AUTHORIZATION TO PLAN (ATP) AN ACADEMIC PROGRAM

Please complete all sections with an emphasis on items 7, 8, 9 and 10. The ATP is not to exceed 5 pages.

1. School/College and Department/Unit
   School of Ocean and Earth Science and Technology, Department of Geology and Geophysics (GG)
2. Chair/Convener of Planning Committee
   Garrett Ito and Neil Frazer
3. Program Category:  X New  ___Modified  ___ Interdisciplinary

4a. Degree or Certificate Proposed:  Masters in Geoscience (MGEO)

4b. List similar degrees or certificates offered in UH System:
   Master of Science, Geology and Geophysics

5. Planning
   a. Planning period  (not to exceed one year or reapplication is necessary)
      10/1/11 to 1/1/12
   b. Activities to be undertaken during the planning phase
      Consult with alumni, potential students, and local business to optimize degree requirements, course scheduling, and work-study activities. Develop a marketing plan. Write degree proposal.
   c. Submission date of program proposal
      January 2012
   d. Workload/budget implications during planning period
      Negligible additional workload anticipated by an ad hoc planning committee.

6. Program Description (Objectives and relationship to campus mission and strategic plan)
   The MGEO will be a professional masters degree program for students who seek careers in geoscience-related industries, but not necessarily academies. It is designed so that new freshmen at UH can complete a B.S. in Geology and Geophysics and the MGEO in five years. The MGEO program is also open to other students with BS degrees. The MGEO differs from the current M.S. degree in the Department of Geology and Geophysics (GG), which emphasizes basic research rather than application.
   The MGEO degree will bolster the University of Hawaii’s mission of educating a skilled workforce in areas of growing importance to Hawai‘i and the global economy. Such areas include the environment (e.g., environmental consulting, water resources, beach erosion, and climate change); natural hazards (mitigation and adaptation due to floods, tsunamis, earthquakes, landslides, volcanic eruptions), energy and natural resources (petroleum and gas exploration and development, alternative energy, metal and mineral resources), and education. It will directly support UH System goals related to “educational effectiveness” by expanding opportunities to a broader sector of student interests; and “learning, research, and service network” by enhancing workforce development through providing work study or internship programs with local companies. By also attracting K-12 educators to the program, GG aims to be among a growing number of geosciences departments nationwide
taking larger roles in supporting K-12 education [Nyman and Ellmein, EOS, Trans. AGU, 89(50), 2008]. It is a part that GG can play in boosting the Hawai‘i state education system, which feeds students to the University and eventually to Hawaii’s workforce.

Relevant to the cost-revenue balance, students will not ordinarily be supported by Research Assistantships, tuition waivers, or individual office space. The program will leverage existing GG/SOEST resources as no new faculty are needed, one new, 1-credit course will be developed, and few additional offerings of existing classes will be required. Courses will need to be adapted, however, to accommodate the schedules of working professionals. These adjustments will include a combination of holding fewer but longer class meetings per week, offering courses during nights and/or weekends, as well as posting lecture material or videos of lectures online, and teaching courses live online.

7. Program Justification (Needs and Rationale. Include, as appropriate, internal and external factors driving need for this program; description of needs assessment; number of interested student per year; need for such a program in relation to workforce development, graduate studies, etc.)

There is a growing career path for students interested in science but who do not want to be academics [e.g., Teitelbam and Cox, Nature 445, 2007]. Professional science masters degrees are being created by an increasing number of U.S. universities to meet this current demand (www.sciencemasters.com, see Supporting Documentation). The Professional Science Master’s (PSM) initiative currently recognizes 194 programs at 95 PSM-affiliated institutions, a nearly doubling of the number of affiliates since 2007. By opening our GG department to this sector of professional needs we can better serve both the state and the local geoscience community. Moreover, enlarging our enrollments at the graduate and upper-undergraduate level will benefit our current MS and PhD programs by allowing the GG faculty to teach some existing graduate courses more frequently and by providing the opportunity for our students to study alongside individuals with more diverse interests and professional expertise. Information about the PSM initiative as well as example programs affiliated with Geology and Geophysics at other universities is given in Supporting Documentation at the end of this document. Evidence for the need for this program is listed as follows:

• “The number of geologists working in environmental jobs has been growing steadily for over a decade, driven by increased government spending and environmental regulations. Legislatures rather than commodity prices drive the employment of these geologists. Employment in these areas has steadily increased because citizens and governments are now more concerned about issues such as pollution, land use and climate change. The ideals that drive the environmental movement are likely to continue and that will support geologist hiring and salaries.” [www.geology.com].

• Over the next several years the number of geology job openings is expected to exceed the number of students graduating from university geology programs. Starting salaries for geologists have recently ranged from $50,000 to $100,000 per year [www.geology.com].

• WorldWideLearn (http://www.worldwidelearn.com) lists “Environmental Engineering” in the “Top Ten Jobs for the Next Decade and Beyond”. “In 2006, the Bureau of Labor Statistics reported on 54,000 environmental engineers in the field. But through 2016, this number is expected to increase by 25 percent, which makes it the fastest growing
engineering subcategory. And these predictions exist in the absence of global catastrophes. If the world's oil supply plummets suddenly or if a series of natural disasters arrive simultaneously, demand for those with environmental engineering degrees could exceed even the current estimates. If that happens, then the current median salary of $70,000 a year might climb substantially. But even without dizzying demand and attractive salaries, many environmental engineers enjoy a level of fulfillment that other careers may not. Environmental engineers focus on urgent matters of security, safety, and health. Equally enticing, they spend much of their time outdoors in a variety of locations.”

•“GeoSalaries Rise Almost 8 Percent” http://www.aapg.org/explorer/salarysurvey.cfm “As crude prices came out of the doldrums in 2010-11, so have the pay hikes for petroleum geologists. Over the past year, salaries for petroleum geologists for the year showed a weighted average increase of 7.9 percent, according to the annual AAPG Salary Survey. This compares with a 5 percent overall increase in 2009-10 and a 2 percent increase the previous year.”

