

CLUSTER IV

Social and Behavioral Geography

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Summary of Identified Issues

This year the Geography IMPAC discussions focused on the following questions:

What would be the ideal lower-division preparation for a Geography major?

Are there additional Geography courses taught throughout the state for which CAN numbers can provide helpful identification (specifically for counselors and articulation officers in the transfer process)? In 2001-2002, IMPAC participants proposed new CAN descriptors for World Regional Geography and Introduction to Geographic Information Systems (G.I.S.), but there was debate about Geography of California, Weather and Climate, and Introduction to Maps and Geographic Images; these courses went through an additional round of discussions this year.

What are the benefits and risks of field trips, and how can we as geographers support field learning as excellent pedagogy?

How can we better influence the state of geographic education in California by preparing teachers-to-be?

Note: Geography switched IMPAC Clusters this year and is now in the Social and Behavioral group of disciplines as was initially proposed in the original IMPAC grant. Although we could also correctly be grouped with the sciences, the clusters were partially organized by the year discussions were started.

Identified Trends/Future Directions

Geographic Information Science (GIS)

GIS will continue to expand as a common technology as computer maps are promulgated and satellites beam down new information about the earth at an exponentially increasing rate. Geographers are uniquely qualified to teach the spatial framework and integration required for expert computer mapping and analysis of satellite imagery.

At the IMPAC statewide meeting faculty from six CSUs and six CCs exchanged viewpoints energetically, and agreed to combine the “Introduction to Mapping” and “Introduction to GIS” CAN descriptors into one descriptor titled Introduction to Mapping and Geographic Information Science (see proposal below). All six CSU representatives present said that they would not articulate the previously proposed “Introduction to GIS” CAN course descriptor (in 2001-02 Annual Report, available on www.cal-impac.org website) because it did not explicitly include academic concepts about maps (projections, scales, etc.). Community college geographers present stated strongly that mapping concepts are a key component of their courses. CSU faculty responded that given this new information, these courses should indeed articulate. To demonstrate the need for academic content as well as technical training in GIS software, the group decided to change “Systems” in the CAN descriptor title to “Science”. GIS is an acronym for both Geographic Information Systems and Geographic Information Science.

Field Trip Benefits and Risks

Geographers believe in field education, and statewide participants crafted a statement of support for colleagues and administrators to dispel doubts:

Field Learning as Excellent Pedagogy

Geography is rooted in fieldwork. Field experience is vital for education in Geography and other disciplines. We learn by doing, and field trips stimulate senses which activate long-term memory, encourage critical thinking, and complement and enhance classroom instruction.

Some educational institutions have become overly cautious to the extent of restricting or even eliminating field trip programs. We think this is an error.

Title 5 and the California Education Code include language that recognizes the value of field-based learning: it is excellent pedagogy, and should be supported as a regular part of geographic education.

Teacher Preparation in Geography

Concern was expressed that a large number of liberal studies majors in the state are not receiving education in Geography. Melanie Renfrew, Geography Discipline Faculty Lead, confirmed that, when queried, most groups of instructors she trains in Los Angeles confuse basic vocabulary like latitude and longitude while others avoid teaching Geography at all, despite the elementary level standards, because they don't understand it well. She did have success with the CSU Dominguez Hills Liberal Studies Curriculum Committee, however, by demonstrating that the Physical Geography class meets many K-8 Science and Social Studies standards by teaching potential teachers about all the "spheres" (atmosphere, hydrosphere, lithosphere, and biosphere) and their integration. As a result, the CSU Dominguez Hills counseling advice sheet for "Pre-Liberal Studies Majors" now lists "Geography 1" first as the recommended physical science general education course.

On this issue, Elliot McIntire reported that, since CSU Northridge has many students in the teaching credential program, large sections of "Earth Science for Teachers" are offered and taught by either a geographer or geologist. One idea mentioned during the discussion about how to further educate future teachers in Geography was to ask for a version of a popular Physical Geography textbook (e.g., Christopherson, deBlij, McKnight and Hess, or Strahler and Strahler) to be tailored to specifically include the California K-8 standards, and be titled "Physical Geography for Teachers," "Earth Science for Teachers," or "Geosystems for Teachers." In institutions like CSU Northridge, this is offered as a special course, but elsewhere, Physical Geography itself could count both as general education and as the earth science education course.

Geographers need to communicate with the curriculum decision-makers of Liberal Studies programs to show how Physical Geography covers many of the K-8 standards, both in science and in social studies, which require an integrative understanding of the physical environment as a context for human settlement, migration, and economic development.

Comments from Statewide Meetings and the General Field

The following comments were made by Geography faculty attending IMPAC regional and statewide meetings.

