Chemistry and Geophysical Sciences Department

IX. Planning and Budgeting

b. Past Planning Goals

Year	Goal #	Description	Relation	Actions Relation	Outcome	Progress
2002	1	Academic Rigor and Curriculum		Upgraded computers in our computer lab, continue to employ computer-based instructional materials, both software and web-based, adopted the OWL web-based homework package with the adoption of the latest edition of our Chem 60/68 text and made it mandatory for all students.		Steps must be taken to enforce prerequisties, and to identify and implement SLO's. The Chem 102 laboratory program needs to be updated and modernized. Honors sections for courses in the geophysical sciences should be deceloped and offered. Efforts to upd
2002	2	Increase Enrollment and Retention		Began offerin Friday and Saturday sections of Chem 60, and Geography 1 and 15 for non-traditional students reactivated the Chemistry 221 Biochemistry corse due to student demand. Created a new course in environmental science, Environmental Science 1		The geophysical sciences need to be better publicized. The courses wil be highlighted in the catalog and in the schedule of classes. SLO's will be developed for several classes in all disciplones.

b. Past Planning Goals

Year	Goal #	Description	Relation	Actions Relation	Outcome	Progress
2002	3	Offer classes at the times and places students need them		non-traditional offerings of chemistry and geology courses continue to be offered, including Friday, Saturday, and 8-week courses. Courses in meteorology and oceanography have been reactivated. Biochemistry has been reactivated and is offererd in the summer as an 8-week course and will be offered in Spring 07 as an 8-week course.		"Investigate the feasibility of creating a certificate program in Geographical Information Systems. This is currently a ""hot"" area and seems promising as a certificate program. Also, an ourteach and publicity program needs to be developed to boost enrollme"
2002	4	Equipment and Technology		Supply and equipment holdings for the geiphusical sciences have been significantly increased and modernized, acquired a modern polarimeter via donation from Occidental College. Obsolete computers in the computer lab have been designed for the geiphysical sciences in the new SciTech building		More work need to be done toreplace obsolete equipment and supplies in bothchemistry and the geipgysical sciences, particularly pH meters, centrifuges, classroom maps and a weather station. Furthermore, the department needs to provide the geophysical scie
2006	1	Identify and incorporate SLO's into all courses		Student learning outcomes (SLO's) are mandatory and necessary for accreditation. Courses will be prioritized for identification and implementation of SLO's.		"A department "" Curiculum Working Group"" is constituted and given responsibility for takent the lead on SLO's. Members of the working group attend workshops on ideentification and assessment of SLO's. Possible SLO's methods for assessment, and the initial "

b. Past Planning Goals

Year	Goal #	Description	Relation	Actions Relation	Outcome	Progress
2006	2	Improve the academic climate of the geosciences dilcipline		The geosciences discipline has been neglected for several years prior to merging with chemistry. During thes time the descipline equipment resources and facilities became run-down faculty colleguality dwindled, courses were abandoned and students involvement in extracurricular activities almost extinguished.		Cleaning and refurbishing the deparment facilities is already underway, but much more remains to be done. Most of the basic cleaning should be completed by Summer 2007. Signs should be replaced immediately, displays should be updated and cabiner=try chose
2006	3	Improve and modernize chemical safety, storage, and inventory processes		The deparment is slated to move into the Science and Techmology building. This facility wil have updated chemical storage facilities, as well as kimits on the amount of chimical storage. The current way of storing chemicals in the department needs to be changed to prepare for the future reality of chemical storage. This needs to be done for the health and safety of faculty, staff, and students. The current situation in the Chemistry Building urgently needs imporvement.		The safety working group will prioritized by December 2007. CERT training is offered thoughout the year. All faculty will be encouraged to undergo CERT training By May 2007.
2006	4	Optimize Scheuling of Core and Specialty Courses		Introduction of several new specialty courses over the last 2 years has resulted in erratic enrollmetn rates. Stabilizing enrollment requires carful time selection and consistent scheduling to allow student interest to build.		Select and stabilize times for the new specialty classes to allow time to build a rehular expectation by students for these corses. Experiment with offerings of specialty courses during winter and summer sessions if demand will support them

