

Department of Geology University of Puerto Rico-Mayagüez Strategic Plan, 2017-2021

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Mission and Objectives

1. Prepare students for professional positions in industry, government, and for careers in academic research and teaching.
2. Increase awareness of Earth and Environmental Sciences in liberal arts, education, and other science majors.
3. Educate engineers in the geological concepts integral to competent engineering practices.
4. Maintain the Department of Geology as a center for research in Caribbean Earth and Environmental Sciences.
5. Develop a greater awareness of Earth Sciences in the general public through community outreach programs.
6. Conduct assessment of all facets of the Department.

I. Faculty

Goals	Objectives	Actions	Success indices	Measurement instruments
Retention of faculty and/or maintaining the same number of faculty members (13)	The positions that become vacant will be filled in areas of perceived departmental need. Provide support for new faculty by working with them to identify their needs.	Recruitment process through local, U.S., and international advertisement in prominent trade journals. Pre-interviews at geological conferences. Search process should be timely.	Contracts signed. Tenured faculty.	Stable number of faculty members per year.

		Mentors for new faculty, apply for startup funds for class materials and research, and annual departmental evaluations.		
Continue faculty commitment to quality teaching and interactions with students.	To improve placement of students in geoscience careers and graduate programs. Include students in research, including the training and use of research facilities.	Revision of undergraduate and graduate curriculum. Hiring new faculty in key specialties. Develop modern classroom facilities oriented to geological disciplines.	High undergraduate retention and graduation rates Post-graduation employment in geology Presentation of revised graduate and undergraduate curriculum	Number of students graduated per year. Number of graduated students hired in geoscience areas. Number of graduated students accepted in graduate programs. Approval of new graduate and undergraduate curriculum.

<p>Obtain external funding for research projects within the department.</p>	<p>Encourage faculty involvement in research and generation of external funding to foster intellectual excellence.</p>	<p>Maintenance and improvement to the basic research facilities of the Department: isotope ratio mass spectrometer; electron microprobe laboratory; thin section laboratory; sedimentology laboratory; X-ray diffraction laboratory; geochemistry laboratory, remote sensing equipment, and the Puerto Rico Seismic Network.</p> <p>Hire capable technicians to manage the analytical equipment and the sedimentation/thin sections laboratory.</p> <p>Provide administrative and technical support for the submission and execution of research proposals.</p> <p>Foster stronger links and collaborations with research groups such as PRSN, as well as other departments (Marine Sciences, Chemistry, Biology, Physics), and faculties (Engineering, Agriculture).</p>	<p>Number of proposals approved submitted</p> <p>Number of proposals approved</p> <p>Number of proposals denied</p>	<p>Number of 1st author papers published in recognized peer- reviewed journals.</p> <p>Number of co-authored papers published in recognized peer- reviewed journals.</p> <p>Total dollars brought to the department from external funding.</p> <p>Number of graduate students supported with external funding.</p> <p>Permanent scientific equipment obtained for the department with external funding.</p> <p>Number of abstracts presented at meetings.</p>
<p>Improve visibility of the geology department in the greater academic community.</p>	<p>Develop local, U.S., and international recognition.</p>	<p>Earth Sciences Week involvement.</p> <p>Internet sites in the geology page with information and current research in the different disciplines covered by the department.</p> <p>Advertisement of the geology department in National and International meetings.</p> <p>Annual Geology Symposium.</p> <p>Regular seminar series which invites pertinent scholars from on- and off-island. Inclusion of distinguished lecture series.</p>	<p>Number of U.S. and international graduate students applying to the department.</p> <p>Number of outside speakers/visitors to our department.</p> <p>Distribution of information about our graduate program to other university geology departments.</p>	<p>Number of papers published in recognized peer- reviewed journals.</p> <p>Number of presentations at meetings.</p> <p>Attendance at off-island workshops.</p> <p>Membership in international organizations.</p> <p>Number of sites in our</p>

				<p>internet page covering the offered disciplines in the department.</p> <p>Number of times the geology department is advertised in local, U.S. and international meetings.</p>
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II. Students

