Kashmir/Srilanka</td>
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<td>April 21</td>
<td>Political Geography (Chapter-8)</td>
<td>Group Discussion (4) continues Written Assignment Due</td>
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<td>6</td>
<td>April 26</td>
<td>Resource Issues (Chapter-14)</td>
<td>Quiz-7 (Chap-7)</td>
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<td>April 28</td>
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<td>Exam-II (Chap 7&amp;8) Quiz-8 (Chapter-8)</td>
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<td>7</td>
<td>Oral Presentations</td>
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<td>May 3</td>
<td>Oral Presentations</td>
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<td>May 5</td>
<td>Oral Presentations</td>
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<tr>
<td>8</td>
<td>May 9-14</td>
<td>FINAL EXAM WEEK, Final Exam (Comprised of Exam I &amp; II)</td>
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<tr>
<td>9</td>
<td>May 20</td>
<td>....FINAL GRADES AVAILABLE ON WEB....</td>
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**Note:** Instructor reserves the right to change the daily teaching schedule to facilitate learning, understanding and critical thinking.
METROPOLITAN STATE COLLEGE OF DENVER  
Omnibus Course Syllabus

School of Letters, Arts and Sciences

Department: Earth and Atmospheric Sciences  
Instructor: Beth Simmons

Prefix and Course Number: GEG 150  
Semester/year offered: Summer, 2002

Banner Number (for Academic Affairs use): 150V

Course Title: Colorado’s Volcanic Landforms

Credit Hours: 2 + 0  
Contact Hours-students: 30  
Contact Hours-faculty: 30

Meeting Times/Dates: Classroom lectures (June 6, 13 and July 2), 2 hours each  
Four all-day field lectures (June 8, 9, 15, and 16)

Grading Mode(s): L  
Schedule Type(s): L

Prerequisites/Corequisites: GEL 1010 or GEL 1100, or permission of instructor

Required Reading Materials (author, title, publisher, copyright date):
C. Volcanic information provided by instructor, including reading and question handouts.
D. USGS publications.
E. Information from the Internet and Museum resources.

Evaluation of Student Performance:
A. One 200-point take-home examination
B. Four 25-point quizzes, given in field, total of 100 points
C. A 5- to 6-page paper relating the geologic history of a volcanic site in Colorado, 100 points

Specific (measurable) Student Behavioral Learning Objectives: Upon successful completion of this course, students should be able to:
1. identify at least 10 different volcanic rock types and associated minerals;
2. identify the sources of volcanic rock types;
3. identify types of volcanic environments which occurred in Colorado;
4. identify types of plutonic environments in Colorado;
5. identify erosional remnants of volcanic environments on aerial photos and topographic maps;
6. discuss the volcanic history of the Front Range;
7. discuss the volcanic history of Middle Park, Colorado and the Capulin volcanic area of Southern Colorado and Northern New Mexico; and
8. discuss the volcanic history of the San Juan Mountains and LaGarita Caldera.

Detailed outline of course content (major topics and subtopics) or outline of field experience/internship (experience, responsibilities and supervision):

A. Introduction to the Geological Time Scale
   1. History of the time scale
   2. Times of volcanic activity
B. Classification of igneous rocks and minerals
   1. Magma composition and chemistry
   2. Naming of igneous rocks and origin of rock types
C. Evolution of volcanoes
   1. Hot spot type volcanism
   2. Vent type volcanism
   3. Subduction type volcanism
D. Mesozoic volcanism in Colorado
   1. Plate tectonic activity in Colorado during the Mesozoic
   2. Types and ages of Mesozoic volcanoes and intrusions
   3. Locations of Mesozoic volcanics in western North America
   4. Influence of volcanism on Colorado area
   5. Laramide orogeny in the Rocky Mountains
E. Cenozoic volcanism in Colorado
   1. Tertiary volcanic episodes up to 2 million years ago
   2. Quaternary volcanic episodes and mechanisms during the last 2 million years
F. Field-lecture sites:
   1. Willow Peak
   2. Finger Rock
   3. Hot Sulphur Springs
   4. Middle Park
   5. North and South Table Mountains
   6. Capulin Volcano National Monument and vicinity, New Mexico and Colorado
   7. Spanish Peaks
   8. La Veta Rhyolite Dome
   9. Raton Mesa
G. Summary of volcanism in Colorado
### Approved - Omnibus course:

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### Approved - Field Experience/Internship Only:

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<th>Location of Internship</th>
<th>Date</th>
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<th>Field Supervisor**</th>
<th>Date</th>
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**Approval by the Field Supervisor is required and must be indicated by the original signature of that supervisor on the syllabus.

Guidelines as set forth in the omnibus course section of the Bulletin must be followed. An accurate copy of each course syllabus must be on file in the Office of Academic Affairs prior to the listing of such course in any semester schedule.
COURSE CROSSLISTING AGREEMENT FORM
The Metropolitan State College of Denver

This is to confirm that the undersigned have met, discussed, and agreed that the following course be crosslisted as follows:

Original/Standing Course:

<table>
<thead>
<tr>
<th>Department Prefix</th>
<th>Course Number</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>GEL</td>
<td>150</td>
<td>Colorado's Volcanic Landforms</td>
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Course to be crosslisted with (one or more courses):

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<th>Department Prefix</th>
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<th>Course Title</th>
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<tr>
<td>GEG</td>
<td>150</td>
<td>Colorado's Volcanic Landforms</td>
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</tbody>
</table>

beginning 2020 (semester and year).

Approved:

- Department Chair/Institute Director
  - Signature: [Signature]
  - Date: 10/26/01

- Department Chair/Institute Director
  - Signature: [Signature]
  - Date: 10/26/01

- Dean
  - Signature: [Signature]
  - Date: 10/26/01

- V. P. for Academic Affairs
  - Signature: [Signature]
  - Date: 11/15/01

Please forward the completed form to the Office of Academic Affairs for processing and recordkeeping (CN 318, Box 48). It will remain in force until rescinded by one of the parties using the Crosslisting Termination Form.
REGULAR COURSE SYLLABUS

School of: Letters, Arts and Sciences

Department: Earth and Atmospheric Sciences

CIP Code: 45.0701

Prefix & Course Number: GEG 1530  Crosslisted With*: None

Course Title: Ghost Towns of Northern Colorado

Check All That Apply: Required for Major: _____  Required for Minor: _____  Specified Elective: _____

Credit Hours: 1  (1 + 0)

Total Contact Hours per semester (assuming 15-16 week semester):

Lecture 15  Lab 0  Internship 0  Practicum 0  Other (please specify type and hours): 0

Schedule Type(s): L  Grading Mode(s): L

Variable Topics Courses (list restrictions, including the maximum number of hours that can be earned*): N/A

*NOTE: This information must be included in the course description.

Restrictions (Variable Topics Course): N/A

Prerequisite(s): None

Corequisite(s): None

Prerequisite(s) or Corequisite(s): None

Banner Enforced:

Prerequisite(s): None
Corequisite(s): None
Prerequisite(s) or Corequisite(s): None

Catalog Course Description: This course investigates the ghost towns of northeastern Colorado. Through lecture and field work, students will learn how perceptions of the land affected settlement patterns and land use in northeastern Colorado. Related topics include use of the land by Native Americans, physical geography, transportation patterns from trails to highways, planned communities and the Buffalo Commons proposal. Note: Students cannot take both GEG 1530 and GEG 3530 for credit.

APPROVED:

Department Chair OR Program Director  Date

Dean OR Associate Dean  Date

Associate VP, Academic Affairs  Date
Prefix and Course Number:  GEG 1530

Required Reading and Other Materials will be equivalent to:

Students will be given a detailed field guide and additional course materials developed by the instructor.

Specific, Measurable Student Behavioral Learning Objectives:

Upon completion of this course the student should be able to:
1. discuss factors that affect landscape perception and how perception affects settlement;
2. describe differences in physical geography east and west of the 100th meridian;
3. discuss early trail patterns in Eastern Colorado;
4. discuss the relationship of values in relationship to land use of Native Americans in the Great Plains;
5. explain site selection decisions for early settlements;
6. explain the relationship of services and transportation;
7. discuss the proposal to give the Great Plains back to the buffalo;
8. compare Michener's Centennial to current towns and land use patterns in NE Colorado; and
9. discuss the rationale and factors of success of planned towns such as Greeley and Dearfield.

Detailed Outline of Course Content (Major Topics and Subtopics or Outline of Field Experience/Internship (experience, responsibilities and supervision)):

I. Geographic Perspectives on Early Settlement
   A. Perceptions of the landscape
      1. Factors that affect perception
      2. Male versus female perceptions
      3. Crossing the 100th meridian
      4. Native Americans
      5. Settlers
   B. Impacts of the Homestead Act
   C. Development of settlement patterns in the Great Plains
      1. Site and situation
      2. Towns for different purposes
      3. Services and growth
      4. Trails to highways
      5. Sequent occupancy
      6. Development of a region--Central Place Theory

II. Factors of Growth As They Relate to Decline of Settlements

III. Dearfield--A town for Black Settlers from Denver

IV. Problems in the Great Plains Region
   A. The Poppers Proposal: "The Buffalo Commons" -- Should we give the Great Plains back to the buffalo?
   B. The Great Plains Initiative, 1992

Evaluation of Student Performance:

1. Class attendance and participation
2. Final exam
REGULAR COURSE SYLLABUS

School of: Letters, Arts and Sciences

Department: Earth and Atmospheric Sciences

CIP Code: 45.0701

Prefix & Course Number: GEG 1610 Crosslisted With*: ___

Course Title: Introduction to Planning

Check All That Apply: Required for Major: X Required for Minor: ____ Specified Elective: ____

Required for Concentration: ____ Elective: X Service Course: ____

Credit Hours: 1 (1 + 0)

Total Contact Hours per semester (assuming 15-16 week semester):

Lecture 15 Lab ____ Internship ____ Practicum ____ Other (please specify type and hours): ____

Schedule Type(s): L Grading Mode(s): L

Variable Topics Courses (list restrictions, including the maximum number of hours that can be earned*): N/A

*NOTE: This information must be included in the course description.

Restrictions (Variable Topics Course): N/A

Prerequisite(s): None

Corequisite(s): None

Prerequisite(s) or Corequisite(s): None

Banner Enforced:

Prerequisite(s): None
Corequisite(s): None
Prerequisite(s) or Corequisite(s): None

Catalog Course Description: This course provides an overview of the role of planning in land use, different types of planning processes, public and private sector actors, skills required of planners, and planning documents and maps.

APPROVED:

[Signature]

Date: May 19, 2006

Department Chair OR Program Director

[Signature]

Date: 3/6/07

Dean OR Associate Dean

[Signature]

Date: 9/17/07

Associate VP, Academic Affairs
Prefix and Course Number:  GEG 1610

Required Reading and Other Materials will be equivalent to:


Specific, Measurable Student Behavioral Learning Objectives:

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

1. define and apply key planning terms;
2. identify and discuss planning processes such as neighborhood plans, comprehensive planning, zoning, and the Consolidated Plan;
3. identify and discuss actors involved in the planning process;
4. evaluate the components of different types of plans;
5. discuss the role of personalities and politics in the planning process;
6. interpret census tract maps and evaluate how they can be used in planning;
7. identify, discuss, and analyze current planning issues and the job market in the metropolitan area; and
8. identify and discuss the major environmental laws which govern planning.

Detailed Outline of Course Content (Major Topics and Subtopics or Outline of Field Experience/Internship (experience, responsibilities and supervision)):

I. Course Introduction and Overview
II. Definition of Key Terms
III. The Nature of Planning
IV. Urbanization
V. Planning and Zoning
VI. Current Planning Issues and the Job Market
VII. Growth Management and Local Government
VIII. Urban Growth Management and the States
IX. Transportation, Development, and Planning
X. Housing
XI. Community and Economic Development
XII. Environmental Planning
XIII. Who Is Involved in the Planning Process? Who Are the Actors?
XIV. What Is Census Data and How Is It Used?
XV. What Types of Maps Do Planners Make or Need?
XVI. What Types of Plans Do Planners Develop?
XVII. What Techniques Do Planners Use to Promote Community Involvement?
XVIII. How Can You Prepare to be a Planner?
XIX. Professional Memberships
XX. Do You Still Want to be a Planner?

Evaluation of Student Performance:

1. Class attendance and participation in discussions.
2. Attendance at a public planning meeting and a written evaluations.
3. Final exam on planning terms, actors, and issues, and any projects, presentations, or exercises required by the instructor.
REQUEST FOR GENERAL STUDIES DESIGNATION (2012-13)
NATURAL AND PHYSICAL SCIENCES

Please review the Course Selection Criteria for this category for assistance in completing this form, particularly as it relates to the percentages associated with each Student Learning Outcome.

If this course is also being submitted for the Global Diversity Category, check here, and complete and attach the separate Global Diversity General Studies Designation request.

Date: 02/12/13
School: LAS
Department: EAS

<table>
<thead>
<tr>
<th>Prefix</th>
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<tr>
<td>GEG</td>
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Title: Water Essentials

Prerequisite(s): Minimum performance standard scores on reading, writing, and mathematics pre-assessment tests

Co-requisite(s): None

Banner enforced prerequisite(s) and/or co-requisite(s): None

Recommended maximum enrollment per section: 30

A. Course content and Student Learning Outcomes

Describe the specific ways in which this course addresses each of these Student Learning Outcomes, providing students opportunities to develop the skills and/or acquire the knowledge. Include reference to readings, discussions, lectures, and other pedagogical tools which will be used.

1. Demonstrate effective use of technologies appropriate to the task and discipline. (10%)

Students will learn to combine digital maps, elevation models, video and images to visualize the Hydrologic cycle and water processes. Students will also learn the instruments (precipitation gauges, barometers, sling psychrometers, flow meters, etc.) that are used to acquire data describing climate, weather, and the flow and movement of water.
2. Demonstrate the ability to locate sources when information is needed, and to evaluate the authenticity, validity, and reliability of resources applied to a specific purpose. (10%)

Students will develop practical skills in data assimilation and analysis to answer specific geographic research questions. They will receive instruction in collecting, evaluating, and analyzing hydrologic data and sources of information from agencies such as the World Meteorological Organization at the global level and national agencies such as the US Geological Survey at the local level, to scientific journals such as Nature Geoscience and popular sources such as Earth, Discover and Scientific American.

10. Describe how the methods of science are used to generate new knowledge. (30%)

The scientific method forms the foundation for many of topics presented in Water Essentials. Building upon that backbone, each topic is presented within the context of how observations of the natural world have lead to acquisition of knowledge with specific instrumentation and experimental design which is then subject to verification and validation within the scientific discipline.

11. Use graphical, symbolic and statistical methods to organize, analyze and interpret data in a manner appropriate to the discipline(25%)

Through lecture, readings, discussions and assignments students will learn to recognize common graphical representations of Hydrologic data. Through assignments students will learn to search published sources to compile data and then construct climographs, hydrographs, and maps to aid in visualization and interpretation of the hydrologic cycle, water resources, and water scarcity.

19. Describe the foundational knowledge and impacts of a field of science using analytical tools appropriate to the field. (60%)

Topics in this course are introduced through the perspective of interconnected systems. Presented with the organizational template of the hydrologic cycle, students learn to combine the elements of weather (temperature, precipitation, humidity, wind and cloud cover) and atmospheric dynamics to describe precipitation and the spatial variability of precipitation and water resources on Earth. Students also learn how water management policies and practices contribute to the changing dynamics of water resources and water scarcity.

Students are expected to analyze, evaluate, and integrate foundational concepts and theories to address the following essential water issues and concepts:

a. The transformation of water as it moves through the hydrologic cycle, including the energy required, quantities of water involved, and residence times of water in various states.

b. The spatial and temporal variability of precipitation, evapotranspiration, runoff, and storage.
The importance of water within ecosystems and the role of wetlands in maintaining water quality.

The potentially catastrophic effect increasing human population, development and infrastructure on the quantity and quality of water as a resource.

The influence of climate change on the hydrologic cycle and the possible results of climate change on water resources in Colorado.

20. Use knowledge and observations to formulate hypotheses, identify relevant variables and design experiments to test hypotheses. (10%)

Lecture presentations, readings and assignments emphasize the scientific method as the foundation for the creation of knowledge. Classroom discussions and course assignments require students to approach problems from the perspective of the scientific method to formulate hypotheses, identify relevant variables and collect data to test hypotheses.

21. Develop concepts of accuracy, precision, and the role of repeatability in the acquisition of scientific data. (10%)

Through readings, lecture presentations, and assignments students are required to acquire, assess and interpret data with attention to the accuracy, precision and repeatability of those data. For example, students learn to critically evaluate stream discharge and chemistry data used to evaluate water quality within their own communities.

B. Assessment of Student Learning

Identify and describe at least one specific form of assessing student achievement of each Student Learning Outcome which will be a regular part of the course. Examples include specified test questions, specified problem sets, written paper prompts and scoring guide or rubric, projects with assignment sheet and scoring guide or rubric, etc. Include attachments as applicable. A single piece of student work may be used to assess student achievement of more than one Student Learning Outcome.

1. Demonstrate effective use of technologies appropriate to the task and discipline.

Online Exercise: Students will use on-line data sources (EPA, CDNR, USGS, etc.) to gather information on the quantity and quality of water within their communities. Students will assess potential sources of contaminants and develop strategies to mitigate pollution of their water resources.

2. Demonstrate the ability to locate sources when information is needed, and to evaluate the authenticity, validity, and reliability of resources applied to a specific purpose.

Online Exercise: Students will be provided with the knowledge to understand and work with online data from international (Intergovernmental Panel on Climate Change) to local
(USGS) sources to answer specific questions related to the global to local effects of
global climate change on the hydrologic cycle.

Students will also develop the skills to interpret and critically evaluate maps of climate
distribution, and to understand how scale and data aggregation influences data
representation on maps. Evaluation will be made during written examinations using
short-answer essay type questions to elicit analysis of graphic representation of data.

**Course Research Project:** Students will research water scarcity in a foreign region of
the world and relate the physical, climatological, and cultural influences of water scarcity
in that region to the causes and impacts of water scarcity in Colorado. The objective of
this exercise is to introduce students to the process of research in the physical sciences.

10. Describe how the methods of science are used to generate new knowledge

**Class Group Discussion:** Students will analyze case studies of water resource issues and
use the scientific approach to make sense of them. Students will read brief articles on
current or recent water resource issues from the New York Times, Earth, Discovery,
Scientific American, etc. They will identify and discuss with classmates the following
questions:

1. What are the driving forces behind this/these events?
2. How are these forces and events related within a systems framework?
3. What are the temporal and spatial dimensions of these forces and events?
4. What are adverse human and natural consequences?

Evaluation is based on qualitative assessment of student participation: How well does the
student use accessible information to support their discussion and how does student
discussion reflect understanding of the scientific process and methods as they apply to
this case. Assessment can also be achieved by assigning students to complete a written
summary of the water resource issue analyzing the importance of the four questions
above.

11. Use graphical, symbolic and statistical methods to organize, analyze and interpret data in
a manner appropriate to the discipline.

Students will be required to analyze maps, graphs, and diagrams in both assigned
readings and lecture materials. Qualitative assessment will be made during lecture.
Quantitative assessment will be addressed through specific questions during written
examinations using short-answer essay type questions to elicit analysis of graphic
representation of data.

19. Describe the foundational knowledge and impacts of a field of science using analytical
tools appropriate to the field.

**Online Exercise:** Students will use on-line data sources (EPA, CDNR, USGS, etc.) to
gather information on the quantity and quality of water within their communities.
Students will assess potential sources of contaminants and develop strategies to mitigate pollution of their water resources.

20. Use knowledge and observations to formulate hypotheses, identify relevant variables and design experiments to test hypotheses.

**Course Research Project:** Students will research water scarcity in a foreign region of the world and relate the physical, climatological, and cultural influences of water scarcity in that region to the causes and impacts of water scarcity in Colorado. The objective of this exercise is to introduce students to the process of research in the physical sciences.


Assessment will be made during written quizzes and examinations using questions specifically focused on the accuracy and precision of data. A specific example might be a set of related questions on the relationship between rainfall in a watershed to the timing of discharge from a river draining the watershed:

- How do the units of measurement of rainfall (mm) relate to the measurement of river discharge (cubic meters per second)?
- What instruments are used to directly measure precipitation (rain gauges, snow tables) and to infer precipitation (Doppler radar, Satellite images)?
- What methods are used to measure and/or calculate river discharge?
- What methods are used to correlate precipitation data with river discharge?
- How can the relationship between precipitation data and river discharge be used to predict floods or water resource availability at some future time?

**C. Conformance with Course Selection Guidelines**

Briefly describe how the course meets the course selection guidelines

- The course must meet the full requirements of the Student Learning Outcomes, or must be paired with a corequisite lab course that, as a pair complete the outcomes.

The course provides a strong foundation for understanding the scientific method and how it is applied across a variety of scientific disciplines. The course examines the instruments, methods and conceptual underpinnings of Meteorology, Climatology, Geology, Geomorphology, Hydrology, and Biology. The course provides the tools for students to acquire and evaluate data and data sources, analyze data with appropriate methods, and apply conclusions to specific cases and within broad contexts. The course fully satisfies all of the required student learning objectives and uses appropriate assessments to evaluate student learning.
geography, analyzing the political, socio-economic, and cultural implications of water as a diminishing resource and the human impacts of spatially and temporally variable water distribution.

Approvals:

Department Curriculum Committee / Date

Department Chair or Program Director / Date

School Curriculum Committee / Date

Dean or Associate Dean / Date

Chair, General Studies Committee / Date

Associate Vice President, Academic Affairs / Date
REGULAR COURSE SYLLABUS

School of: Letters, Arts and Sciences

Department: Earth and Atmospheric Sciences

Prefix & Course Number: GEG 1900 1910

Course Title: Water Essentials

Check All That Apply: Required for Major: ____ Required for Minor: X Specified Elective: ____

Required for Concentration: ____ Elective: X Service Course: ____

Credit Hours: 3 (3+0)

Total Contact Hours per semester (assuming 15-16 week semester):

Lecture 45 Lab ____ Internship ____ Practicum ____ Other (please specify type and hours):

Schedule Type(s): L Grading Mode(s): L

Variable Topics Courses (list restrictions, including the maximum number of hours that can be earned**): __

** NOTE: This information must be included in the course description.

Restrictions (Variable Topics Course): __

Prerequisite(s): None

Corequisite(s): None

Prerequisite(s) or Corequisite(s): None

Banner Enforced:

Prerequisite(s): None
Corequisite(s): None
Prerequisite(s) or Corequisite(s): None

Catalog Course Description:

Water Essentials is a general introduction the essential nature of water on Earth. The course presents students with a comprehensive foundation in the water cycle, human use of water, water and the environment, the politics of water, and the critical issues surrounding water as a resource. The course will educate Colorado water users on the sources and uses of their water, its importance as a resource, the critical issues of water conservation and scarcity, and the legal, political, economic and physical infrastructure that controls water in the American West.

APPROVED:

Department Chair OR Program Director

Dean OR Associate Dean

Associate VP, Academic Affairs

*If crosslisted, attach completed Course Crosslisting Agreement Form
Prefix and Course Number: GEG 1910

Required Reading and Other Materials will be equivalent to:
Pennington, K. L. and Cech, T. *Introduction to Water Resources and Environmental Issues* 2010
Cambridge University Press
and *Citizen's Guide to Water Law* 2010 Colorado Foundation for Water Education.

**Specific, Measurable Student Behavioral Learning Objectives:**
Upon completion of this course the student should be able to
1. recognize that water is an essential and limited resource (SLO #19);
2. identify critical issues pertaining to water (e.g. availability, distribution, storage, sustainability (SLO #2, 10, 19);
3. describe the methods used to measure water quantity and quality as it moves through the hydrologic cycle(SLO #1,2,10,11,21);
4. relate the concept of sustainability to sustainable practices of water use and water development (SLO #1,2,10,20);
5. develop competency in recognizing and communicating information about water from diverse sources(SLO #2,10,11,19,20,21);
6. describe issues pertaining to water issues in Colorado (SLO #2,11,19,21).

**Detailed Outline of Course Content (Major Topics and Subtopics) or Outline of Field Experience/Internship (experience, responsibilities and supervision)**

I. Essentials Of Water
   A. Molecular structure of water
   B. Unique properties of water
   C. Global distribution of water

II. The Water Cycle
   A. Precipitation forms and amounts
   B. Evaporation and Evapotranspiration
   C. Surface runoff, infiltration and groundwater recharge

III. Perspectives on Water and Environmental Issues
   A. Ecosystems, Biomes and Watersheds
   B. Global Water Use
   C. The Global Water Budget
   D. Population Growth and Sustainability

IV. The Economic Value of Water
   A. Residential Water Systems
   B. Agricultural Water Systems
   C. Socio-Political Water Control

V. The Water Environment of Early Civilizations
   A. Water Technologies of Early Civilizations
   B. Lessons of Water Sustainability from Early Civilizations

VI. The Global Scarcity of Water
   A. Water as a Limited Resource
   B. Drought
   C. Global and Local Water Conflicts
VII. Water and Culture
   A. Reverence – Religious and cultural beliefs
   B. Music – Celebrating Water Through Music
   C. Art – Depictions

VIII. Watershed basics
   A. Watershed Delineation
   B. Watershed Structure
   C. Watershed Function

IX. Groundwater
   A. Aquifers, the Water Table, and Artesian Springs
   B. Groundwater Extraction and Water Supply
   C. Sustainability

X. Lakes and Ponds
   A. Lake Types
   B. Lake Structure
   C. Lake Chemistry

XI. Rivers and Streams
   A. Physical Features and River Systems
   B. River System Function
   C. Flow and Flooding
   D. Fluvial Geomorphology
   E. Riparian Ecology

XII. Wetlands

XIII. Water storage facilities
   A. Dams and Reservoirs

XIV. Drinking Water and Wastewater Treatment
   A. Water Quality and Chemistry
   B. Field Trip to Water Treatment Plant
   C. Field Trip to Wastewater Treatment Plant

XV. Water Allocation Law Colorado Water Law
   A. Historical Water Law
   B. Riparian Doctrine
   C. Doctrine of Prior Appropriation
   D. Interstate Compacts
E. International Water Law

XVI. Global and Local Water Conflicts
   A. Agriculture and Urbanization
   B. Trans-Basin Diversion
   C. Global Climate Change
   D. Desertification

XVII. Sustainability and Solutions
   A. Technological Innovations
   B. Cultural Innovations
   C. Socio-Political Evolution

Evaluation of Student Performance

1. Written Examinations including objective and essay questions
2. A minimum of two writing assignments.
3. Final Exam
Assignment: Using two of the assigned readings on water scarcity, further investigate the causes and consequences of diminishing water resources and their effects on environmental preservation, economic development, potential conflict, and the human condition. You must select a region experiencing water scarcity (North Africa, South Asia, Western China, etc.) and compare that to water resource pressures that affect Denver and Colorado.