•An informal market survey of our alumni and undergraduate body returned wide interest from individuals at various companies, government agencies, and schools in Hawai‘i and other states. A few example responses include:

“I would say 90% of all non-academic geology jobs here in Hawaii are in the environmental field, yet UH doesn’t prepare their graduates with courses for this field of work. It makes no sense to me. Maybe this masters program will allow geology grads to focus more in this area to prepare them for the job market in Hawaii.” -Dave Davis ESN Pacific, Honolulu, HI

“As someone who pursued and received my MS in Geology & Geophysics there while working full-time as an Active Duty Army Officer, I say it sounds like a great plan! The late night research and hours in the labs killed me when I put on my uniform early every morning. If you need more than encouragement, let me know!” - LTC Joseph L. Ingignoli, Commander, 7th Squadron, 6th Cavalry (ATK HEL), Conroe, TX

“A Masters of Geoscience degree program would definitely draw interest from our firms staff. I can think of several people (4+) that would probably be interested in this program, including myself. Thanks for the opportunity to comment.” -Scott Moncrief, Project Manager, CH2M

“The program sounds quite good- particularly in that the 'culminating experience' final project will be derived from the work place, tying together the practical and academic parts of the degree in a way that should benefit both the student and employer. I think if the program had been available at the time of my graduation I might have taken a job with a local firm and gone for it.” -Eden Jael Feirstein, Dept. Hydrology & Water Resources, University of Arizona

“Currently, I work for the U.S. Geological Survey Water Resources Division in Honolulu. I have been an employee here since May 2005 under their Student Career Employment Program. The USGS and the university have a joining contract to employ me as a student until 2010. I would like to earn a professional degree with a focus on what I do here at the USGS, but do not know how to go about it or what the grand details are. …” - Tracy Ibarra, USGS

“…When I returned three years ago I was disappointed in knowing that my only chance to do a Masters in Geology was to quit my job and go through a traditional MS program I dismissed the idea
of going back to school.” “... I am a middle school teacher but would love to take courses to keep current in the field to be a better teacher.” Mahalo nui loa -Tina M. Mueller

8. Description of resources required
   a. Faculty (existing and new FTEs)
      Existing faculty will teach courses they are already teaching. Minimal additional FTE (approximately 0.25 FTE for year 1 and 0.1 FTE per year thereafter) are needed to develop online content, run and evaluate the program, as well as establish and maintain internships with companies and state agencies.
   b. Library resources (including an evaluation of current resources and an estimate of the cost of additional resources required)
      No additional resources needed.
   c. Physical resources (space, equipment, etc.)
      No additional physical resources needed
   d. Other resources required (staff, graduate assistantships, etc.)
      No additional staff or other resources needed

9. Five-Year Business Plan. Provide a five-year projected budget for the program that includes:
   a. Annual costs to implement the program (see table below)
   b. Projected enrollment and estimated tuition revenue (see table below)
   c. How will be program be funded?
      Additional costs are negligible and will be absorbed by the school.
   d. Does the current or proposed budget (Department/College/Campus) include funds or a request for funds for the proposed program? Please provide details.
      (see table below)
   e. Given a “flat budget” situation, how will the proposed program be funded?
      Existing funds are nearly sufficient as additional costs are negligible. A flat budget would restrict the effort to revise course content or advertise the program.

**Standard Cost-Revenue Table Assuming All In-state Tuition**

<table>
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<tr>
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<td>PROGRAM COSTS</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Faculty w/o fringe</td>
<td>$20,000</td>
<td>$20,000</td>
<td>$20,000</td>
<td>$20,000</td>
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<td></td>
<td>Other personnel costs w/o fringe</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Equipment/Supplies</td>
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<td>$1,000</td>
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<tr>
<td></td>
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<td></td>
<td>TOTAL Expenses</td>
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<td>$21,000</td>
<td>$21,000</td>
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<td>REVENUES</td>
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<tr>
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<td>Projected Enrollment</td>
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<td>8</td>
<td>11</td>
<td>13</td>
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<tr>
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<td>No. of Courses</td>
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<td>10</td>
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<tr>
<td></td>
<td>No. of Credits</td>
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<td>SSH</td>
<td>90</td>
<td>165</td>
<td>225</td>
<td>225</td>
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<td>Tuition Rate/Credit</td>
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<td>Total Revenue from Tuition</td>
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<td>$75,570</td>
<td>$103,050</td>
<td>$103,050</td>
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<td>Other Sources of Income</td>
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<td>0</td>
<td>0</td>
<td>0</td>
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<tr>
<td></td>
<td>TOTAL Revenues</td>
<td>$41,220</td>
<td>$75,570</td>
<td>$103,050</td>
<td>$103,050</td>
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</table>
### Cost-Revenue Table Assuming 50% In-State, 50% Out-of State Tuition