Goals	Objectives	Actions	Success indices	Measurement instruments
Facilitate the timely graduation of students.	Undergraduates finishing their degree in four years. Graduate Students finishing their masters in three years.	<p>Appointment of a specific professor - coordinator- in the department to work with student affairs.</p> <p>Identify student's problems by following their curriculum.</p> <p>Provide support (external and internal) for students with special needs in certain courses.</p> <p>Annual meetings of each graduate student with the members of the departmental graduate committee and coordinator.</p>	<p>High % of undergraduate students graduating in four years.</p> <p>High % of graduate students graduating in three years or less.</p>	<p>Percentage of undergraduate students graduating in four years.</p> <p>Percentage of graduate students graduating in three years or less.</p>
Measure the quality of our program, address problems, and improve overall value of the program.	Objective assessment of our students compared to national standards tests (GRE) / and RUM programs.	Acquire and analyze annual statistics of student standing on national tests (GRE) / and RUM programs, compared to applicants to our graduate program and our students.	Students at or above median in objective test results.	Measure the quality of our program, address problems, and improve overall value of the program.
Establish a graduate program of excellence.	Provide well-trained geoscientists with advanced degrees in multiple disciplines.	<p>Advertising materials forwarded to geology departments in the US and internationally to enhance recruiting efforts.</p> <p>Apply to grants that include benefits for graduate students.</p>	<p>Achievement of stable and diverse graduate student population.</p> <p>Number of U.S. and international</p>	<p>Number of U.S. and international graduate students graduating from the department.</p> <p>Ratio of local vs.</p>

		Advertisement of the department at local, U.S., and international meetings.	graduate students applying to the department.	U.S. vs. international graduate students.
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III. Academic Programs

Goals	Objectives	Actions	Success indices	Measurement instruments
Create awareness in the community of the importance of geological sciences.	Familiarize non-geology majors with earth system science.	Offer lower level courses to non-majors as a service to the university community. Annual Geology Symposium. Earth Sciences Week involvement. Encouragement of student societies to participate in outreach programs. Be receptive of interviews by media agencies.	Number of courses offered to non-majors per year.	Number of non-major students taking earth sciences courses per year.
Maintain strong curriculum in geosciences for undergraduates that includes undergraduate research.	Improvement of quantitative training of undergraduates. Prepare undergraduates to use the research equipment/instrumentation housed in the Department of Geology. Promote undergraduate research.	Restructure current courses to incorporate more quantitative and/or computer based assignments and teaching. Create short courses focused on quantitative and/or computer-based training. Establish (agree) specific computer software to be used in all classes. (Matlab/R/ArcMap/Graphical Software/Agisoft PhotoScan, etc.) Require students to choose from a list of designated departmental courses that will prepare them to use the research equipment/instrumentation housed in the Department of Geology. Introduction of elective undergraduate courses that include analytical methods. Undergraduate courses mainly focused on active	Number of courses offered that incorporate quantitative assignments and teaching. Number of courses offered that incorporate computer based assignments and teaching. Number of courses offered that incorporate analytical methods and the use of the state-of-the-art equipment housed in the Department of	Number of students enrolled in classes that incorporate quantitative assignments and teaching. Number of students enrolled in classes that incorporate computer based assignments and teaching. Number of students enrolled in classes that incorporate analytical methods and the use of the state-of-the-art equipment housed in the Department of