1. Thirsty Cities: Water Management in A Changing Environment

Material for researching this assignment can include web-based resources but should also include at least two references from journal articles and books. All sources must be properly cited and referenced.

NOTE: These assigned readings are only the beginning. YOU MUST DO SOME ADDITIONAL DIGGING AND RESEARCH ON THE TOPIC TO PROVIDE MORE DETAILED INFORMATION. I expect no less than 4 additional references.

Your paper must include recent and historical data (i.e. precipitation, river discharge, temperature, cost of living, change in area of forest or agriculture, etc.) Your data source must be properly referenced.

Your paper must include a map and other appropriate diagrams.

Grading Rubric:
Required format: 20%
- 4-6 pages in length, not including figures or bibliographic references. Typed. Double -spaced or 1.5 space.
- A Title that refers to the topic being addressed.
- Properly and consistently referenced sources. Use the citation style appropriate for your discipline, or Chicago Manual of Style as default.

Content: 80%
- An appropriate topic 10%
- An abstract that summarizes your paper and your conclusions. 10%
- An introduction that references information from the assigned reading. 10%
- Coherent description of the cause and effect of water scarcity for a region 20%
- A discussion of the environmental, political, and socio-economic outcomes of water scarcity in the region. 20%
- Comparison with Denver and Colorado. 10%
- A map and appropriate figures. 10%
- Spelling, punctuation and grammar. 10%
Appendix 2

Water Essentials: Water Quality Research

Assignment: Using data from reliable sources, evaluate the historical and current quality of water in your neighborhood. (Note: You may use the Auraria neighborhood also.) Assess the potential sources of contaminants and their potential hazards. Describe how you might confirm identification of contaminant sources or how you might investigate hazardous impacts to the environment or to humans.

Suggested Data Sources:
1. Environmental Protection Agency: Surf Your Watershed
   http://cfpub.epa.gov/surf/locate/index.cfm
2. Water Watch: Maps and Graphs of current water conditions
   http://waterwatch.usgs.gov/
3. Denver Water
   http://www.denverwater.org/

NOTE: These assigned readings are only the beginning. **YOU MAY NEED TO DO SOME ADDITIONAL DIGGING AND RESEARCH TO PROVIDE MORE DETAILED INFORMATION.**

Material for researching this assignment can include web-based resources but should also include at least two references from journal articles and books. All sources must be properly cited and referenced.

Your paper must include recent and historical data and your data sources must be properly referenced.
Your paper must include a map and other appropriate diagrams.

Grading Rubric:
Required format: 20%
• 2-3 pages in length, not including figures or bibliographic references. Typed.
• Double-spaced or 1.5 space.
• A Title that refers to the topic being addressed.
• Properly and consistently referenced sources. Use the citation style appropriate for your discipline, or Chicago Manual of Style as default.

Content: 80%
• An appropriate topic 10%
• An abstract that summarizes your paper and your conclusions. 10%
• An introduction that references information from the assigned reading. 10%
• Coherent description of the cause and effect of water quality issues 20%
• A discussion of the potential hazards of water contaminants20%
• A proposal for further investigation 10%
• A map and appropriate figures. 10%
• Spelling, punctuation and grammar. 10%
Read all of the directions carefully. Make sure that you fill in your name above and your initials at the top of each page. Keep breathing, cessation of breathing for prolonged periods may have a negative effect on your performance. The test is worth a total of 1,100,000 points.

Part 1: Multiple Choice: Read each question carefully. Please enter your answers on the Scantron form and circle your answers on the test. There is only one best choice for each answer. Each of the following questions is worth 20,000 points.

1) The term used to define an area that contributes water to a single point or source is?
   a. watershed  b. hydrologic cycle  c. mountain range  d. aquifer  e. supply line

2) Which of the following percentages is the BEST estimate of all water on Earth that is easily available for human consumption?
   a. 3%  b. 0.2%  c. 75%  d. 10%  e. 0.00001%

3) What percentage of the world’s population lives in regions where water is physically scarce?
   a. 50%  b. 80%  c. 20%  d. 100%  e. 5%

4) On average, water use in the United States is ______ the water use in Europe
   a. approximately half of  b. two times greater than  c. four times greater than  d. two times less than  e. about the same as

5) Ocean salinity has remained relatively constant at ______ for almost 4 billion years.
   a. 35 parts per million  b. 85%  c. 21.25 x NaCl  d. 7% salt  e. all of the above

6) El Niño – Southern Oscillation events are identified by
   a. a change in pressure patterns in the Pacific ocean that moves High pressure further east
   b. a weakening of trade winds and reduction of upwelling along the Peruvian coast
   c. a reduction in biological productivity in the eastern Pacific ocean
   d. drought in Africa
   e. all of the above

7) Wetlands hold approximately ______ of the freshwater on Earth
   a. 80%  b. 0.002%  c. 36%  d. 8%  e. 1%

8) It is estimated that by 2030, over 60% (5 billion) of the world’s population will be living in ______
   a. urban areas  b. deserts  c. Europe  d. Africa  e. America

9) One gallon of water weighs approximately ______
   a. 11 kilograms  b. 4 acre feet  c. 8.3 pounds  d. 74 ounces  e. none of the above

10) What two water-based inventions were implemented by early Egyptian civilization?
    a. horn bucket and step well  b. qanat and acequia  c. water wheel and aqueduct  d. dams and desalination  e. saquiya and sweep

11) What percentage of all water on Earth does fresh water make up?
    a. 10%  b. 50%  c. 2.5%  d. 0.0001%  e. 30%
12) During infiltration of water into soil, percolation occurs in which zone?
   a. saturation zone  b. hyporheic zone  c. wilting zone  d. water table  e. soil-moisture zone

13) How much energy gain or loss does it take to change 1 gm of water by 1°C?
   a. 10 hydrotherms  b. 500 molecules  c. 1 calorie  
   d. 1013 millibars  e. none of the above

14) How many gallons of water are in 1 cubic foot?
   a. 117.4 gallons  b. 7.48 gallons  c. 325,851 gallons  
   d. 1 million gallons  e. 30 gallons

15) The largest portion of indoor residential water use is consumed by?
   a) Showering and sanitation  
   b) growing weed in the basement  
   c) washing clothes and doing laundry  
   d) flushing the toilet  
   e) Drinking water.

16) The visual display of the continuous flow record of a stream or river is termed a _____
   a. monograph  b. climagraph  c. hydrograph  d. flowgraph  e. aquagraph

17) River discharge is measured in what units:
   a. gallons  b. cubic feet per second  c. acre-feet  
   d. inches  e. reservoir dogs

18) Reservoir storage is measured in what units:
   a. gallons  b. cubic feet per second  c. acre-feet  
   d. inches  e. a and c

19) How many gallons of water are in 1 acre-foot?
   a. 117.4 gallons  b. 7.48 gallons  c. 325,851 gallons  
   d. 1 million gallons  e. 30 gallons

20) One acre-foot of water is equivalent to the amount used annually by _____ Denver residential 
    households:
   a. 30  b. 3  c. 300  d. 3000  e. 3 million

21) How much water are Lake Mead and Lake Powell designed to hold:
   a. 27 million gallons  b. 27 million acre-feet  c. 270 acre-feet  
   d. 270,000 gallons  e. 900 billion acre-feet

22) Which of the following are diseases associated with water quality and/or water scarcity?
   a. cholera, and typhoid fever  
   b. trachoma (an eye infection that can lead to blindness) and plague  
   c. typhus and dysentery  
   d. dengue fever and malaria  
   e. all of the above

23) What two water-based inventions were implemented by the Roman Empire civilization?
   a. horn bucket and step well  b. qanat and asequia  
   c. water wheel and aqueduct  d. dams and desalination  e. saquiya and sweep

24) What two rivers contributed to the fertility and ability for early civilizations to thrive in Mesopotamia?
   a. Nile and Rhone  b. Tigris and Euphrates  c. Indus and Ganges  
   d. Yellow and Yangtze  e. none of the above
25) How much indoor residential water does the average American use every day?
   a. 70 – 100 gallons    b. 300 – 400 gallons    c. 10 – 20 gallons
   d. 270, 000 gallons    e. 1000 – 2000 gallons

26) Much of the consumptive use of water around the world is from:
   a. beer   b. more beer   c. evapotranspiration from agriculture, lawns and plants
   d. industrial production of beverages   e. war and water conflict

27) Which of the following terms best defines a dynamic complex of plant, animal and microorganism communities and their non-living (abiotic) environment?

28) Water has the highest __________ of any natural substance, meaning it takes an enormous amount of energy to change the temperature of water
   a. adiabatic heat    b. heat capacity    c. radiant heat    d. latent heat    e. density

29) Most of the increased demands and water use on Earth in the last 1000 years can be traced to__________?
   a. population growth    b. tectonic theory    c. Tim Tebow
   d. desertification    e. sub-tropical rainforest depletion

30) Fracking has been common since 1950, but the recent explosion in fracking is the result of the the technological development of __________.
   a) Horizontal drilling    b) Sub-surface explosives    c) Non-linear sequential bioturbation
   d) Deep mass spectrometric geophysiological hydroreintroduction physiometry    e) Don’t have a frickin clue

PART 2: TRUE/FALSE Questions: Select TRUE if the statement is always true or FALSE if the is ever false. Indicate your answer on the Scantron sheet and circle your response on the test booklet. Each of the following questions is worth 10,000 points.

31) Verga is rain that evaporates before it hits the ground.
   TRUE    FALSE

32) More than 75% of all fresh water on Earth is frozen in glaciers and ice sheets.
   TRUE    FALSE

33) Water has the second highest heat capacity of any natural substance, lower only than oil.
   TRUE    FALSE

34) Ninety-seven percent (97%) of Earth is covered by water
   TRUE    FALSE

35) Water is a dipolar molecule.
   TRUE    FALSE

36) A flow rate of 1 cfs will deliver almost 2 acre-feet per day.
   TRUE    FALSE
37) The amount of water needed to frack one gas well will irrigate 1000 acres of corn in Colorado.
   TRUE   FALSE

38) Denver has the most expensive water of all of the cities in Colorado.
   TRUE   FALSE

39) A country is said to experience "water stress" when annual water supplies drop below 1,700 cubic meters per person.
   TRUE   FALSE

40) London is drier than Istanbul, and the South East of England has less water available per person than the Sudan and Syria.
   TRUE   FALSE

PART 3: Definition Questions: Define the following terms in a sentence or two. Include diagrams whenever possible. (30,000 pts. ea.)

41) Virtual Water

42) Your water footprint

43) Qanat

44) Consumptive vs. Non-consumptive water
PART 4: SHORT ESSAY QUESTIONS: Answer ONLY TWO of the following questions with a short paragraph and a DIAGRAM—50,000 pt. ea.

46) DIAGRAM and explain the hydrologic cycle.

47) Define at least three definitions of drought and discuss the magnitude and effects of drought in the United States.
48) Discuss the environmental effects of fracking in Colorado. Include in your discussion a thorough discussion of the environmental effects on water.

49) Sketch and describe the stream gauge on Cherry Creek and comment on the average discharge.

50) Describe how you calculated your water footprint and what the biggest components of your calculation were.

Extra Credit: Teach me a concept that you studied for the exam that wasn’t asked? Or, what concepts we have covered that weren’t tested here can you combine to explain some water-related topic in detail? Include maps or sketches where appropriate. Up to 50,000 pts.
## Water Essentials - ENV -190A
### Fall 2012 Syllabus

**Instructor:** Tom Davinroy  
**Office:** 2025 Science Bldg  
**Office Hours:** T-Th 11:00 – 13:00, W 10:00–11:00, and/or by appointment.  
**Telephone:** (303) 352-4458  
**e-mail:** tdavinro@mscd.edu

### Course Description:
This course is offered to provide a general introduction the essential nature of water on Earth. The course is designed to provide students with a comprehensive foundation in the water cycle, human use of water, water and the environment, the politics of water, and the critical issues surrounding water as a resource. The course is designed to educate Colorado water users on the sources and uses of their water, its importance as a resource, the critical issues of water conservation and scarcity, and the legal, political, economic and physical infrastructure that controls water in the American West. The course will contain a comprehensive overview of global water issues but will focus on Colorado water issues.

### Learning Goals:
1. To provide students with the foundation to understand how water is essential to our lives;
2. To develop skills to observe and understand critical issues pertaining to water;
3. To provide students with an understanding of the methods used to measure water quantity and quality as it moves through the hydrologic cycle;
4. To introduce students to the concept of sustainability and to sustainable practices of water use and water development.
5. To develop competency in both understanding and presenting oral communication and public writing;
6. To build life-long learning skills and scholarly inquiry so that students can critically assess and evaluate issues pertaining to water and water in Colorado and become leaders in their discipline; and
7. To prepare students for active and informed engagement in our communities so that they can shape the future of water issues in Colorado.

### Required Text:

### Additional Required Reading:
To be determined. Readings and other materials will often be posted on the CLASS WEBSITE: Log on to ConnectU, select the MyCourses tab.

### Grading:
The final course grade will be based on the following:
- 30% - Unannounced quizzes, assignments and class participation
- 15% - First exam
- 15% - Second exam
- 15% - Research Writing Assignment
- 25% - Comprehensive Final Exam

### Exams:
Midterm and final exams will be based on material presented in lecture, assignments, and assigned readings. Attendance at lectures is essential because most lectures will include material not covered in the text. **NO MAKE-UP EXAMS ARE GIVEN.** Students who miss an exam without a documented and acceptable excuse (e.g. medical, family emergency) will receive a score of zero for the missed exam. Students with a valid documented reason for missing an exam will be given a score for the missed exam equal to the average score on other tests. Other valid schedule conflicts will be considered only if arrangements are made in advance. Pop quizzes will be given in the first ten minutes of selected classes and will cover reading assignments, lecture material and outside reading. **NO MAKE-UP OR LATE QUIZZES ARE GIVEN.**

### Additional Assignment(s):
There will be several assignments addressing current issues in water. These will typically require critical evaluation of one or more articles and writing a summary of the issue. Additional assignments may include an executive summary of one or more current articles about an ongoing water issue.
Students unfamiliar with these writing styles should inform themselves of them and seek additional resources to get assistance. The Writing Center, located in King Center 310, can help you with any aspect of your writing, from generating ideas to supporting your arguments to organizing to editing for style. For the current schedule or to make an appointment, visit the Writing Center's website: http://www.msced.edu/~wriectr/ or call 303-556-6070.

ATTENDANCE: Students are responsible for all material presented during lecture periods, in assigned readings, and posted on the course website. Attendance is essential for successful participation in the course. Attendance will be monitored by pop quizzes, exams, and returned materials.

CLASSROOM DECORUM: It is expected that the classroom is a place of cooperative education where respect is given to all for the opportunity to engage in learning without distraction, intimidation or embarrassment. To maintain the optimal environment for teaching and learning, the following guidelines for classroom behavior will be strictly enforced:

1. **ALL CELL PHONES AND SIMILAR COMMUNICATION DEVICES WILL BE SET TO SILENT AND USED ONLY IN EXTREME EMERGENCY.**
2. **NO SENDING OR READING TEXT MESSAGES, TWEETS, BLOGS, VLOGS, ETC.**
3. **ALL CLASSROOM INTERACTIONS WILL BE CONDUCTED WITH COURTESY AND RESPECT.**
4. **LAPTOP COMPUTERS MAY BE USED ONLY FOR COURSE-RELATED WORK AND RESEARCH.**

ACADEMIC INTEGRITY STATEMENT:
"As students, faculty, staff and administrators of Metropolitan State University of Denver, it is our responsibility to uphold and maintain an academic environment that furthers scholarly inquiry, creative activity and the application of knowledge. **We will not tolerate academic dishonesty.** We will demonstrate honesty and integrity in all activities related to our learning and scholarship. We will not plagiarize, fabricate information or data, cheat on tests or exams, steal academic material, or submit work to more than one class without full disclosure."

CLASS ATTENDANCE FOR RELIGIOUS OBSERVANCE:
According to the policy of the Metropolitan State University of Denver: Students at Metropolitan State University of Denver ("MSUD") who, because of their sincerely held religious beliefs, are unable to attend classes, take examinations, participate in graded activities or submit graded assignments on particular days shall, without penalty, be excused from such classes and be given a meaningful opportunity to make up such examinations and graded activities or assignments provided that advance written notice that the student will be absent for religious reasons is given to the faculty members during the first two weeks of the semester.

Nothing in the preceding paragraph of this policy shall require Metro State faculty members to reschedule classes, repeat lectures or other ungraded activities or provide ungraded individualized instruction solely for the benefit of students who, for religious reasons, are unable to attend regularly scheduled classes or activities. However, presentations, critiques, conferences and similar activities involving individual students shall be scheduled to avoid conflicts with such students' religious observances or holidays provided that reasonable advance notice of scheduling conflicts is given to faculty members. Because classroom attendance and participation is an important aspect of learning, Metro State students should not register for courses if regularly scheduled classes or activities routinely conflict with their religious observances or holidays (e.g., conflicts resulting in weekly absences for an entire semester).

NC / INCOMPLETE: See your Student Handbook for College guidelines on NC or Incomplete grades. You must request an NC by the end of the 10th week of the semester (online through ConnectU). Incomplete grades will be issued ONLY in extreme cases on a case-by-case basis.
SPECIAL ACCOMMODATION:
The Metropolitan State University of Denver is committed to making reasonable accommodations to assist individuals with disabilities in reaching their academic potential. If you have a disability which may impact your performance, attendance, or grades in this class and are requesting accommodations, then you must first register with the Access Center, located in the Auraria Library, Suite 116, Phone: 303-556-8387.

The Access Center is the designated department responsible for coordinating accommodations and services for students with disabilities. Accommodations will not be granted prior to my receipt of your faculty notification letter from the Access Center. Please note that accommodations are never provided retroactively (i.e., prior to the receipt of your faculty notification letter.) Once I am in receipt of your official Access Center faculty notification letter, I will be happy to meet with you to discuss your accommodations. All discussions will remain confidential. Further information is available by visiting the Access Center website http://www.mscd.edu/~access.

Students requesting special accommodation for lectures or examinations are requested to contact me as soon as possible.

Family Educational Rights and Privacy Act
MSUD hereby gives notice that it has designated the following categories of personally identifiable information as directory information under section 438(a)(5)(b) of the Family Educational Rights and Privacy Act of 1974 (FERPA). Subject to the Colorado Public Records Act, directory information concerning students as the college may be released without prior consent of the student as permitted by FERPA unless within ten days after registration as student had notified MSUD (Office of the Registrar) that such information should not be released without his or her consent. Directory information at MSUD is as follows:

Name/Address/Dates of Attendance/ Degrees Received

Requests for disclosure of the directory information must be submitted in writing to the MSUD Office of the Registrar. In the case of emergencies, directory information may be released without written request, at the college’s discretion. Prospective employers or their agents may request information concerning verification of student degrees received or dates of attendance directly from the MSUD Office of the Registrar without submitting a written request to the university.
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<thead>
<tr>
<th>Meeting Date</th>
<th>Lecture Topic</th>
<th>Readings</th>
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<tr>
<td>Aug. 21</td>
<td>Course Introduction: Essentials Of Water</td>
<td>Syllabus</td>
</tr>
<tr>
<td>Aug. 23</td>
<td>The Water Cycle</td>
<td>Ch 3</td>
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<td>Aug. 28</td>
<td>Perspectives on water and environmental issues</td>
<td>Ch 1</td>
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<td>Aug. 30</td>
<td>The economic value of water</td>
<td>Headwaters pp 27-35</td>
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<td>Sept. 4</td>
<td>Labor Day Holiday</td>
<td>Have Fun</td>
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<td>Sept. 6</td>
<td>The water environment of early civilizations</td>
<td>Ch 2</td>
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<td>Sept. 11</td>
<td>Lessons of water sustainability from early civilizations</td>
<td>Ch 2</td>
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<td>Sept. 13</td>
<td>The global scarcity of water</td>
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<td>Sept. 18</td>
<td>Water and culture - Venice</td>
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<td>Sept. 20</td>
<td><strong>FIRST EXAM</strong></td>
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<td>Sept. 25</td>
<td>Watershed basics</td>
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<td>Sept. 27</td>
<td>Groundwater</td>
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<td>Oct. 2</td>
<td>Groundwater – Is it a sustainable resource?</td>
<td>Ch 6</td>
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<td>Oct. 4</td>
<td>Lakes and Ponds</td>
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<td>Rivers and Streams</td>
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<td>Oct. 16</td>
<td>Rivers and Streams</td>
<td>Ch 8</td>
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<td>Oct. 18</td>
<td><strong>SECOND EXAM</strong></td>
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<td>Oct. 23</td>
<td>Water storage facilities</td>
<td>Ch 10</td>
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<td>Oct. 25</td>
<td>Dams and Reservoirs -</td>
<td>Ch 10</td>
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<td>Oct. 30</td>
<td>Water and Art</td>
<td>Assigned Reading</td>
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<td>Nov. 1</td>
<td>Wetlands</td>
<td>Ch 9</td>
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<td>Nov. 6</td>
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<td>Nov. 8</td>
<td>Drinking Water and Wastewater Treatment</td>
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<td>Ch 11</td>
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<td>Nov. 15</td>
<td><strong>THIRD EXAM</strong></td>
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<td>Nov. 20</td>
<td>Thanksgiving Holiday – No Class</td>
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<td>Nov. 22</td>
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<td>Water Allocation Law Colorado Water Law</td>
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<td>Nov. 29</td>
<td>Global and Local Water Conflicts</td>
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<td>Dec. 6</td>
<td>Sustainability and Solutions Local</td>
<td>Assigned Reading</td>
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<td>Dec. 11</td>
<td><strong>FINAL EXAM (25%)</strong> LOCATION TO BE DETERMINED</td>
<td>See Above</td>
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**Note:** Additional readings and assignments will be assigned at lecture and on the course web site during the semester.
1. **Read the textbook.** Several times. You might read chapters entirely the first time through, then focus more closely on individual sections. Re-read sections until you are certain you've mastered the topic. I suggest that the first time you read, make sure to look up every new word you don't know and define every concept that is new to you. On subsequent readings, take notes that emphasize the topics covered in that section.

2. **Use the textbook and publisher support materials.** All textbooks we use have glossaries, lists of key terms, conceptual summaries, practice quizzes, practice exams and other support either in the text or on text specific websites.

3. **Become intellectually curious.** Explore more than the textbook to learn about the topic. There are literally thousands of other books, journals, websites and publications that you can use for reference, and they are more available than ever before.

4. **Write questions.** Make up a quiz for each section, and a test for each chapter. In addition to factual questions, write conceptual questions too. This will help you think about the topic as both a set of facts and how those facts are related.

5. **DON'T MISS CLASS!!!** Take good notes during class and then rewrite your notes after class, comparing them to the notes you take from the textbook and other sources.

6. **Ask questions.** Ask questions in class, ask questions of your other students, ask questions of other faculty. If you don't know something and can't understand it after going through steps 1-5, then ask. Go to office hours and ask questions.

7. **Make use of the support available to you through the Access Center and other campus support programs, including getting tutorial assistance.**

8. **Study every day.** It takes many, many hours of real work and concentration to learn at the college level and thus requires considerable discipline and effort. It is nearly impossible to master a subject by merely attending class and skimming the text the night before the exam.

9. **Form a study group and make sure you meet frequently.** Ask you fellow students how they learn, how they study, and how they prepare for exams.

10. **Try teaching the subject.** Not just off the cuff but prepare a lesson plan on what you want to teach and how you will teach it. Think up hands-on exercises, worksheets, and other assignments that will help emphasize the lesson. Then gather an audience and teach. You might find an audience in your family, your study group, your friends, or co-workers. Or you can certainly find an audience at a senior center, nursing home, homeless shelter, or prison.

*If you follow these general guidelines with dedication, commitment and perseverance I'm sure you can succeed in any course you take.*
REQUEST FOR GENERAL STUDIES DESIGNATION (2010-11)
SOCIAL and BEHAVIORAL SCIENCES I

Please review the Course Selection Criteria for this category for assistance in completing this form, particularly as it relates to the percentages associated with each Student Learning Outcome.

If this course is also being submitted for the Global Diversity Category, check here , and complete and attach the separate Global Diversity General Studies Designation request.

