

CALIFORNIA STATE UNIVERSITY, EAST BAY

DESIGNATION CODE: **2007-08 CAPR 23**

DATE SUBMITTED: **May 15, 2008**

TO: The Academic Senate

FROM: The Committee on Academic Planning and Review (CAPR)

SUBJECT: Five-Year Program Review for Geography and Environmental Studies

PURPOSE: For Action by the Academic Senate

ACTION REQUESTED: Acceptance of Five-Year Program Review for Geography and Environmental Studies and Approval of Continuation of Programs without Modification

Executive Summary

The Department of Geography and Environmental Studies consists of six regular faculty members, several lecturers, two with regular contracts, and one administrative support person. In Fall Quarter 2007 the department had 51 majors and offered 23 course sections. The department offers four degrees: Geography B.S. and B.A., Environmental Studies B.A. and Geography M.A. In Fall 2006, enrollment increased sharply to 132.7 FTES. This trend has continued through AY 07-08, bolstering the CAPR recommendation for a new tenure-track position for the department. The department serves CSUEB students with fifteen courses that fulfill General Education social science or science requirements in both the lower and upper division. Courses are regularly taught at both the Hayward and Concord campuses.

The Department has begun implementing its plans for improvement in four areas: revamping its degree programs, expanding the number of majors, requesting a new tenure track position, and updating and expanding its laboratory space. The Environmental Studies degree has been reworked and the Geography programs are undergoing the same process. The number of students appears to be increasing in response to the department's initiatives.

CAPR strongly recommends the department be allocated one more tenure-track position as soon as possible. Additionally, expansion of the department's physical space in the geospatial lab is essential. Current capacity is 15 students. Both the external reviewer and the department agree that expansion of this lab will significantly improve the quality of course offerings as well as the capacity of increasingly popular geospatial classes. CAPR concurs with this recommendation.

CAPR RECOMMENDATION FOR CONTINUATION OF THE PROGRAM

CAPR recommends the continuation of the Geography B.S. and B.A., the Environmental Studies B.A., and Geography M.A. without modification. The next CAPR review will take place in 2012-2013.

1. BACKGROUND

Overview description of the program

The Department of Geography and Environmental Studies consists of six regular faculty members, several lecturers, two with regular contracts, and one administrative support person. Of particular note, the department also has a highly regarded Oakland-based environmental consultant teach a constantly evolving policy course (ENVT 4100: Environmental Impact Analysis) on an annual basis. In Fall Quarter 2007 (the quarter with the most recent statistics) the department had 51 majors and offered 23 course sections. The department offers four degrees: Geography B.S. and B.A., Environmental Studies B.A. and Geography M.A.

Beyond its majors and minors the department serves CSUEB students with fifteen courses that fulfill General Education social science or science requirements in both the lower and upper division. Courses are regularly taught at both the Hayward and Concord campuses. The Department has made a specific commitment to offer at least one course per quarter at the Concord campus, and offers two whenever possible.

Until 2005, enrollments in department courses were static. Beginning in the Fall Quarter, 2006, enrollment jumped to 132.7 FTES (compared to an average of 104 during the preceding five years). This trend has continued through AY 07-08, bolstering the CAPR recommendation for a new tenure-track position for the department.

The Department of Geography and Environmental Studies has begun implementing its plans for improvement in four areas: revamping its degree programs, expanding the number of students who are declared majors in the department, requesting an additional tenure track faculty position, and updating and expanding its laboratory space. The Environmental Studies degree has been reworked and the Geography programs are undergoing the same process. The number of students appears to be increasing in response to the department's initiatives.

With all this we strongly recommend the department be allocated at least one more tenure-track position as soon as possible.

One specific aspect of the expansion of the department's physical space is the geospatial lab. Current capacity is 15 students. Both the external reviewer and the department agree that expansion of this lab will significantly improve the quality of course offerings as well as the capacity of increasingly popular geospatial classes.

Overview of the documents submitted to CAPR

The following documents were submitted by the Department of Geography and Environmental Studies for the five year program review: Five-Year Plan for the department; Geography BS/BA/MA programs revamp; Self-Study; External Reviewer's Report; and Response to the External Reviewer's report.

