San Bernardino Valley College
Curriculum Approved: March 28, 2005

I. COURSE INFORMATION:

A. Division: Science and Math
Department: Geography
Course ID: GEOG 106
Course Title: Geographic Perspectives on the Environment
Units: 3
Lecture: 3 Hours
Laboratory: None
Prerequisite: None
Corequisite: None
Dept. Advisory: None

B. Catalog Description: Introductory study of the latest geographic perspectives of critical environmental issues occurring within and across local, regional, national, and global scales. Creates an awareness of the geography of human-environment relationships, in particular how nature and natural resources are defined, contested, distributed, and consumed. Emphasis is on social, political, cultural, psychological, and economic evaluation of natural resources and associated resource management, occurring in place and across space and including exploitation, conservation, and preservation values.

C. Schedule Description: Introductory study of the latest geographic perspectives of critical environmental issues occurring within and across local, regional, national, and global scales. Creates an awareness of the geography of human-environment relationships, in particular how nature and natural resources are defined, contested, distributed, and consumed.

II. NUMBER OF TIMES COURSE MAY BE TAKEN FOR CREDIT: One

III. EXPECTED OUTCOMES:

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

A. Provide and understand multiple definitions of “nature” and “natural resource.”
B. Apply the geographic perspective in order to analyze key environmental issues.
C. Compare and contrast nature- and human-centered views of natural resource management.
D. Evaluate current environmental issues through the twin concepts of environmental justice and environmental ethics and their psycho-social implications.
E. Describe the environmental dilemma of infinitely growing populations with infinitely growing wants and needs.
F. Describe and apply different natural resource management approaches, including exploitation, conservation, and preservation.
G. Evaluate historic and present social, political, cultural, psychological, and economic pressures on natural resources and associated resource management.
H. Formulate her/his own social, political, cultural, psychological, and economic evaluation of natural resources and associated resource management.
I. Discuss and evaluate the necessity of tradeoffs (e.g., economic productivity and environmental protection).
J. Explain how technology impacts upon the resource availability of the “Three Fs:” food and agricultural production, forests, and fisheries.
K. Explain how the “Geographic Trinity:” climate, vegetation, and soil, imposes real limits on population growth and health – psychological and physiological well-being – and apply this principle to real life situations.
L. Explain how the ability to produce food on a sustainable basis imposes absolute limits on the quantity of life and apply this principle to real life situations.
M. Explain the finite nature of groundwater resources and how contamination further reduces the quantity available for human use.
N. Describe air pollution, how it is caused, and the consequences of cleanup or non-cleanup, including key issues of global warming and human health (psychological and physiological well-being).

O. Analyze the nature of all energy resources and the consequences in the use of each.
P. Discuss the nature of perpetual, renewable (flow), nonrenewable (stock), and potential resources.

IV. COURSE CONTENT:

A. Overview of environmental geography
   1. Introduction to the geographic perspective
      a) The social, political, cultural, psychological, and economic meanings of space and place
      b) Absolute and relative location
      c) Definition of "geographic scale" and linkages among scales
   2. The nature of resources
      a) The social, political, cultural, psychological, and economic meanings of space and place
      b) Absolute and relative location
      c) Definition of "geographic scale" and linkages among scales
   3. Introduction to the "Geographic Trinity"
      a) Limits on the quantity and quality, especially health (psychological and physiological well-being) of human life via climate, vegetation, and soils
      b) Society, technology, and the impact upon resources and reserves
   4. Introduction to the "Three Fs:" the intersection of socio-economics, politics, culture and psychology
      a) Food production and agriculture: carrying capacity, sustainability, and the green revolution
      b) Forests as a natural resource: habitat, timber production, tourism, and carbon sequestration
      c) Fisheries: exploitation, protection, and the tragedy of the commons
B. A brief history of the environmental movement
   1. Economics of natural resources
   2. Politics and natural resources policy
   3. Ecological perspectives on natural resource use
   4. Contributions from Marxist and feminist theories
C. Human population
   1. Brief history of human population growth: agricultural revolution, industrial revolution, medical revolution, and the demographic transition
   2. Basic demographics: birth rate, death rate, fertility rate, and net natural increase
   3. Malthus: food production growth versus human population growth
   4. The geography of health: spatial variations in psychological and physiological well-being
      a) Different responses to air, water, and land quality and pollution in developed (MDCs) versus developing (LDCs) countries
      b) HIV/AIDS and its impacts on selected population pyramids
      c) The special case of Africa
   5. Global distribution of human population
      a) MDCs versus LDCs countries: old age versus population explosion
      b) A brief history of human migration: rural versus urban and MDCs versus LDCs
   6. Population control strategies
      a) Population control strategies: technocentrists, cornucopians, Cassandras, and Pollyannas
      b) Garrett Hardin and "Living on a Lifeboat"
      c) Paul Ehrlich and "The Population Bomb"
D. Agriculture and food production
   1. Food production resources: the food web and carrying capacity
   2. Soil and water resources
   3. Fertilizers, pesticides, herbicides and corporate agriculture: the green revolution
   4. Genetically modified organisms (GMOs), organic produce, and sustainable agriculture
E. Forests