		<p>research.</p> <p>Create an undergraduate curriculum that is consistent with the model of most US institutions.</p>	<p>Geology in assignments and teaching.</p> <p>Number of courses offered that are focused on active undergraduate research.</p>	<p>Geology in assignments and teaching.</p> <p>Number of students enrolled in classes that are mainly focused on active undergraduate research.</p>
Student development.	<p>Foster exchange programs and internships for undergraduate and graduate students with various government agencies and national laboratories, local and regional industry, and other U.S. and international universities</p> <p>Expose students to new ideas and ongoing research in the geosciences</p> <p>Expose students to a wide variety of geological environments in Puerto Rico and outside Puerto Rico (e.g. United States, Dominican Republic, Lesser Antilles, Central America).</p>	<p>Inform students about internship and exchange programs; e.g., U.S. Geological Survey; Keck; Soars; U.S. Nuclear Regulatory Commission; U.S. Army Corps of Engineers, RESESS, Smart, internships at universities, and others.</p> <p>Bulletin board in the department with announcements of foster exchange programs and internships for undergraduate and graduate students with various government agencies and national laboratories, local and regional industry, and other U.S. and Central and South American universities</p> <p>Start and maintain a visiting lecturer program.</p> <p>Develop geological excursions in Puerto Rico and outside Puerto Rico (e.g. United States, Dominican Republic, Lesser Antilles, Central America, Europe).</p>	<p>Number of foster exchange programs and internships announced in the department's bulletin board.</p> <p>Number of geological excursions in Puerto Rico and outside Puerto Rico.</p>	<p>Number of undergraduate students that participate in foster exchange programs and internships</p> <p>Number of visiting lecturers each year</p> <p>Number of undergraduate and graduate students that participate in geological excursions in Puerto Rico and outside Puerto Rico.</p>
Develop a Geophysics Program in the Department of Geology highlighted by activity in the Puerto Rico Seismic Network.	Prepare students for careers and advance studies in geophysics.	<p>Establish a curricular sequence in geophysics.</p> <p>Establish an MS degree and curriculum in geophysics.</p>	<p>Progress in the development of the curricular sequence in geophysics.</p> <p>Date of the establishment of a curricular sequence in geophysics.</p>	<p>Number of students in the geophysics program.</p> <p>Number of students following careers in geophysics.</p>
Develop educational	Further solidify the importance of the seismic	Incorporate learning exercises that involve the	A community of	Number of classes

experiences which utilize the Puerto Rico Seismic Network faculty, staff, and institution.	<p>network as a part of the educational experience for geology students.</p> <p>Promote courses offered by faculty members in the seismic network.</p> <p>Promote MS thesis projects that involve research at or including the seismic network.</p>	<p>seismic network in more classes at the undergraduate and graduate level.</p> <p>Inclusion of seismic network faculty and staff in class and departmental field trips.</p>	<p>knowledgeable, competent, and aware undergraduate and graduate students in regards to the purpose and role of the seismic network.</p> <p>Engagement of students and faculty in Seismic network events, drills, and activities.</p>	<p>that incorporate learning exercises which involve the seismic network faculty, staff, and institution.</p> <p>Number of classes offered by seismic network faculty.</p>
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IV. Research

Goals	Objectives	Actions	Success indices	Measurement instruments
Improve research, research skills, and research output and products.	<p>Stimulate undergraduate involvement in multiple research projects.</p> <p>Stimulate graduate involvement in research projects other than their thesis.</p>	<p>Revise the undergraduate curriculum to require one semester of research, and encourage talented and interested students to continue for a second elective semester of research in a different subject.</p> <p>Encourage undergraduate students to apply and participate in summer programs and internships (Keck, Smart, USGS, UNAVCO, NASA, others).</p> <p>Encourage graduate students to apply and participate in summer programs, internships, and fellowships (Keck, Smart, NASA, USGS, NSF, Army Corps, others).</p> <p>Shaping graduate classes to produce publishable research.</p>	<p>Number of research projects available for undergraduate students.</p> <p>Number of research projects available for graduate students.</p> <p>Number of professors available as primary advisors for undergraduate students.</p> <p>Number of professors available as primary advisors for graduate students.</p> <p>Quantity of funds available for</p>	<p>Number of undergraduate students per year in external internship programs.</p> <p>Number of graduate students per year in external summer programs and internship per year.</p> <p>Number of research projects produced per year by undergraduate students.</p> <p>Number of master thesis projects produced per year by graduate students</p> <p>Number of peer</p>

			<p>undergraduate research projects.</p> <p>Quantity of funds available for graduate research projects.</p> <p>Analytical equipment available for undergraduate research projects.</p> <p>Analytical equipment available for graduate research projects.</p>	<p>reviewed publications produced per year as a result of undergraduate research.</p> <p>Number of peer reviewed publications produced as a result of master thesis research.</p>
	<p>Encourage undergraduate and graduate students to present their research results in local, national and international conferences.</p>	<p>Encourage undergraduate and graduate students to participate in local poster and oral presentations of their research (e.g. Sigma Xi, PRISM, NEAAGEP, Annual Geology Department Symposium)</p> <p>Encourage student participation at national and international scientific conferences</p>	<p>Number of professors available as advisors for undergraduate students to help them develop presentations.</p> <p>Number of professors available as advisors for graduate students to help them develop presentations.</p> <p>Quantity of funds available to fund participation of undergraduate and graduate students in U.S. and international scientific conferences.</p>	<p>Number of presentations given by graduate students in local scientific conferences.</p> <p>Number of presentations given by graduate students in U.S. scientific conferences.</p> <p>Number of presentations given by graduate students in international scientific conferences.</p> <p>Number of presentations given by undergraduate students in local scientific conferences.</p>