2. FIVE-YEAR PROGRAM REVIEW/SELF-STUDY (2007-2008)

• Summary of specific areas of the Self-Study

The Department of Geography and Environmental Studies is to be commended for the thoroughness of the material presented to the Committee on Academic Program Review for the five-year review. The program clearly characterized its recent and current status with respect to faculty and lecturer staffing, student enrollment, and courses of study. The department Self-Study contains four sections that will be summarized below. In brief, these are:

- I. Summary (prior program review, changes and events since 05-06 CAPR 17)
- II. Curriculum and Student Learning
- III. Students, Advising, and Retention
- IV. Appendices (including comparisons with other departments, enrollment data, and the department's response to the external reviewer's comments)

Section I – Summary (Prior Program Review, Changes and Events Since 05-06 CAPR 17)

The prior five-year review was considerably more focused than the 2002 report. In 2002 the Department listed ten areas with plans for the future. The current 2008 Department Self-Study emphasizes progress and plans in just three major areas:

- Curriculum and Student Learning
- Students, Advising and Retention
- Faculty, Resources, Requirements

The Outside Reviewer made three specific recommendations regarding resources:

1. "A new tenure-track line in Cultural/Urban Geography with a regional specialty in Africa or Europe."
2. "Resources to remodel and expand their geospatial teaching laboratory"¹ to 40 work stations.²
3. "Two paid graduate student teaching assistantships in order to provide teaching assistance in geospatial labs and other high-enrollment courses."³

The department identified several individual objectives associated with each element. The Self Study critically evaluated progress in each area as well as every individual objective. Progress in each element is evident through data and information presented in the Self Study and 2007-2012 Five Year Plan.

The department made progress in each thematic element of its previous plan. For example, the department identified as a primary task revamping the curriculum for each of the degree programs. At the time the previous Five-Year Plan was written, the initial phase of the Environmental Studies program's redesign (modifications to the upper and lower division core) had been completed. Each of the four degrees offered by the department (BS, BA and MA in Geography and the BA in Environmental Studies) was reviewed and revised. This process is now complete and moving into the

¹ Wright, John, External Review Dept. of Geog. And Env. Studies. April 1, 2008, cover letter p. 1.

² *Ibid.*, report body p. 1.

³ *Ibid.*, report body p. 1.

curricular approval process.

Interestingly one barrier the department encountered in this process was CSUEB rules. The department attempted to change the name of the MA degree from “Geography” to some phrase that would have included the word “Environment.” The University recommended against this because “the effort required to re-title a graduate program was too complex for the department to pursue at this time.”⁴

The department identified at least three individual goals under each thematic element. In the Self Study the department was candid about its achievements, redirections and shortcomings with respect to each individual objective. For those areas in which individual objectives were not attained, the department provided an explanation or a plan for future action.

The Department was adversely impacted by the implementation of the cluster GE program. As the Five Year Planning document notes, “Implementation of the GE cluster program for first- and second-year students in the late 1990s massively eroded enrollments in those intro courses, severely impacting our programs. The number of majors dropped precipitously, especially in Environmental Studies. (Majors in our two programs fell from 130+ to under 50, where it stabilized.)”⁵

The Five Year Plan goes on to note that elimination of the sophomore year cluster program helped immensely. Enrollment in the 2000-level courses is once again robust. The department is committed to increasing the number of majors with an objective of reaching the 100 major threshold in a few years. Expansion of the GIS lab would be a good way to assist this process. The Outside Reviewer predicted that expansion of the lab would double the number of majors in 4 – 5 years.

According to the Outside Reviewer, “geospatial careers are exploding across the country. MONEY magazine has named ‘geospatial analysis and Geographic Information Systems’ one of the Top Ten careers in terms of growth in opportunities.” On top of this there has been a recent surge in career opportunities in fields related to “green” technologies. The restructuring of the Environmental Studies program is designed, in part, to prepare more effectively our students for employment in this emerging sector of the economy.

Section II – Curriculum and Student Learning

The previous two five-year reviews have emphasized revamping the Geography BS/BA and MA and the Environmental Studies BA programs. This process is now complete. The curricular approval process is about to begin. CAPR commends the department for their thorough and timely follow-through on this plan.