1. Multiple-use forests
2. Forests for timber production
3. Forests for animal and plant habitat: biodiversity
4. Forests for recreation and eco-tourism
5. Forest management and the carbon cycle

F. Fisheries and marine resources
1. The marine environment
2. Fisheries: sustainable production and tragedy of the commons
3. Management of marine resources

G. Water
1. Water supply
2. Water demand
3. Water politics
4. Water quality and pollution: geographies of health

H. Land
1. Waste storage
2. Urbanization
3. Desertification
4. Threats to biodiversity: geographies of health

I. Air
1. Structure of the atmosphere
2. Air pollution: anthropogenic and natural sources
3. Focus on smog: geographies of health

J. Atmosphere as a resource
1. Acid rain
2. Ozone layer depletion
3. Global climate change

K. Non-fuel mineral resources

L. Energy resources
1. Energy use in the industrial age
2. Energy sources
   a) Fossil fuels
   b) Biomass and bio-fuels
   c) Nuclear power
   d) Renewable energy sources

M. The future of natural resources
1. Sustainable development
2. Thinking globally and acting locally: reducing, reusing, and recycling natural resources

V. METHODS OF INSTRUCTION: (Please check all that apply and add any additional not listed.)

√ Lecture
√ Class and/or small group discussion
√ Critical evaluation of texts, newspapers, journal articles, and other printed research
√ Critical evaluation of films, videotapes, audiotapes, or other media forms
√ Classroom demonstrations
√ Field trips
√ Guest speakers
√ Other: Student Presentations
√ Other: Computer-based demonstrations and tutorials

VI. TYPICAL OUT-OF-CLASS ASSIGNMENTS:

A. Reading Assignment. Reading assignments are required and may include (but are not limited to) the following: After reading "The Human Population" chapter in your textbook and Garrett Hardin's "Living on a Lifeboat" article, address the following question: "After millennia

of relatively slow population growth, the human population began to increase rapidly about three hundred years ago. Consider the reasons for this population explosion, including the industrial revolution and associated rural-to-urban migrations in both MDCs and LDCs. Also consider feminist and Marxist critiques of Hardin's article in particular and development programs in general."

B. Writing Assignment. Writing assignments are required and may include (but are not limited to) the following: Pick a consumer item with which you are familiar. Within a three- to five-page paper, describe the natural resources used in its manufacture. Be sure to discuss global sources of natural resources and which ones are renewable and nonrenewable. Conclude with one or more ways in which this product could be manufactured in order to lessen its ecological footprint (e.g. more environmentally friendly). Be sure to discuss how consumer choices directly impact upon natural resources and the environment and how your personal consumer decisions could make a difference.

C. Critical Thinking Assignment. Critical thinking assignments are required and may include (but are not limited to) the following: After learning the stages of demographic transition, formulate a program that would lead an LDC to a declining birth rate. You must not only incorporate in-class and textbook material but also out-of-class material obtained through basic field research techniques, including Internet and library, public presentations, and interviews with experts. Field research and subsequent in-class "PowerPoint" presentation will be conducted in groups of three to four students. Note that your group should critically evaluate existing development models in light of what you understand about Cassandra, Pollyanna, feminist, and Marxist viewpoints about natural resources and the environment.

VII. EVALUATION:

A student's grade will be based on multiple measures of performance and will reflect the objectives explained above. A final grade of "C" or better should indicate that the student has the ability to successfully apply the principles and techniques taught in this course. These evaluation methods may include, but are not limited to, the following (Please check all that apply, and add additional ones not listed):

_ Portfolios
√ Projects
√ Written papers or reports
√ Presentations (oral and visual)
_ Work performance (internships or field work)
_ Lab work
√ Comprehensive examinations (cumulative finals or certifications)
√ Peer evaluation
_ Self evaluation
√ Classroom participation
√ Homework
√ Other: Self-guided, computer-based projects and quizzes

VIII. TYPICAL TEXTS:

A. Harper, Charles L., Environment and Society: Human Perspectives on Environmental Issues, 3rd edition, Prentice Hall, 2004.
B. Miller, G. Tyler, Jr., Living in the Environment: Principles, Connections, and Solutions, 14th edition, Brooks/Cole, 2005.
C. Cutter, Susan L. and William H. Renwick, Exploitation, Conservation, Preservation: A Geographic Perspective on Natural Resource Use, 4th edition, John Wiley and Sons, Inc., 2004.
D. Marsh, William M. and John Grossa, Jr., Environmental Geography: Science, Land Use, and Earth Systems, 3rd edition, John Wiley and Sons, Inc., 2005.
E. Park, Chris, The Environment: Principles and Applications, 2nd edition, Routledge, 2001.

IX. OTHER SUPPLIES REQUIRED OF STUDENTS: None