Date: 04/15/11

School: LAS

Department: EAS

<table>
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<tr>
<th>Prefix</th>
<th>Course Number</th>
<th>Credit Hours</th>
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<tr>
<td>GEG</td>
<td>1920</td>
<td>3.0</td>
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Title: Concepts and Connections in Geography

Prerequisite(s): Minimum performance standard scores on reading, writing, and mathematics preassessment tests

Corequisite(s): None

Banner enforced prerequisite(s) and/or corequisite(s): None

Recommended maximum enrollment per section: 30

A. Course content and Student Learning Outcomes

Describe the specific ways in which this course addresses each of these Student Learning Outcomes, providing students opportunities to develop the skills and/or acquire the knowledge. Include reference to readings, discussions, lectures, and other pedagogical tools which will be used.

2. Demonstrate the ability to locate sources when information is needed, and to evaluate the authenticity, validity, and reliability of resources applied to a specific purpose (10%)

Students will develop the practical skills in data gathering and data analysis to answer specific geographic research questions. They will receive instruction in collecting, evaluating, and analyzing geographic data and sources of information from agencies such as the United Nations and its affiliates at the global level to national agencies such as the US Census Bureau at the local level.
6. Analyze texts, sources, and argumentation, identify cause and effect relationships and recognize fallacies of argument (10%)

Students will be introduced to the process of critically analyzing texts and arguments through questioning in order to understand reasoning in science. The goal is to engage students in active learning: that is to teach them how to generate essential questions as a means to express problems and delineate issues. Throughout the semester, readings and arguments will be used to help students develop analytical (to determine cause and effect) and evaluative questions (to assess the value or quality) for self-development and excellence in thought. Students will be also introduced to the different questioning approaches within the natural and social sciences.

7. Use and document sources and evidence in an ethical manner (10%)

Students will gain an understanding of epistemology as a toll for differentiating science from ideology, bias, and propaganda in an ethical manner. That is to identify whether discourse, knowledge, and sources of evidence contribute to enhance the rights and welfare of people or if they are harmful to universal human rights. Students will be introduced to distinguishing between ethical considerations (those involving universal human rights) from those involving more relative issues such as culture, religion, law, and social conventions. The following sets of issues might be used to differentiate between those two perspectives: racism, slavery, deceit, sexism, terrorism, political rights, educational and health rights, etc.

10. Describe how the methods of science are used to generate new knowledge (10%)

Students are expected to learn the comparative approach in the social sciences in general and in geography in particular as an essential tool for generating new knowledge. The comparative approach in the social sciences and in geography aims to highlight the singularity or uniqueness of phenomena or a territory and to determine what they have in common: that is, an analysis of singularities and commonalities. The geographical comparative approach’s significance is its capacity to move research away from a national local perspective towards a more global understanding and accompanying social transformations. Students will evaluate the geographical comparative approach for its crucial capacity not just for explaining social and geographical phenomena but also for seeking action on crucial problems such as environmental degradation that are seen as less and less dependent on national initiatives and increasingly more dependent on global actions. The comparative approach will be used to illustrate how the social sciences and their methodologies are adapting to the new realities of the global era.
17. Describe the forms and impacts of geographical conditions or social, economic, financial, or political practices on the human experience using analytical methods appropriate to the field. (SBS I) (80%) 

Students are expected to analyze and to evaluate integrating foundational concepts and theories the following crucial geographical issues and problems:

1. The population and resources conundrum
2. Human diversity amid globalization
3. The interaction between the physical and cultural landscape
4. Human environmental interactions
5. The uneven development of economic activity
6. The relationship among resources, economic growth, governance, and human well being

B. Assessment of Student Learning

Identify and describe at least one specific form of assessing student achievement of each Student Learning Outcome which will be a regular part of the course. Examples include specified test questions, specified problem sets, written paper prompts and scoring guide or rubric, projects with assignment sheet and scoring guide or rubric, etc. Include attachments as applicable. A single piece of student work may be used to assess student achievement of more than one Student Learning Outcome.

2. Demonstrate the ability to locate sources when information is needed, and to evaluate the authenticity, validity, and reliability of resources applied to a specific purpose

**Course Research Project:** Students should develop a research paper and a class presentation about a specific topic or issue they want to learn more about. Students will be assessed based upon the choice of academic sources (Attachment 3).

6. Analyze texts, sources, and argumentation, identify cause and effect relationships and recognize fallacies of argument

**Write-ups in Online Discussions:** Students should read online articles posted on Blackboard and write critical assessments to identify: (1) What are the main problems or issues raised in the articles? (2) What are the causes of the problems thus identified? (3) What are the effects or consequences of the problems? (4) What evidence is provided? (5) What solutions, if any, does the literature provide (what ought to be done)? Students should also engage critically with one their classmates’ assessments of the articles (Attachment 1)
7. Use and document sources and evidence in an ethical manner

Course Research Project: Students should develop a research paper and a class presentation about a specific topic or issue they want to learn more about. Students will be assessed based upon the use and appropriate referencing of academic sources (Attachment 3).

10. Describe how the methods of science are used to generate new knowledge

Class Group Discussion: Students will analyze case studies of the human impact on the environment and use the scientific approach to make sense of them. Students will read three short articles on the disappearing Aral Sea, the impact of cattle raising in the Amazon, and wildlife corridors in North America. They will identify and discuss with classmates the following questions:

1. What are the human driving forces indirectly generating the environmental change?
2. What human activities are directly causing it?
3. What is the mechanism of environmental change?
4. What are its adverse human and natural consequences? And,
5. What are the proposed solutions to treat the problems?

17. Describe the forms and impacts of geographical conditions or social, economic, financial, or political practices on the human experience using analytical methods appropriate to the field. (SBS 1)

This learning outcome will be assessed based on two different assignments.

Course Research Project: Students should develop a research paper and a class presentation about a specific topic or issue they want to learn more about. The issue should relate to one of the following themes: (1) Population and water and food resources, and (2) human-environmental interactions. The objective of this exercise is to introduce students to the process of research in the social sciences. That is: How to seek out logical explanations for social phenomena we care about (Attachment 3).

Written Assignment: Students should read an article that reviews Colonialism’s systematic racial classification and division of the world’s population to control and exploit labor (a racial division of labor). Students should engage with the question of the historical roots and legacy of colonialism on contemporary racism and the developmental gap between rich and poor nations (Attachment 2).
C. Conformance with Course Selection Guidelines

Briefly describe how the course meets the course selection guidelines

To demonstrate breadth, describe the different areas of the Social Sciences examined within the course. Course content must address at least two major areas or domains in a discipline. Examples might be the historical context or theoretical and methodological approaches within a discipline.

The course provides a solid background for building geographic literacy and addresses the field of culture from historical and theoretical perspectives. The course provides the tools for understanding the interconnectedness of social and environmental dynamics, cultural diversity, global awareness, and spatial variation.

Approvals:

Ruth E. Wright 8/11/11

Department Curriculum Committee / Date

Kenneth Englund 8/15/11

Department Chair or Program Director / Date

Cheri E. Randall 11/2/11

School Curriculum Committee / Date

Linda Stagg-Perez 11/3/11

Dean or Associate Dean / Date

Nels Gunstin 11/22/11

Chair, General Studies Committee / Date

Thea A. Thompson 2/16/12

Associate Vice President, Academic Affairs / Date
REGULAR COURSE SYLLABUS
GENERAL STUDIES

School of: Letters, Arts, and Sciences
Department: Earth and Atmospheric Sciences
Prefix & Course Number: GEG 1920  Crosslisted With*: 
Course Title: Concepts and Connections in Geography

Check All That Apply:  
- Required for Major: _____  - Required for Minor: _____  - Specified Elective: _____
- Required for Concentration: _____  - Elective: _____  - Service Course: _____

Credit Hours: 3 (2+2)

Total Contact Hours per semester (assuming 15-16 week semester):
- Lecture 30  Lab 30  Internship _____  Practicum _____  Other (please specify type and hours): _____

Schedule Type(s): B, J, 6  Grading Mode(s): L

Variable Topics Courses (list restrictions, including the maximum number of hours that can be earned**):
NA

** NOTE: This information must be included in the course description.

Restrictions (Variable Topics Course): None

Prerequisite(s): Minimum performance standard scores on reading, writing, and mathematics preassessment tests

Corequisite(s): None

Prerequisite(s) or Corequisite(s): None

Banner Enforced:
- Prerequisite(s): None
- Corequisite(s): None
- Prerequisite(s) or Corequisite(s): None

Catalog Course Description:
This course introduces the basic concepts and themes of geography covering both physical and cultural aspects of the Earth's surface. Students will develop the analytical skills to understand how people shape and are shaped by their environment. The course examines how the human experience and human activity create and sustain places; how climates, landforms, and water processes shape the earth's surface; the interconnections between physical and cultural phenomena; and how this knowledge relates to everyday life.

APPROVED:

Department Chair OR Program Director  Date

Dean OR Associate Dean  Date

Associate VP, Academic Affairs  Date

*If crosslisted, attach completed Course Crosslisting Agreement Form
Required Reading and Other Materials will be equivalent to:


Course Category and Related Student Learning Outcomes:

2. Demonstrate the ability to locate sources when information is needed, and to evaluate the authenticity, validity, and reliability of resources applied to a specific purpose (10%)
6. Analyze texts, sources, and argumentation, identify cause and effect relationships and recognize fallacies of argument (10%)
7. Use and document sources and evidence in an ethical manner (10%)
10. Describe how the methods of science are used to generate new knowledge (10%)
17. Describe the forms and impacts of geographical conditions or social, economic, financial, or political practices on the human experience using analytical methods appropriate to the field.

Specific, Measurable Student Behavioral Learning Objectives:
Upon completion of this course the student should be able to:

1. Locate, define and discuss global human and physical patterns and examine how and why they vary across the earth’s surface: (2, 6, 17)
   a. global development patterns: developed, emerging, and developing countries; the global north and the global south
   b. global human patterns: population, urbanization, religion, language/culture, and economic activity
   c. global physical patterns: climate, landforms, and natural resources

2. Illustrate and explain geographical issues and problems through the examination of the interaction and impact of geopolitical, cultural, economic and environmental forces within a variety of scales, from that of local events to the world perspective as a whole, including: (2, 6, 7, 17)
   a. the diversity of human culture within an increasingly interconnected world
   b. the dynamic geographic processes associated with population, urban, economic, and political systems in our rapidly changing world
   c. how physical earth systems continue to interact and affect changes on the surface of the earth

3. Integrate and apply theories and concepts developed in this course to analyze and evaluate the following problems and issues, including: (6, 7, 10, 17).
   a. the impact of human activities on the environment at the local and global scale
   b. the factors that affect the spatial variation of both economic development and human well being
   c. and, the global and local spatial interaction along the dimensions of migration, diffusion, and globalization

Detailed Outline of Course Content (Major Topics and Subtopics) or Outline of Field Experience/Internship (experience, responsibilities and supervision) (format: I, A, 1, a, etc.):

I. Foundations of Geography: Understanding Spatial Analysis and Connections
   A. Evolution of the Discipline (6, 10, 17)
      1. What is Geography?
      2. Subfields of Geography
      3. Why Geography Matters: Where is it? Why is it there? Why does it matter?
   B. Core Geographic Concepts (2, 6, 10, 17)
      1. Location, Direction, and Distance
      2. Size and Scale
II. Spatial Visual Tools: Understanding Maps
   A. Maps as the Tools of Geography (2, 7, 10)
      1. Map Projections
         a. Area
         b. Shape
         c. Distance
         d. Direction
         e. Scale
   B. Types of Maps (2, 10, 17)
      1. Topographic Maps and Terrain Representation
      2. Thematic Maps and Data Representation
   C. Geographic Information Technologies (2, 10, 17)
      1. Remote Sensing
      2. The Global Positioning System
      3. Geographic Information Systems

III. Physical Geography: Landforms
   A. Earth Materials and the Cycle of Rock Change (6, 10, 17)
   B. The Lithosphere and the Tectonic System (6, 10, 17)
      1. Geologic Time
      2. Plate tectonics
   C. Landform Evolution (6, 10, 17)
      1. Weathering
      2. Mass Movement
      3. Erosional Agents and Deposition
         a. The Work of Water, Waves, Wind, and Ice
   D. Landform Regions (6, 10, 17)

IV. Physical Geography: Weather and Climate Systems
   A. The Earth as a Rotating Planet (6, 19, 17)
   B. The Energy System: Air Temperature and Air Temperature Cycles (6, 19, 17)
   C. Atmospheric Moisture and Precipitation (6, 19, 17)
   D. Air Pressure, Winds, and the Global Circulation System (6, 19, 17)
   E. Ocean Currents (6, 19, 17)
   F. The Global Scope of Climates: Climate Classification (6, 19, 17)
   G. Climatic Change (6, 7, 19, 17)
      1. Long-Term Climatic Change
      2. Short-Term Climatic Change
      3. The Greenhouse Effect and Global Warming

V. Population Geography and Migration
   A. Population Fundamentals (2, 6, 7, 10, 17)
      1. Size, Fertility, Mortality, Life Expectancy
      2. World Population Distribution and Density
Prefix and Course Number: GEG 1920

B. Population Composition and Change (2, 6, 7, 10, 17)
   1. Population Pyramids
   2. Natural Increase and Doubling Times
   3. The Demographic Transition: The Western Experience and the Developing World
   4. Age-dependency Ratio
C. Population-Environment interactions (2, 6, 7, 10, 17)
   1. Malthusian Population Theory: Neo-Malthusians and Cornucopians
   2. Resources and Population Interactions
D. Migration (2, 6, 7, 10, 17)
   1. Push and Pull factors
   2. Patterns of Global Migration

VI. Cultural Geography
A. Geographies of Culture (2, 6, 7, 17)
   1. Components of Culture
   2. Cultural Change: Innovation, Diffusion, and Acculturation
   3. Cultural Diversity and Contemporary Globalization
B. Geographies of Language (2, 6, 7, 17)
   1. Languages in the World
   2. Language Diffusion and Globalization
C. Geographies of Religion (2, 6, 7, 17)
   1. Religion in Global Context
   2. Religious Hearths and Diffusion
   3. Religion, Society, and Globalization
D. Geographies of Identity (2, 6, 7, 10, 17)
   1. Race, Class, and Ethnicity
   2. Sexuality and Gender

VII. Political Geography
A. Geographies of the Nation-State (6, 7, 17)
   1. Evolution of the Modern State: Nations and States
   2. National Political Systems and Sovereignty
   3. Nationalism
B. Internationalism and Supranational Institutions (6, 7, 17)
   1. The United Nations and its Agencies
   2. The European Union
C. Global Geopolitics (6, 7, 17)
D. The Geography of Representation: Electoral Geography (6, 7, 10, 17)

VIII. Economic Geography
A. Changing Geographies of Development (2, 6, 7, 10, 17)
   1. Uneven Spatial Development: The Global North, the Global South, and Emerging Economies
   2. Development and Income Inequality
B. Geographies of Industry and Services (2, 6, 7, 10, 17)
   1. Evolution of Manufacturing in the Core
   2. Evolution of Manufacturing in the Periphery or Beyond the Core
   3. Services: Deindustrialization and Globalization
C. Agricultural Geographies (2, 6, 7, 10, 17)
   1. World Agricultural Hearths and the Diffusion of Agriculture
   2. Agricultural Systems
   3. Agriculture, the Environment, and Globalization
D. Spatial Patterns Global Trade (2, 6, 7, 10, 17)

IX. Urban Geography
A. Cities and Urbanization (2, 6, 7, 10, 17)
   1. Origins and Evolution of Cities and Urban Settlements
   3. Urban Policy and Planning
B. Urban Structure (2, 6, 7, 10, 17)
   1. Patterns of Urban Land Use
   2. The Geographies of Class and Ethnicity: Residential Change, Urban Segregation and Urban Poverty
   3. Urban Dynamics: Suburbanization, Urban Decline, Downtown Renewal and Gentrification
C. Global Urban Diversity (2, 6, 7, 10, 17)
   1. Urban Hierarchies and Globalization
   2. World Cities and Global Cities

X. Human Impact on the Environment
A. The Geography of Natural Resources (2, 6, 7)
   1. Nonrenewable Energy Resources
   2. Renewable Energy Resources
B. Ecosystems (2, 6, 7, 17)
   1. Ecological Concepts
   2. Environmental Degradation
   3. Biodiversity
C. Human Environmental Interactions (2, 6, 7, 10, 17)
   1. Impacts on Water
   2. Impacts on Air and Climate
   3. Impacts on Landforms
   4. Impacts on Plants and Animals
   5. Global Warming and Climate Change

Evaluation of Student Performance (format: 1, a, i, ii, etc.):

1. Examinations on the course content;
   a. formative quizzes
   b. summative exams
2. Written Assignments or Exercises
3. Written or oral assignments based on scheduled readings
4. Course research project: oral presentation with written summary
Online Discussions

Write-ups to Online Discussions: Students should read the article *The Food Movement Rising* by Michael Pollan (posted on Blackboard), where he investigates the Western Diet and its effects on human health, the environment, and civil society. For this assignment write an essay that refers to Pollan’s specific contribution to the contemporary food experience in American life and post it in the discussion board. Also, respond with one paragraph, or more, to one of your classmates’ postings. Address the following questions in your write-up:

a. What are the main problems or issues raised by Pollan?
b. What are the causes of the problems thus identified?
c. What are the effects or consequences of the problems?
d. What evidence is provided?
f. What solutions, if any, does he provide (what ought to be done)?
Written Assignment: On Colonialism

The Latin American scholar (Peruvian) Aníbal Quijano in his article *Coloniality of Power, Eurocentrism, and Latin America*, defines Coloniality of power (the product of the European expansion throughout the world or colonialism) as: the systematic racial classification and division of the world’s population to control and exploit labor (a racial division of labor). I would like you to express your opinion about this process in this forum and engage with your classmates in discussion. Address the following questions in your write-up:

- What relationships might be drawn between Colonialism and the use of slave labor and contemporary notions of racism?
- How can we use this concept to explain the gap between rich and poor nations today?
- What other elements should be considered besides Coloniality of power to explain contemporary racism?
- What relation might be drawn between Coloniality of power and democracy in developing nations?
- What is Eurocentrism? How does it work? And, how might it affect personal identities and socio-economic opportunities?
- What is hegemony, and how might it relate to development?

Write an essay of a minimum of 600 words (about 3 pages).
METROPOLITAN STATE COLLEGE of DENVER

Department of Earth and Atmospheric Sciences
GEG 1920: Concepts and Connections in Geography

Course Research Project

Students should develop a research and a class presentation about a specific topic or issue they want to learn more about. The issue should relate to one of the following themes: (1) Population and water and food resources; and (2) human-environmental interactions. The objective of this exercise is to introduce students to the process of research in the social sciences. That is: How to seek out logical explanations for social phenomena we care about. Students should address the following questions in their research project.

1. The Topic: Choose a specific topic/issue you want to learn more about.
2. The Context or Background: Provide the general and interesting information for your inquiry: the where, when, and how.
3. Your research question: Translate the topic into a central question to do your research: what is the question you are attempting to answer? The question should directly relate to one country of the world and to the themes stated above.
4. The rationale: why this question is worth studying? (Or why should we care about this issue?)
5. Your argument: what is the main idea developed in the presentation?
6. Review of the literature: Search and read academic sources that deal specifically with your topic (at least three academic sources).
7. Analysis-Discussion: provide the answer to your question and state the conclusions.
8. Personal reflection: what are your ideas about the issue?

Besides the class presentation you should write an executive summary of your research, which should clearly address the following points: (1) What is the main question, problem, or issue of your report? (2) What is the answer to the question or to the problem? (3) What are the consequences of the problems or issue? (4) What do you think about it?
GEG 1920: Concepts and Connections in Geography

Course Research Project Grading Rubric

<table>
<thead>
<tr>
<th>I. INTRODUCTION</th>
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Total Points:

* Each bullet item is worth 10 points, for a total of 100 possible points.
GEG 1920: Concepts and Connections in Geography

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METROPOLITAN STATE COLLEGE OF DENVER

COURSE SYLLABUS: GEG 1920: Concepts and Connections in Geography

Spring 2011

Section 2: F 12:00 – 15:50, Location: NC – 1202

Instructor: Dr. Antonio Bellisario
E-mail: abellisa@mccd.edu
Department of Earth & Atmospheric Sciences
Office address: Science Building, Room 2026, Phone, 303) 352-4278
Office hours: Monday and Wednesday 9:30 - 10:45; 14:00 – 15:15

PREREQUISITES

Minimum performance standard scores on reading, writing, and mathematics preassessment placement tests are required.

COURSE PURPOSE

CATALOG COURSE DESCRIPTION: This course will cover basic concepts and themes of geography as well as the primary division of the discipline. Topics include major world regions and the interconnections between them, the geography of human activities, physical geography, and human interaction with the environment. Basic geographic tools, methodologies, and theories are used as keys to understanding past, present, and future events in the world. The region of the Middle East will be used to demonstrate relationships between physical and human geography and resource development. (General Studies - Level II, Social Sciences)

COURSE LEARNING OBJECTIVES

The objectives include the expectations of both PLACE and Colorado Model Content Standards. Upon completion of this course the student should be able to:

1. Locate and identify states, countries, major cities, and major physical features on a map (GS 1.2);
2. Explain the tools used to create different types of maps and interpret spatial data (GS 1.1, 1.2);
3. Construct and explain a mental map and a concept map (GS 1.1, 1.2, 2.3);
4. Examine how the four general earth systems continue to interact and affect changes on the surface of the earth (GS 3.1, 3.2);
5. Evaluate how human activities are altering the four systems and interfaces between systems (GS 2.1, 5.1, 5.2);
6. Identify the variables of population growth, prepare and interpret population projections, and explain patterns of global population distribution (GS 1.3, 4.1);
7. Describe geographic aspects of human activity and explain how and why they vary across regions and cultures (GS 1.3);
8. Evaluate factors that affect levels of development on a global basis and how global lending institutions, such as the World Bank, and multinational corporations impact the use of resources (GS 4.3, 5.3);
9. Explain the variables of spatial behaviors (GS 1.3, 2.3, 4.4);
10. Analyze how regions are formed, bounded, and interact (GS 2.2); and
11. Integrate course content and apply the concepts developed in this course to analyze geographic phenomena (GS 6.1 and 6.2).

COURSE FORMAT/TEACHING METHODS

Lectures/Discussions: We meet two times per week. On Mondays the class session will be a lecture/discussion based on the weekly topic from the textbook. On Wednesdays the section will be based on a mini-conference format in which the students will review the secondary readings. Students must read the assigned materials PRIOR to the scheduled session in order to make an informed contribution.

COURSE REQUIRED READINGS

Textbook (The following books are available for purchase at the bookstore):


Secondary Readings


4. A set of readings will be posted online

COURSE ASSIGNMENTS AND ASSESSMENT TECHNIQUES

1. Research project and individual class presentation: Students should develop a research-based project that illustrates a particular topic within the broad issues of global food and water problems, and human-environment interactions. Students should present a 15 minutes exposition-summary to the class of your research report. The written summary of the presentation (executive summary) is due at your scheduled presentation date (15% of final grade).
2. Online discussions and written assignments: Students should write 5 responses to specific written assignments (10% of final grade).
3. Ten quizzes: students must take ten online (Blackboard) quizzes on the required weekly readings from Introduction to Geography (15% of final grade).
4. **Exams:** Three exams covering lectures and scheduled readings (each exam is worth 15% of final grade).

5. **Final Exam:** covering the books by Pollan and Flannery (15% of final grade)

**GRADING CRITERIA**

Assignments will be given a standard numerical grade. The final letter grades will be determined by the sum of numerical points you accumulated during the quarter.

**COURSE REQUIREMENTS AND POLICIES**

**Institutional Statement:** each student is responsible for being aware of the information contained in the MSCD Catalog 2008/09 (Academic Policies and Procedures and Student Rights and Responsibilities), MSCD 2008/09 Student Policy Handbook, and semester information listed in the Class Schedule.

**Make up and Late Assignment policy:** Late work will not be accepted without a valid excuse properly documented. Students who do not meet this criterion, and miss a test or presentation, will receive a score of zero. There are **NO** provisions for extra credit, and/or re-examinations. Make-up exams will be given only under extreme circumstances, e.g. serious illness properly documented.

**Reading:** Reading in this class is an integral part of learning. Students should complete the required weekly reading assignments for each week. This is a rigorous requirement and must be taken to heart. In order to do well in the course, it is essential that you read all assigned materials **PRIOR** to class. You are expected to come to class prepared, to participate actively (including responding to discussion questions asked in class), and to make an informed contribution to classroom discussions.

**Class Attendance:** Attendance during the first week of class is required. It contributes greatly to teaching and learning. Some departments determine a student’s enrollment in a course based upon attendance during the first week of class. Consult the department for more information about the attendance policy for the class that you are attending.

Students enrolled in this class are expected to attend all class sessions. Students are responsible for obtaining materials missed due to absences. **Any student with more than 4 unexcused absences during the semester will receive a failing grade for the course.**

**Tardiness:** Please be punctual; do not come to class late. Tardiness is distracting to everyone.

**Classroom Disruption:** Persistent classroom disruption that interferes with instruction will be seen as a disciplinary offense. The term "classroom disruption" means behavior a reasonable person would view as substantially interfering with the progress of the class. Examples include but are not limited to: repeatedly leaving and entering the classroom without authorization, show up 10 minutes late, making loud or distracting noises, persisting in speaking without being recognized, answer your cell phone, text messaging, listen to music with headphones, surfing the web (interneting), exhibit a poor/negative attitude, etc.
Academic integrity: For the University's policy on plagiarism (using someone else's work without proper acknowledgement), see the section on Policies and Procedures on the Metro State Catalog 2007-2008, page 75. Cheating will not be tolerated; if discovered, the student may receive an F and will be reported to the dean of students.