The Five-Year Plan for the department includes a breakdown of the so-called “specialty studies” for each degree and two new 20-unit Certificates (in Sustainable Resource Management and in Global Studies) that join the department’s longstanding Certificate in Cartography and Geographical Information Systems. The Minor in Geography has been reworked as well, yet remains at 36 units.

⁴ Five Year Plan of the Geography BS, BA, MA & Environmental Studies BA Programs at California State University, East Bay, 2008 – 2012, page 2.

⁵ Five Year Plan..., *op. cit.*, p. 4.

The restructuring of Environmental Studies is also complete. Under the direction of Prof. Karina Garbesi, both the Options and the Minor have been reworked. The previous five Options have been reduced to three, simplifying an unnecessarily complex part of the major. The new set of Options is:

1. *Sustainable Resource Management* (slightly different from the *Environmental Resource Management* title identified in the previous plan);
2. *Environment and Social Justice*; and
3. *Physical Environment*.

Each option includes potential courses from ten different departments or programs outside Geography & Environmental Studies, thus preserving the multidisciplinary spirit of the Environmental Studies major. A significant aspect of these changes is a reduction in the size of the major from 100-105 to 85-88 units. The proposed program is more contemporary and less diffuse without sacrificing its traditional rigor. The outside reviewer applauded the 15-unit reduction in the size of the major (while at the same time questioning Geography's proposal to increase its unit load).

The Department is also to be commended for their ongoing commitment to the Concord campus. They offer at least one course per quarter in Concord and try to offer two courses in any quarter where feasible.

The department is also well represented in the GE program, both lower- and upper-division, and in both Science (B, B6) and Social Science (D, D4). Proposed new upper-division courses on Africa, Europe and Global Economic Patterns will seek G.E. designation.

Geog 3200 (Asian Americans: Spatial Disparity and Multiculturalism), a well-received new course, will be offered more frequently by Prof. Woo. The previously noted new regional course on Africa will be a useful addition to the multicultural learning experience.

The only new program currently envisioned would be a certificate in Sustainable Resource Management. The Outside Reviewer recommended designing a 1000-level course in Geography in an attempt to capture a portion of the increasingly large number of freshman now enrolling at CSUEB. The department has tentatively identified this course as World Regional Geography, a common offering at universities across the country. Ideally, this course would serve to bring students back for other courses in the department, whether they chose to major in Geography or not.

The recently restructured programs address the learning goals of each of the Geography programs. (Learning goals for the Environmental Studies program were clearly established in the previous Plan submitted in 2005.) The two most significant changes involved adding courses to enhance students' abilities in quantitative reasoning and problem solving (ENVT 3400: Environmental Resource Analysis) and application of techniques and methods (Geog 3480/Geog 3480: Applied Field Study). One noteworthy by-product was that class projects for the applied field course in 2006 and 2007 were so professional that they were presented by Prof. Garbesi at sessions of the Energy Specialty Group at the annual meetings of Association of American Geographers. In a break from academic tradition, each of the students was identified as a co-author of the paper.

Section III – Students, Advising, and Retention

The curriculum restructuring mentioned previously in this document was largely motivated by data collected from majors in 2005 – 2007. Department assessment grids list specific assignments (projects, papers, presentations, etc.) within key courses that are used to assess outcomes in five areas:

1. spoken English
2. written English
3. research skills
4. social science (or science) methods
5. technical skills

As the Self-Study notes, “students coming into our two programs share one key characteristic: they believe they are better writers and better researchers than they actually are.”⁶ The department has responded to this concern by emphasizing research and writing in three key classes *required for both majors*. These classes are:

1. GEOG 3450 Literature and Research Methods (5)
2. ENV 4300 Environmental Field Studies (5)
3. ENV 4800 Senior Seminar in Environmental Studies (3)

The department is candid about progress toward improvements in research and writing. The Self-Study notes that most graduates are rated “competent” in research and writing, but few achieve “area of strength” ranking. As writing and research proliferate throughout the department’s curriculum, there should be improvements in this area.

Two other areas of weakness identified in the Self-Study are presentation skills and quantitative skills. The revamp of the department’s degree programs addresses these weaknesses by:

- a. “replacing selected science courses with more scientifically rigorous offerings; and
- b. adding upper-division courses designed to improve our students’ quantitative, analytical and graphical abilities.”⁷

The specific upper-division courses added were ENVT 3400 (Environmental Resource Analysis) and GEOG 4600 (Introduction to Geographic Information Systems).