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<thead>
<tr>
<th>Year</th>
<th>FY2013</th>
<th>FY2014</th>
<th>FY2015</th>
<th>FY2016</th>
<th>FY2017</th>
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<tr>
<td><strong>Expenses</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total FTE for all 30 credit hrs per year of program (0.2 FTE/hr &amp; 1FTE=$100K)</td>
<td>$600,000</td>
<td>$600,000</td>
<td>$600,000</td>
<td>$600,000</td>
<td>$600,000</td>
</tr>
<tr>
<td>FTE costs for ADDITIONAL course offerings needed for program (i.e., for a new 1-hr course)</td>
<td>$20,000</td>
<td>$20,000</td>
<td>$20,000</td>
<td>$20,000</td>
<td>$20,000</td>
</tr>
<tr>
<td>Other personnel</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Library</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplies (advertising, reproduction)</td>
<td>$1,000</td>
<td>$1,000</td>
<td>$1,000</td>
<td>$1,000</td>
<td>$1,000</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Expenses for All 30 Credit hrs (includes current FTE without the M GEO)</td>
<td>$601,000</td>
<td>$601,000</td>
<td>$601,000</td>
<td>$601,000</td>
<td>$601,000</td>
</tr>
<tr>
<td>Total ADDITIONAL Expenses</td>
<td>$21,000</td>
<td>$21,000</td>
<td>$21,000</td>
<td>$21,000</td>
<td>$21,000</td>
</tr>
<tr>
<td><strong>Revenue</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Projected No. of Entering Students</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td>9</td>
<td>9</td>
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<tr>
<td>Projected No. of Full-Time Students</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>4</td>
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<tr>
<td>Proj. No. Half-Time Students</td>
<td>2</td>
<td>5</td>
<td>7</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Projected Enrollment</td>
<td>4</td>
<td>8</td>
<td>11</td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td>No. of Credit Hrs Taught</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Student Semester Hrs (assuming full-time students take 30 cr/yr; half-time students take 15 cr/yr)</td>
<td>90</td>
<td>165</td>
<td>225</td>
<td>255</td>
<td>270</td>
</tr>
<tr>
<td>Tuition Rate/Credit (assuming 50% res. &amp; non. res)</td>
<td>$787</td>
<td>$787</td>
<td>$787</td>
<td>$787</td>
<td>$787</td>
</tr>
<tr>
<td>Total Revenue from Tuition</td>
<td>$70,830</td>
<td>$129,855</td>
<td>$177,075</td>
<td>$200,685</td>
<td>$212,490</td>
</tr>
<tr>
<td><strong>Other Sources of Income</strong></td>
<td></td>
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<td></td>
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<tr>
<td>Total Revenue</td>
<td>$70,830</td>
<td>$129,855</td>
<td>$177,075</td>
<td>$200,685</td>
<td>$212,490</td>
</tr>
<tr>
<td>Revenue Minus Total Expenses</td>
<td>-$530,170</td>
<td>-$471,145</td>
<td>-$423,925</td>
<td>-$400,315</td>
<td>-$388,510</td>
</tr>
<tr>
<td>Revenue Minus Added Expenses</td>
<td>$49,830</td>
<td>$108,855</td>
<td>$156,075</td>
<td>$179,685</td>
<td>$191,490</td>
</tr>
</tbody>
</table>

10. Impact on current courses or programs.
Enlarging our enrollments at the graduate and upper-undergraduate level will benefit our current MS and PhD programs by allowing the GG faculty to teach some existing graduate courses more frequently and by providing the opportunity for our students to study alongside students with more diverse interests and professional expertise.

11. If this program is multidisciplinary, provide evidence of commitment for support from the colleges, departments, programs, and/or individuals expected to participate.
ATP for MGEO: Professional Masters Degree in Geoscience

Reviewed by: (The ATP has completed the campus approval process prior to review by Council of Chief Academic Officers)

Campus Chief Academic Officer:
Comments and Recommendations:

<table>
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<tr>
<th>Print Name</th>
<th>Signature</th>
<th>Date</th>
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Council of Chief Academic Officers (Systemwide Consultation):
Comments/Recommendations:

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<tr>
<th>Print Name</th>
<th>Signature</th>
<th>Date</th>
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</table>

Chancellor: ___ Approved    ____ Disapproved

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<tr>
<th>Print Name</th>
<th>Signature</th>
<th>Date</th>
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</thead>
</table>

(Final signed copy is provided to the Vice President of Academic Planning and Policy for Program Action Report) 6/12/07
Supporting Documentation: Overview of the professional masters in geosciences (MGEO) degree

1. **Target Market**: Students who wish to gain an advanced degree in geoscience to benefit career pursuits fields such as:
   - Environmental consulting, environmental engineering, environmental geology
   - Engineering Geology, geotechnical engineering
   - Hazards mitigation and adaptation
   - Petroleum and gas exploration, including offshore exploration
   - Economic geology, mining
   - Alternative energy
   - Intermediate or high school education

2. **Features**
   • Five-year masters: entering freshmen can earn a B.S. in Geology and Geophysics as well as the MGEO degree in five years.
   • Required minimum of 30 credit hours beyond what was taken for the BS. Up to 6 credits can be for the work-study requirement (Graduate Intern GG750). A minimum of 12 credits should be in courses numbered 600 and above, excluding GG750. Letter grades (A,B,C) must be taken in courses for at least 18 credits at the 300-level or above (excluding GG750 Graduate Intern). 1 credit per year must be in GG740 (MGEO Seminar)
   • Students who complete the MGEO can apply to enter our PhD program without first completing an M.S.
   • The MGEO degree differs from our M.S. (both Plan A and Plan B) by emphasizing coursework in applied science, and in providing practical work experience, rather than a research thesis (Plan A) or report (Plan B). The MGEO degree title will come with the equivalent prestige as the M.S. Plan A and more prestige than the M.S. Plan B.
   • The program will be run by a GG faculty committee (the oversight committee) reporting to the chair and the department. To assure continuity, the chair of the oversight committee and its members will ordinarily be reappointed each year.
   • Only one new 1-credit hr. GG course (GG740 MGEO Seminar) is needed (See Cost-Revenue Table above).
   • Key courses will be taught on nights/weekends or include online content (e.g., lectures or recordings of lectures posted online) so they will be more available to working professionals.

3. **Prerequisite**: BS in natural science from an accredited university.

4. **Undergraduate courses**. Up to 18 credits will be taken from the following courses, provided they were not taken for the BS. Letter grades (A,B,C) must be taken in courses for at least 18 credits at the 300-level or above (excluding GG750 Graduate Intern).

<table>
<thead>
<tr>
<th>Course</th>
<th>credit hrs</th>
<th>Mean ranking of priority from 2001 employer survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geomathematics (GG312)</td>
<td>3</td>
<td>3.33</td>
</tr>
<tr>
<td>Geological Data Analysis (GG413)</td>
<td>3</td>
<td>3.75</td>
</tr>
<tr>
<td>Geophysical Methods (GG450)</td>
<td>4</td>
<td>3.52</td>
</tr>
<tr>
<td>Environmental Geochemistry (GG425)</td>
<td>3</td>
<td>3.92</td>
</tr>
<tr>
<td>Hydrogeology (GG 455)</td>
<td>4</td>
<td>4.96</td>
</tr>
<tr>
<td>Engineering Geology (GG454)</td>
<td>3</td>
<td>4.32</td>
</tr>
</tbody>
</table>
Students who took all the above courses as undergrads may substitute extra graduate GG courses and/or the following two classes in Civil and Environmental Engineering:

- Fluid Mechanics (CEE 320) 4
- Geotechnical Engineering (CEE 355) 4

Writing requirement: At least 3 credits in a writing class are required in addition to those required to fulfill their B.S. degree. Eligible classes include any GG course designated as writing intensive (W) Technical Writing ENG308, Grant Writing for Graduate Students TPSS657

Substitutions other than the above will require the approval of the oversight committee.