Americans with Disabilities Act (ADA): The Metropolitan State College of Denver is committed to making reasonable accommodations to assist individuals with disabilities in reaching their academic potential. If you have a disability which may impact your performance, attendance, or grades in this class and are requesting accommodations, then you must first register with the Access Center, located in the Auraria Library, Suite 116, 303.556.8387.

The Access Center is the designated department responsible for coordinating accommodations and services for students with disabilities. Accommodations will not be granted prior to my receipt of your faculty notification letter from the Access Center. Please note that accommodations are never provided retroactively (i.e., prior to the receipt of your faculty notification letter.) Once I am in receipt of your official Access Center Faculty Notification Letter, I would be happy to meet with you to discuss your accommodations. All discussions will remain confidential. Further information is available by visiting the Access Center website www.mscd.edu/~access.

Class Attendance on Religious Holidays: Students at MSCD who, because of their sincerely held religious beliefs, are unable to attend classes, take examinations, participated in graded activities or submit graded assignments on particular days shall without penalty be excused from such classes and be given a meaningful opportunity to make up such examinations and graded activities or assignments provided that advance written notice that the student will be absent for religious reasons is given to the faculty members during the first two weeks of the semester.

Nothing in paragraph one of this policy shall require MSCD faculty members to reschedule classes, repeat lectures or other ungraded activities or provide ungraded individualized instruction solely for the benefit of the students who, for religious reasons, are unable to attend regularly scheduled classes or activities. However, presentations, critiques, conferences, and similar activities involving individual students shall be scheduled to avoid conflict with such students' religious observances or holidays provided that reasonable advance notices of scheduling conflicts is given to faculty members.

Because classroom attendance and participation is an important aspect of learning, MSCD students should not register for courses if regularly scheduled classes or activities routinely conflict with their religious observances or holidays.

Family Educational Rights and Privacy Act

MSCD hereby gives notice that it has designated the following categories of personally identifiable information as directory information under section 438(a)(5)(b) of the Family Educational rights and Privacy Act of 1974 (FERPA). Subject to the Colorado Public Records Act, directory information concerning students as the college may be released without prior consent of the student as permitted by FERPA unless within ten days after registration as student had notified MSCD (Office of the Registrar) that such information should not be released without his or her consent. Directory information at MSCD is as follows: Name/Address/Dates of Attendance/ Degrees Received

Requests for disclosure of the directory information must be submitted in writing to the MSCD Office of the Registrar. In the case of emergencies, directory information may be released
without written request, at the college’s discretion. Prospective employers or their agents may request information concerning verification of student degrees received or dates of attendance directly from the MSCD Office of the Registrar without submitting a written request to the college.

SCHEDULE OF LECTURES AND READINGS

--Week 1 (Jan. 19): Introduction to the class
--Week 2 (Jan. 23-29): What is Geography? Documentary: An Inconvenient Truth
  • Readings: Getis Chapter 1.
  • Assessment: Quiz Chapter 1.
--Week 3 (Jan. 30 Feb. 05): Physical Geography: Landforms
  • Readings: Getis Chapter 3 and Flannery Foreword-43.
  • Assessment: Quiz Chapter 3.
--Week 4 (Feb. 06-12): Physical Geography: Weather and Climate
  • Readings: Getis Chapter 4 and Flannery 44-83
  • Assessment: Quiz Chapter 4.
--Week 5 (Feb. 13-19): Natural Resources
  • Readings: Getis Chapter 5 and Flannery 84-107
  • Assessment: Quiz Chapter 5
--Week 6 (Feb. 20-26): Mon. 21 Review and First Exam Wed. 23 (Chapters. 1, 3, 4, 5)
--Week 7 (Feb. 27 Mar. 05): Population Geography
  • Readings: Getis Chapter 6 and Flannery 115-167
  • Assessment: Quiz Chapter 6
--Week 8 (Mar. 06-12): Cultural Geography, Documentary: Food Inc.
  • Readings: Getis Chapter 7
  • Assessment: Quiz Chapter 7
--Week 9 (Mar. 13-19): Political Geography
  • Readings: Getis Chapter 9 and Pollan 1-32
  • Assessment: Quiz Chapter 9
--Week 10 (Mar. 20-26): Spring Break no classes.
--Week 11 (Mar. 27 Apr. 02): Second Exam Wed. 30 (Chapters. 6, 7, 9)
--Week 12 (Apr. 03-09): Economic Geography
  • Readings: Getis Chapter 10 and Pollan 32-61.
  • Assessment: Quiz Chapter 10
--Week 13 (Apr. 10-16): An Urban World
  • Readings: Getis Chapter 11 and Pollan 61-101.
  • Assessment: Quiz Chapter 11
- Readings: Getis Chapter 12 and Pollan 111-136.
- Assessment: Quiz Chapter 12

--Week 15 (Apr. 24-30): Review Mon. 25 and Third Exam Wed. 27 (Chapters. 10, 11, 12)

--Week 16 (May. 01-07): Review of Pollan’s Book
- Readings: Mon. 139-161 and Wed. 161-201

--Final Exam Week 17: (May 10-14) (final’s date to be announced)
REQUEST FOR GENERAL STUDIES DESIGNATION (2012-13)
SOCIAL and BEHAVIORAL SCIENCES I

Please review the Course Selection Criteria for this category for assistance in completing this form, particularly as it relates to the percentages associated with each Student Learning Outcome.

If this course is also being submitted for the Global Diversity Category, check here , and complete and attach the separate Global Diversity General Studies Designation request.

Date: 10/01/2012
School: Letters, Arts and Sciences
Department: Earth and Atmospheric Sciences

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Course Number</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>GEG</td>
<td>2020</td>
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Title: Geography of Colorado

Prerequisite(s): Minimum performance standard scores on reading, writing, and mathematics preassessment placement tests.

Corequisite(s): NA

Banner enforced prerequisite(s) and/or corequisite(s): NA

Recommended maximum enrollment per section: 30

A. Course content and Student Learning Outcomes

Describe the specific ways in which this course addresses each of these Student Learning Outcomes, providing students opportunities to develop the skills and/or acquire the knowledge. Include reference to readings, discussions, lectures, and other pedagogical tools which will be used.

2. Demonstrate the ability to locate sources when information is needed, and to evaluate the authenticity, validity, and reliability of resources applied to a specific purpose (10%)

Students are required to locate appropriate information for two written assignment from government web-sites, reliable published research, and respected and vetted sources. Lectures include references to specific sources of information and an appraisal of their validity.

6. Analyze texts, sources, and argumentation, identify cause and effect relationships and recognize fallacies of argument (10%)
Students are required to locate appropriate information for two written assignments addressing topics relating to the geography of locations within Colorado. Students are asked to analyze arguments, and to evaluate sources for bias and logical fallacy.

7. Use and document sources and evidence in an ethical manner (10%)

Students are required to compile appropriate information and data for two written assignments from reliable publications, topical literature, web-based sources and student-collected sources (interviews, diaries, letters, etc.). Students are expected to fully document the sources and methods used to acquire and assemble that information. Lectures include references to specific sources of information and an appraisal of their validity.

10. Describe how the methods of science are used to generate new knowledge (10%)

Lectures include discussions and analysis of the history, demography, politics, geography and economy of Colorado. Lectures also include discussions on the social and economic impact of declining resources and how those data are collected. Students are presented with current contentious developments within Colorado (e.g. water distribution and allocation, education funding, re-districting, etc.) and required to apply methodologies from these disciplines to analyze all sides of the issues and to compare and contrast them.

17. Describe the forms and impacts of geographical conditions or social, economic, financial, or political practices on the human experience using analytical methods appropriate to the field. (SBS I) (80%)

Geography as a field adopts a multi-disciplinary approach to describing place and process. The Geography of Colorado combines elements of physical geography (geology, geomorphology, climatology, hazards, and biogeography) with elements of human geography (economics, political science, historical geography, demographics, and behavioral geography) to describe and analyze spatial relationships of human and natural activity within the state. The course employs appropriate analytical methods from these fields to address both historical and current human experience in Colorado.

B. Assessment of Student Learning

Identify and describe at least one specific form of assessing student achievement of each Student Learning Outcome which will be a regular part of the course. Examples include specified test questions, specified problem sets, written paper prompts and scoring guide or rubric, projects with assignment sheet and scoring guide or rubric, etc. Include attachments as applicable. A single piece of student work may be used to assess student achievement of more than one Student Learning Outcome.

2. Demonstrate the ability to locate sources when information is needed, and to evaluate the authenticity, validity, and reliability of resources applied to a specific purpose.

Writing Assignments: Geography of a Colorado Town (See Attachment 1) and Field Trip Brochure (See Attachment 2)
These assignments require locating and evaluating several relevant sources.

6. Analyze texts, sources, and argumentation, identify cause and effect relationships and recognize fallacies of argument.

Writing Assignment: Geography of a Colorado Town (See Attachment 1)
This assignment requires analyzing various text and data sources.

7. Use and document sources and evidence in an ethical manner.

Writing Assignment: Geography of a Colorado Town (See Attachment 1)
This assignment requires students to use a document vetted sources.

10. Describe how the methods of science are used to generate new knowledge.

Writing Assignments: Geography of a Colorado Town (See Attachment 1) and Field Trip Brochure (See Attachment 2)
This assignment applies methodologies of the physical and social sciences to describe location, geology, climate and vegetation, unique landforms, settlement history, natural resources, economy, government, transportation, culture, and demographics. The product is likely to be a unique combination of these data and description of a Colorado location. For most Colorado towns, no similar publication has ever been compiled.

17. Describe the forms and impacts of geographical conditions or social, economic, financial, or political practices on the human experience using analytical methods appropriate to the field. (SBS 1)
Writing Assignment: Consequences of Water Scarcity (See Attachment 1)
This assignment combines elements of physical geography (geology, geomorphology, climatology, hazards, and biogeography) with elements of human geography (economics, political science, historical geography, demographics, and behavioral geography) to describe and analyze spatial relationships of human and natural activity within the state. The course employs appropriate analytical methods form these fields to address both historical and current human experience in Colorado.

C. Conformance with Course Selection Guidelines

Briefly describe how the course meets the course selection guidelines.

The Geography of Colorado is a multi-disciplinary examination of the physical, and human geography of Colorado. The course adopts a multi-disciplinary approach to describing place and process, combining elements of physical geography (geology, geomorphology, climatology, hazards, and biogeography) with elements of human geography (economics, political science, historical geography, demographics, and behavioral geography) to describe and analyze spatial relationships of human and natural activity within the state. The course employs appropriate analytical methods form these fields to address both historical and current human experience in Colorado.
Approvals:

<table>
<thead>
<tr>
<th>Approval Date</th>
<th>Signature</th>
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<tbody>
<tr>
<td>10/04/12</td>
<td>Helen Evans</td>
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<tr>
<td>10/04/12</td>
<td>Department Curriculum Committee / Date</td>
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<tr>
<td>10/04/12</td>
<td>Thomas Englund</td>
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<tr>
<td>11/22/13</td>
<td>Department Chair or Program Director / Date</td>
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<td>11/22/13</td>
<td>Brian Wirth</td>
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<td>11/22/13</td>
<td>Linda Lang-Perrett</td>
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<td>Dean or Associate Dean / Date</td>
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<td>3/1/13</td>
<td>Richard Wagner</td>
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<td>Chair, General Studies Committee / Date</td>
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<td>3/1/13</td>
<td>Michele Thompson</td>
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<td>3/1/13</td>
<td>Associate Vice President, Academic Affairs / Date</td>
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</table>
REGULAR COURSE SYLLABUS

School of: Letters, Arts and Sciences

Department: Earth and Atmospheric Sciences

Prefix & Course Number: GEG 2020  
Course Title: Geography of Colorado

Check All That Apply:  
Required for Major: ____  Required for Minor: ____  Specified Elective: ____  
Required for Concentration: ____  Elective: X  Service Course: ____

Credit Hours: 3 (3+0)

Total Contact Hours per semester (assuming 15-16 week semester):

Lecture 45  Lab ____  Internship ____  Practicum ____  Other (please specify type and hours): ____

Schedule Type(s): L  Grading Mode(s): L

Variable Topics Courses (list restrictions, including the maximum number of hours that can be earned**):

**NOTE: This information must be included in the course description.

Restrictions (Variable Topics Course): ____

Prerequisite(s): None
Corequisite(s): None
Prerequisite(s) or Corequisite(s): None

Banner Enforced:
Prerequisite(s): None
Corequisite(s): None
Prerequisite(s) or Corequisite(s): None

Catalog Course Description: Geography of Colorado presents the study of physical, economic, and cultural features of Colorado. These features include climatic, landforms, history, water resources, energy and minerals, mining, soil, natural vegetation, agriculture, population characteristics, the economy, current issues, as well as their interactions, and the overall geographic setting. (General Studies – Level II, Social Sciences)

APPROVED:

[Signatures and dates]

*If crosslisted, attach completed Course Crosslisting Agreement Form
Required Reading and Other Materials will be equivalent to:
No text required

Specific, Measurable Student Behavioral Learning Objectives:
NOTE: Geography is by its nature a multidisciplinary approach that does not pigeonhole well into a single Course Category of Student Learning Outcomes. The list of Student Learning Objectives below are tied to General Studies SLO’s from several Course Categories.
Upon completion of this course the student should be able to:
1. identify the major landforms in Colorado (SBSI-2,6,17)
2. describe the climatic patterns and causal factors in Colorado weather; (SBSI-2,6,17 SBSII-18)
3. discuss the history of Colorado; (HS-2,14, SBSI-2, 6, 17)
4. identify the water resources of Colorado, both surface and underground, and the types and amounts of water use; (SBSI - 2,6,10,17)
5. describe the natural vegetation patterns of the State; (SBSI - 2,6,10,17)
6. identify the soil types and their significance; (SBSI - 2,6,10,17)
7. explain the major agricultural, mining, and industrial types and patterns in Colorado; (SBSI - 2,6,10,17)
8. explain the pattern of population distribution and trends in Colorado; (SBSI - 2,6,10,17, SSBII-18))
9. describe the types and patterns of transportation in the State; (SBSI - 2,6,10,17, SSBII-18)
10. discuss the types and geographic distribution of energy and mineral resources in Colorado; (SBSI - 2,6,10,17)
11. discuss the physical environments, people, and economic activities and their interactions in Colorado; and (SBSI - 2,6,10,17)
12. discuss the overall geographic and geologic settings of Colorado. (SBSI - 2,6,10,17)

Detailed Outline of Course Content (Major Topics and Subtopics) or Outline of Field Experience/Internship
I. Introduction
   A. Physiography
   B. Climate
   C. Vegetation
II. History
   A. Territorial evolution
   B. Pre-European history
   C. Spanish exploration and settlement
   D. Exploration, settlement, and expansion
III. The Physical Environment
   A. Physiography and geology
      1. Geology
         a. Basic geological concepts
         b. Historical geology
      2. Physiographic provinces
         a. Plains
         b. Mountains and parks
         c. Plateaus
   B. Climatology
      1. Climate - semi-arid
      2. Seasonality
      3. Importance of snowpack
5. Urban heat island

C. Vegetation
   1. Grasslands
   2. Desert shrublands and shrublands
   3. Coniferous forests
   4. Tundra

D. Water
   1. Distribution of water
   2. Water law
   3. Uses of water and population distribution
   4. Relationship to conservation
   5. Water diversions

E. Natural resources
   1. Renewable
   2. Non-renewable
      a. Energy
      b. Minerals
   3. Aesthetic

F. Environmental concerns
   1. Air
   2. Water
   3. Quality-of-life

IV. The Cultural Environment
A. Demography and population
   1. Population distribution
   2. Population change since 1910
   3. Minority distribution
   4. Income distribution

B. Economics
   1. Primary/extractive
      a. Agriculture
      b. Mining
      c. Forestry
   2. Secondary/industrial
      a. Manufacturing
      b. Construction
   3. Tertiary/service
      a. Regional service centers
      b. Resort counties
   4. Diversified economies
   5. Land use

C. Regions

V. Colorado's Future

Evaluation of Student Performance

1. Two mid-semester examinations and a comprehensive Final exam
2. A minimum of two writing assignments.
   a. Field-trip guide book
   b. Research paper on a Colorado Place.
3. Final Exam
Assignment: Using information from reliable sources, write a description for one of the stops on our field trip. Your description should place the attraction in the context of our field trip and why we are stopping there. Some stops are geological, some historic, some cultural. Your description should contain a general overview of the location, and should focus on the significant attraction for why it is a stop on the field trip.

NOTE: YOU WILL NEED TO DO SOME DIGGING AND RESEARCH TO PROVIDE MORE DETAILED INFORMATION.

Material for researching this assignment can include web-based resources but should also include at least two references from journal articles and books. All sources must be properly cited and referenced.

WE WILL COMPILE ALL OF THESE INTO A FIELD TRIP GUIDEBOOK THAT WE WILL ALL USE ON THE TRIP.

Grading Rubric:
Required format: 20%
• 2-3 paragraphs in length, not including figures or bibliographic references. Typed.
• Double –spaced or 1.5 space.
• A Title that refers to the topic being addressed.
• Properly and consistently referenced sources. Use the citation style appropriate for your discipline, or Chicago Manual of Style as default.

Content: 80%
• An appropriate topic 10%
• An introduction that describes the unique attraction for this stop. 20%
• Historical, geographica, or cultural focus 30%
• A map and appropriate figures. 10%
• Spelling, punctuation and grammar. 10%

Due no later than Thursday, Oct 30, 2012.
Assignment: Using the topics covered in this class as a model, write a description of the geography of a Colorado town. You might want to pick your home town, a ski town, a gambling town, or a farming community. To write the Geography of that place, you will want to describe its location, geology, climate and vegetation, unique landforms, settlement history, natural resources, economy, government, transportation, culture, and demographics.

Material for researching this assignment can include web-based resources but should also include at least two references from journal articles and books. All sources must be properly cited and referenced.

NOTE: YOU MUST DO SOME ADDITIONAL DIGGING AND RESEARCH ON THE TOPIC TO PROVIDE MORE DETAILED INFORMATION. I expect no less than 4 additional references.

Your paper must include recent and historical data (i.e. climate, first settlement, cost of living or housing, census data, economic data, etc.)
Your data source must be properly referenced.
Your paper must include a map and other appropriate diagrams.

Grading Rubric:
Required format: 20%
- 8-12 pages in length, not including figures or bibliographic references.
  Typed. Double -spaced or 1.5 space.
- A Title that refers to the topic being addressed.
- Properly and consistently referenced sources. Use the citation style appropriate for your discipline, or Chicago Manual of Style as default.

Content: 80%
- An abstract that summarizes your paper. 10%
- An introduction that reinforces why this location is worth reading about. 10%
- A discussion of the physical geography of the town 30%
- A discussion of the environmental, political, and socio-economic and demographic geography of the town 30%
- Maps, photographs and appropriate figures. 10%
- Spelling, punctuation and grammar. 10%

Due no later than Thursday, Nov. 29, 2012.
Read all of the directions carefully. Make sure that you fill in your name above and your initials at the top of each page. Keep breathing, cessation of breathing for prolonged periods may have a negative effect on your performance. The test is worth a total of 150 points.

Part 1: Multiple Choice: Read each question carefully. Please enter your answers on the Scantron form and circle your answers on the test. There is only one best choice for each answer. Each of the following questions is worth 2 points.

1) What year was Colorado first established as a state by the United States Congress?
   a. 1859  b. 1861  c. 1876  d. 1868  e. 1812

2) How big is Colorado?
   a. 104,000 mi²  b. 22,000 mi²  c. 400,207 mi²  d. 1,934,000 mi²  e. 1,876 mi²

3) What in 2010 is the most populous county in Colorado?
   a. Adams County  b. El Paso County  c. Denver County  d. Weed County  e. Populous County

4) How wide is Colorado from East to West?
   a. 380 miles  b. 140 miles  c. 300 miles  d. 550 miles  e. 420 miles

5) How wide is Colorado from South to North?
   a. 4° lat  b. 7° lat  c. 280 miles  d. both a and c  e. both b and c

6) The northernmost boundary of Colorado is set along the parallel:
   a. 41°  b. 27°  c. 37th  d. 100th  e. 40th

7) Which demographic age group had the highest population in Colorado according to the 2010 census?
   a) 45 - 50 year olds  b) 15 - 20  c) 20 - 40  d) 10 - 20  e) 65 - 70

8) Which of the following States forms the western border with Colorado?

9) Colorado ranks first nationally in the agricultural production of ?
   a. marijuana  b. cantaloupe  c. apples  d. pinto beans  e. proso millet

10) Colorado law limits landowner withdrawal of Denver Basin groundwater to an annual maximum of:
    a. 1% of water under their land  b. 1 acre-feet  
    c. 1 mgd  d. 1 cfs  e. none of the above
11) Which was the fastest growing county in Colorado between 2000 and 2010?
   a. Douglas County  
b. Bruce County  
c. Boulder County  
d. Denver County  
e. El Paso County

12) How many commercial downhill ski areas are there in Colorado?
   a. 40  b. 34  c. 11  d. 26  e. 77

13) Mike the headless helped make what Colorado town famous?
   a. stoner, Boulder  b. skier, Vail  c. nudist, Glenwood Springs  
d. miner, Cripple Creek  e. chicken, Fruita

14) What is the highest elevation in Colorado?
   a. Mt Erebus  b. Long’s Peak  c. Pike’s Peak  
d. Mt. Sopris  e. Mt. Elbert

15) Louisville, Lafayette and Erie were towns founded for what reason?
   a. growing cantaloupes  b. skiing  c. mining coal  
d. hunting big game  e. first colleges in Colorado

16) What two states send the most vacationers to Colorado?
   a. California and New York  b. Texas and Wyoming  
c. Wyoming and Nebraska  d. Texas and California  e. New York and Florida

17) What is the leading manufacturing product in Colorado?
   a. Medical marijuana processing and ingestion equipment  
b. Petroleum extraction machinery  c. Scientific Instruments  
d. Mining Equipment  e. Medical equipment and supplies

18) “Tom’s Baby” is
   a. His Geography of Colorado class, GEG 2200  
b. A large open-pit coal mine near Hayden  
c. A 14 pound kola bud grown in a greenhouse near Boulder  
d. A 14 pound gold nugget found in a stream bed near Breckenridge  
e. A hybrid cantaloupe grown near Rocky Ford

19) Which of the following states does not form a border with Colorado?
   a. Oklahoma  b. Utah  
c. Wyoming  d. Nebraska  e. South Dakota

20) Which of the following is Colorado’s state soil
   a. sietz  b. alfisol  c. loess  d. cryosol  e. colosoil
21) What company's fire insurance maps provide an excellent historical record of urban development?  
   a. Allstate Fire Maps Co.  
   b. State Farm Map Division  
   c. Sanborn Maps  
   d. Geiko Maps, saves your house in 15 minutes or less  
   e. National Geographic

22) How many miles of public roads and highways are in Colorado?  
   a. 820,813 miles  
   b. 88,259 miles  
   c. 122,967 miles  
   d. 66,784 miles  
   e. 24,119 miles

23) What percentage of the U.S. overnight ski trips market does Colorado have?  
   a. 20%  
   b. 9%  
   c. 15%  
   d. 33%  
   e. 50%

24) What is the average cost per lane mile to clear snow and ice from Colorado roads?  
   a. $2000  
   b. $26 million  
   c. $116.35  
   d. $9.75  
   e. $76,441

25) What city was the first territorial capital of Colorado?  
   a. Denver City  
   b. Gunnison  
   c. Colorado Springs  
   d. San Juan  
   e. Golden

PART 2: TRUE/FALSE Questions: Select TRUE if the statement is always true or FALSE if the is ever false. Indicate your answer on the Scantron sheet and circle your response on the test booklet. Each of the following questions is worth 20,000 points.

26) Colorado manufacturing accounted for $40 billion in 2010.  
   TRUE  
   FALSE

27) The Black Canyon of the Gunnison is both deeper and narrower than the Grand Canyon of the Colorado.  
   TRUE  
   FALSE

28) No major river flows into Colorado.  
   TRUE  
   FALSE

29) As you move east to west the rocks of the foothills get progressively younger.  
   TRUE  
   FALSE

30) The Wattenburg-Spindle is a famous gold mine near Cripple Creek.  
   TRUE  
   FALSE

31) Groundwater in the Denver Basin aquifers is replenished annually by snowmelt fed streams flowing through the foothills.  
   TRUE  
   FALSE

32) Western Colorado did not become part of United States territory until 1848.  
   TRUE  
   FALSE

33) Colorado holds the record for the single greatest 24-hr snowfall, 78.5 inches at Silver Lake, near Ward.  
   TRUE  
   FALSE
34) The treaty of Guadalupe-Hidalgo established the legality of Mexican land grants in United States courts.
   TRUE       FALSE

35) If you were to drill from Denver down all the way through the center of the Earth you would reappear at the surface in south-western China.
   TRUE       FALSE

PART 3: Short Essay Questions: Define the following terms in a sentence or two. Include diagrams whenever possible. (5 pts. ea.)

36) Sketch on a map the principle urban regions of Colorado and name the cities that comprise them.

37) Name the five P's that describe Colorado's regions and sketch them on a map.
38) Name the 8 major mountain ranges of Colorado and draw them in the state.

39) Name the four major rivers of Colorado and draw them on a map.

40) Sketch on a map the major agricultural regions of Colorado and the crops they are most famous for growing there.
PART 3: SHORT ESSAY QUESTIONS: Answer ONLY THREE of the following questions with one or two paragraphs and MAPS AND DIAGRAMS – 15 pt. ea.