b. Past Planning Goals

Year	Goal #	Description	Relation	Actions Relation	Outcome	Progress
2006	5	Revise laboratory manual for Chemistry 102 lab program		The Chem 102 lab manual is severely outdated and in need of overhaul, and needs to better reflect the current lecture curriculum. Currently, instructors are testing our new experiments in their classes to test the feasibility of incorporating the new experiments into the Chem 102 lab program.		The revision of the chem 102 manual has started. New experiments ar being tested, a chemistry faculty member will be appointed to take the lead the chemistry discipline in revising the manual. Once a final set of experiments is chosen the new manual will
2006	6	Update Geosciences Equipment and Technology		The Geosciences have not received substantial equipment upgrades for several years. As a result, wall maps are inaccurate and dilapidated, field equipment is missing or disorganized, meteorological equipment is unusable, and demonstation of current techmology used in the geosciences is not possible. Equipment upgrades will make the department more visible and more popular. This may also improve interest in continued studies for transfer students.		Space will be clearedto install existing computer equipment in 2006-2007 so that instructores can begin incorporating GIS curriculum into their courses. The needs for additional equipment will be assessed in 2007 for furterhexpension of a GIS lab. Funding

e. New Planning Goals

Describe departmental planning goals for the next 6 years, explaining how they support the various college plans, including:

- *Strategic Priorities of the College's Strategic Plan: http://www.lacitycollege.edu/public/strategic_planning.htm#strategicplan*

- *Educational Master Plan: http://www.lacitycollege.edu/public/EduMasterPlan.pdf*

- *Technology Master Plan: http://www.lacitycollege.edu/resource/oac/IT_Plan_Draft03.pdf*

New Planning Goals

Year	Goal #	Description	Relation	Outcome
2008	1	Academic Rigor and Curriculum (ongoing)	Priority 1: a quality chemistry program must be rigorous and expect high standards from students Priority2: the department must continue to maintain its student-centered outlook on teaching. Priority 5: continued excellence will continued to make our students desirable at transfer institutions.	Increased retention rates; increased success rates; increased transfer rates; increased number of AS degrees awarded.
2008	2	Increase Enrollment and Retention (ongoing)	Priority 2: a student-centered and welcoming environment gives the students a sense of community and makes the department a desirable place to take courses. Priority 4: a student-centered environment results in greater interaction between students, faculty and staff.	Increased enrollment, retention and success in all courses at all levels.
2008	3	Offer classes at the times and places students need them (ongoing)	Priority 4: students need a variety of options for when and where to take classes.	Increased enrollment in all classes. Increased number of course sections offered. Adoption of a new, non-science majors chemistry course for Northeast campus.
2008	4	Equipment and Technology (ongoing)	Priority 1: access to the same modern instrumentation/technology that is available in the workplace and universities will prepare our students for professional or academic life beyond LACC. Priority 5: The quality of science programs is judged by the quality and use of modern technology.	Regular replacement of older computers with newer computers. Furnishing the future computer studio lab for use of computer-assisted lecture and lab instruction. Replacement of old/obsolete instruments. Incorporation of the new weather station in geosciences instruction.