5. Graduate courses
A minimum of 12 credits will be taken from graduate courses numbered 600 and above, excluding GG750 (Graduate Intern). For example, students who take less than 18 credits from the undergraduate courses listed in (3) will need correspondingly more graduate courses to make their total of 30 credits. 1 credit per year must be in GG740 (MGE0 Seminar)

6. Culminating Experience
Students are required to do a work-related project either as an intern, volunteer, or employee of a local company or agency. The culminating experience will involve a written report or technical paper as well as oral presentation on their work. The oral presentation can be made at UH or at the location of the sponsoring organization.
### 6. Sample Schedule for 5-year B.S. and MGEO

<table>
<thead>
<tr>
<th>Year 1 Fall Courses</th>
<th>Credits</th>
<th>Ni Credits</th>
<th>Year 1 Spring Courses</th>
<th>Credits</th>
<th>Ni Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>GG 170 (DP+DY)</td>
<td>4</td>
<td>0</td>
<td>GG200</td>
<td>4</td>
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<tr>
<td>MATH 140 (FS)</td>
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<td>MATH 241</td>
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<tr>
<td>ENG 100 (FW)</td>
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<td>FR 102</td>
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<td>0</td>
</tr>
<tr>
<td>HIST 151 (FG/A)</td>
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<td>0</td>
<td>CHEM 161</td>
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<tr>
<td>FR 101</td>
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<td>CHEM 161L</td>
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<tr>
<td><strong>Total:</strong></td>
<td><strong>16</strong></td>
<td><strong>0</strong></td>
<td><strong>Total:</strong></td>
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<td><strong>8</strong></td>
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<th>Year 2 Fall Courses</th>
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<th>Year 2 Spring Courses</th>
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<td>PHYS 170+L</td>
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<td>GG302 (WI)</td>
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<td>WS 200 (DS)</td>
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<td><strong>8</strong></td>
<td><strong>Total:</strong></td>
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<td><strong>7</strong></td>
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### Sample Schedule for 2-year MGEO Taken Part Time

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The following course instructors have expressed interest in rescheduling class times and developing online materials/lectures to make their existing courses accessible to working professionals: Robert Dunn, Aly El Kadi, Garrett Ito, Steve Martel, Greg Ravizza, Scott Roland, Ken Rubin, Paul Wessel.
A Master’s for Science Professionals Sweeps U.S. Schools

By JOSEPH ROSENBLUM
Published: December 26, 2010

BOSTON — A curiosity tucked away in a handful of university catalogs a decade ago, the professional science master’s degree is emerging from the shadows at a number of college campuses.

The degree, which a few universities quietly pioneered in the mid-1990s, combines graduate studies in science or mathematics and business management courses. In 2008, 58 universities were offering the professional science master’s degree, or P.S.M., according to the Council of Graduate Schools in Washington. By the start of this academic year, the number had nearly doubled to 103, and is set to climb further.

The number is certain to grow because the professional science master’s degree is being adopted by at least six state university systems. In addition, in February, the first P.S.M. program in Europe was created at the Open University in Milton Keynes, northwest of London.

Advocates of the degree say it will become a fixture at many more universities because it promises to satisfy the work force requirements of increasingly technological economies in the United States and abroad.

“I think of it as a 21st-century degree,” said David King, dean of graduate studies and research at the State University of New York in Oswego. “It’s interdisciplinary. It’s a hybrid, which I think is more agile. It’s responsive to rapidly changing needs in terms of the job market.”

Mr. King likens the growth of the P.S.M. to the emergence of the M.B.A. more than a century ago. He heads a systemwide consortium of 16 New York colleges and universities that introduced the P.S.M. on seven campuses in September. (The degree was already being offered at an eighth campus in the consortium, the University of Buffalo.) He said he expected all 16 schools to offer the degree next year.

The professional science master’s degree received an important imprimatur two years ago from a committee of the National Research Council, which inquired into ways to enhance the master’s degree in the natural sciences.

Carol Lynch, director of the professional science master’s program of the Council of Graduate Schools, estimates total P.S.M. enrollment around 5,000. That’s a tiny fraction of the hundreds of thousands enrolled worldwide in M.B.A. programs, but Ms. Lynch said the degree “is on a huge trajectory, and we’re just getting started.”

Already, however, the subject matter of professional science master’s curriculums differs widely (as does tuition, which ranges from a few thousand dollars a year to more than $20,000). Studies in biotechnology and environmental science are in particular demand. Also required are business courses in subjects like project management and communications.

The degree typically involves two years of study, and there is no thesis requirement. But P.S.M. students must work with a “real world” company either in an internship or on a project.

Most enrolled students are Americans, many at large state schools, according to the Council of Graduate Schools.

But there is a large minority of international students pursuing a P.S.M. One of them, Aayush Pandey, 23, is studying biotechnology at Northeastern University in Boston. After earning an undergraduate degree in that subject last year at the Amity Institute of Biotechnology in New Delhi, he found that his options were limited to embarking on a doctorate program with a researcher’s career in mind or working as a low-paid laboratory assistant for an Indian biotech company.

“I didn’t want to do a research-oriented course,” Mr. Pandey said. “I was more interested in industry.” He thought that with a P.S.M. degree in biotechnology, he could stick to a field he liked and prepare for a management-level job. When he completes his degree, he will look for a job with a U.S. biotech company, aiming to save enough money in two to three years to repay his parents the $36,000 that they lent him to cover his tuition.

Northeastern’s biology-oriented P.S.M. classes have attracted international students, particularly from India. Of the 154 students who enrolled this autumn, 76 are from countries other than the United States, with 68 from India.

Northeastern has been increasing its P.S.M. offerings, having inaugurated a course in bioinformatics in 2001 and adding specialties in biotechnology, marine biology and regulatory science.