41) Describe the role of public spaces in the urban environment, how we recognize them, and what purposes they serve. Give examples of public spaces in Denver and discuss how they fit your explanation.

42) Describe the von-Thunen model of urban development and detail how Denver fits the model and/or does not.

43) Describe the geography of the tourism industry in Colorado.

44) Detail the major elements of Colorado’s manufacturing industry and where they are located.

45) Describe the Geography of mining and hydrocarbon extraction in Colorado.

46) Describe the Geography of Colorado’s transportation system.

47) Describe Native American settlement of Colorado from earliest times through to the present day.

48) Describe the geography of Colorado’s climate. How does it vary across the state? What and where are the record events recorded?

Extra Credit: Teach me a concept that you studied for the exam that wasn’t asked? Include maps or sketches where appropriate. Up to 5 pts.
GEOGRAPHY OF COLORADO - GEG 2020-001

FALL 2012 SYLLABUS

Instructor: Tom Davinroy
Office: 2025 Science Bldg
Office Hours: W 10:00 – 11:00, T-Th 11:00-13:00, and/or by appointment.
Telephone: (303) 352-4458
e-mail: tdavinro@msudenver.edu

Instructor: Tom Davinroy
Office: 2025 Science Bldg
Office Hours: W 10:00 – 11:00, T-Th 11:00-13:00, and/or by appointment.
Telephone: (303) 352-4458
e-mail: tdavinro@msudenver.edu

COURSE DESCRIPTION: This course presents the study of the physical and cultural geography of Colorado. The course is designed to provide students with a comprehensive foundation in Colorado’s landforms, climate, history, natural resources (including water, energy, minerals, soils, natural vegetation,) population distribution and characteristics, agriculture, industry and service and tourism activities. Particular attention is paid to the spatial distribution of Colorado’s geographic elements, their interaction and the resultant geographical landscape.

LEARNING GOALS
1. To provide students with a factual understanding of Colorado’s physical and cultural geographic environment;
2. To develop student understanding of the interaction of physical and cultural environments and the resulting spatial patterns that develop;
3. To promote student understanding of Colorado’s geographic setting;
4. To develop competency in both understanding and presenting oral communication and scientific writing;
5. To build life-long learning skills and scholarly inquiry so that students can critically assess and evaluate issues pertaining to Colorado; and
6. To prepare students for meaningful participation in Colorado’s future.


ADDITIONAL REQUIRED READING: To be determined. Readings and other materials will often be posted on the CLASS WEBSITE: Log on to MetroConnects, select the MyCourses tab.

GRADING: The final course grade will be based on the following:
20% - Unannounced quizzes, assignments, field trips and class participation
15% - First exam
15% - Second exam
25% - Term Project
25% - Comprehensive Final Exam

EXAMS: Midterm and final exams will be based on material presented in lecture, assignments, field trips and assigned readings. Attendance at lectures is essential because most lectures will include material not covered in the text. NO MAKE-UP EXAMS ARE GIVEN. Students who miss an exam without a documented and acceptable excuse (e.g. medical, family emergency) will receive a score of zero for the missed exam. Students with a valid documented reason for missing an exam will be given a score for the missed exam equal to the average score on other tests. Other valid schedule conflicts will be considered only if arrangements are made in advance. Pop quizzes will be given in the first ten minutes of selected classes and will cover reading assignments, lecture material and outside reading. NO MAKE-UP OR LATE QUIZZES ARE GIVEN.
TERM PROJECT: There will be one term research project on one particular topic in the geography of Colorado. Additional assignments may include an executive summary of one or more current articles about an ongoing Colorado issue. Students unfamiliar with these writing styles should inform themselves of them and seek additional resources to get assistance. The Writing Center, located in King Center 310, can help you with any aspect of your writing, from generating ideas to supporting your arguments to organizing to editing for style. For the current schedule or to make an appointment, visit the Writing Center's website: http://www.mscd.edu/~writectr/ or call 303-556-6070.

ATTENDANCE: Students are responsible for all material presented during lecture periods, in assigned readings, on field trips and posted on the course website. Attendance is essential for successful participation in the course. Attendance will be monitored by pop quizzes, exams, and returned materials.

CLASSROOM DECORUM: It is expected that the classroom is a place of cooperative education where respect is given to all for the opportunity to engage in learning without distraction, intimidation or embarrassment. To maintain the optimal environment for teaching and learning, the following guidelines for classroom behavior will be strictly enforced:

1. **All cell phones and similar communication devices will be set to silent and used only in extreme emergency.**
2. **No sending or reading text messages, tweets, blogs, vlogs, etc.**
3. **All classroom interactions will be conducted with courtesy and respect.**
4. **Laptop computers may be used only for course-related work and research.**

CLASS ATTENDANCE FOR RELIGIOUS OBSERVANCE:
According to the policy of the Metropolitan State University of Denver: Students at Metropolitan State University of Denver (“MSUD”) who, because of their sincerely held religious beliefs, are unable to attend classes, take examinations, participate in graded activities or submit graded assignments on particular days shall, without penalty, be excused from such classes and be given a meaningful opportunity to make up such examinations and graded activities or assignments provided that advance written notice that the student will be absent for religious reasons is given to the faculty members during the first two weeks of the semester.

Nothing in the preceding paragraph of this policy shall require Metro State faculty members to reschedule classes, repeat lectures or other ungraded activities or provide ungraded individualized instruction solely for the benefit of students who, for religious reasons, are unable to attend regularly scheduled classes or activities. However, presentations, critiques, conferences and similar activities involving individual students shall be scheduled to avoid conflicts with such students’ religious observances or holidays provided that reasonable advance notice of scheduling conflicts is given to faculty members. Because classroom attendance and participation is an important aspect of learning, Metro State students should not register for courses if regularly scheduled classes or activities routinely conflict with their religious observances or holidays (e.g., conflicts resulting in weekly absences for an entire semester).

NC / INCOMPLETE: See your Student Handbook for University guidelines on NC or Incomplete grades. You must request an NC by the end of the 10th week of the semester (online through MetroConnect). Incomplete grades will be issued ONLY in extreme cases on a case-by-case basis.
SPECIAL ACCOMMODATION:
The Metropolitan State University of Denver is committed to making reasonable accommodations to assist individuals with disabilities in reaching their academic potential. If you have a disability which may impact your performance, attendance, or grades in this class and are requesting accommodations, then you must first register with the Access Center, located in the Auraria Library, Suite 116, Phone: 303-556-8387.

The Access Center is the designated department responsible for coordinating accommodations and services for students with disabilities. Accommodations will not be granted prior to my receipt of your faculty notification letter from the Access Center. Please note that accommodations are never provided retroactively (i.e. prior to the receipt of your faculty notification letter.) Once I am in receipt of your official Access Center faculty notification letter, I will be happy to meet with you to discuss your accommodations. All discussions will remain confidential. Further information is available by visiting the Access Center website http://www.mscd.edu/~access.

Students requesting special accommodation for lectures or examinations are requested to contact me as soon as possible.

Family Educational Rights and Privacy Act
MSUD hereby gives notice that it has designated the following categories of personally identifiable information as directory information under section 438(a)(5)(b) of the Family Educational rights and Privacy Act of 1974 (FERPA). Subject to the Colorado Public Records Act, directory information concerning students as the University may be released without prior consent of the student as permitted by FERPA unless within ten days after registration as student had notified MSUD (Office of the Registrar) that such information should not be released without his or her consent. Directory information at MSUD is as follows:

Name/Address/Dates of Attendance/ Degrees Received

Requests for disclosure of the directory information must be submitted in writing to the MSUD Office of the Registrar. In the case of emergencies, directory information may be released without written request, at the University's discretion. Prospective employers or their agents may request information concerning verification of student degrees received or dates of attendance directly from the MSUD Office of the Registrar without submitting a written request to the University.
### GEG 2200 Fall 2012

**GEOGRAPHY OF COLORADO**

#### Lecture Schedule and Reading Assignments

<table>
<thead>
<tr>
<th>Meeting Date</th>
<th>Lecture Topic</th>
<th>Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug. 20</td>
<td>Course Introduction: Location of Colorado</td>
<td></td>
</tr>
<tr>
<td>Aug. 22</td>
<td>Physical Geography of Colorado - Landforms</td>
<td>CAH Prologue</td>
</tr>
<tr>
<td>Aug. 27</td>
<td>Physical Geography of Colorado – Landforms and Geology</td>
<td>PPP Intro, 1-31</td>
</tr>
<tr>
<td>Aug. 29</td>
<td>Physical Geography of Colorado – Landforms and Geology</td>
<td>PPP 1-31</td>
</tr>
<tr>
<td>Sept. 3</td>
<td>No Class – Labor Day</td>
<td></td>
</tr>
<tr>
<td>Sept. 5</td>
<td>Physical Geography of Colorado – Landforms and Geology</td>
<td>PPP 32-68</td>
</tr>
<tr>
<td>Sept. 10</td>
<td>Physical Geography of Colorado – Landforms and Geology</td>
<td></td>
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<tr>
<td>Sept. 12</td>
<td>Physical Geography of Colorado – Mineral Resources</td>
<td>PPP 74-102</td>
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<tr>
<td></td>
<td></td>
<td>CAH Ch 6-8, Ch 10-11</td>
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<tr>
<td>Sept. 17</td>
<td>Field Trip - Optional</td>
<td></td>
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<tr>
<td>Sept. 19</td>
<td>Physical Geography of Colorado - Climate</td>
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<tr>
<td>Sept. 24</td>
<td>Physical Geography of Colorado - Water</td>
<td>PPP</td>
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<tr>
<td>Sept. 26</td>
<td>Physical Geography of Colorado – Vegetation and Soils</td>
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<tr>
<td>Oct. 1</td>
<td>Physical Geography of Colorado – Natural Resources,</td>
<td></td>
</tr>
<tr>
<td>Oct. 3</td>
<td>Colorado Environmental Concerns</td>
<td></td>
</tr>
<tr>
<td>Oct. 8</td>
<td>FIRST EXAMINATION (15%)</td>
<td></td>
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<tr>
<td>Oct. 10</td>
<td>Pre-Colombian Human Settlement European Exploration,</td>
<td>CAH Ch 1, Ch 2</td>
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<td></td>
<td>Settlement and Territorial Evolution</td>
<td></td>
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<tr>
<td>Oct. 15</td>
<td>Colorado Human Geography – Demography and Population</td>
<td></td>
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<tr>
<td>Oct. 17</td>
<td>Colorado Human Geography – Demography and Population</td>
<td></td>
</tr>
<tr>
<td>Oct. 22</td>
<td>Colorado Human Geography – Agriculture</td>
<td>CAH Ch 16, 18, 24</td>
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<tr>
<td>Oct. 24</td>
<td>Colorado Human Geography – Transportation</td>
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<tr>
<td>Oct. 29</td>
<td>Colorado Human Geography – Economy and Manufacturing</td>
<td>CAH Ch 11, 23, 30</td>
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<tr>
<td>Oct. 31</td>
<td>Colorado Human Geography – Economy and Manufacturing</td>
<td></td>
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<tr>
<td>Nov. 5</td>
<td>SECOND EXAMINATION (15%)</td>
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<tr>
<td>Nov. 7</td>
<td>Colorado Human Geography - Colorado Human Geography – Economy and Technology Economy and Services</td>
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<tr>
<td>Nov. 12</td>
<td>Colorado Human Geography – Economy and Services</td>
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<td>Nov. 14</td>
<td>Colorado Human Geography – Economy and Services</td>
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<tr>
<td>Nov. 19</td>
<td>Colorado Human Geography - Tourism and Recreation</td>
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<tr>
<td>Nov. 21</td>
<td>Colorado Human Geography – Tourism and Recreation</td>
<td></td>
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<tr>
<td>Nov. 26</td>
<td>NO CLASS – THANKSGIVING BREAK</td>
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<tr>
<td>Nov. 28</td>
<td>NO CLASS – THANKSGIVING BREAK</td>
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<tr>
<td>Date</td>
<td>Topic</td>
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<tr>
<td>Dec. 4</td>
<td>Colorado Urban Geography</td>
<td>CAH Ch 32</td>
</tr>
<tr>
<td>Dec. 6</td>
<td>Colorado Urban Geography</td>
<td></td>
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<tr>
<td>Dec. 11</td>
<td>Colorado’s Regions</td>
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</tr>
<tr>
<td>Aug. 20</td>
<td>Colorado’s Future</td>
<td>CAH Ch 35-36</td>
</tr>
<tr>
<td>Aug. 22</td>
<td>FINAL EXAM (25%)</td>
<td>See Above</td>
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<tr>
<td></td>
<td>LOCATION TO BE DETERMINED</td>
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</tbody>
</table>

Note: Additional reserve readings and assignments will be assigned at lecture and on the course web site during the semester.
METHODS FOR ACADEMIC SUCCESS

1. Read the textbook. Several times. You might read chapters entirely the first time through, then focus more closely on individual sections. Re-read sections until you are certain you’ve mastered the topic. I suggest that the first time you read, make sure to look up every new word you don’t know and define every concept that is new to you. On subsequent readings, take notes that emphasize the topics covered in that section.

2. Use the textbook and publisher support materials. All textbooks we use have glossaries, lists of key terms, conceptual summaries, practice quizzes, practice exams and other support either in the text or on text specific websites.

3. Become intellectually curious. Explore more than the textbook to learn about the topic. There are literally thousands of other books, journals, websites and publications that you can use for reference, and they are more available than ever before.

4. Write questions. Make up a quiz for each section, and a test for each chapter. In addition to factual questions, write conceptual questions too. This will help you think about the topic as both a set of facts and how those facts are related.

5. DON'T MISS CLASS!!! Take good notes during class and then rewrite your notes after class, comparing them to the notes you take from the textbook and other sources.

6. Ask questions. Ask questions in class, ask questions of your other students, ask questions of other faculty. If you don’t know something and can’t understand it after going through steps 1-5, then ask. Go to office hours and ask questions.

7. Make use of the support available to you through the Access Center and other campus support programs, including getting tutorial assistance.

8. Study every day. It takes many, many hours of real work and concentration to learn at the University level and thus requires considerable discipline and effort. It is nearly impossible to master a subject by merely attending class and skimming the text the night before the exam.

9. Form a study group and make sure you meet frequently. Ask your fellow students how they learn, how they study, and how they prepare for exams.

10. Try teaching the subject. Not just off the cuff but prepare a lesson plan on what you want to teach and how you will teach it. Think up hands-on exercises, worksheets, and other assignments that will help emphasize the lesson. Then gather an audience and teach. You might find an audience in your family, your study group, your friends, or co-workers. Or you can certainly find an audience at a senior center, nursing home, homeless shelter, or prison.

If you follow these general guidelines with dedication, commitment and perseverance I'm sure you can succeed in any course you take.
SCHOOL: Letters, Arts and Sciences

DEPARTMENT: Earth and Atmospheric Sciences

SEMESTER(S) OFFERED: Every third regular semester

PREFIX & COURSE NUMBER: GEG 210

COURSE TITLE: Geography of Latin America

CREDIT HOURS: 2 (2 + 0)

CONTACT HOURS: Lecture 30 Lab 0 Internship 0 Practicum 0

RESTRICTIONS (VARIABLE TOPICS COURSES): None

PREREQUISITE(S): A course in Geography or permission of instructor

COREQUISITE(S): None

CATALOG COURSE DESCRIPTION:

This course studies the physical, political, and economic geography of Latin American countries. The course emphasizes contemporary land-use patterns and use of natural resources.

REQUIRED READING MATERIALS: (Title, Author, Publisher, Copyright Date)

Latin America and the Caribbean, 2nd revised edition, Brian Blouet, John Wiley & Sons, Inc., 1993, or a current equivalent.

APPROVED:

Department Chair

Dean

V.P., Academic Affairs

DATE:

2/22/97

2/24/97

2/26/97

DISTRIBUTION: Original to Vice President for Academic Affairs

Copies retained by Dean and Department Chair

Revised 9/94: Academic Affairs-Curriculum-Regular Course Syllabus

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SPECIFIC (MEASURABLE) STUDENT BEHAVIORAL LEARNING OBJECTIVES:

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

1. define particular physical regions of Latin America based on specific criteria;
2. identify and locate major landforms of the region;
3. explain climate variations within Latin America;
4. explain different soil types, patterns, and development;
5. discuss the distribution of different vegetation;
6. list and locate on a map the political units of Latin America;
7. describe the different political frameworks and the relationship to spatial arrangements;
8. discuss the internal cohesion and degree of urban development of the various countries and relate to their cultural features, political order, and physical base;
9. explain various land-use patterns and their development;
10. explain the relationship between land-use patterns and transportation networks;
11. discuss the existing levels of development in mining and manufacturing and relate to the physical bases and political systems; and
12. map and explain population distributions, densities, compositions, etc.

OUTLINE OF COURSE CONTENT: (Major Topics and Subtopics)

I. Physical Regions of Latin America
   A. Major landforms
   B. Climate patterns
   C. Soils
   D. Vegetation distribution
   E. Mineral resources

II. Human Geography
    A. Population distribution
    B. Political composition
    C. Urbanization and development
    D. Cultural factors

III. Political Units
    A. Countries of each region
    B. Political frameworks
    C. Internal cohesion—stability

IV. Economic Patterns
    A. Land-use patterns
    B. Transportation networks
    C. Mining and manufacturing
    D. Trade

EVALUATION OF STUDENT PERFORMANCE:

1. Three examinations
2. Term paper and presentation
REGULAR COURSE SYLLABUS

SCHOOL: Letters, Arts and Sciences

DEPARTMENT: Earth and Atmospheric Sciences

SEMESTER(S) OFFERED: Every third regular semester

PREFIX & COURSE NUMBER: GEG 220

COURSE TITLE: Geography of the United States

CREDIT HOURS: 3 (3 + 0)

CONTACT HOURS: Lecture 45 Lab 0 Internship 0 Practicum 0

RESTRICTIONS (VARIABLE TOPICS COURSES): None

PREREQUISITE(S): Six hours of Earth Sciences courses.

COREQUISITE(S): None

CATALOG COURSE DESCRIPTION:

This course is a survey of the geography of the U.S., including an overview of the physical characteristics, landforms, climate, soil, vegetation, and natural resources. Regions of the U.S. are studied, including the distribution of population, agriculture, industry, transportation, and culture. Geographic problems and issues are raised.

REQUIRED READING MATERIALS: (Title, Author, Publisher, Copyright Date)


APPROVED:

Department Chair

Dean

V.P., Academic Affairs

DATE:

2/27/97

2/24/97

2/12/97

DISTRIBUTION: Original to Vice President for Academic Affairs

Copies retained by Dean and Department Chair

Revised 9/94: Academic Affairs-Curriculum-Regular Course Syllabus

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SPECIFIC (MEASURABLE) STUDENT BEHAVIORAL LEARNING OBJECTIVES:

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

1. locate and discuss the major physical areas of the U.S.;
2. identify the major periods of internal population shifts;
3. discuss the land policy programs of the Federal Government;
4. discuss the role of transportation on the development of economic regions;
5. locate agricultural regions and discuss crop combinations and relate them to economic and environmental factors;
6. locate industrial regions and identify the principal variables of industrial location;
7. identify the eras of transportation development; and
8. identify the principal physical, economic, and political characteristics of the major regions of the U.S.

OUTLINE OF COURSE CONTENT:  (Major Topics and Subtopics)

I. Topical Issues
   A. Physical
   B. Population
   C. Governmental
   D. Economic
   E. Agricultural
   F. Industrial
   G. Transportation

II. Regions
   A. Regionalism
   B. New England
   C. Mid-Atlantic
   D. Appalachia
   E. South
   F. Gulf Coast of Texas
   G. Interior
   H. Plains and prairies
   I. Mountains and deserts
   J. California and Hawaii
   K. Pacific Northwest

EVALUATION OF STUDENT PERFORMANCE:

1. Three examinations
2. Term paper and presentation
REGULAR COURSE SYLLABUS

SCHOOL: Letters, Arts, and Sciences

DEPARTMENT: Earth & Atmospheric Sciences

SEMESTER(S) OFFERED: Every two years, Fall semesters

PREFIX & COURSE NUMBER: GEG 230

COURSE TITLE: Geographic Analysis of Social Issues

CREDIT HOURS: 3 (3 + 0)

CONTACT HOURS: Lecture 45 Lab 0 Internship 0 Practicum 0

RESTRICTIONS (VARIABLE TOPICS COURSES): None

PREREQUISITE(S): GEG 130

COREQUISITE(S): None

CATALOG COURSE DESCRIPTION:

This course is a geographic analysis of current social issues. Topics include urban spatial problems, such as crowding and crime, drugs and gangs, population growth, environmental perception, resource use, and culturally-based land-use patterns. The administration of space, boundaries, territoriality, and spatial learning are discussed.

REQUIRED READING MATERIALS (Title, Author, Publisher, Copyright Date):


APPROVED:

Department Chair

Dean

V.P., Academic Affairs

DATE:

2/27/97

2/28/97

2/29/97

DISTRIBUTION: Original to Vice President for Academic Affairs

Copies retained by Dean and Department Chair

Revised 9/94:

Academic Affairs-Curriculum-Regular Course Syllabus

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SPECIFIC (MEASURABLE) STUDENT BEHAVIORAL LEARNING OBJECTIVES:

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

1. discuss the field of social geography and how geographic concepts and techniques are applied to social issues;
2. identify and describe geographic stereotypes;
3. explain the relationships between territoriality and behavior;
4. describe how environmental perception is developed;
5. identify factors involved in the decision-making process to migrate and explain the relationships to spatial patterns that emerge;
6. participate in a simulation demonstrating locational strategies for selected institutions and extrapolate the geographic factors;
7. explain how boundaries are determined and how they impact spatial behavior and administration;
8. discuss the geographic aspects of current social problems, such as gangs, poverty, environmental degradation, and population growth;
9. utilize raw data and make a series of census tract maps to interpret the relationships of selected variables to a social problem;
10. interpret charts and graphs; and
11. conduct small-scale research projects and make oral and written reports.

OUTLINE OF COURSE CONTENT (Major Topics and Subtopics):

I. Introduction: A Geographic Approach to the Study of Contemporary Social Issues
II. Geographic Stereotypes
   A. Stereotyping people
   B. Stereotyping places
III. Territoriality
   A. The effects of crowding
   B. Territoriality and behavior
IV. Environmental Perception
   A. Spatial learning and mental maps
   B. Cognizing landscapes
V. Basic Concepts of Spatial Interaction
   A. Activity spaces
   B. Movement at different scales
   C. Cognized distances
VI. Migration
   A. Decision making in migration
   B. Migration patterns and processes
   C. Spatial patterns of total displacement migrations
VII. Locating Social Institutions
   A. Patterns of location
   B. Locational strategies for selected institutions
   C. Locational obsolescence
VIII. The Administration of Space
   A. Creation and nature of boundaries
   B. Spatial hierarchies of administration
   C. Reorganization of space-administrative manipulation
IX. Geographic Analysis of Current Economic Issues
   A. Poverty
   B. Unemployment
   C. International trade problems
   D. International debt
   E. Military spending
X. Geographic Analysis of Current Political Issues
   A. Wars—borders and occupation
   B. The arms trade
   C. New states/new political structures
XI. Geographic Analysis of Current Ecological Issues
   A. Human impacts on the environment
   B. Psychology of pollution
   C. Endangered species
   D. Recreation and the environment
XII. Geographic Analysis of Human Issues
   A. Human rights
   B. Homelessness
   C. Drug use and drug trade
   D. Status of Women
   E. Education and literacy
   F. Crime
   G. Population growth
   H. Refugees
   I. Gangs

EVALUATION OF STUDENT PERFORMANCE:

1. Midterm
2. Final
3. Written Evaluation of a Simulation
4. Class Participation
5. Research Project:
   a. Written
   b. Oral
Course Title: Historical Geography of the U.S.

Check All That Apply: Required for Major: ___ Required for Minor: ___ Specified Elective: X
Required for Concentration: ___ Elective: X Service Course: ___

Credit Hours: 3 (3 + 0)

Total Contact Hours per semester (assuming 15-16 week semester):
Lecture 45 Lab 0 Internship 0 Practicum 0 Other (please specify type and hours): 0

Schedule Type(s): L Grading Mode(s): L

Variable Topics Courses (list restrictions, including the maximum number of hours that can be earned): N/A

*NOTE: This information must be included in the course description.

Restrictions (Variable Topics Course): N/A

Prerequisite(s): Six hours of geography or permission of instructor: GEG 1300, GEG 2200, or HIS 1210 recommended

Corequisite(s): None

Prerequisite(s) or Corequisite(s): None

Banner Enforced:
Prerequisite(s): None
Corequisite(s): None
Prerequisite(s) or Corequisite(s): None

Catalog Course Description: This course examines the unique interrelationships between geography and history. Topics covered include frontiers and boundaries, settlement patterns, environmental perception, sequent occupancy, changing land-use practices, migration, and urban growth. Further, the course addresses the interrelationships between different physical environments and cultural landscapes.

APPROVED:

Department Chair OR Program Director

Dean OR Associate Dean

Associate VP, Academic Affairs
Prefix and Course Number: GEG 3000

Required Reading and Other Materials will be equivalent to:


Specific, *Measurable Student Behavioral Learning Objectives*:

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

1. examine the interrelationships between geography and history;
2. determine the geographic significance of place names;
3. analyze and apply methodological approaches in historical geography;
4. analyze geographic aspects of changing frontiers and boundaries;
5. determine geographic factors in delimiting state boundaries;
6. evaluate the effective location of state capitols;
7. assess the interrelationships between culture and settlement patterns;
8. examine the development of cultural landscapes;
9. analyze the relationships of water, climate, and soil to changing land-use patterns;
10. evaluate human attempts to alter the landscape;
11. examine the spatial expansion of commercial agriculture in the U. S.;
12. determine relationships between perception of the environment and land-use patterns;
13. compare, in geographic terms, the development of settlement patterns and urban areas; and
14. extrapolate geographic perspectives from original sources.