New Planning Goals

Year	Goal #	Description	Relation	Outcome
2008	5	Improve and modernize chemical safety, storage, and inventory processes (ongoing)	Priority 2: Safe procedures in the chemistry lab contributes to a safe learning environment. Priority 5: modern safety methods reflect the quality of a chemistry program.	Continued replacement of outdated storage containers with modern, approved storage. Continued replacement of outdated chemicals with fresh chemicals. Implementation of "best practices" in both the instructional laboratory and in maintenance of the chemical inventory.
2008	6	Expand geosciences course offerings beyond the first-year and introduce new lab courses	Priority 1: a geosciences program with diverse course offerings will attract students who are serious about pursuing majors and careers in the geosciences. Priority 5: expansion of course offerings in geosciences will increase the visibility of the geosciences program and improve its reputation among students and universities.	Implementation of courses in mineralogy and petrology. Implementation of lab courses in meteorology and oceanography. Implementation of courses in world regional geography and California geography.
2008	7	Develop a Geographic Information Systems (GIS) certificate program	Priority 3: development of GIS will require collaboration with experts in academe and the private sector. Priority 4: a GIS certificate will make students employment-ready for entry into this high-demand field.	Faculty hired to develop program. Program implemented and certificates awarded. Graduates enter the workforce in GIS.
2008	8	Environmental/Sustainability science and technology	Priority 1: curriculum in these areas will show LACC to be on the leading edge of growth disciplines and technologies. Priority3: partnerships with outside entities will be integral to developing such programs. Priority 5: these areas are growth areas for the near and long terms.	Development and implementation of environmental science/sustainable technologies curricula. Development of related certificate program(s). Enrollment of students in these programs.

f. New Action Plans and Special Projects

Describe the specific action plans and special projects that will be undertaken during the next 6 years to achieve the goals described above.
There should be at least one action plan for each goal listed, and there may be more than one action plan for a goal. Plans and projects may include curriculum and program development, establishment of new labs or facilities, outreach and recruitment efforts, public/private partnerships, etc.
Include estimated costs and projected time lines for implementation.
You can add as many New Action Plans and Special Projects as desired.

New Action Plans and Special Projects

Year	Goal #	Project #	Project Name	Planned Activities	Individuals Responsible	Expected Outcomes	Projected Costs*	Total Cost	Project Start Date	Project End Date
2008	1	1	Academic Rigor and Curriculum	a. Incorporate innovative teaching and assessment techniques into our course delivery. b. Use computer-aided instruction methods in chemistry and geosciences courses. c. Update the chemistry and geosciences curriculum to reflect current standards and trends in these disciplines. d. Identify, incorporate and assess Student Learning Outcomes in all courses at all levels. e. Expand the use if instrumental and computer-aided instruction at all levels.	Various	1. Make the study of chemistry and the geosciences attractive to the students in our service area; 2. Increase retention rates, the number of successful entries into vocational programs such as nursing, and the number of transfers and AS chemistry degrees awarded.	1. Conference attendance for faculty, $2,000	$2,000	Ongoing	Ongoing

2008	2	2	Increase Enrollment and Retention	a. Evaluate student needs regarding scheduling. b. Publicize prerequisites. Continue to work with Counseling and Matriculation to make sure students are properly advised. c. Adopt a general educaton chemistry course to serve satellite centers. d. Explore distance-learning options for chemistry and the geosciences. e. Recruit students from high schools and surrounding employers. Publicize courses through brochures and leaflets. f. Use the department web page to promote the department. g. Advertise the availability of tutoring, and provide a special place for students to study and receive tutoring. h. Maintain an "open door" office hour policy and encourage students to approach any instructor for help. i. Provide seminars, social activities and a Science Club for our students. j. Extend computer lab hours to Fridays and weekends. k. Move into the Science and Technology Building. l. Develop a "weather ticker" on the department and college websites to provide real-time weather data from our weather station. m. Collaborate with Cal State Los Angeles through the Bridges to the Future Program and the Math/Science Teachers Initiative.	Various	Make the study of chemistry and geosciences attractive to more students in our service area. Increase enrollment in chemistry and geosciences courses at all levels. Increased retention rates, particularly in preparatory and general chemistry. Expansion of the geosciences course offerings beyond the first-year level.				