Murray Gibson, dean of Northeastern’s College of Sciences, said the professional science master’s degree provides a “potential source of revenue,” deepens the school’s partnerships with business and links its professors and students to cutting-edge business research. “It goes two directions. We can service industry and know better what’s going on outside the university,” he said.
A Master’s for Science Professionals Sweeps U.S. Schools

Among the companies that employ P.S.M. graduates of Northeastern is Regeneron Pharmaceuticals, a biotechnology company based in Tarrytown, New York. Several degree holders are working at Regeneron in program management or regulatory affairs, said Ross Grossman, the company’s vice president for human resources. The value of the degree, he said, “is it enables you to put people in business roles who really understand science, which is critical to what we do.”

Notably heeding such business demand is the University of Maryland’s University College, where instruction in biotechnology, biodefense and other P.S.M. programs is entirely online. Enrollment — mostly of midcareer, part-time students — is up from 1,365 two years ago to 1,967 now, according to a university representative.

The trend has been fueled since 1997 by a total of $22 million in grants to dozens of universities from the Alfred P. Sloan Foundation. And, starting in 2009, the National Science Foundation injected $15 million in grants to help create the degree on U.S. campuses.

Also propelling the P.S.M. movement is the statewide introduction of programs by public university systems, under way in Arizona, California, Oregon, North Carolina, Florida and New York.

Policy makers in the six states are investing in P.S.M. expansion as the kind of work-force-development catalyst that they see as key to economic revival.

But some of the nation’s most prestigious universities have not embraced the idea: None of the Ivy League schools have, though the program is on the drawing board at Cornell University, which is a member of Mr. King’s statewide consortium in New York.

Some faculty members at top universities that focus heavily on research are resisting. “Why should you bother me by introducing a new master’s degree when I’m already busy with what I’m doing with the Ph.D.’s,” they ask, according to Ms. Lynch, of the Council of Graduate Schools.

Nor has the idea caught on outside the United States, except at the Open University in Britain, the University of Queensland in Australia and the University of British Columbia in Canada.

Queensland, which has 100 students enrolled in its P.S.M. in biotechnology, caters mostly to international midcareer students from India, the Middle East and China on its Brisbane campus. “The cream of the crop go on to higher degrees or jobs in local industry,” said Ross Barnard, Queensland’s P.S.M. director.
Employers are looking for science-trained professionals who possess science or mathematics knowledge as well as business fundamentals, project management, team-building, and communication skills. By earning a PSM degree, you can acquire these desired work skills and gain an advantage in today's increasingly competitive job market.

The Professional Science Master’s (PSM) is an innovative, new graduate degree designed to allow students to pursue advanced training in science or mathematics, while simultaneously developing workplace skills highly valued by employers. PSM programs consist of two years of academic training in an emerging or interdisciplinary area, along with a professional component that may include internships and "cross-training" in workplace skills, such as business, communications, and regulatory affairs. All have been developed in concert with employers and are designed to dovetail into present and future professional career opportunities.

**PSM Overview**

The Professional Science Master’s (PSM) degree is an innovative two-year graduate degree designed to allow students to pursue advanced training and excel in science while simultaneously developing highly-valued business skills. PSM programs prepare students for science careers in business, government, or nonprofit organizations, where workforce needs are increasing. Programs are characterized by "science-plus," combining rigorous study in science or mathematics with skills-based coursework in management, policy, or law. PSM programs emphasize writing and communication skills, and most require a final project or team experience, as well as a "real-world" internship in a business or public sector enterprise.

The PSM programs now recruiting are of three kinds:

- Those that deepen a student’s knowledge beyond what can be learned in a four-year course of study, but stay within a disciplinary domain;

- Those that fuse scientific fields at a level of depth and complexity hard for undergraduates to achieve; in many cases, the fusion may be with computer or information sciences; and

- Those that integrate study in the natural sciences and mathematics with knowledge and training in management, law, or other professional domains.

Programs are developed in concert with industry and are designed to dovetail into present and future professional career opportunities. Graduates are equipped to manage the breakthroughs that are created by the research teams. They can interact between researchers and managers, especially in the marketing, finance, and legal departments.

The PSM began in 1997 with a series of grants from the Alfred P. Sloan Foundation to selected research universities. (Background on the PSM initiative.)
State University of New York, University at Buffalo

Department of Geology

GRADUATE PROGRAMS

DIRECTOR OF GRADUATE STUDIES
Dr. Charles E. Mitchell
office: 771 Natural Sciences Complex
phone: (716) 645-4280
e-mail: cem@buffalo.edu
website: Dr. Charles Mitchell's webpage

GRADUATE SECRETARY
Ms. Marty Roth
office: 411 Cooke Hall
phone: (716) 645-3489
e-mail: miroth@buffalo.edu

INTRODUCTION

The Department of Geology at UB offers a comprehensive graduate program designed for those with either academic or professional aspirations. We present a robust sequence of courses specifically designed to play on the strengths of our department, and to ensure that graduate students leave here with an integrated understanding of geology. The combination of this curriculum and our faculty of internationally renowned researchers make ours an outstanding graduate program.

DEGREES

The Department of Geology offers traditional M.A. (non-thesis), M.S. and Ph.D. degrees. Students interested in paleontology also may participate in the interdisciplinary graduate programs in Ecology, Evolution and Behavior. In addition, we are a participating department in two NSF-sponsored IGERT programs for PhD students at UB: ERIE is for students who's dissertation research emphasizes an element of ecosystem restoration and the GIScience program is for students who will integrate geospatial information into their dissertation research.

CERTIFICATES

The Department of Geology offers an advanced, graduate certificate program in Professional Science Management. The Professional Science Management (PSM) certificate is designed to allow students to pursue advanced training in science without a Ph.D., while simultaneously developing highly-valued business skills without an MBA. The PSM is best suited for students who seek science careers in business, government or non-profit organizations.
PROFESSIONAL SCIENCE MANAGEMENT CERTIFICATE PROGRAM

The Department of Geology offers an advanced, graduate certificate program in Professional Science Management. The Professional Science Management certificate is designed to allow students to pursue advanced training in business, government or non-profit organizations without a Ph.D., while simultaneously developing highly-valued business skills without an MBA. The PSM is best suited for students who seek science and business, government or non-profit organizations.