**Detailed Outline of Course Content** (Major Topics and Subtopics or Outline of Field Experience/Internship (experience, responsibilities and supervision)):

I. Relationships of Geography and History
   A. The geography behind history--interrelationship of humans and land
   B. The history behind geography
   C. Geographic significance of place names
   D. Methodology in historical geography

II. Relationship of Geography to Exploration and Development of the U. S.
   A. Early explorations
   B. Frontiers and boundaries--territorial expansion
   C. Exploration and government surveys
   D. Horizontal regional development
   E. Vertical development--sequent occupancy
   F. State boundary demarcation
   G. Location of state capitols

III. The Frontier and American Culture
   A. Culture and settlement
   B. Cultural diffusion--the development of cultural landscapes
   C. Values and attitudes of settlers related to settlement patterns

IV. The Development and Diffusion of Agricultural Practices in the U. S.
   A. Water and land use
   B. Climate and soil
   C. Dry farming, the rain makers, the tree planters, the irrigators
   D. Suitcase farming frontier
   E. Demise of the piedmont cotton region
   F. Spatial expansion of commercial agriculture

V. Relationship of Perception of the Environment to Particular Types of Land Use
   A. Environmental determinism
   B. The Great American Desert and westward expansion
   C. Land laws and the landless
   D. Promises implied in the landscape

VI. Development of Spatial Distribution of Town-Settlement Patterns
A. Spatial dynamics of urban industrial growth
B. Changes in the pattern of rural population in the U.S.

Evaluation of Student Performance:

1. At least two examinations
2. Any projects, papers, presentations, or exercises required by the instructor
REGULAR COURSE SYLLABUS

School of: Letters, Arts and Sciences

Department: Earth and Atmospheric Sciences

CIP Code: 45.0701

Prefix & Course Number: GEG 3300 Crosslisted With*: NAS 3300, PSC 3300

Course Title: Land Use, Culture and Conflict

Check All That Apply: Required for Major: _____ Required for Minor: _____ Specified Elective: _____

Required for Concentration: _____ Elective: X Service Course: _____

Credit Hours: 3 (3 + 0)

Total Contact Hours per semester (assuming 15-16 week semester):

Lecture 45 Lab 0 Internship 0 Practicum 0 Other (please specify type and hours): 0

Schedule Type(s): L Grading Mode(s): L

Variable Topics Courses (list restrictions, including the maximum number of hours that can be earned*): N/A

*NOTE: This information must be included in the course description.

Restrictions (Variable Topics Course): N/A

Prerequisite(s): ENV 1400 or NAS 1000 or PSC 1010 and junior or senior standing

Corequisite(s): N/A

Prerequisite(s) or Corequisite(s): N/A

Banner Enforced:

Prerequisite(s): N/A
Corequisite(s): N/A
Prerequisite(s) or Corequisite(s): N/A

Catalog Course Description: This course is designed to introduce students to theories, approaches and controversies concerning use of land and resources on Indian Reservations. Reading and discussion will be directed toward questions related to differing views on land use and resources, how modernization impacts traditional settings, as well as treaties and governmental policies that govern Indian land. Case studies which illustrate current conflict/resolution issues between Native Americans and other actors such as federal, state and local governments will be examined. Credit will be granted for only one prefix. (General Studies - Level II, Social Science; Multicultural)

APPROVED:

Department Chair OR Program Director

Date

Dean OR Associate Dean

Date

Associate VP, Academic Affairs

Date
Prefix and Course Number: GEG 3300

Required Reading and Other Materials will be equivalent to:


Specific, Measurable Student Behavioral Learning Objectives:

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

1. discuss and explain how resources and land use are culturally defined;
2. make connections between cultural values, resource development and control of land;
3. analyze the role of the Federal government and other actors in resource exploitation including the taking of Indian land, to the establishment of reservation, to accessing resources on reservations;
4. analyze, interpret, and explain implementation and violation of selected treaties;
5. explain the rationale and impact of the shift from treaty making to congressional legislation with respect to reservations;
6. analyze conflicting cultural viewpoints toward land use and resources as demonstrated through eight case studies;
7. use raw data to develop population pyramids, determine physiological density, assess the extent of natural resources and their market value.

Detailed Outline of Course Content (Major Topics and Subtopics or Outline of Field Experience/Internship (experience, responsibilities and supervision)):

I. Cultural Attitudes and Values Related to Land Use and Resources
   A. American Indian Perspectives Prior to the Arrival of Europeans
      1. American Indian Culture Regions
      2. Traditional Connections between Land and Culture
         a. Land As Communal Space
         b. Communal Responsibility Toward Land
         c. Land As Sacred Space
      3. Territoriality and Boundaries—Tribal Recognition of Rights of Use, Not Ownership
      4. Seasonal Land Use and Settlement Patterns
      5. Cultural Values Regarding Care and Use of Land and Resources
      6. Preservation of Land As Preservation of American Indian Culture
   B. Euro-Americans
      1. Doctrine of Discovery
         a. Thread of Value Issues Related to Discovery
         b. Role of Christianity in Land Acquisitions
         c. Role of Nation Building in Cultural Genocide
      2. Land Ownership and Settlement Patterns of Selected European Powers
      3. Territoriality and Permanent Boundaries
      4. Views of Land Use From Exploitation to Conservation and Preservation

II. Westward Expansion and the Implementation of Manifest Destiny
   A. Boundary and Cultural Conflicts
   B. Role of the Federal Government in Land Acquisition and Resource Exploitation
   C. Relationship Between Federal Government and American Indians—Tribal Nation vs. State vs. Federal Rights
   D. From Territory to Treaties to Trade
      1. Treaties and policies Based on Acquisition of American Indian Land
      2. Cultural Assimilation to Nullify Resistance
      3. Cultural Conflicts Within Modernization
   E. Switch in Management of American Indian Issues From the War Department to the Department of the Interior
      1. Shifts in Attitudes Towards Indians from Eliminate and Extirpate, to Removal to Support Westward Expansion, to Establishment of Reservations
      2. Conflict of Cultural Values in Selection of Reservation Lands
      3. Reservations as a Form of Apartheid
      4. Post WWII Retrenchment and Termination Policies

III. Conflicts Related to Accessing Resources on Reservations
A. Pressures on American Indians to Develop Economic Activities on Reservations
B. Who Controls? Who Decides?
   1. American Indian Political Structures vs. State and Federal
   2. Conflict Over Who Represents Traditional Values
   3. Role of Federal Agencies Such As Bureau of Indian Affairs, Bureau of Land Management, Supreme Court, and Congress
   4. Conflicts Between Indian Traditionalists and Indian Modernists
IV. Examination of Data for Selected Reservations
A. Population Growth
   1. Chart Population Growth From 1900-2030
   2. Use 1990 Census Data to Develop Population Pyramids
   3. Determine the Amount of Arable Land
   4. Calculate the Physiological Density
B. Identify Known Resources Including Life and Market Value
C. Examine the Relationships Between Population, Arable Land, and the Pressures for Resource Development from
V. Internal and External Perspectives In Depth Case Studies
A. Examinations of Selected Treaties and Congressional Legislation Between Indian Nations and the Federal Government
B. Discuss Contemporary American Indian Resistance As It Relates to the Breaking of Treaties and Loss of Traditional and Sacred Space
C. Examination of Selected Resource/Land Use Conflicts From Multiple Perspectives
   1. Black Hills (Land and Resource) Treaty Violation Supreme Court Decision--Recognized Treaty Violated--Repayment Based on 1868 Land Value
   2. Navajo/Hopi (Land and Resources) Land Disputes, Resource Development on Sacred Land Plus Division of Traditional Indian Space by External Federal Agencies
   3. Nevada (Cattle Grazing on Public Lands) Treaty Violation
   4. Pueblo/Blue Lake (Nuclear Testing) Congressional Legislation
   5. Lummi (Fishing Rights) Congressional Legislation Regulated Traditional Food Survival Practices
   7. Pyramid Lake, Nevada (Water) Treaty and Supreme Court Decisions to Divert Water for Urban Use and Development of Regional Agriculture. Reservation Lost Agricultural Base and Fishing

Evaluation of Student Performance:
1. Class Participation. Class discussions provide the opportunity to evaluate and debate the assigned readings. Attendance and Participation are critical to your success in this class.
2. 5-3 page papers based on the Case Studies
3. Final Exam or Take Home Question
GENERAL STUDIES, SENIOR EXPERIENCE, AND MULTICULTURAL PROPOSAL FORM
(To accompany old and new regular syllabus form and Curriculum Change Proposal Forms)

Date: October 15, 1996

School ___Letters, Arts, and Sciences___
Department ___Earth and Atmospheric Sciences___

Current Course Status

[ X ] New course
[   ] Existing course with revisions
[   ] Existing General Studies Course:
    Level __________ Category ______________
[   ] Existing Multicultural Course
[   ] Existing Senior Experience Course

Proposed General Studies Designation

LEVEL Category
[   ] I
[   ] English 101
[   ] English 102
[   ] Mathematics
[   ] Communications
[ X ] II
[   ] History
[ X ] Social Science
[   ] Arts and Letters
[   ] Natural Science

Proposed Senior Experience Designation

[   ] Senior Experience

Proposed Multicultural Designation

[ X] Multicultural Studies

Prefix, Course Number, and Credit Hours __GEG 330, NAS 330, & PSC 330__

Title __Land Use, Culture and Conflict__ ( 3 + 0 )

CIP __45.0701__
Prerequisites
_GEG 140 or NAS 100 or PSC 101 and Junior Standing_

Corequisites

Anticipated Number of Sections per Semester _1_
Recommended Maximum Enrollment per Section _30_

GENERAL STUDIES, SENIOR EXPERIENCE, AND MULTICULTURAL PROPOSAL FORM
Page 2

I. Describe how the course will address the criteria listed for the General Studies, Senior Experience, and/or Multicultural category for which this course is being proposed.

See Attached

II. If the proposed course is for Level II, specify how the relevant general criteria for Level II courses will be met.

See Attached

APPROVALS:

Director 11/15/95
Department Curriculum Committee  (date)
Department Chair  (date)

Elizabeth 11/15/95
School Curriculum Committee  (date)
School Dean  (date)

J. Douglas 12/9/96
Chair, Faculty Senate Curriculum Committee  (date)

Viced President for Academic Affairs  3/5/97

(Johnston, 1995)
General Studies: Level II Criteria

1. Knowledge and basic methods fundamental to the discipline.
   a. map interpretation including remote sensing, aerial photographs, GIS, topographic maps;
   b. use of graphs and charts in analysis;
   c. identification and distribution of natural resources;
   d. analysis of patterns in regional geography;
   e. boundaries, land use patterns, land ownership; and
   f. evaluate an Environmental Impact Statement dealing with a development project on Indian land from multiple perspectives.

2. Origin and development of theories, concepts and recurrent themes.
   a. environmental, geographic and geologic context of resource distribution and
   b. frontiers and boundaries.

3. Relationship to other disciplines.
   This course is highly interdisciplinary in nature. The main focus will obviously be Geography, Native American Studies and Political Science. In addition, it interfaces with the following disciplines:
   a. Geology - Discussion will include information about land forms and the geologic formations in which the resources are located.
   b. Environmental Science - Information regarding the impacts of human activity on the landscape. This includes mining, water diversion, hazardous waste disposal, and grazing rights.
   c. Sociology - Information will be included regarding the forces that shape persons lives, the importance of culture, and events that contribute to social conflict.
   d. Anthropology - Selected information will be presented regarding Indian cultures of the Southwest, relationships of humans and nature, and social organization related to the environment.
   e. Resource Management - Course will include an analysis of diverse viewpoints regarding exploitation, conservation, and preservation of resources.

4. Influence of Technological Change.
   a. resistance to technological change;
   b. hazardous materials storage;
   c. water diversion;
   d. energy development vs. tradition;
   e. use of remote sensing, aerial photographs; and
   f. use of GIS mapping software.
5. Issue of Ethics, Ideals or Values
   a. reservations as apartheid;
   b. value and use of land;
   c. value and use of resources;
   d. who controls? and
   e. values of a larger society vs. values of Native Americans.

6. Writing and Communications.
   a. multiple short papers
   b. oral reports
   c. class discussion
   d. comparison, analysis, evaluation
   e. follow specific format
   f. written responses for improvement

7. Increase critical and logical thinking and problem solving skills.
   a. formulate problem or issue to research;
   b. designing a research process;
   c. logical design of project; and
   d. assessing impacts of resource removal or addition such as water diversion or hazardous materials dumps; and
   e. evaluate a current environmental impact statement for a development project on Indian land.

8. Locate, organize and evaluate material independently.
   a. a resource list and some materials will be provided
   b. students are responsible for selecting a meaningful topic, research design, accessing necessary materials through the library or internet.

GEG 330/NAS 330/PSC330-3 Land Use, Culture and Conflict

Criteria for Social Science Courses

1. Use and Improve Quantitative Skills.
   Students will improve their quantitative skills by:
   a. identification of resources and estimating amount;
   b. determining market value of resources;
   c. determining life of resources;
   d. utilizing census data to develop demographic projections, charts, and graphs;
   e. interpreting hydrologic data;
   f. calculating population density; and
   g. calculating arable land and physiological population density.

2. Explore the formation, behavior and interaction of various social, cultural, political or economic groups and institutions. Students will be exposed to social, cultural and
economic factors as they impact Native Americans and larger society by:

a. discussing factors that impact the preservation of Native American culture;
b. identifying pressures to develop economic activities on reservations (internal and external);
c. comparing Native American political structures in contrast to Federal state and local governments;
d. comparing attitudes towards resources ranging from exploitation to conservation and preservation; and
e. examining specific institutions such as BLM, BIA, Congress, Supreme Court, and tribal governments to determine links or differences in the formation of their behavior.

3. Learn a variety of causes and consequences of individual and collective behavior.
The impacts of the following will be examined in detail to understand the interaction between tribal governments and federal/state governments and between Indians and non-Indians:
   a. traditional and modern culture patterns as they relate to resource and land development;
   b. conflicts as it relates to intertribal and intratribal behavior;
   c. conflicts between Native Americans and Europeans
   d. settlement patterns;
   e. frontiers and boundaries;
   f. loss of native land to settlement and emerging reservation system;
   g. corporate, state and federal strategies of development; and
   h. collective action by individual Indians and organized Indians.

4. Recognize how behavior is affected by global interdependence or by social, cultural, physical, political or economic environment.
   Impacts of the following will be examined:
   a. divergent goals for settlement patterns, land ownership and resources;
   b. world capitalist need for access to selected resources;
   c. westward expansion and the implementation of Manifest Destiny;
   d. treaty violation and federal Indian legislation;
   e. Native resistance in the context of self determination; and
   f. values of economic development vs. preservation of resources on reservations.

5. Explore structures, models or processes that have developed independently or chronologically.
   This course will trace the evolution of federal Indian
treaty and legislation in the context of Indian land acquisition through:
   a. examination of the structures and institutions which developed to further the process of economic development;
   b. cultural transformation and political dynamics as tied to economic development; and
   c. ability to understand conflict issues in a broader context.

6. Learn to function more effectively in a complex and rapidly changing society by applying appropriate methods to a specific problem.
   By taking this class students learn to function more effectively in a multicultural society through:
   a. exposing students conflicts over the acquisition of resources on Native American lands;
   b. examining specific treaties and legislation and assessing how well they have been followed; and
   c. awareness of contemporary problems confronted by Indians related to resources and land use.
Multicultural Criteria

A. Describe how the course will address the criteria listed for the category for which this course is proposed.

1. **Explore the formation and evolution of cultural values.**
   Culture and land is as intrinsic to being Native American as the owning of land and the development of its resources is to being non-Native in the United States. These two diametrically opposed values have had significant impact on the formation of cultural values of both societies. The control of land and the resources within it has been the essential source of conflict between these two evolving cultures.

2. **Analyze the factors which lead to the formation and continuation of cultural groups within a society.**
   The course will analyze an assortment of factors which have lead to Native Americans being a defined cultural group. First of all, the formation of reservations, and the definition of Indians as nations or tribal governments by the federal government, has maintained Indians as a separate legal entity. The role of spiritualism or religion for Indians continues to reinforce Indian’s connection to issues of land use, particularly land defined as sacred. And, certainly, the continued desire for land and its resources by larger society contributes to the desire of Native Americans to maintain separateness from the values and ideas of dominant society.

3. **Develop a sensitivity to the customs, behavioral patterns, and identities of the diverse cultural groups, including an investigation of bias, prejudice, and discrimination.**
   The course enhances the development of cultural sensitivity by:
   
   1. promoting an understanding of Native American culture;
   2. providing a comprehensive and in-depth exposure to Native and western ideas of land use;
   3. utilizing diverse source materials, both current and historical, such as treaties, demographic data, as well as charts, graphs and maps of resources on Indian land;
   4. exploring the causes and factors that have contributed to specific resource/land use conflicts; and
   5. examining conflicts resulting from superimposing political boundaries on the natural distribution of resources. For example, an examination will be made of original government survey reports regarding the potential of western lands and how these reports shaped larger society’s perceptions of Indians, Indian land and resources.
COURSE CROSSLISTING AGREEMENT FORM
The Metropolitan State College of Denver

This completed form is to be forwarded to the Office of Academic Affairs for processing and recordkeeping (CN 318) and remains in force until rescinded by one of the parties.

This is to confirm that the undersigned have met, discussed, and agreed that the following course be crosslisted as follows:

<table>
<thead>
<tr>
<th>Dept./Prefix</th>
<th>Course Number</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>BEE</td>
<td>330</td>
<td>Land Use, Culture and Conflict</td>
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To be crosslisted with

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<tr>
<td>NAS</td>
<td>330</td>
<td>Land Use, Culture and Conflict</td>
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Beginning Spring, 1998 (semester and year).

Approved:

[Signature]
Department Chair/Institute Director/Department Curriculum Committee Chair - Date 9/5/97

[Signature]
Department Chair/Institute Director/Department Curriculum Committee Chair - Date 9/5/97

[Signature]
Dean Date 9/5/97

[Signature]
V. P. for Academic Affairs Date 9/5/97
Metropolitan State College of Denver
Course Cross-Listing Agreement Form

This completed form is to be forwarded to the Office of Academic Affairs for record purposes (CN 318) and remains in force until rescinded by one of the parties.

This is to confirm that the undersigned have met, discussed, and agreed that the following course be cross-listed as follows:

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<td>Spring</td>
<td>1997</td>
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SEMIESTER         YEAR

Signatures:

Department Chair/Institute Director

Department Chair/Institute Director

Department Chair/Institute Director
REGULAR COURSE SYLLABUS

School of: Letters, Arts and Sciences

Department: Earth and Atmospheric Sciences

Prefix & Course Number: GEG 3360  Crosslisted With*: 

Course Title: Economic Geography

Banner course title (30 characters): Economic Geography

Check All That Apply: Required for Major: x Required for Minor: Specified Elective: x

Required for Concentration: x Elective: x Service Course: 

To receive Title IV financial aid funds, all institutions of higher education must comply with the federal definition of a credit hour. The Higher Learning Commission requires institutions to maintain policies and procedures for verifying compliance with this definition.

*Federal Credit Hour Definition: A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally-established equivalency that reasonably approximates not less than:

(1) one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or ten to twelve weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time; or (2) at least an equivalent amount of work as required in paragraph (1) of this definition for other activities as established by an institution, including laboratory work, internships, practica, studio work, and other academic work leading toward the award of credit hours. 34CFR 600.2 (11/1/2010)

Credit Hours: 3 (3 + 0)

Face-to-Face or Equivalent Hours per course:

Lecture 45  Lab  Internship  Practicum  Other (please specify type and hours): 

Additional Student Work Hours per course:  

Schedule Type: L Grade Mode: L 

Variable topics umbrella course: No Yes If Yes, number of credit hours allowed 

Specified repeatable course: No Yes  

APPROVED:  

Department Chair OR Program Director  

Dean OR Associate Dean 

Associate VP, Academic and Student Affairs  

*If crosslisted, attach completed Course Crosslisting Agreement Form
Prefix and Course Number: GEG 3360

Prerequisite(s): GEG 1300
Corequisite(s): __
Prerequisite(s) or Corequisite(s): __

Banner Enforced:
Prerequisite(s): GEG 1300
Corequisite(s): ___
Prerequisite(s) or Corequisite(s): ___

Registration restrictions: Level _____ Class _____ Program/Major _____ Student attribute _____

Catalog Course Description:

This course investigates the "economic landscape" and analyzes global patterns of spatial interdependence in a systems framework. Spatial economic models are examined through case studies and class exercises. The relationships between human activity and land-use patterns are examined in a world/regional context.

Specific Variable Topics Course Description (if applicable, umbrella course description included above):

Required Reading and Other Materials will be equivalent to:

Economic Geography, Truman Hartshorn and John W. Alexander, Prentice Hall.

Specific, Measurable Student Behavioral Learning Objectives:
Upon completion of this course the student should be able to (format: 1, a, i, ii, etc.):

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

1. analyze economic landscapes;
2. distinguish sectors of the economy and relate locations on the earth's surface where each sector is important to local economic systems;
3. analyze the importance of circulation to geography;
4. examine and apply central-place theory to systems of cities and tertiary activities;
5. propose the locations for small businesses and give examples;
6. modify Von Thunen's land-rent model so that it may be used to analyze an urban economic landscape;
7. analyze charts, maps, and graphs of spatial phenomena;
8. distinguish global economic regions and assess their attributes;
9. analyze the spatial organization of land use and spatial interaction;
10. examine the heartland and hinterland paradigms and give examples;
11. evaluate relationships between population, growth, resource base and level of development;
12. evaluate the distribution of the world's megacities in the year 2000 and interpret potential implications for the global economy;
13. make predictions about future trends in international networks; and
14. evaluate spatial distribution of economic phenomena as both static and dynamic patterns.
Detailed Outline of Course Content (Major Topics and Subtopics) or Outline of Field Experience/Internship (experience, responsibilities and supervision) (format: I, A, 1, a, etc.):

I. Introduction
   A. Perspectives on the changing nature of economic geography
   B. Review of geographic concepts and the world map
   C. Theories and models of economic activity and geographic analysis
   D. Historical development of economic systems

II. Economic Fundamentals
   A. Price and other mechanisms for regulating exchange
   B. Preference structures and spatial variations in demands
   C. Costs and scale: Basic supply relationships
   D. Spatial demand curve

III. Theories of Location
   A. The spatial organization of land use
   B. World trade patterns and dynamics
   C. Local trade and urban hierarchies

IV. The Role of Transportation in Economics Systems
   A. Spatial organization of transportation: Circulation and accessibility
   B. Location of routes and networks
   C. Structure of transportation costs
   D. Distance and spatial interaction

V. Regional and Economic Structure
   A. The regional concept and international system
   B. The heartland/hinterland paradigm

VI. The World's Industrial Heartland Economies
   A. Canada: The challenge of growth and change
   B. The United Kingdom: An imperial power turned inward
   C. Japan: Growth pole of Asia
   D. The former Soviet Union: From central planning to decentralization
   E. Determinants of growth in the heartland economies: The Denison model

VII. The World's Hinterland Economies
   A. The CACM economies: Development through cooperation
   B. New Zealand: Challenge of size and diversity
   C. China: Governmental plans for regional development
   D. Hinterland growth problems and their consequences

VIII. Implications of Population and Resource Distribution
   A. Systems growth and spatial dynamics
   B. Stages of demographic transition
   C. World patterns of urbanization
      1. Projected megacities by the year 2000
      2. Major cities in developing countries
   D. Population, resources, and economic development
   E. The widening gap between developed and developing countries
   F. The use of world census data

IX. Environmental Issues
   A. Population growth and environmental pressures
   B. Environmental decision making
   C. Economic aspects of environmental assessment
      1. Environmental impact statements
      2. Risk analysis

X. The Emerging Future: The Global Economy
   A. Gold collars and global markets
   B. New international networks and shifting world markets
   C. Future prospects
Evaluation of Student Performance (format: 1, a, i, ii, etc.):

- Examinations
- Quizzes
- Projects
- Exercises
SCHOOL: Letters, Arts and Sciences

DEPARTMENT: Earth and Atmospheric Sciences

SEMESTER(S) OFFERED: Annually

PREFIX & COURSE NUMBER: GEG 3520

COURSE TITLE: Regional Geography (Variable Topics)

CREDIT HOURS: 2-3 (2-3 + 0)

CONTACT HOURS: Lecture 30-45 Lab 0 Internship 0 Practicum 0

RESTRICTIONS (VARIABLE TOPICS COURSES): None

PREREQUISITE(S): Six hours of Earth Sciences courses

COREQUISITE(S): None

CATALOG COURSE DESCRIPTION:
Specific regions of the world will be selected for in-depth study. Topics will include physical and cultural geography, demographics, economic activity, urbanization, political geography, and environmental issues. Courses may be repeated for credit as a different region is studied.

REQUIRED READING MATERIALS: (Title, Author, Publisher, Copyright Date)
Materials will typically consist of professor-authored materials, collections of journal articles, and textbooks appropriate to the region under study.