The Outside Reviewer enthusiastically supported the restructuring of the degree programs but questioned the increase in major requirements from the present 61 units to the proposed 73-76. The faculty is committed to a significant enhancement in the quality of these degree programs, as reflected by the proposed changes. A possible modest lengthening the time-to-degree appears to be an acceptable trade-off.

The department completed an assessment plan in 2003, following initial submission to CLASS in November 2001, and subsequent revisions. The plans for the Geography BS, BA and MA each contain five student learning outcomes, and the plan for the Environmental Studies

⁶ Department of Geography & Environmental Studies **Self-Study** 2007-2008, p. 6.

⁷ *Ibid.*, p. 7

BA contains seven. The SLOs for the Geography BS/BA and the Environmental Studies BA are assessed through four instruments: an Entrance Interview, Portfolio of Student Projects, an Exit Interview, and an Individual Assessment Grid. The Geography MA SLOs are assessed through an Individual Assessment Grid.

The Entrance Interview is conducted with the major advisor soon after a student declares the major. It consists of a semi-structured interview to determine a student's levels of interest and knowledge about geography and environment, and a self-assessment of the student's perceived strengths and weaknesses. At this time the student begins the Portfolio, with writing samples produced prior to entry into the major.

The Portfolio of Student Projects contains evidence of performance in eight areas: quantitative analysis skills; computing; EIR work (ENVT majors); map and graphical projects (GEOG majors); oral presentation; subject area mastery; subject area experience; and writing skills. The portfolio is to be submitted as a part of the Exit Interview and prior to filing for graduation.

The Exit Interview is also conducted with the major advisor or department chair. It consists of a portfolio review; a semi-structured interview to determine a student's levels of interest and knowledge about geography and environment as covered in the Entrance Interview, a self-assessment of the student's perceived strengths and weaknesses; and a Department Assessment Questionnaire.

The Individual Assessment Grid was created for each major. The commonalties are that each student is measured in five performance areas: oral English; written English; research skills; social science methods; and technical skills. Within the grid for each major, specific courses and activities are designated as performance indicators. For example, for the Geography B.S., under the heading, Oral English, the performance indicators are a) Literature review presentation (GEOG 3450), b) Exit Interview (Grad Check), and c) other.

Use of the Assessment Instruments. The department began implementing two of its four assessment instruments (Entrance Interview and Portfolio of Student Projects) in AY 2003-04. The Individual Assessment Grid was made operational for the Winter and Spring Quarters 2004-2005 and used on seniors only. Exit Interviews, which had been conducted on an ad hoc basis since 2001 and from which the faculty gained valuable information that led to recent and ongoing restructuring of the curriculum (such as the addition of a course in quantitative methods), were conducted with most but not all graduating seniors in Environmental Studies and Geography. Those interviews, too, though few in number owing to the small number of students in the graduating class, provided feedback that helped the chair decide which quarter in subsequent years would be best for scheduling various advanced courses (for example, provide a better balanced annual schedule by reducing the total number of advanced courses offered in the Spring and redistributing a couple of them to Fall.)

Since the department has just completed a top-to-bottom reorganization of the curriculum, it would be premature to comment on SLO assessments at this point.

Section IV – Appendices (including comparisons with other departments, enrollment data, and the department’s response to the external reviewer’s comments)

The Department of Geography and Environmental Studies included performance data from 1996 – 2008 in its Self Study.

Program data. Both the Geography and the Environmental Studies programs increased total FTES in the report period between 2005 and 2006. Total FTES for the two programs was 110.3 in 2005 and 132.74 in 2006. Geography generated 84.20 in 2005 and 94.07 in 2006. Environmental Studies produced 26.13 FTES in 2005 and 38.67 in 2006. Enrollment should continue to increase as the department’s restructuring begins to take effect.

Program data extracted from CSUEB Institutional Research and Assessment and added to data presented by the department in the Self-Study indicate a slow but steady increase in the number of majors and degrees awarded in the presence of a stable number of courses and sections offered. SFR is increasing slightly. These data suggest the department is on the path to attaining one of its stated goals, which is to return to the status of having 100+ majors.