PROFESSIONAL SCIENCE MANAGEMENT CERTIFICATE PROGRAM

The University at Buffalo Department of Geology offers a specialized Professional Science Management certificate in Environmental Geographic Information Systems (GIS). The program, sponsored by the Alfred P. Sloan Foundation, is directed toward students seeking rapid advancement in public or private organizations by integrating management and professional skills with traditional geological technical skills. In our advanced certificate program, management and high-performance computing courses are combined with traditional environmental earth science courses. Students may choose between a focus on Natural Hazards Evaluation, Environmental Earth Science or Natural Resource Development.

The Certificate program is open to candidates for the Master’s degree in Natural Science Interdisciplinary, Geography, Geology, Chemistry, Biology, or those already holding an appropriate baccalaureate degree in the sciences. U.S. and international students are eligible to participate in the Certificate program.

Admission

Students enter the program by applying to and being accepted in a ‘home department’ – a department in which they will pursue disciplinary coursework and a related internship or laboratory experience. Students may pursue the Certificate through the Departments of Biological Sciences, Chemistry, Geology, or Geography.

Students must apply online through the University’s Interactive Graduate Application Site: http://www.grad.buffalo.edu/admissions/applications.php. There is no application fee to apply to the certificate program if you are a current graduate level student at the University at Buffalo, or if you’ve applied to a graduate program at the University at Buffalo. Applications are accepted on a rolling basis, but you’re encouraged to apply early.

Coursework

The PSM program requires the completion of five courses. The professional courses are in management skills evaluation (MGG 501 or MGB 666) and a graduate research ethics (PHI 640). The geology courses are Analysis of Geological Data (GLY 529), GIS for Earth and Environmental Scientists (GLY 560) and and 3 Credit hours of Graduate Research (GLY 633)

Substitution of courses completed at other institutions or within other departments will be allowed at the discretion of the Department of Geology, Director of Graduate Studies.

All students will be required to develop a portfolio of their work; including presentations from the internship/project/lab experience. Exit interviews are mandatory upon program completion and should be scheduled with the PSM Office during your last semester of classes.

Academic Grade Requirements:
A graduate student must maintain a B (3.0) average in graduate courses. A grade of C must be received in all graduate courses taken outside of Geology.
Rice University:

**Rice University**

**RICE UNIVERSITY**

**Earth Science Department**

**Professional Science Master’s**

| Wess School of Natural Sciences - Rice University |

*An Unconventional Degree*

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**RICE UNIVERSITY**

**PSM Enrollment**

**Enrollment Summary 2002 - 2010**

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**Subsurface Geoscience Program, Earth Science Department**

**RICE UNIVERSITY**

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RICE UNIVERSITY

Rice PSM Program = 100% Placement

Job Placement

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<tr>
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Supporting Documentation: Informal market survey regarding the proposed MGeo program

The memo sent to the alumni for whom we have email addresses:

To: Alumni and Friends in Hawaii’s Geoscience Industry  
From: Neil Frazer, neil@soest.hawaii.edu  
Regarding: Proposed M.Geo degree

I’m writing to ask whether anyone in your company is a potential student for a new, professional masters degree program we are trying to establish in the Department of Geology and Geophysics at UH Manoa.

Geology undergraduates could earn this degree with an additional year of study past the B.S. However, we think our largest group of potential customers is working scientists and professional engineers who want to earn a graduate degree in earth sciences without becoming a research scientist. We expect that many, if not most, of these students will be part-time students with full-time jobs.

The new degree will have the name Master of Geoscience (abbreviated as M.Geo.) in order to distinguish it from our existing MS degree, which is mostly concerned with research. The name was chosen for its similarity to the M.Eng. offered by many engineering departments, which is widely recognized as a professional degree.

The program will consist of 12 credits from upper level GG courses not already taken as an undergraduate, and 12 credits from non-seminar GG graduate courses numbered 600 or above. Students who enter with a BS in geology can substitute extra GG graduate courses or upper level courses in departments such as Civil and Environmental Engineering, depending on their needs. University requirements for any Masters degree require a “culminating experience” which, for this degree, will be an oral presentation of a 6-credit geoscience project carried out in connection with their employment.

Each candidate for the M.Geo. will be assigned a faculty advisor and co-advisor to help him design a program that meets his professional needs.

Please let me know, frankly, whether this program is of interest to anyone in your company, and what, if anything, we could do to make it better. A few words by email would be most welcome. Thanks for your help.

The memo emailed to GG undergraduates:

To: GG Undergraduates  
From: Neil Frazer, neil@soest.hawaii.edu  
Regarding: Proposed M.Geo degree

I’m writing to ask whether you would be interested in the new, professional masters degree program we are trying to establish in the Department of Geology and Geophysics at UH Manoa.

Geology undergrads could earn this degree with an additional year of full-time study past the B.S. However, we expect that many of the students in the program will be part-time students with full-time jobs.
The new degree will have the name Master of Geoscience (abbreviated as M.Geo.) in order to distinguish it from our existing MS degree, which is mostly concerned with research. The name was chosen for its similarity to the M.Eng. offered by many engineering departments, which is widely recognized as a professional degree.

The program will consist of 12 credits from upper level GG courses not already taken as an undergraduate, and 12 credits from non-seminar GG graduate courses numbered 600 or above. Students who enter with a BS in geology can substitute extra GG graduate courses or upper level courses in departments such as Civil and Environmental Engineering, depending on their needs. University requirements for any Masters degree require a “culminating experience” which, for this degree, will be an oral presentation of a 6-credit geoscience project carried out in connection with their employment.

Each candidate for the M.Geo. will be assigned a faculty advisor and co-advisor to help him design a program that meets his professional needs.

If you have any thoughts or questions about the proposed new degree, I’d appreciate an email.

Here are the responses:

Nice job! I think the hydrographic and marine surveying industries may be good targets for this - assuming we could teach the sorts of classes they want. Also NAVOCEANO and other Navy groups, and perhaps our NOAA colleagues doing work in the Coral Reef Ecosystem Division and the Marine Sanctuaries program.