"IMPAC was always regarded with suspicion in our department because its announcements arrived on glossy paper (a sure sign on our campus that the administration is pushing something down on the department) and a suspicion that our curriculum was being dictated from off-campus. Both of these misconceptions have been

reversed (for me, anyhow) and the importance of communication with our colleagues in the community college system brought home.” (Paul Melcon, CSU Chico)

“It sounds like things are going swimmingly, and I congratulate you on your efforts on behalf of Geography in the state. Keep up the good work.” (Elliot McIntire, CSU Northridge)

“IMPAC meetings are educational geographically because they expand our view of our discipline in California... The statewide meeting was a great success: new CSU faculty participated from Chico to San Diego, and everyone was open to understanding other viewpoints, yet felt free to avidly express contrast as well. This kind of dialogue and exchange is what the IMPAC Program is designed to do.” (Melanie Renfrew, Los Angeles Harbor College)

Recommendations for the Discipline

Recommendation to the CCC Academic Senate:

The minimum qualifications for community college instruction should be Master’s in Geography, and CC faculty should pursue this concern when the disciplines list is next revised.

Participants expressed concern and agreed for the second year that the minimum qualifications for community college instruction in Geography should be a Master’s Degree in Geography (as was the 2001-2002 consensus). Non-geographers are often not qualified to teach both branches of Geography, and as a result, course content, Geography’s spatial perspective, and recruitment to the major are diluted or missing.

Recommended Lower-Division Preparation for a Geography Major

After discussions at all four regional and the statewide IMPAC meetings, Geography participants agreed on the following list of recommended courses for a Geography major. (This is not a rigid list and not all community colleges or universities will have all of these courses. However, it represents a type of ideal foundation in Geography with exposure to related fields. Students should also be counseled regularly to meet general education requirements.)

Core Curriculum (4 courses): Physical Geography or Physical Geography with Laboratory, Cultural/Human Geography, World Regional Geography, Introduction to Mapping and Geographic Information Science

One additional course in the Physical or Biological Sciences: (beyond general education) such as Geology, Chemistry, Meteorology, Oceanography, Field Ecology, Environmental Science

One additional course in the Social/Behavioral Sciences: such as World History, Cultural Anthropology, Economics, International Business, Psychology

Skills: Follow general education requirements, but also secure mathematical/quantitative/statistical skills and computer literacy/information competence.

Electives: Field Geography, Regional Geography, etc., depending on offerings and transferability.

Topics for Further Discussion

GIS

How can other G.I.S. classes and programs be better articulated?

In these days of state budget cuts, can we better demonstrate to administrators that GIS could meet the “information competence” requirement of general education?

Can we better influence the teaching of GIS statewide so that it is soundly academic as well as “technical”? In other words, can we better disseminate to instructors the decisions made regarding this year’s new combined CAN descriptor, and convince administrators who misunderstand GIS as mere technical training?

Teacher Preparation in Geography

How can we better influence Liberal Studies programs so future teachers will understand and teach Geography well, especially those aspects of the discipline that are part of California science and social studies standards? Geographic and spatial understanding, preservation of environments, long-range metropolitan and regional planning, and voting power of California citizens can be greatly influenced by positive teacher preparation in Geography.

Introduction to Mapping course

Should it have a separate CAN number in its own right in addition to the proposed combined course with GIS?

Regional connections

One of the most powerful advantages of the IMPAC program is the way it facilitates regional connections among faculty at different institutions. These relationships influence the transfer process and promote successful and accurate counseling as effectively as documented instructions. Thus, an important part of every regional IMPAC meeting should be the sharing of local patterns and transfer needs of the colleges and universities represented.

Recommendations Forwarded/to be Forwarded to CAN:

We recommend that the new CAN descriptors as they appear in Geography Appendix 1 be forwarded to CAN following a final review and comment by the field.

Presentations to the Field

The Geography statewide meeting was held at American River College in conjunction the California Geographical Society on April 24, 2003. Over 18 participants were in attendance.

RECOMMENDATIONS TO CAN

Introduction to Mapping and Geographic Information Science (3 units Lecture and/or 3 units Lecture/Lab)

This course provides an introduction to mapping and geographic information science. Includes interpretation of maps and mapping techniques, topographic maps, scale, map projections, map symbols, grid systems, surveying, digital maps and satellite imagery, field methods and data collection. Introduces use of computer systems and software for geographic analysis, the nature of spatial data, geographic data structures, data acquisition, analysis, display of geographic data and examples of practical applications, combining discussion of conceptual topics with practical exercises using microcomputer software.

The course description above merges the CAN Descriptors for “Introduction to Maps and Geographic Images” with “Introduction to Geographic Information Systems.” The resulting course will serve as the descriptor for a lower-division course that will articulate with comparable lower-division courses at four-year institutions. At the statewide meeting, both CSU and CC faculty determined that this resulting course better reflects the goals and content of existing introduction to GIS classes at both the CC and four-year level.

Geography of California (3 units Lecture)

Introduction to the state’s diversified geography including climate, landforms, natural vegetation, water resources, the cultural landscape, our Native American past, urban and agricultural regions, and the economic challenges of the future. Course emphasizes ethnic diversity, human alteration of the landscape, and contemporary social, economic, and environmental issues, using maps and other geographic imagery.

Introduction to Weather and Climate (3 units Lecture)

Introduction to Earth’s atmosphere: topics include atmospheric structure, solar radiation and energy balances, atmospheric moisture, clouds and fog, air pressure, winds, air masses and fronts, cyclones, tornadoes, hurricanes, weather forecasting, climate classification, and climate change.