			Number of presentations given by undergraduate students in U.S. scientific conferences.
			Number of presentations given by undergraduate students in international scientific conferences.
Increase external funding, especially the number of grants to individual investigators.	Encourage the faculty to write proposals for external funding.	Number of grants awarded per year.	Number of credits of release time offered to professors with external funding.
Increase collaboration with other universities and federal laboratories.	Encourage and facilitate the possibilities for faculty to visit other institutions, either for sabbatical leaves or shorter periods. Encourage the faculty to write grants with faculty members from other universities in the UPR system by facilitating the use of the equipment/instrumentation housed in the Department of Geology by these other institutions.	Number of organizations doing collaboration with the department.	Number of projects that include the cooperation of other Universities and federal laboratories.
Increase output of research papers in refereed journals	Encourage faculty to submit a minimum of one article per year in a refereed journal to increase exposure and chances for funding. Identify and pursue funding to establish a yearly award to recognize the professors with (the most) peer review publications each year.	Research papers submitted and successful grant proposals	Number of publications in refereed journals per professor per year.
Establish the Department as a center for Caribbean geoscience research.	To maintain the Geology Department as a center of permanent research at the University of Puerto Rico.	Apply for funding wherever available. Acquire equipment to perform research. Make efficient use of our departmental spaces to conduct research	Degree of success in obtaining grants and their continuation Number of proposals in a specific number of years.
Enhance collaborations between all faculty	Research products that are complete and multi faceted, rather than limited.	Multi-dimensional grant proposals that include various subdisciplines of geological sciences.	Number of published papers Active projects that include two or more

members, including those in the Puerto Rico Seismic Network.			with two or more authors from the department.	faculty members.
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V. Facilities

Goals	Objectives	Actions	Success indices	Measurement instruments
State of the art learning environment and facilities.	Provide tools to maximize student learning in the classroom and laboratories.	Internet access in all classrooms/labs, computer projectors, sound system for amphitheatres, clean white boards, smart-boards, physical demo models, DVDs, maps	All classrooms/labs meet minimum technical standards	% of classrooms/labs with modern facilities and tools
State-of-the-art computer systems for students and professors.	Provide computer laboratories for undergraduate and graduate students. Provide computer systems for faculty members	Undergraduate student computer laboratory created on fourth floor. Longer staffed hours. Continuous improvement of the student computer laboratory. Continuous improvement of computer systems for faculty members.	Number of years the computers in the laboratory facilities have been in use. Number of years the professors have used the same computer.	Number of computers available in the laboratory. Quality of the computer equipment available in the laboratory. Quality of the computer equipment available in the professor offices.
Adequate transportation for increased student body.	Support for field teaching and field research activities.	Identify and pursue sources of funding to purchase new vehicles as necessary and to cover maintenance expenses to keep existing ones in working order.	Acquisition of 2-3 transport vans and a 4WD field vehicle.	Number of vehicles available in the department to do field teaching and field research. Mechanical status of vehicles available in the department to do field teaching and field research.
Maintain and improve state-of-the-art analytical facilities	Provide reliable in-house research facilities to carry out analyses and train students.	Apply for grants to get new instrumentation and upgrade the instrumentation already available. Provide continuous maintenance and care to the research and analytical facilities and equipment.	Functionality of the machines available.	Number of state-of-the-art analytical machines available in the Geology Department.