The department compared itself to Environmental Studies Departments at seven⁸ California State University campuses:

1. San Bernardino (Env. Studies BA, two different degree tracks)
2. Bakersfield (Env. Resource Management)
3. Sacramento (Env. Studies BA)
4. San Jose State (Env. Studies BA)
5. Sonoma State (Env. Studies BA)
6. Chico (Env. Science BS)
7. Humboldt (Env. Science BS)

The Self-Study also included information about Geography programs of one variety or another at ten CSU campuses, five UC campuses and four comparable campuses outside California.⁹ The comparison noted the degree programs offered at each university, the faculty composition, degree requirements, course offerings, course requirements in selected courses, and program specialties, such as the number of educational options. Examination of the data from the CSUEB Department of Geography and Environmental Studies and these programs revealed that the CSUEB program is reflective of the prevailing wisdom and practices with respect to the depth and range of interdisciplinary and interdepartmental programs. The CSUEB department is one of the smallest departments in terms of full time, tenure track faculty, however it ranks significantly higher than other departments in the ratio of curricular specialties (such as Biogeography) to number of full time faculty. Supporting data appear in the Self Study Appendices F, G and H.

⁸ The Self-Study claims only six campuses (p. 143) but seven are listed.

⁹ The four external campuses were New Mexico State U., Las Cruces; Portland State U., Northern Arizona State U., Flagstaff; and U. of Colorado, Colorado Springs.

Summary

Faced with numerous challenges, the department has managed to sustain quality and variety in its educational programs, participate in university governance, develop a sense of community for its students, and maintain a rigorous research agenda. It has overcome several factors that worked against its previous practice of recruiting students to the major through introductory courses and enrollment is on an increase. The faculty "...lead by force of example..." as is evident in the Self Study.

Summary of supporting data

Several documents reporting data were appended to the self-study: Previous program review and response; Tenure track position announcement; Institutional Research Data; Degree requirements for other CSU environmental programs; Annual enrollment; Geography programs at CSU and UC campuses; and Positions held by Geography and Environmental Studies alumni.. These documents show the following trends:

Performance Review Statistics

1. initial decline in number of undergraduate majors that is gradually reversing itself; stable number of graduate majors
2. stable number of courses and sections taught; increase in variety of courses
3. relatively stable FTES and FTEF; decline in SFR, possibly due to decline in undergraduate majors
4. diverse student population

Degrees Conferred

1. a decrease in undergraduate degrees awarded in Environmental Studies and a stable number of undergraduate and graduate degrees awarded in Geography

Headcount

1. majority of majors from Alameda and Contra Costa counties
2. more junior and senior majors than freshmen and sophomore majors
3. majority of majors are continuing students

Overall Degrees Conferred

1. data on ethnicity, gender and geographic origin support the claim of a diverse student body

3. OUTSIDE REVIEWER'S COMMENTS & THE DEPARTMENT'S RESPONSE

The program review visitation took place on March 6 and 7, 2008. The reviewer was Dr. John Wright, Head, Department of Geography, New Mexico State University. The reviewer spent two days on campus, meeting with all permanent and part-time faculty, the department chair, the Dean of the College of Letters, Arts and Social Sciences, the administrative coordinator, faculty in departments that

are allied with the Department of Geography and Environmental Studies, and the President's Chief of Staff. The summary of Dr. Wright's comments is arranged in order of his mention and under his headings.

Summary of Dr. Wright's comments

Faculty Quality: Dr. Wright described the faculty as "excellent."¹⁰ He noted the diversity of research interests. Of special mention is Dr. Scott Stine, selected as CSUEB Outstanding Professor in 2005. Dr. Wright considers "the faculty to be on a par with those at highly regarded Ph.D.-granting programs." High praise indeed.

New Faculty Lines: It was Dr. Wright's opinion that the department should have a new tenure track position in Cultural/Urban Geography. He particularly noted the commendable internship and field-based experiences CSUEB offers, which are equaled only by a few of the best private and public universities. A longer-term recommendation was for a second tenure-track position focusing on environment and geospatial techniques.