APPROVED: DATE:
Department Chair
Dean
V.P., Academic Affairs

DISTRIBUTION: Original to Vice President for Academic Affairs

Revised 9/94: Academic Affairs-Curriculum-Regular Course Syllabus
SPECIFIC (MEASURABLE) STUDENT BEHAVIORAL LEARNING OBJECTIVES:

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

1. describe the physical geography, including landforms, climate patterns, vegetation, and waterbodies, and relate the effects of physical geography to human activity;
2. analyze the location and distribution of major cities;
3. analyze population growth patterns and explain future trends;
4. explain the impacts of physical and cultural geography on the political organization of the region;
5. explain different land-use patterns;
6. explain the relationship between land-use patterns and the transportation network;
7. map and explain population distributions, densities, and composition;
8. analyze economic development projects in relationship to sustainable development; and
9. evaluate the relationship of the selected region to the global system.

OUTLINE OF COURSE CONTENT: (Major Topics and Subtopics)

The course content will vary based on the region selected for consideration. Examples of courses to be considered could include: Geography of Latin America, Geography of the United States, Geography of Canada, Geography of the Far East, Geography of the Former Soviet Union, Geography of World Cities, Political Geography of Eastern Europe, U.S./Mexican Border, and Environment and Development in Latin America.

EVALUATION OF STUDENT PERFORMANCE:

Class attendance and participation
Exams
Report(s), project(s), and/or paper(s) } Dependent upon the region and the instructor
METROPOLITAN STATE COLLEGE OF DENVER
Omnibus Course Syllabus

School of

Department: Earth and Atmospheric Sciences  Instructor: Roberta Smilnak

Prefix and Course Number: GEG 352  Semester offered: Fall, 2000
Banner Number (for Academic Affairs use): 352 A

Course Title: Blue Highways: Back Road Geography of the U.S.

Credit Hours: 3  Contact Hours-students: 45  Total Other Hours*:
Contact Hours-faculty:

Meeting Times/Dates: Mondays, 5:30 - 8:10 pm  August 21, - December 16, 2000

Grading Mode(s): L  Schedule Type(s): L

Prerequisites/Corequisites: GEG 1000 or GEG 1300 or upper division standing

Required Reading Materials (author, title, publisher, copyright date):

See Attached

Evaluation of Student Performance:

See Attached

Specific (measurable) Student Behavioral Learning Objectives:

See Attached

Detailed outline of course content (major topics and subtopics) or outline of field experience/internship (experience, responsibilities and supervision):

See Attached
### Approved - Omnibus course:

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**Approval by the Field Supervisor is required and must be indicated by the original signature of that supervisor on the syllabus.

Guidelines as set forth in the omnibus course section of the Bulletin must be followed. An accurate copy of each course syllabus must be on file in the Office of Academic Affairs prior to the listing of such course in any semester schedule.
Course Description
This course will cover basic information about the geography of the United States by topic and by region. Coverage will then shift to an examination of regions by travelling back roads and learning the geography from an inside perspective. Different topics will be covered in each region. Presentation will include contributions by the students, guest speakers from different regions and slide presentations.

II. Texts
Required:
Additional books will be assigned by region.

General Texts On Reserve:


III. Objectives: Upon successful completion of this course students should be able to:
1. regionalize the U.S. based on different attributes;
2. examine the patterns of development in each region;
3. evaluate the concept of "livable small towns;"
4. compare regional patterns such as food or agriculture;
5. conduct a research project with oral and written presentations.

IV. Course Evaluation:
1. develop 2 regional maps based on different attributes with a written rationale; (100)
2. written comparison of 2 regions based on variables such as food, language or architecture; (100)
3. written research project on the back roads of a selected region; (100)
4. oral presentation of research which includes visuals and maps (100).
5. class participation (100)

V. Course Outline
A. Introduction/Overview
B. Geographic Patterns and the Physical Environment of the U.S.
1. Physical Geography  
2. Soils  
3. Climate  
4. Vegetation  
C. Regions of the U.S.  
1. Regional Boundaries  
2. Examples of Traditional Regional Landscapes  
   a. Population Regions  
   b. The South  
   c. The Great Plains  
   d. The Great American Desert  
3. Emerging Regional Landscapes  
   a. Agricultural Changes-Shift of the Cotton Belt  
   b. The Sun Belt  
   c. The Rust Belt  
4. Cultural Landscapes  
   a. The Melting Pot Approach  
   b. Food Regions  
   c. Language Regions  
D. Impacts of Urban Growth on Adjacent Rural Areas  
   a. Urban Fringe  
   b. Leapfrogging  
   c. Sprawl  
   d. Loss of Agricultural Land  
E. Transportation Networks  
   a. Connectivity  
   b. Accessibility  
F. Northeast  
1. Historical Settlement Patterns  
2. Rise and Decline of the Fishing Industry  
3. Covered Bridges and Rustic Barns  
G. The Rust Belt  
1. Shift of the Manufacturing Core  
2. Deline of Cities-What Happened to BosWash and Megalopolis?  
H. Southeastern U.S.  
1. Shifting Agricultural Patterns  
2. Food Patterns  
3. Impacts of Immigration  
I. Agricultural Core  
1. The Corn Belt  
2. Crop Patterns  
3. Simulation-The Farm Game  
J. Great Plains and Prairies  
1. Life in the Sandhills of Nebraska  
2. Agriculture and The Ogallala Aquifer  
K. The Empty Interior  
1. Impacts of Government Owned Land  
2. Mining  
3. Rock Hounding in Nevada
4. Gambling-Jackpot, Nevada
5. Damming the Missouri

L. Rockies
1. Rise of Tourism
2. Oil, Gas and Coal Industries
3. Logging

M. Southwest Border Area
1. Impacts of NAFTA
2. Environmental Problems Along the Border
3. Undocumented Immigrants

N. Interior Southwest
1. Reservations and Resources
2. The Sun Belt
3. Water Diversion Projects
4. Electrical Production
5. Following the Santa Fe Trail
6. Image and Architecture of Santa Fe

O. California As A Region
1. Agricultural Patterns
2. Water Diversion-Cadillac Desert
3. Should California Be Divided Into 3 States?
4. Dams and Flooding
5. Death In The Marsh
6. Living With Earthquakes

P. Pacific Northwest
1. Coastal Development and Protection
2. Logging Wars-Old Growth Trees and Owls
3. Dam Removal
4. Risk Perception and Living With Volcanoes-Mt St. Helens and Mt. Rainier

Q. The Glaciated Northern Region
1. Landforms
2. Land Use
3. Canoeing the Borderland Waterways

R. Vacacioning in Hawaii
1. Landforms
2. Vegetation and Wildlife
3. Population

S. Moving to Alaska
1. Impacts of Oil Development
2. Melting Glaciers
3. Tourism
4. Aerial Highways

T. Student Reports
METROPOLITAN STATE COLLEGE OF DENVER
Omnibus Course Syllabus

School of Letters, Arts and Sciences

Department: Earth and Atmospheric Sciences  Instructor: Adjunct
Prefix and Course Number: GEG 352?  Semester/year offered: Spring, 2002
Banner Number (for Academic Affairs use): 352 B

Course Title: Geography of Africa

Credit Hours: 3+0  Contact Hours-students: 45  Total Other Hours*: ___
Contact Hours-faculty: 45

Meeting Times/Dates: TR; 7:00-8:15 pm

Grading Mode(s): L  Schedule Type(s): L

Prerequisites/Corequisites: Six hours of Earth Sciences courses

Required Reading Materials (author, title, publisher, copyright date):


Evaluation of Student Performance:

Class attendance and participation
Examinations
Report(s), project(s), and/or papers

Specific (measurable) Student Behavioral Learning Objectives:

Upon completion of this course the student should be able to:
(1) describe the physical geography, including landforms, climate patterns, vegetation, and water bodies, and relate the effects of physical geography to human activity;
(2) analyze the location and distribution of major cities;
(3) analyze population growth patterns and explain future trends;
(4) explain the impacts of physical and cultural geography on the political organization of Africa;
(5) explain different land-use patterns;
(6) explain the relationship between land-use patterns and the transportation network;
(7) map and explain population distributions, densities, and composition;
(8) analyze economic development projects in relationship to sustainable development; and
(9) evaluate the relationship of Africa to the global system.

Detailed outline of course content (major topics and subtopics) or outline of field experience/ internship (experience, responsibilities and supervision):

A. North Africa
   1. Cultural geography concepts
      a. Culture hearth
      b. Cultural diffusion
      c. Cultural ecology
      d. Hydraulic civilization theory
      e. Climate change theory
   2. Spatial diffusion
      a. Expansion diffusion
      b. Relocation diffusion
      c. Contagious diffusion
      d. Hierarchical diffusion
   3. Religious fundamentalism
      a. Cultural revival
      b. Muslim Front
      c. Stateless nation
      d. Nomadism
      e. Buffer state
   4. Regions covered
      a. Egypt and the Lower Nile Basin
      b. Magreb and its neighbors
      c. African Transition Zone
      d. Middle East

B. Sub-Saharan Africa
   1. Cultural and physical geography concepts
      a. Human evolution
      b. Rift Valley
      c. Continental Drift
   2. Medical geography
      a. Endemic
      b. Epidemic
      c. Pandemic
      d. A.I.D.S.
   3. Land tenure
      a. Land alienation
      b. Green Revolution
c. State formation  
d. Colonialism  
4. Special topics  
a. Periodic market  
b. Enclave  
c. Landlocked state  
d. Apartheid  
e. Separate development  
5. Regions covered  
a. West Africa  
b. Equatorial Africa  
c. East Africa  
d. Southern Africa  

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REGULAR COURSE SYLLABUS

School of: Letters, Arts and Sciences

Department: Earth and Atmospheric Sciences

CIP Code: 45.0701

Prefix & Course Number: GEG 3530  Crosslisted With*: None

Course Title: Advanced Ghost Towns of Northern Colorado

Check All That Apply: Required for Major: ____  Required for Minor: ____  Specified Elective: ____

Required for Concentration: ____  Elective: X  Service Course: ____

Credit Hours: 1 (1-0)

Total Contact Hours per semester (assuming 15-16 week semester):

Lecture 15  Lab 0  Internship 0  Practicum 0  Other (please specify type and hours): 0

Schedule Type(s): L  Grading Mode(s): L

Variable Topics Courses (list restrictions, including the maximum number of hours that can be earned*): N/A

*NOTE: This information must be included in the course description.

Restrictions (Variable Topics Course): N/A

Prerequisite(s): nine hours of geography or geology or permission of instructor

Corequisite(s): None

Prerequisite(s) or Corequisite(s): None

Banner Enforced:
Prerequisite(s): None
Corequisite(s): None
Prerequisite(s) or Corequisite(s): None

Catalog Course Description: This course examines the ghost towns of northeastern Colorado. Through lecture and field work, students will evaluate how perceptions of the land affected settlement patterns and land use in northeastern Colorado. Additional topics to be evaluated include use of the land by Native Americans, physical geography, transportation patterns from trails to highways, planned communities and the Buffalo Commons proposal. Note: Students can not take both GEG 1530 and GEG 3530 for credit.

APPROVED:

[Signature]
Department Chair OR Program Director  7/7/06

[Signature]
Dean OR Associate Dean  3/6/07

[Signature]
Associate VP, Academic Affairs  1/11/08
Required Reading and Other Materials will be equivalent to:

Students will be given a detailed field guide and additional course materials developed by the instructor.

Specific, Measurable Student Behavioral Learning Objectives:

Upon completion of this course the student should be able to:
1. discuss factors that affect landscape perception and how perception affects settlement;
2. describe differences in physical geography east and west of the 100th meridian;
3. discuss early trail patterns in Eastern Colorado;
4. discuss the relationship of values in relationship to land use of Native Americans in the Great Plains;
5. explain site selection decisions for early settlements;
6. explain the relationship of services and transportation;
7. discuss the proposal to give the Great Plains back to the buffalo;
8. compare Michener's Centennial to current towns and land use patterns in NE Colorado; and
9. discuss the rationale and factors of success of planned towns such as Greeley and Dearfield.

Detailed Outline of Course Content (Major Topics and Subtopics or Outline of Field Experience/Internship (experience, responsibilities and supervision)):

I. Geographic Perspectives on Early Settlement
   A. Perceptions of the landscape
      1. Factors that affect perception
      2. Male versus female perceptions
      3. Crossing the 100th meridian
      4. Native Americans
      5. Settlers
   B. Impacts of the Homestead Act
   C. Development of settlement patterns in the Great Plains
      1. Site and situation
      2. Towns for different purposes
      3. Services and growth
      4. Trails to highways
      5. Sequent occupancy
      6. Development of a region--Central Place Theory

II. Factors of Growth As They Relate to Decline of Settlements

III. Dearfield--A town for Black Settlers from Denver

IV. Problems in the Great Plains Region
    A. The Poppers Proposal: "The Buffalo Commons" -- Should we give the Great Plains back to the buffalo?
    B. The Great Plains Initiative, 1992

Evaluation of Student Performance:

1. Class attendance and participation
2. Final exam
REGULAR COURSE SYLLABUS

School of: Letters, Arts and Sciences
Department: Earth and Atmospheric Sciences
Prefix & Course Number: GEG 3600  Crosslisted With*: N/A
Course Title: Urban Geography
Banner course title (30 characters): Urban Geography

Check All That Apply:  Required for Major: ___  Required for Minor: ___  Specified Elective: X
Required for Concentration: X  Elective: X  Service Course: ___

To receive Title IV financial aid funds, all institutions of higher education must comply with the federal definition of a credit hour. The Higher Learning Commission requires institutions to maintain policies and procedures for verifying compliance with this definition.

Federal Credit Hour Definition: A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally-established equivalency that reasonably approximates not less than:
(1) one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or ten to twelve weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time; or
(2) at least an equivalent amount of work as required in paragraph (1) of this definition for other activities as established by an institution, including laboratory work, internships, practica, studio work, and other academic work leading toward the award of credit hours. 34 CFR 600.2 (11/1/2010)

Credit Hours: 3 (3 + 0)

Face-to-Face or Equivalent Hours per course:
Lecture 45  Lab 0  Internship 0  Practicum 0  Other (please specify type and hours): 0

Additional Student Work Hours per course: 0

Schedule Type: ___ Grade Mode: ___

Variable topics umbrella course: No X Yes ___  If Yes, number of credit hours allowed ___

Specified repeatable course: No  X  Yes ___

APPROVED:

[Signature]

Department Chair OR Program Director

Date

[Signature]

Dean OR Associate Dean

Date

[Signature]

Associate VP, Academic and Student Affairs

Date

*If crosslisted, attach completed Course Crosslisting Agreement Form
Prefix and Course Number: GEG 3600

Prerequisite(s): GEG 1300

Corequisite(s): ______

Prerequisite(s) or Corequisite(s): ______

Banner Enforced:
Prerequisite(s): GEG 1300
Corequisite(s): ______
Prerequisite(s) or Corequisite(s): ______

Registration restrictions: Level ______ Class ______ Program/Major ______ Student attribute ______

Catalog Course Description: This course examines theories of urban development and factors that affect urbanization, such as demographic change, annexation, zoning, and infrastructure development. Models of urban land use are examined in the context of cities in the United States. Students learn how to prepare and analyze census-tract maps.

Specific Variable Topics Course Description (if applicable, umbrella course description included above): N/A

Required Reading and Other Materials will be equivalent to:


Specific, Measurable Student Behavioral Learning Objectives:
1. analyze spatial processes in urban areas;
2. apply central-place theory;
3. compare and contrast sectors of the economy and how these are represented in urban areas;
4. Compare urban areas in the U. S;
5. participate in an industrial location simulation and analyze factors that affect location decisions;
6. Analyze the role of annexation in urban growth using Denver as an example;
7. Evaluate the growth of suburbs and edge cities;
8. Use selected variables to compare neighborhoods;
9. Evaluate the impacts of zoning on land use patterns;
10. Analyze local housing patterns;
11. Evaluate the role of transportation in urban development;
12. Analyze factors that impact urban revitalization;
13. Evaluate proposals for metropolitan government in Denver; and
14. Prepare census-tract maps from raw data and provide interpretation and comparison.
Detailed Outline of Course Content (Major Topics and Subtopics) or Outline of Field Experience/Internship (experience, responsibilities and supervision) (format: I, A, 1, a, etc.):

A. Introduction
   a. What is urban geography?
   b. Review of geographic concepts and terms
   c. Ideas for meeting attendance and projects

B. Census Data and Census Maps
   a. Sources of raw data
   b. Techniques or map construction

C. The Spatial View of Cities

D. Urban Hierarchy
   a. Central place theory
   b. Sectors of the economy and urban development

E. North American Urban Development

F. Cities as Centers of Manufacturing
   a. Locational issues in manufacturing
   b. Regional change

G. Historical Perspectives on Urban Growth
   a. Site and situation
   b. Annexation
   c. Boundary issues

H. Models of Urban Development
   a. Burgess
   b. Hoyt
   c. Harris-Ulman

I. Decentralization of Urban Area
   a. Suburbanization
   b. Edge Cities
   c. Neighborhoods

J. Models of Urban Land Use and Population
   a. Rent and land values
   b. Von Thunen's land-use and transportation model
   c. Peak gradient

K. Public Policy and Land Use
   a. Zoning
   b. Planning

L. Social Structure of Cities
   a. Ecological model
   b. Social distance—Social-area analysis
   c. Residential mobility.
   d. Conflict and social space
   e. Gentrification
f. Supply and demand

g. Choice and location

h. Denver housing-Market analysis

M. Urban Revitalization
   a. Sub-markets
   b. CBD
   c. Redlining
   d. Restrictive covenants
   e. Abandonment
   f. City programs for revitalization

N. Role of the Real Estate Agent in Urban Change

O. Location of Employment and Urban Change
   a. Sectors of the economy
   b. Location of employment versus residential location
   c. Emerging transportation patterns
   d. Rise of industrial parks and shopping centers

P. Transportation Patterns
   a. Accessibility
   b. Nodes and networks
   c. Connectivity

Q. Provision of Urban Services

R. Managing Cities
   a. Finance
   b. Forms of urban government
   c. Fragmentation
   d. Metropolitan government

Evaluation of Student Performance:

Examinations
Projects
Papers
Presentations
REGULAR COURSE SYLLABUS

School of: Letters, Arts and Sciences

Department: Earth and Atmospheric Sciences

Prefix & Course Number: GEG 3610 Crosslisted With*: n/a

Course Title: Principles of Land Use Planning

Banner course title (30 characters): Prin of Land Use Planning

Check All That Apply: Required for Major:___ Required for Minor:____ Specified Elective: x

Required for Concentration: x Elective: x Service Course: ___

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Federal Credit Hour Definition: A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally-established equivalency that reasonably approximates not less than:

(1) one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or ten to twelve weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time; or (2) at least an equivalent amount of work as required in paragraph (1) of this definition for other activities as established by an institution, including laboratory work, internships, practica, studio work, and other academic work leading toward the award of credit hours. 34CFR 600.2 (11/1/2010)

Credit Hours: 3 (3+0)

Face-to-Face or Equivalent Hours per course:
Lecture 45 Lab 0 Internship 0 Practicum 0 Other (please specify type and hours): 0

Additional Student Work Hours per course: ___

Schedule Type: L Grade Mode: L

Variable topics umbrella course: No x Yes ___ If Yes, number of credit hours allowed ___

Specified repeatable course: No x Yes ___

APPROVED:

[Signatures and Dates]

*If crosslisted, attach completed Course Crosslisting Agreement Form
Prefix and Course Number: GEG 3610

Prerequisite(s): GEG 3600
Corequisite(s): NONE
Prerequisite(s) or Corequisite(s): NONE

Banner Enforced:
Prerequisite(s): GEG 3600
Corequisite(s): NONE
Prerequisite(s) or Corequisite(s): NONE

Registration restrictions: Level ___ Class ___ Program/Major ___ Student attribute ___

Catalog Course Description: In this course students learn basic land use planning concepts and how to analyze land-use patterns, interpret land-use maps, and analyze existing land-use plans. Further, students learn how to collect relevant data, prepare a comprehensive land-use plan, and predict future planning issues. Special attention is paid to geographic Information Systems (GIS) in land-use planning.

Specific Variable Topics Course Description (if applicable, umbrella course description included above):

Required Reading and Other Materials will be equivalent to:

Specific, Measurable Student Behavioral Learning Objectives:
Upon completion of this course the student should be able to:
1. Apply basic concepts of land-use planning;
2. Analyze land use patterns and evaluate changes through time;
3. Evaluate the interdisciplinary nature of land-use studies;
4. Compare how zoning influences urban growth and development;
5. Evaluate the use of PUD’s in urban growth;
6. Examine and evaluate major legal issues in land use;
7. Evaluate current issues in land use;
8. Analyze selected land-use plans and use these plans in a site selection process;
9. Analyze a comprehensive land-use plan;
10. Assemble relevant data for land-use studies;
11. Analyze and synthesize data used in land-use plans; and
12. Make predictions for future issues in land-use planning

Detailed Outline of Course Content (Major Topics and Subtopics) or Outline of Field Experience/Internship (experience, responsibilities and supervision):
I. Settlement of America
II. Need for Planning
III. History of Planning
IV. Politics and Social Influences on Planning
V. Land Analysis and the General Plan
   a. Development of Land Use Plans
   b. Components of a Land use plan
   c. Information Gathering and Analysis
VI. Urban Infrastructure
   a. Urban Economic Viability
   b. Growth Management
VII. Environmental Planning
VIII. Energy Planning
IX. Regional Planning
X. Planning Theory

Evaluation of Student Performance:
Examinations
Projects
Papers
Presentations
Exercises
REGULAR COURSE SYLLABUS

School of: Letters, Arts and Sciences
Department: Earth and Atmospheric Sciences
CIP Code: 40.0301
Prefix & Course Number: GEG 3630 Crosslisted With*: 

Course Title: Transportation Planning and Land Use
Check All That Apply: Required for Major: Required for Minor: Specified Elective: X Required for Concentration: X Elective: X Service Course: 

Credit Hours: 3 (3 + 0)
Total Contact Hours per semester (assuming 15-16 week semester):
  Lecture 45 Lab 0 Internship 0 Practicum 0 Other (please specify type and hours): 0
Schedule Type(s): L Grading Mode(s): L

Variable Topics Courses (list restrictions, including the maximum number of hours that can be earned*): N/A

*NOTE: This information must be included in the course description.

Restrictions (Variable Topics Course): N/A
Prerequisite(s): GEG 3610, six additional hours of geography
Corequisite(s): None
Prerequisite(s) or Corequisite(s): None

Banner Enforced:
  Prerequisite(s): None
  Corequisite(s): None
  Prerequisite(s) or Corequisite(s): None

Catalog Course Description: This course is an analysis of transportation systems as they relate to other types of land use. Transportation networks are examined in terms of types, patterns, and densities. Consideration is given to alternative transportation systems as they relate to energy savings, pollution prevention, and the reduction of congestion.

APPROVED:

[Signature] [Signature] 7/10/06
Department Chair OR Program Director 3/6/07
[Signature] [Signature] 9/10/07
Dean OR Associate Dean Associate VP, Academic Affairs
Prefix and Course Number: GEG 3630

Required Reading and Other Materials will be equivalent to:

Readings as assigned by Instructor.

Specific, Measurable Student Behavioral Learning Objectives:

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

1. examine and evaluate the role and importance of transportation systems;
2. distinguish between various modes of transportation and explain the characteristics of each;
3. analyze urban and inter-urban patterns;
4. analyze changing transportation patterns and account for those changes;
5. assess the impact of transportation on settlement patterns;
6. evaluate the relationship of transportation and urban form and structure;
7. evaluate the relationship between transportation and urban growth;
8. analyze the environmental impact of various transportation systems;
9. assess the impact of transportation on human lives;
10. evaluate political aspects of transportation planning;
11. diagram the political hierarchy of transportation planning and development and explain the interrelationship;
12. differentiate between various funding sources and control;
13. compare and contrast different methods of transportation analysis;
14. plan and predict future transportation systems; and
15. apply what is learned in this course to the local area, e.g., RTD and C-470.

Detailed Outline of Course Content (Major Topics and Subtopics or Outline of Field Experience/Internship (experience, responsibilities and supervision)):

I. Introduction and Historical Overview
   A. Role and importance of transportation
   B. Characteristics of various transport modes
   C. Urban, inter-urban, and rural patterns
   D. Changing transportation patterns

II. Role of Transport Systems in Land Use
   A. Impact of transportation on settlement patterns
   B. Transportation and urban form
   C. Transportation as a growth factor, e.g., urban sprawl

II. Environmental Impacts of Transport Systems
   A. Physical landscape issues
   B. Human landscape issues

IV. Political Aspects of Transportation Planning
   A. Political hierarchy - who decides?
   B. Politics and location, e.g., the Auraria Rapid Transit Proposal

V. Economic Aspects of Transportation Planning
   A. Funding sources
   B. Transportation patterns and economic development
   C. Other influences on the location of transport routes

VI. Methodology of Transport Analysis
   A. Diffusion processes
   B. Network analysis
   C. Stochastic and deterministic models

VII. Planning and Alternative Forms of Transportation
   A. New technologies in transportation
   B. Approaches to a balanced transportation system
   C. Regional transportation planning

VIII. Transportation Planning for the Future
   A. Alternative systems
      i. Japan
      ii. Europe
   B. Law energy, law impact systems
   C. Creative futures
Evaluation of Student Performance:

1. At least two examinations
2. Any projects, papers, presentations, or exercises required by the instructor
REGULAR COURSE SYLLABUS

School of: Letters, Arts and Sciences

Department: Earth and Atmospheric Sciences

CIP Code: 04.0301

Prefix & Course Number: GEG 3920 Crosslisted With*: N/A

Course Title: Directed Study in Land Use

Check All That Apply: Required for Major: ____ Required for Minor: ____ Specified Elective: X

Required for Concentration: ____ Elective: X Service Course: ___

Credit Hours: 2 - 6 (0 + 4 - 12)

Total Contact Hours per semester (assuming 15-16 week semester):

Lecture 0 Lab 60 - 180 Internship 0 Practicum 0 Other (please specify type and hours): 0

Schedule Type(s): L Grading Mode(s): L

Variable Topics Courses (list restrictions, including the maximum number of hours that can be earned*): N/A

*NOTE: This information must be included in the course description.