				Number of analytical tests performed per machine in the department per year.
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VI. Outreach and Public Service

Goals	Objectives	Actions	Success indices	Measurement instruments
Improve understanding of geological processes in the community.	Establish the Department of Geology as the Puerto Rico center for information on geosciences	<p>Offer conferences to the community including K-12, boy scouts and girl scouts, and other educational associations and clubs.</p> <p>Maintain and expand the Geology Museum.</p> <p>Participate in local and national science fairs as judges</p> <p>Continue seismic hazard awareness programs through the Puerto Rico Seismic Network</p> <p>Continue Puerto Rico Seismic Network Tsunami Alert Network awareness programs</p> <p>Continue participating in outreach programs, such as AFAMAC and AMP, to give workshops to teachers and students of the educational system of PR.</p> <p>Production and constant update of the Geology Department internet page.</p> <p>Develop a UPRM Geology Research blog (Spanish and English) where professors and students write short entries on research accomplishments and progress. The entries will include field work, professional meetings, and laboratory work.</p>	Degree of success in graduate and undergraduate student recruitment in the Department of Geology.	<p>Record of every interaction of professors and students with visitors from the community that visit the department for help.</p> <p>Number of conferences to the community including K-12, boys and girl scouts, and other educational associations and clubs per year.</p> <p>Number of participations in local and national science fairs as judges.</p> <p>Number of workshops and other educational activities by the Puerto Rico Seismic Network</p>

				<p>Number of workshops and presentations given to teachers and/or students</p> <p>Number of visits to the Geology Department web site</p>
<p>Provide the community with earth science knowledge.</p>	<p>Participate in community activities.</p> <p>Participation in educational activities related to geology around the island.</p>	<p>Continue offering the Annual Symposium on Caribbean Geology</p> <p>Encourage alumni, faculty, and staff visits to elementary and secondary schools;</p> <p>Expand the departmental website to include additional information about the activities of the department and the geology of Puerto Rico.</p> <p>Continue seismic hazard awareness programs through the Puerto Rico Seismic Network</p> <p>Continue Puerto Rico Seismic Network Tsunami Alert Network awareness programs</p> <p>Continue participating in outreach programs, such as AFAMAC and AMP, to give workshops to teachers and students of the educational system of PR.</p>	<p>Degree of success in the graduate and undergraduate student recruitment in the Department of Geology.</p>	<p>Maintain a record of every interaction of professors and students outside of the department (including the Puerto Rico Seismic Network), in the community and the visitors from the community that visit the department for help.</p>

VII. Funding

Goals	Objectives	Actions	Success indices	Measurement instruments
<p>Improve funding.</p>	<p>Find non-traditional sources of funding.</p> <p>Take advantage of our minority status for funding opportunities.</p>	<p>Solicit alumni support for Departmental activities.</p> <p>Outreach to local and U.S. mainland industry to establish reliable sources of independent funding to supplement the UPR budget.</p>	<p>Funding obtained from non-traditional sources.</p>	<p>Number of students supported by non-traditional sources of funding.</p> <p>Number of investigations supported by non-</p>

				traditional sources of funding.
Inventories of departmental holdings and room space.	Increase efficiency of use of teaching and research tools purchased with department funds.	Create/publish /update inventory and locations of all equipment and software holdings of the department. Annual reviews of operational and repair status.	Complete inventories of department materials and space.	Completeness and availability of inventories on departmental holdings, room space, materials and analytical equipment.
Annual department budget report	Address teaching and minor research needs in a timely (at least annual) schedule	Annual discussion of budget priorities, with faculty participation. Written report of expenses submitted to faculty. Faculty questionnaire about budget needs.	Published budget report. Number of meetings per year that discuss budget priorities or have budget discussions.	Approval of budget priorities at department meeting.

VIII. Curriculum and Academic Offerings

Goals	Objectives	Actions	Success indices	Measurement instruments
Continue offering quality education by providing timely, innovative curriculum.	Incorporation in the curriculum of social, cultural, economic and technological changes.	The faculty of the Department will continually add new courses at every level. The faculty of the Department will continuously revise the already offered courses and update them. The undergraduate research course has and will include topics directly related to social, cultural, economic and technological changes.	Number of courses offered that include the impact of geology in social, cultural, economic and technological changes.	Number of students registered in courses that include social, cultural, economic and technological changes. Course Assessment.
Link courses and pre-requisites	Integrate Curricula to overall strategy and goals, improve overall student comprehension and preparation	Discussions between faculty offering basic courses, and the subsequent higher level of classes for which they are intended.	Application of better linked basic and higher level courses in the curriculum.	End of semester assessment exams. Undergraduate student scores on skill assessments exams.
Graduate Program Improvement	Offer a competitive and innovative graduate program that attracts students from both Puerto Rico and off-island.	Implement strategies that generate, develop, and or strengthen innovative academic programs at the graduate level	Numbers of students graduated from the Geology graduate	Number of applications received from