Degrees and Curriculum: Dr. Wright reviewed the negative impact of General Education cluster courses on the number of majors in the department and recommended adding a range of geography and environmental studies courses back into the General Education requirement. He then recommended at least two paid graduate teaching assistant positions, largely to assist with the increasing student load, especially in the GIS lab. Dr. Wright then recommended the department reconsider listing six "Areas of Specialization" on the department web site and in department-printed brochures. He questioned whether this listing was adding to student confusion about where these specialties fit into the department's degree programs.

Sustainability: Dr. Wright commended the efforts of the department in this area, singling out the contributions of Prof. Karina Garbesi and Dr. Michael Lee.

Facilities: Dr. Wright *strongly* recommends "that resources be allocated to creating a state of the art geospatial laboratory with 40 workstations."¹¹ He goes on to predict that expansion of the lab could double the number of majors within 4 to 5 years.

Student Services: Dr. Wright commented that advising in the department is excellent. He suggested that the department "build on their ESRI Certificate program by pursuing other workforce development options for students."¹² He also suggested that expanding and improving the geospatial lab would improve the quality of students choosing these majors.

Promotion and Tenure Policies: The department should lay out the "rubric for measuring progress toward promotion and tenure." He notes that this also appears to be a deficiency across the Hayward campus.

¹⁰ External Reviewer's Report, *op. cit.*, body text p. 2.

¹¹ *Ibid.*, body text p. 5.

¹² *Ibid.*, body text p. 6.

Grants and Contracts: Dr. Wright “strongly recommend[s] that CSUEB amend any policies that stand in the way of faculty receiving summer salary and/or supplementary compensation from external funding.”¹³

Alumni Involvement: Dr. Wright recommends the department reconnect with their alumni. He has several practical suggestions for accomplishing this goal.

Of these recommendations, Dr. Wright considered two the most important: a new tenure-track position in Cultural/Urban Geography and expansion of the geospatial lab. CAPR would add a third recommendation to this list, namely hiring two graduate teaching assistants. Expansion of the lab will be of only limited value without the human resources to make effective use of the additional space and hardware.

Response of the Department

The department acknowledged Dr. Wright’s comments and broadly agreed with his conclusions. For example, the department agreed that the “six areas of specialization” needed (at best) to be repositioned on the department web site. Not surprisingly, the department received the recommendations for new tenure-track positions and expansion of the geospatial lab with considerable enthusiasm. The department also acknowledges that Dr. Wright’s suggestion that the major is too large (73 – 76 units versus the 61 units he would prefer) and agreed to give serious consideration to the ways in which the larger major might negatively impact enrollments. The department also agreed that creation of a 1000 level geography course as part of a freshman cluster was a very good idea. They note that they have the resources for *one* such course (emphasis in original text).

4. PROGRAM’S FIVE-YEAR STRATEGIC PLAN (2008 - 2013)

Curriculum

The department’s degree programs have now been completely restructured. There are multiple objectives for this revamping. Time will tell how well these objectives are met. But there is one area that should not be an issue. The department has tried to attach the word “Environment” to the title of its M.A. program to better reflect the nature of the program. Apparently such a change is too complex for the CSUEB. We encourage CSUEB to think creatively about how to accomplish this task in light of the value to be gained with such a re-naming. This should be easier given the highly complimentary external review document.

Students

The department has begun to see the increasing enrollment, primarily as a result of the acceptance into the General Education program of several lower division courses in both Geography and Environmental Studies. Faculty members have contributed to this with concentrated efforts to raise the visibility of the department in the region’s community colleges in an attempt to entice transfer students. The department has also begun to make its programs known to local high school seniors. The faculty hopes to increase enrollment and the number of majors through its self-titled effort – “recruiting by force of example.”

¹³ External Reviewer’s Report, *op. cit.*, body text p. 7

Tasks to accomplish these efforts, such as preparing a guide describing the societal value of geography, have been identified and a lead faculty member assigned to each task. The department also plans to offer additional courses at the Concord campus, to manage the timing of course offerings, and to institute several activities to improve services to students (i.e. tracking student performance). An important goal area for the coming review period will be to strengthen the graduate program through recruitment, grant support for students, and curriculum modification.