Bruce Appelgate, PhD
Director, Ocean Technology Group (OTG)
University of Hawai‘i School of Ocean & Earth Science & Technology
1680 East-West Road, Honolulu HI 96822
tel: 808-956-9720 web: http://www.soest.hawaii.edu/HMRG

The program looks good. One suggestion I have is to require a technical writing class and not just an oral presentation, but a written report or final project paper. We constantly have problems with scientists and engineers coming out of the various universities and not being able to write. Since the final product that we give our clients is a written report, it is of utmost importance that our employees are competent writers.

Thanks for the opportunity to look at the program, Jenni

Jennifer Kleveno Hernando
Mountain Edge Environmental, Inc.
62-180 Emerson Road
Haleiwa, Hawaii  96712
Phone: (808) 637-1200
Fax: (808) 637-0001

Thank you for sending out the letter regarding the professional masters degree. I would definitely be interested in learning more about this program. I have a BS in Geo./Geophys. from U.H. Manoa and have been working for the USGS Water Science Center since 2000. It has always been my plan to continue my studies at some point. However, as you know it is hard to find the time once in career type work positions. Please keep me on the emailing list.

Marcael (Ball) Jamison (U.H. Alumni 1997)
Hydrologic technician
This sounds really exciting. I wish this was around when I was thinking about a Masters. I would have seriously considered this program because it doesn't tie you down so much to research, but would broaden horizons in the geophysical world, which is why I am here in the first place.

Melody Studer
808-956-5241 (office)
808-956-5154 (fax)
SOEST, Geology and Geophysics, POST 842B
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A Masters of Geoscience degree program would definitely draw interest from our firms staff. I can think of several people (4+) that would probably be interested in this program, including myself. Thanks for the opportunity to comment.

Scott Moncrief
Project Manager, CH2M
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I love the idea and would love to take courses to work towards a M. Geo degree. While I was living in CA and working at a geo-technical/engineering firm there were some many options for professional development. When I returned three years ago I was disappointed in knowing that my only chance to do a Masters in Geology was to quit my job and go through a traditional MS program I dismissed the idea of going back to school. I am not part of your target group as I am a middle school teacher but would love to take courses to keep current in the field to be a better teacher.

Mahalo nui loa,
Tina M. Mueller
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Hey, that degree sounds like a great idea, i personally would love to get involved in a program like that. The M.Geo. degree would hold the same merit as the regular MS degree right? Please let me know when you are starting this and the entrance requirements. Thanks, and i hope the program makes it, one more year for a Masters would be great.

Michael Smith
Mikchael Smith Consulting
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Thank you for including alumni such as myself in your investigation into the viability of a M.Geo. program. Before I proceed with my comments, I should state up front that I am not working in industry, but neither am I a (strictly-speaking) a researcher, though I hold a Ph.D. degree (I'm employed by the Pacific Tsunami Warning Center). That being said, I do know people who work in industry (esp. environmental) who would be among your targeted M.Geo. candidates, and feel I have some insight into what they might feel about what this program would offer.

You specifically state that your best candidates for the M.Geo. program would be people already working in industry who hold a bachelor's degree. I'm not sure that would be true. You are
proposing a one-year program (24 credits including the oral presentation, if I understand this correctly), but if the student is attending part-time, this degree will take considerably longer, possibly reducing its appeal. Furthermore, you suggest that the student's project would be work-related, yet under the supervision of a pair of G&G faculty members. A seasoned employee in a given field is likely to feel that they and their supervisor(s) are the experts of their current line of work, and since (please correct me if I'm wrong!) G&G doesn't have many faculty members with recent industry experience, such a potential student may need some convincing that a member of the G&G faculty knows more about their job than they do. Possible exceptions to this would be someone who's still pretty green (e.g., less than a year's experience), someone looking to change jobs (in which case, they need a project at their new job), or someone needing the credentials for a promotion or to start a consultancy.

I do think, however, that the M.Geo. program will appeal to current undergraduate students who would be willing to attend school an extra year in exchange for a higher degree and industry experience. This would be especially true if the M.Geo. program could be manifested as some sort of internship program with local companies (also common in engineering programs). This would not only appeal to students already enrolled, but expand the appeal of the undergraduate program in general. An incoming or current student would know that they had the option to gain industry experience and the chance to get their "foot in the door" with industry upon graduation with the higher degree. Furthermore, it would help the department gain some outreach to local industries, and if some kind of internship program is developed, then even long-term professional relationships could be forged between faculty members and industry specialists (thus eventually removing one of my suggested obstacles in the previous paragraph). And just as side note--in the past the G&G department tried to enhance its enrollment by allowing undergraduates to specialize early in the program, which resulted in graduating students with specializations but also with deficiencies. The M.Geo. would appeal to these same students, give them the specialization they need, but without sacrificing other areas of a "classic" geoscience undergraduate curriculum.

So, in short, I think the M.Geo. program is a fine idea. I just think that you'll have better luck finding your M.Geo. candidates from within the G&G program than without. Thank you for your time,

Nathan Becker
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As someone who pursued and received my MS in Geology & Geophysics there while working full-time as an Active Duty Army Officer, I say it sounds like a great plan! The late night research and hours in the labs killed me when I put on my uniform early every morning. If you need more than encouragement, let me know!

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I think that this is a great idea and am definitely interested in the program. I would hope that you will have enough response to make this a reality. I graduated in 1987 with a BS geology and geophysics degree, but have not had time to go back and get the masters due to steady work as a consultant.
Working in the consulting realm actually presents some projects that would make a good "culminating experience". I am especially interested in groundwater flow within the caprock for instance, and have several projects that would make for interesting study.

Please include me on the mailing list for any further updates on the program.

Marc Dexter, PG, REM
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I like the sound of this new professional degree. I have a few questions,

1st: When would the program start?
2nd: Will this program use the same entrance requirements as a master’s degree? (i.e. GRE scores)
3rd: Will the program require the student to be already employed, or is there a group of companies that are willing to work with the program that the department had in mind?

I am personally very interested in this degree. On a more collective level, I believe that this professional degree is a wonderful idea. It will strengthen the bridge between academia and industry which seems to be missing currently in GG. Also, I will talk to a couple of my undergraduate colleagues that I know are interested in going more the direction of industry after they graduate their thoughts on this degree.