		<p>Hire new faculty to broaden departmental academic base</p> <p>Purchase and maintain state-of-the-art research equipment</p> <p>Develop and maintain up to date computing facilities.</p>	<p>program and their origin (Puerto Rico vs. off-island).</p>	<p>students interested in our graduate program.</p> <p>Diversity of applications (e.g., Puerto Rico and off island).</p> <p>Graduate student scores on skill assessments exams like the GRE.</p>
<p>Identify permanent geology positions in other campuses (similar to other physical sciences) and establish working partnerships.</p>	<p>Increase geographic availability of advanced geological curricula to Puerto Rico.</p>	<p>Support for long-distance course offerings and Internet course offerings</p> <p>Advocate permanent UPR institutional hiring's.</p> <p>Remote teaching.</p> <p>Develop active collaboration of the faculty with other institutions allowing students to interact with their faculty and students.</p>	<p>Establish working partnerships with a core of 2-3 geology professors in UPR-RP and 1 or 2 in other campuses.</p>	<p>Number of certified geologic courses offered + faculty in other UPR campuses.</p>

IX. Academic and Professional Improvement of faculty and administration

Goals	Objectives	Actions	Success indices	Measurement instruments
<p>Improvement in faculty development.</p>	<p>Enrich the professional development of teaching and administrative staff of the department.</p>	<p>The Department Director will solicit the help of the Dean of Art and Sciences to reduce the number of teaching credits (release time), to allow faculty to write research/education proposals, conduct research, and publish the results.</p> <p>Promote and improve the interaction of professors and employees in Geology and Puerto Rico Seismic Network to better develop an environment conducive to creating collaborative research.</p>	<p>Amount of time measured in credits that the faculty is dedicating to research/education proposals, conduct research, and publish the results.</p>	<p>Number of publications and abstracts produced by the faculty.</p>
<p>Improve departmental</p>	<p>Increase the participation and representation of</p>	<p>The faculty will be active in the professional</p>	<p>Overall visibility of</p>	<p>Number of</p>

reputation in scientific community.	the department in professional activities (workshops, conventions) inside and outside Puerto Rico. Establish incentives to stimulate faculty to submit articles to scientific journals.	scientific community by participating in activities/research/teaching in and outside of the University.	the faculty at the national and international level.	publications and abstracts produced by the faculty. Number of professional activities (workshops, conferences, conventions, etc.) with participation and representation of the department, inside and outside Puerto Rico.
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X. Improvement of the services offered to students and the quality of life at a departmental level

Goals	Objectives	Actions	Success indices	Measurement instruments
Continue providing an environment conducive to student development and quality education.	Establish a data-base at the departmental level to develop a demographic profile of our students and the students graduated from the department.	The Department will develop an “Alumni Web Site” on the Department home page. Alumni will be kept informed on developments in the department such as new faculty, equipment, job possibilities, and major publications. An item in the web page will be “People on the Move” informing fellow graduates of the whereabouts and new positions, or degrees of their colleagues.	Date of the publication of the web page and number of updates per year.	Number of graduates that are reached by the web page.
	Establish strategies to improve the services offered to students and the quality of life for students at the departmental level.	The department will continue to provide top quality computer facilities to graduate and undergraduate students and continue to provide offices for graduate students where they can carry out research.	Continuous improvement of departmental facilities.	Number of computers available in the department for the students.
	Develop strategies to provide counseling and mentoring to our students.	Faculty members will develop orientation activities for incoming students during the orientation week. Director and Associate Directors will mentor students during pre-registration and registration.	Date of implementation of new counseling and mentoring strategies.	Number of students advised. Comparison of the percentage of students that finish the degree before and after the

	<p>A designed faculty member will be responsible of counseling the undergraduate students on their requirements.</p> <p>Faculty will mentor undergraduate and graduate students interested in their areas of expertise.</p> <p>The graduate committee will mentor graduate students and the committee will have meetings at least every year with the graduate students.</p>		<p>counseling and mentoring strategies are implemented.</p>
Foster an inclusive environment to students of any background, gender, race, sexuality, or physical condition.	Faculty will conduct classes and field trips in a professional and inclusive manner.	A diverse and inclusive student population.	Statistics on the department diversity.