Restrictions (Variable Topics Course): N/A

Prerequisite(s): 15 hours in earth science courses and approval of instructor and department chair

Corequisite(s): None

Prerequisite(s) or Corequisite(s): None

Banner Enforced:
Prerequisite(s): None
Corequisite(s): None
Prerequisite(s) or Corequisite(s): None

Catalog Course Description: This course provides an opportunity for upper-division students with a strong background in earth science to pursue study in a specific topic of interest and value. The course requires permission of the instructor and chair of the Earth and Atmospheric Sciences Department and frequent meetings between student and instructor.

APPROVED:

[Signature]

12/8/06

Department Chair OR Program Director

[Signature]

5/6/07

Dean OR Associate Dean

[Signature]

9/10/07

Associate VP, Academic Affairs

Date
Prefix and Course Number: GEG 3920

Required Reading and Other Materials will be equivalent to:

Necessary reading materials will depend upon topic chosen.

Specific, Measurable Student Behavioral Learning Objectives:

The learning objectives of the course are to give upper-division students in Land Use an opportunity to pursue a specific topic in the earth sciences to a greater depth of understanding. It allows the student to develop their specific field of interest. It encourages self-discipline and self-motivation. The student works independently to develop their resources which may include library, public agencies, field work, and others. The student meets regularly with instructor for conferences.

Detailed Outline of Course Content (Major Topics and Subtopics or Outline of Field Experience/Internship (experience, responsibilities and supervision)):

Course content dependent upon topic chosen.

Evaluation of Student Performance:

Students will be evaluated on progress reports, paper(s), and/or project(s) dependent upon topic chosen.
METROPOLITAN STATE COLLEGE of DENVER
Office of Academic Affairs

REGULAR COURSE SYLLABUS

School of: Letters, Arts, and Sciences

Department: History

CIP Code: 54.0199

Prefix & Course Number: HIS 4020  Crosslisted With*: GEG 4020

Course Title: Field Experience in Teaching Social Studies in Secondary Schools

Check All That Apply: Required for Major: ____ Required for Minor: ____ Specified Elective: ____

Required for Concentration: X  Elective: ____  Service Course: ____

Credit Hours:  1  (0+4)

Total Contact Hours per semester (assuming 15-16 week semester):

Lecture ____  Lab ____  Internship ____  Practicum ____  Other (Field Experience, 60 hours): X

Schedule Type(s): 8  Grading Mode(s): 8

Variable Topics Courses (list restrictions, including the maximum number of hours that can be earned**):

**NOTE: This information must be included in the course description.

Restrictions (Variable Topics Course): ____

Prerequisite(s): EDS 3140

Corequisite(s): HIS 4010 Methods of Teaching Social Sciences

Prerequisite(s) or Corequisite(s): ____

Banner Enforced:

Prerequisite(s): EDS 3140

Corequisite(s): None

Prerequisite(s) or Corequisite(s): ____

Catalog Course Description:

This field-based course provides opportunities to develop teacher candidates’ professional and pedagogical skills in a Social Studies classroom. In coordination with the classroom teacher, teacher candidates will design and implement content lessons, use content strategies to improve both information acquisition and literacy skills, and adjust instruction for students with diverse needs. Course assignments and evaluations are designed to help teacher candidates become reflective practitioners.

APPROVED:

_____________________________  ________________________
Department Chair OR Program Director  Date

_____________________________  ________________________
Dean OR Associate Dean  Date

_____________________________  ________________________
Associate VP, Academic Affairs  Date

*If crosslisted, attach completed Course Crosslisting Agreement Form
Required Reading and Other Materials will be equivalent to:


Specific, Measurable Student Behavioral Learning Objectives:
Upon completion of this course the student should be able to (format: 1, a, i, ii, etc.):
1. Plan lessons to enhance student understanding and application of historical, geographic, or civics literacy. (CPBST 4.1)
2. Analyze and make use of social studies curriculum materials in light of effective practices identified by research. (CPBST 3.1, 6.1, 6.2)
3. Utilize assessment data to plan instruction and evaluate lesson effectiveness. (CPBST 1.1)
4. Guide secondary students to use appropriate strategies for interpreting social studies content. (CPBST 1.3)
5. Support historical, geographic, or civics literacy in secondary students through the use of strategies to improve reading, writing, speaking, and listening skills. (CPBST 1.4)
6. Examine and reflect upon teaching capabilities in secondary social studies contexts. (CPBS 8.5)

Detailed Outline of Course Content (Major Topics and Subtopics) or Outline of Field Experience/Internship (experience, responsibilities and supervision)

I. Analyzing classroom environment and existing classroom management strategies
II. Reflecting on curriculum implementation and use of content literacy strategies
III. Planning
   A. Designing curriculum
   B. Developing lessons
IV. Teaching
   A. Enacting lessons
   B. Reflection on practice
V. Assessing secondary student learning of content
   A. Designing assessment in light of objectives
   B. Evaluating assessments
   C. Reflection on student learning

Evaluation of Student Performance
A combination of some or all of the following:

1. Design and enactment of at least one lesson.
2. Short essay analyzing state standards and district curriculum in assigned content area.
3. Reflective journal entries on lesson planning, teaching, assessment, and classroom management strategies.
4. Review of student assessment data as it informs instruction.
5. Standards-based evaluation completed by cooperating teacher and reviewed by the college instructor.
6. Documentation of 60 hours of classroom observation and practice teaching with cooperating teacher’s signature.
Metropolitan State College of Denver

COURSE CROSSLISTING AGREEMENT REQUEST

This is to confirm that the undersigned have met, discussed, and agreed that the following course be crosslisted as follows:

**Original/Standing Course:**

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<tr>
<th>Prefix</th>
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<th>Course Title</th>
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<tr>
<td>HIS</td>
<td>4020</td>
<td>Field Experience in Teaching Social Studies in Secondary Schools</td>
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**PRIMARY COURSE OWNER (Dept.):**

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<th>Course Title</th>
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<tbody>
<tr>
<td>GEG</td>
<td>4020</td>
<td>Field Experience in Teaching Social Studies in Secondary Schools</td>
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Course to be crosslisted with (one or more courses):

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<th>Course Title</th>
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Beginning Fall 2012 (semester and year).

**Approvals:**

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<th>Department Chair OR Institute Director</th>
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<th>Department Chair OR Program Director</th>
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<th>Dean OR Associate Dean</th>
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Please forward the completed form to the Office of Academic Affairs for processing (CN 318, Box 48). It will remain in force until rescinded by one of the parties using the Crosslisting Termination Form.
REGULAR COURSE SYLLABUS

School of: Letters, Arts and Sciences

Department: Earth and Atmospheric Sciences

Prefix & Course Number: GEG 4610  Crosslisted With*: N/A

Course Title: Urban and Regional Planning

Banner course title (30 characters): Urban and Regional Planning

Check All That Apply: Required for Major:  Required for Minor: Specified Elective: x

Required for Concentration: x  Elective: x  Service Course: __

To receive Title IV financial aid funds, all institutions of higher education must comply with the federal definition of a credit hour. The Higher Learning Commission requires institutions to maintain policies and procedures for verifying compliance with this definition.

Federal Credit Hour Definition: A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally-established equivalency that reasonably approximates not less than:

(1) one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or ten to twelve weeks for one quarter hour of credit, or the equivalent amount of work over a different amount of time; or (2) at least an equivalent amount of work as required in paragraph (1) of this definition for other activities as established by an institution, including laboratory work, internships, practica, studio work, and other academic work leading toward the award of credit hours. 34CFR 600.2 (11/1/2010)

Credit Hours: 3

Face-to-Face or Equivalent Hours per course:

Lecture 45  Lab 0  Internship 0  Practicum 0  Other (please specify type and hours): 0

Additional Student Work Hours per course: __

Schedule Type: L  Grade Mode: L

Variable topics umbrella course: No X Yes  If Yes, number of credit hours allowed __

Specified repeatable course: No  Y es __

APPROVED:

[Signatures and dates]

*If crosslisted, attach completed Course Crosslisting Agreement Form
Prefix and Course Number: GEG 4610

Prerequisite(s): GEG 3610
Corequisite(s): NONE
Prerequisite(s) or Corequisite(s): NONE

Catalog Course Description:
This course studies the philosophy and scope of urban and regional planning and the principles and factors of planning and their interrelationships.

Specific Variable Topics Course Description (if applicable, umbrella course description included above):

Required Reading and Other Materials will be equivalent to:


Specific, Measurable Student Behavioral Learning Objectives:
Upon completion of this course the student should be able to:

1. Evaluate basic philosophies of planning;
2. Classify the physical factors related to planning;
3. Analyze human factors related to planning;
4. Construct a list of decision makers in planning;
5. Diagram the power hierarchy in planning;
6. Analyze the interrelationships of values and planning;
7. Differentiate the various political entities involved and or affected by planners;
8. Analyze the ramifications of state and local governments;
9. Analyze the power structure of state and local governments;
10. Evaluate services provided by state and local governments;
11. Evaluate the benefits and liabilities of state and local organizations; and
12. Evaluate examples of past, present, and proposed plans.
Detailed Outline of Course Content (Major Topics and Subtopics) or Outline of Field Experience/Internship (experience, responsibilities and supervision):

I. Development of Urban and Regional Planning
   A. Antecedents of local planning
   B. Nineteenth Century precursors of modern urban planning
   C. 1900-1930
   D. Local planning after 1930
   E. New directions

II. Analysis and Quantitative Methods
    A. Nature of quantitative methods
    B. Data handling procedures
    C. Quantitative methods and planning agency operations

III. Transportation Planning
     A. Streets, highways, and mass transportation
     B. Travel in urban space
     C. The urban transportation system
     D. Intercity transportation

IV. The Comprehensive Plan
    A. What is a comprehensive plan?
    B. Development of the plan concept
    C. The function of the plan
    D. Procedures for preparing and using the plan

V. Zoning
   A. Nature of zoning
   B. Preparing the zoning ordinance
   C. Amendments
   D. Common deficiencies
   E. Content of the zoning ordinance

VI. Urban Renewal
    A. Accomplishments
    B. Criticisms
    C. Key elements of renewal

VII. Planning Agencies
     A. Local planning agency: Organization and structure
     B. Local planning agency: Internal administration
     C. Regional Council of Government
     D. Planning and the public

Evaluation of Student Performance:
   Examinations
   Term Papers
   Projects
   Presentations
METROPOLITAN STATE COLLEGE OF DENVER
Office of Academic Affairs

REGULAR COURSE SYLLABUS

SCHOOL: Letters, Arts and Sciences

DEPARTMENT: Earth and Atmospheric Sciences

SEMESTER(S) OFFERED: Every third regular semester

PREFIX & COURSE NUMBER: GEG 4620

COURSE TITLE: Residential Land Use Patterns

CREDIT HOURS: 3 (3+0)

CONTACT HOURS: Lecture 45 Lab 0 Internship 0 Practicum 0

RESTRICTIONS (VARIABLE TOPICS COURSES): None

PREREQUISITE(S): GEG 3600 or GEG 3610 or 6 hours of Urban Studies courses

COREQUISITE(S): None

CATALOG COURSE DESCRIPTION:

This course examines spatial patterns of urban growth, factors that affect housing, the role of non-profit developers in the current housing market as well as theories which explain the residential mosaic of North American cities. It includes an analysis of current housing trends as well as the housing types, densities, patterns, and geographic distribution as well as the interrelationships with other aspects of the urban environment including infrastructure.

REQUIRED READING MATERIALS: (Title, Author, Publisher, Copyright Date)


Other readings supplied by the Instructor.

APPROVED:

Department Chair

Dean

V.P., Academic Affairs

DATE:

3/6/99

3/5/99

5/20/99

DISTRIBUTION: Original to Vice President for Academic Affairs
Copies retained by Dean and Department Chair

Revised 9/94: Academic Affairs-Curriculum-Regular Course Syllabus
(s:\wpform\acadaff\currculm\regsyl.wp)
SPECIFIC (MEASURABLE) STUDENT BEHAVIORAL LEARNING OBJECTIVES:

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

1. define and apply key terms;
2. analyze and discuss current housing trends at the local, regional, and national levels;
3. analyze and explain the relationships between migration patterns and decisions to move to current trends;
4. analyze and explain the relationships between urban growth patterns and housing patterns;
5. analyze locational requirements for special-needs housing;
6. develop and administer a housing preference survey;
7. analyze and explain the factors that affect housing patterns such as crime, fair housing, and banking practices;
8. conduct a comparative neighborhood survey and present the results;
9. conduct an original research project which could be used for planning purposes;
10. conduct field research; and
11. collect and translate raw data into meaningful charts and graphs.

OUTLINE OF COURSE CONTENT: (Major Topics and Subtopics)

I. Overview of Factors That Affect Housing
   II. National Housing Trends
       A. Mobility and Migration Patterns
       B. Impacts of Migration on Housing
       C. Emerging National Issue-Affordable Housing
   III. Urban Growth Patterns
       A. Growth Areas in the U.S.
       B. Suburban Growth Patterns
       C. Urban and Regional Planning Issues - DRCOG
       D. Planned Communities
       E. Edge Communities
       F. Gateway Development
       G. Inner City Development
   IV. What Factors Contribute to Housing Patterns?
       A. Real Estate Practices
       B. Market Patterns
       C. Location and Land Use
       D. Fair Housing Issues
       E. Zoning
       F. Building Codes
       G. In-Out Migration
       H. Financing/Bank Loan Policies
       I. Income
       J. Governmental Policies and Practices
       K. Technological Change-Cottage Industries
       L. Values and Attitudes
V. Transportation and Housing--Chicken or Egg?
VI. Infrastructure and Housing
VII. Zoning
   A. Philosophy
   B. Codes
   C. Conflicting Policies and Codes
   D. Use of PUD’s
VIII. Neighborhood Redevelopment
   A. Multifamily versus Single Family
   B. Impacted Areas-Focus Areas
   C. CBD Redevelopment and/or Expansion
   D. Platte Valley Development
   E. Dispersed Housing
   F. LoDo Lofts
   G. Role of Developers in Neighborhood Redevelopment
IX. Denver Neighborhood Comparison-Field Work
   A. Lot Size
   B. House Types
   C. Price
   D. Zoning
   E. Set Backs
   F. Age
   G. Ownership
   H. Construction
   I. Population Information
X. Historic Districts/Historic Preservation
XI. Special Needs Housing-Locating Group Homes
   A. Elderly
   B. HIV/AIDS-HOPWA
   C. Handicapped
   D. Homeless
   E. Prison Release Programs
   F. Drug Programs
   G. Chronically Mentally Ill
XII. Public Housing Projects
   A. Pruitt-Igoe
   B. Lincoln Park
XIII. Housing for Recreation Areas
XIV. So, What is Affordable Housing?
XV. What Agencies Are Involved in Housing In The DMSA?
XVI. Housing Ownership Patterns
   A. Rentals
   B. Investment Properties
   C. Speculation
XVII. Market Practices-Speaker
   A. Bank Financing
   B. Urban Investment Charge
   C. Zoning

XVIII. What Is The Relationship Between Patterns Of Ownership, Real Estate Market, Affordable Housing, And Patterns Of Vacant And Boarded-Up Housing?

EVALUATION OF STUDENT PERFORMANCE:

1. Attendance and participation in all class discussions 15%
2. Neighborhood comparison--Oral report 15%
   Use of visuals: Maps, charts, or matrix, census tract maps, neighborhood maps, slides
3. Interviews with people on why they live where they do--chart/graph/text--Analysis 15%
4. Housing trends in Denver, use multi-list--Oral report 10%
5. Group research project--Current housing issue 20%
6. Final paper--Individual paper based on group research project 25%
REGULAR COURSE SYLLABUS

SCHOOL: Letters, Arts and Sciences

DEPARTMENT: Earth and Atmospheric Sciences

SEMESTER(S) OFFERED: Every third regular semester

PREFIX & COURSE NUMBER: GEG 4640

COURSE TITLE: Recreational Land Use Patterns

CREDIT HOURS: 3 (3 + 0)

CONTACT HOURS: Lecture 45  Lab 0  Internship 0  Practicum 0

RESTRICTIONS (VARIABLE TOPICS COURSES): None

PREREQUISITE(S): GEG 3610 or permission of instructor.

COREQUISITE(S): None

CATALOG COURSE DESCRIPTION:

This course considers various types of recreation space, including greenbelts, open space, wilderness areas, and national, state, and local parks. It relates recreational land to the land-use planning process, as well as the environmental impacts of recreation.

REQUIRED READING MATERIALS: (Title, Author, Publisher, Copyright Date)


APPROVED: DATE:

Department Chair

Dean

V.P., Academic Affairs

DATE:

2/5/98

3/25/98

5/29/99

DISTRIBUTION: Original to Vice President for Academic Affairs
Copies retained by Dean and Department Chair

Revised 9/94: Academic Affairs-Curriculum-Regular Course Syllabus
(s:\wpform\acadaff\currculm\regsyl.wp)
SPECIFIC (MEASURABLE) STUDENT BEHAVIORAL LEARNING OBJECTIVES:

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

1. examine different types of recreational spaces;
2. apply various classification methods of recreation space;
3. evaluate current issues in recreation planning;
4. analyze the competing social interests involved in recreation planning issues;
5. examine recreation policy proposals in terms of their contributions to specific goals and objectives;
6. examine and evaluate the environmental impacts of recreation;
7. evaluate changing values and attitudes towards recreation space;
8. analyze how recreation areas are determined in terms of size, spacing, density, etc.;
9. evaluate the accessibility of recreation areas;
10. analyze the relationships between population density and distribution of recreation space;
11. relate and compare other land uses to recreation space;
12. distinguish and evaluate sources of funding for recreation areas;
13. examine and evaluate who controls recreation areas;
14. analyze the relationship between climate and recreation;
15. analyze the relationship between landforms and recreation space;
16. analyze the relationship between soils and vegetation and recreation space;
17. analyze water availability related to recreation areas;
18. examine and evaluate political groups involved in recreational activity planning;
19. evaluate how recreation areas are used as buffers and barriers;
20. analyze the components of a recreation plan;
21. analyze how planning processes differ for various recreation spaces;
22. compare and contrast how natural and cultural resources affect the recreation planning process;
23. examine the concept of leisure as it relates to recreation planning; and
24. prepare a recreation plan and make a formal presentation to the class.

OUTLINE OF COURSE CONTENT: (Major Topics and Subtopics)

I. Introduction
   a. The categories and nature of impacts
   b. Evaluation of the environmental impacts
II. Environmental Impacts on Tourism and Tourists
III. External (Nontourist) Human Impacts on Natural Environment as Part of the Tourism Product
IV. The Positive Impacts of Tourism and Recreation on the Natural Environment
V. The Negative Impacts of Tourism and Recreation on the Environment: Parameters, Agents, and Factors of Overdevelopment
VI. The Negative Impact of Tourism and Recreation on Elements of the Environmental System
VII. The Negative Impact of Tourism and Recreation on Ecosystems
VIII. The Issue of Carrying Capacity
IX. The Search for Environmentally Sustainable Tourism
X. Environmental Planning and Management of Tourism and Recreation
XI. Ecotourism as a Form of Alternative Tourism

EVALUATION OF STUDENT PERFORMANCE:

1. Midterm and final examinations
2. Written recreation plan
3. Oral presentation
4. Questions on assigned readings
5. Class participation
REGULAR COURSE SYLLABUS

School of: Letters, Arts and Sciences

Department: Earth and Atmospheric Sciences

CIP Code: 40.0301

Prefix & Course Number: GEG 4710 Crosslisted With*: N/A

Course Title: Legal Aspects of Land Use

Check All That Apply: Required for Major: _____ Required for Minor: _____ Specified Elective: X

Required for Concentration: _____ Elective: X Service Course: _____

Credit Hours: 3 (3 + 0)

Total Contact Hours per semester (assuming 15-16 week semester):

Lecture 45 Lab 0 Internship 0 Practicum 0 Other (please specify type and hours): 0

Schedule Type(s): L Grading Mode(s): L

Variable Topics Courses (list restrictions, including the maximum number of hours that can be earned*): N/A

*NOTE: This information must be included in the course description.

Restrictions (Variable Topics Course): N/A

Prerequisite(s): ENV 4010 or GEG 3610 or permission of instructor

Corequisite(s): None

Prerequisite(s) or Corequisite(s): None

Banner Enforced:

Prerequisite(s): None
Corequisite(s): None
Prerequisite(s) or Corequisite(s): None

Catalog Course Description: This course studies the laws, ordinances, and regulations related to land use, as well as the role of federal, state, and local government in regulating and controlling land use. The course makes use of case studies and local issues.

APPROVED:

[Signature and date]

Department Chair OR Program Director

[Signature and date]

Dean OR Associate Dean

[Signature and date]

Associate VP, Academic Affairs
Prefix and Course Number: GEG 4710

Required Reading and Other Materials will be equivalent to:


Specific, Measurable Student Behavioral Learning Objectives:

1. examine and evaluate the legal aspects of land use, especially in Colorado and the metropolitan area;
2. evaluate specific land-use laws affecting land use at the federal, state, county, and municipal levels;
3. examine and debate the philosophy of land-use regulations, including private versus public interests; and,
4. analyze the relationships between land-use regulations and the value of land, the development of land, and resource development.

Detailed Outline of Course Content (Major Topics and Subtopics or Outline of Field Experience/Internship (experience, responsibilities and supervision)):

I. Historical Background
   A. History of land-use law in U.S.
   B. History of land-use law in Colorado

II. General Trends
   A. Legal developments in land use in past ten years
   B. Anticipated developments in land-use law

III. Federal Laws
   A. On federal lands
   B. Impacts on private lands

IV. State Laws (Outside of Colorado)
   A. Review of most significant states

V. Colorado Laws
   A. Colorado state laws

VI. County and Municipal Ordinances
   A. County
   B. Municipal

VII. All Laws Applied to Land-Use Zoning and Resource Use
   A. Zoning as a legal measure
   B. Impacts on resources and land values

VIII. Philosophy of Land-Use Regulations
   A. Reasons for regulations
   B. Arguments pro and con

IX. Relationship of Land Regulation, Taxation, and Evaluation
   A. Regulation and taxation
   B. Regulation, pro and con

X. Relationship of Land-Use Regulations and Resource Development
   A. Does regulation restrict resource development?

XI. Future Trends in Land-Use Regulation
   A. Future federal regulations
   B. Future state regulations
   C. Future local regulations

Evaluation of Student Performance:

1. At least two examinations
2. Any projects, papers, presentations, or exercises required by the instructor
REGULAR COURSE SYLLABUS

School of: Letters, Arts and Sciences

Department: Earth and Atmospheric Sciences

CIP Code: 04.0301

Prefix & Course Number: GEG 4950  Crosslisted With*: N/A

Course Title: Internship in Land Use

Check All That Apply: Required for Major: X Required for Minor: _____ Specified Elective: _____

Required for Concentration: _____ Elective: _____ Service Course: _____

Credit Hours: 2-15 (0 + 6-45)

Total Contact Hours per semester (assuming 15-16 week semester):

Lecture 0  Lab 0  Internship 90-675  Practicum 0  Other (please specify type and hours): 0

Schedule Type(s): L  Grading Mode(s): L

Variable Topics Courses (list restrictions, including the maximum number of hours that can be earned*): N/A

*NOTE: This information must be included in the course description.

Restrictions (Variable Topics Course): N/A

Prerequisite(s): Land Use major with upper-division standing plus twelve upper-division hours of earth science courses and permission of the chair of the earth and atmospheric sciences department.

Corequisite(s): None

Prerequisite(s) or Corequisite(s): None

Banner Enforced:
  Prerequisite(s): None
  Corequisite(s): None
  Prerequisite(s) or Corequisite(s): None

Catalog Course Description: This course provides an on-the-job internship experience with a land-use-related company or agency. The experience must be done under qualified supervision and under the direction of an earth and atmospheric sciences faculty member.

APPROVED:

Department Chair OR Program Director

Dean OR Associate Dean

Associate VP, Academic Affairs
Prefix and Course Number: GEG 4950

Required Reading and Other Materials will be equivalent to:

None. Necessary reading materials will be provided by participating company or agency.

Specific, Measurable Student Behavioral Learning Objectives:

This course provides the opportunity for the student to correlate theoretical knowledge with actual practice, under the guidance of an experienced supervisor. Upon completion of this course the student should be able to:

1. to apply, test, and evaluate, under actual working conditions, knowledge gained in the classroom;
2. to acquire practical experience in preparation for employment or career development;
3. to develop a more in-depth and broader understanding of decision-making processes in jobs requiring a land-use background; and
4. to develop confidence and a sense of one's own capabilities and needs in the workplace.

Detailed Outline of Course Content (Major Topics and Subtopics or Outline of Field Experience/Internship (experience, responsibilities and supervision)):

A specific job description and work schedule is developed for each placement and is on file in the Department of Earth and Atmospheric Sciences (EAS). A student is expected to work 45 hours for each hour of academic credit granted. On-the-job supervision and training is provided by the company or agency, with overall supervision provided by EAS faculty. The company or agency provides an evaluation of the student's work, which becomes the basis for the grade.

Evaluation of Student Performance:

Students are evaluated by progress reports and consultation with supervisor.