New Action Plans and Special Projects

Year	Goal #	Project #	Project Name	Planned Activities	Individuals Responsible	Expected Outcomes	Projected Costs*	Total Cost	Project Start Date	Project End Date
2008	3	3	Offer classes at times and places studends need them	a. Design/adopt non-majors chemistry course for satellite centers. b. Evaluate distance-learning options for chemistry and geosciences. c. Continue to schedule weekend classes. d. Develop honors sections for the geosciences. e. Develop lab courses for meteorology and oceanography.	Various	Increase enrollments and retention rates at all levels. Increased number of sections and increased number of FTE hours of instruction.	1. Faculty: eventually an additional full-time geosciences instructor, $80,000	$80,000	Ongoing	Ongoing
2008	4	4	Equipment and Technology	a. Purchase and deploy computer-assisted data collection hardware for instructional labs. b. Use computer-aided instruction and drills in chemistry and geosciences. c. Purchase modern A/V equipment for classrooms and labs inSciTech. d. Maintain/replace current instrumentation and purchase new instrumentation.	Various	Increased enrollment, retention rates and success rates. Increase the prestige and respect for instruction in the department. Make LACC the place to go for science majors of all kinds.	3. ComWEB system for computer lab, $60,000; Data collection interfaces with probes for labs, $25,000; Repair budget for instrumentation, $2,000 per year; Replace UV/Vis spectrometer, $10,000	$97,000	Ongoing	Ongoing

New Action Plans and Special Projects

Year	Goal #	Project #	Project Name	Planned Activities	Individuals Responsible	Expected Outcomes	Projected Costs*	Total Cost	Project Start Date	Project End Date
2008	5	5	Improve and modernize chemical safety, storage and inventory processes	a. Identify and target safety and storage equipment for replacement. b. Identify needed additions to storage and safety equipment inventory. c. Hire 0.5 FTE lab tech to provide additional coverage/assistance in the stockroom. d. Work with IT to develop an automated inventory process for equipment and chemicals.	Safety working group	Improved chemical safety, improved inventory control, improved stockroom service to faculty and students.	2. Additional 0.5 FTE lab tech, A-basis, for days and/or weekends, $25,000 3. Purchase new storage containers for chemicals and waste, $5,000.	$30,000	Ongoing	Ongoing
2008	6	6	Expand geosciences offerings beyond first year and offer new lab courses	a. Engage and work with geography and geology departments from local universities, e.g. Cal State L.A. throught the MSTI program. b. Develop curriculum and write/revise course outlines. c. Identify equipment needs for new courses.	Geosciences faculty	Increased visibility of the geosciences program; increased interest, enrollment and retention in the geosciences; increased transfers to geography and geology programs at universities.	1. Additional geography and earth sciences faculty (1 each): 2 x $80,000 = $160,000 3. Equipment for mineralogy lab, oceanography lab, meteorology lab: $75,000	$235,000	Fall 2008	Fall 2014

New Action Plans and Special Projects

Year	Goal #	Project #	Project Name	Planned Activities	Individuals Responsible	Expected Outcomes	Projected Costs*	Total Cost	Project Start Date	Project End Date
2008	7	7	Develop a Geographic Information Systems (GIS) certificate program	a. Identify courses needed for program by engaging with local colleges and universities with GIS programs. b. Develop curriculum and write course outlines as needed. c. Identify and acquire equipment and supplies needed. d. Hire faculty with GIS expertise.	Geosciences faculty	Increased enrollment in geography; increased enrollment for college; enhanced reputation for geosciences at LACC.	1. Additional geography instructor: $80,000 3. Computers and software for GIS: $60,000	$140,000	Fall 2008	Fall 2014
2008	8	8	Environmental/sustainability science and technology	a. Continue participation with LACCD Sustainability Group to work on district-wide curricular goals and to clarify minimum qualifications for the Environmental Science discipline. b. Identify and design identify possible degree and certificate programs. c. Identify and design courses.	John Freitas, Christie O'Boyle, various other faculty and staff.	Students graduate with degree/certificates in environmental-related fields. Increased enrollment at LACC due to increased demand for people with skills and training in these fields.	1. Possible hiring of an Environmental Science instructor: $80,000	$80,000	Fall 2008	Fall 2014

**Projected Costs*
1.Faculty Requirements/Costs
2.Staff Requirements/Costs
3.Equipment Requirements/Cost
4.Facilities Requirements/Costs
5.Other Requirements/Costs