XI. Incorporation of Information Technology

Goals	Objectives	Actions	Success indices	Measurement instruments
Enhance the use of information technology in teaching and research.	Implement strategies of most up to date information technology in the teaching, research, and information dissemination process.	<p>The department will continue to provide top quality computer facilities (computers, printers, scanners, digitizers, internet access) to graduate and undergraduate students and continue to provide spaces for graduate students where they can work in their research. All the software available will have licenses.</p> <p>Linux facilities will be acquired for the use of the students working in geophysics (dual booting using CentOS).</p>	Degree of improvement in the computer laboratory facilities.	<p>Number of computers and software available in the laboratory.</p> <p>Quality of the computer equipment available in the laboratory.</p> <p>Quality of the physical environment present in the laboratory.</p>
	Implement strategies for effective use of modern information technology.	<p>Faculty will place course materials on the web.</p> <p>Faculty will use and take advantage of technology and teaching software (Top-Hat, clickers, and others) in the classroom.</p>	Date of availability of course materials on the web.	<p>Number of courses with material on the web.</p> <p>Number of faculty members with courses on the web.</p> <p>Number of faculty</p>

			members using technology tools in the classroom.
Develop strategies to implement long distance learning.	The department continuously improves its website. The faculty will develop long distance internet courses.	Date of implementation of long distance learning.	Number of long distance lectures. Number of universities (or places) where long distance lectures are offered. Numbers of courses based on long distance learning.

XII. Community Service

Goals	Objectives	Actions	Success indices	Measurement instruments
Offer scientific services to the community	Establish the Department of Geology as the Puerto Rico center for information on geosciences.	Reports on felt Earthquakes and the latest information on earthquake events will continue to be available to the community at the Puerto Rico Seismic Network web site.	Exposure of PRSN to local and international media outlets.	Number of hits on the PRSN web site after an earthquake.
		Re-open the Geology Museum.	Date of inauguration of the New Geology Museum.	Number of students or other groups visiting the museum.
		Maintain analytical equipment to analyze materials for government agencies and local customers.	Up to date facilities in working order	Number of analyses performed for government agencies and local customers.
		Offer short courses and workshops for the local government and industry.	Requests for collaboration from the community and government agencies	Number of presentations, workshops and courses given to government agencies and local people.
		Faculty members will continue to carry out consulting on behalf of local government agencies and private companies. These services	Request for consultancies by community	Number of consulting jobs performed by the

	range from free advice and information to long-term professional services.	members and government agencies.	faculty for government agencies and local customers.
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XIII. Development Of A System Of Continuous Self Evaluation

Goals	Objectives	Actions	Success indices	Measurement instruments
Continuous self evaluation	Develop strategies to periodically evaluate the departmental activities and to ensure the department is fulfilling its mission and goals.	Bring in outside experts to create and External Advisory Board to evaluate the Geology Department.	Date of implementation of the External Advisory Board.	Attendance to the yearly symposium Number of external scientists visiting the department annually. Yearly number of students accepted to outside programs run by visiting professors to the department.
	Develop strategies to evaluate teaching, research, and community service of the faculty.	Each faculty member provides the Director with a summary of his/her activities during the year. This report will be evaluated by the Director and the departmental personnel committee, and discussed with the faculty member concerned. Assessment for teaching, research, and community service.	Number of assessment tools applied. Educational and Administrative changes made from assessment results.	Changes in the number of assessment tools per year. Number of improvements in assessment tools per year.
	Maintain and support one faculty member as the departmental Assessment Coordinator.	Prepare plans for educational and administrative assessment. Carry out cycles of assessment of key classes (ex. Field Camp, Undergraduate Research), and administrative processes in the department (ex. class registration, technology services, graduate program, etc.)	Number of assessment tools applied. Educational and Administrative changes made from assessment results.	Changes in the number of assessment tools per year. Number of improvements in assessment tools per year.

		<p>Present results of assessment to the department and to the Arts and Sciences level assessment committee.</p> <p>Provide the Assessment Coordinator with a reasonable amount of release time credits.</p>		year.
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