Faculty

It appears the department will lose one faculty member. Prof. Stine informed the outside reviewer of his intention to retire at the end of AY 2009 – 2010. The department will request another tenure-track position in anticipation of this event. Adding support for this recommendation, at least one faculty member is typically away from campus activities each quarter on research or other activities. The faculty agrees that given its academic and teaching pursuits and anticipated expansions, the time has come for it to request an additional tenure track position and the request will be submitted for a search in 09-10. This request is well-supported by enrollment trends, faculty activity, and student needs.

Resources

The department identified physical space and equipment issues as important goal areas for the next review period. Part of this process is to include upgrading equipment for cartography, remote sensing, air-photo interpretation, computing, and global positioning for use on campus and in field coursework.

5. CAPR ANALYSIS OF THE PROGRAM'S FIVE-YEAR REVIEW

a. Program

The Department of Geography and Environmental Studies conducted a thorough and balanced self-review. The data and documentation included in the review package clearly supported the claims and conclusions of the department and outside reviewer. The newly revamped curriculum appears to be sound, with a clear direction for future growth. Student enrollment is growing following a decline that tracks with limited access to lower division courses in the General Education clusters. Enrollment growth and number of majors are predicted to continue throughout the next review period. The department has plans to offer additional courses at the Concord campus. It has revised its mission statement, and identified student-learning outcomes and a detailed assessment process.

CAPR strongly recommends expansion and upgrading of the geospatial lab. This would allow the department to continue their recent pattern of expanding enrollment. The two graduate teaching assistants will be a necessity for any faculty member to teach a hands-on computer-based course enrolling 40 students. Naturally, adding a tenure-track faculty member would also help extend this trend.

The department has ambitious plans for enhancing existing programs and expanding its graduate program. In the context of revising its curriculum, it is also determining the direction of future tenure-track requests, particularly in light of the possibility that Prof. Stine, a nationally recognized authority on climate change, intends to retire after AY 2009-2010.

CAPR urges the University to try to overcome whatever complexities exist in renaming the MA program. Repackaging the MA degree by wrapping it in a name that better describes the content would assist the department in attracting FTES. Carl Bellone has discovered that changing the name of the graduate program would require approval of the Chancellor's Office. A name change would require changing the system-wide Master Plan documents. In Bellone's view, the small size of the department's graduate program does not warrant that kind of effort at this time. CAPR urges the department to proceed in this direction as resources permit.

The Department of Geography and Environmental Studies is to be commended for the assessment activities it has completed to date. The department has made an excellent beginning to the assessment process. CAPR has several recommendations for continued assessment activities that should be addressed in the next review.

1) Outcome Indicators for undergraduate and graduate students include portfolios, yet there is no objective measurement of the goals or quality of the portfolios. The department should develop a rubric for each Outcome to evaluate the associated portfolio projects and demonstrate student learning for the respective outcome. Creation of a portfolio is the evidence of a student's learning; the rubric is an evaluation of the quality of that evidence.

2) Primary and direct outcome data to show the distribution of student performance on the Outcome rubrics should be included.

3) Formative assessment activities used as Outcome Indicators are not supported by data from clearly identified direct measurements of student learning outcomes. The department should review its Outcome Indicators and determine a method of direct measurement for each indicator. Data from these measurements should be collected over the coming years.

4) The department identified some trends in its limited assessment data. It is encouraged to examine future data for trends in parallel outcomes in the undergraduate or graduate programs in order to support potential instructional changes.

5) The department indicated that it has current collaborations with other programs (such as Environmental Science and International Studies) and has plans for future collaborations. CAPR recommends that the department continue to forge alliances with other departments and programs to increase enrollment.

b. Resources

The faculty has been vigorous and excellent stewards of the department's resources. As a result they have increased FTES and maintained a quality academic program despite a flat number of majors and somewhat antiquated technological equipment. The department has begun to acquire new equipment and should be supported in acquiring additional technology to make it competitive with comparable programs in California and other states. Of primary importance in this effort is expansion of the geospatial lab.

6. CAPR RECOMMENDATION FOR CONTINUATION OF THE PROGRAM

CAPR recommends the continuation of the B.S. and B.A. in Geography, the B.A. in Environmental Studies and the M.A. in Geography without modification.

DATE OF THE PROGRAM'S NEXT FIVE-YEAR REVIEW

2012-2013