Benjamin R. Sellers
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Thanks very much for the information. You are correct in your conclusion that a significant proportion of GG alumni have taken the industry route rather than academic route. For those of us that chose the former, the transition to the environmental industry was quite challenging. This proposed focused degree would be good for all involved: it would make the transition easier for the future graduates, it would provide those of us already in the industry with new hires that are more prepared for the different demands, and it would hopefully attract a larger pool of students to GG or SOEST.

My own experience with hiring alumni from the various branches of UH geosciences has mostly been good so far, but like anything else, can get better. My own specific suggestions deal with largely non-technical topics, as the graduates in general have had a good grounding in the sciences. The following are my specific suggestions:
1) Training in business aspects like project management or cost accounting. I would agree very much with those that would conclude that these topics are not technical and that they would very likely not be of great interest (if at all) to most students going into the geosciences. On the other hand, my own experience is that these represent a significant proportion of work in an industry setting. I will go even farther to say that while such skills may not be immediately essential to an entry level candidate, very few will be able to advance very far in industry without them. While Civil Engineering has some aspects of this built-in to their technical curriculum, there was nothing equivalent in the geosciences when I was in the program (admittedly, this was sometime in the early Bronze Age). Our experience with recent graduates suggests that this has not changed.

2) Most industry work absolutely requires a firm knowledge of focused regulations and/or laws. By example, I am convinced that our own field of environmental remediation would not exist if environmental laws did not exist, as well. As with business/management training, this was nowhere part of the GG curriculum in the past and I am not aware if this has changed recently.

3) The third point deals with a more general aspect that I am sure you have already experienced. Have students take more classes that are writing-specific or -intensive to develop their skills of expression. There has been a rather startlingly wide range in the demonstrable writing skills of recent graduates.

Thanks for the chance to give input and I would be very interested to see where this goes. I hope things are well with you.

By the way- if the response to your message is a little light overall, it may be that some recipients will have the message flagged as "spam" by their operating systems and delete them without knowing. As you can see, that was the case with me, and I almost deleted the email until I recognized your name.

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I'm finishing my Masters in Geological Engineering from the University of Nevada, Reno. This new masters of geoscience sounds very interesting and exciting. Here are my concerns:
-What are Hawaii's requirements for a engineer intern license? In Nevada and Illinois (where I currently live), in order to take the licensure exam, you must have a degree in engineering from an ABET certified school. I know the Engineering School at UH is ABET certified but SOEST is not. This changes the minimum requirements (i.e., years of graduate school and/or years of experience) needed to take the exam and to eventually become certified as a Professional Engineer.
-What are Hawaii's requirements to become a state certified geologist? In Illinois, you must work
with a state certified geologist for x-many years before qualifying to take the exam.
-How many engineering firms in Hawaii employ staff geologists? I think they are getting away
with only geotechnical (civil) engineers
-I am currently not on track for a research scientist position but I worked as a junior engineer in
Reno and now as an assistant to a fluvial geomorphologist. My employers are puzzled that I did
not take a groundwater hydrology course (a requirement course for the masters in geoscience?).
-Perhaps students enrolled for the masters of geoscience should be paired with someone in
industry? I realize that graduate students should be aware of the paradigms in research but they
(l) lacked some essential skills needed in the field (e.g., field mapping, photogeology, GIS,
AutoCAD). Although a masters degree on your resume looks great, marketable skills
(programming, familiarity with computer software used in industry) are also a plus (as well as
experience).
-How many UH undergraduates go on for a graduate degree? How many in the field of
geoscience? Mike Dahilig was in my graduating class and he's graduating with a law degree.
More effort needs to be made to get undergraduates interested in research and/or exposed to
graduate school opportunities. Not much effort was made to retain graduating undergrads as UH
graduate students. I wasn't sure exactly what I wanted to pursue until my senior year, when it
was too late to start a senior thesis project.

Again, just some thoughts. Please feel free to contact me if you have any more questions.

Kimberly "Kimi" S. Artita
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Thanks for passing this information on to me. I will spread it around to my people and my clients
I come in contact with. It seems like a good deal to me. I have been in full support of UH
offering more classes and degrees for people wanting non-research jobs. I would say 90% of all
non-academic geology jobs here in Hawaii are in the environmental field, yet UH doesn't prepare
their graduates with courses for this field of work. It makes no sense to me. Maybe this masters
program will allow geology grads to focus more in this area to prepare them for the job market in
Hawaii. I will let you know if I talk to anyone interested.

Dave Davis
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Hello. I just got this e-mail from one of our recently matriculated former undergraduates. Note
the line in bold.

I just wanted to thank you for your recent help with my pursuit of the State geologist position. I
found out that the position is under the DLNRs commission on water resource
management. Apparently the State does employ geologists under different departments such as
DOH, DLNR, and the Planning branch. Unfortunately I found out that I do not have
the requirements to pass the dept. of human resource's screening process (min. 3 yrs exp.).
However, I did have a meeting with the DLNR folks and they offered me a position as a
hydrologist. The idea is that I can gain the required amount of experience in the hydrologist
position and then eventually transfer to a geologist position. I also found out that the water
commission will start looking outside the State to fill the geologist one and two slots they
have because they have not seen any applicants locally that can pass the screening process.
Stephen Martel  
Professor  
Department of Geology and Geophysics  

Neil - take a look at the requirements here (pdf advertisement for a State of Hawaii geologist position). Our graduates will have a tough time getting a job with the state without a Masters degree.  
Steve--  
Stephen Martel  
Professor  
Department of Geology and Geophysics  

The program sounds quite good—particularly in that the 'culminating experience' final project will be derived from the work place, tying together the practical and academic parts of the degree in a way that should benefit both the student and employer. I think if the program had been available at the time of my graduation I might have taken a job with a local firm and gone for it.

Eden Jael Feirstein  
Dept. Hydrology & Water Resources  
Harshbarger Building Rm. 322A  
University of Arizona  
Office Tel: 520-621-7115  

I received a memo from you regarding a proposed masters program, M.Geo, and I am interested in pursuing a masters. I graduated from G&G in May 2004 and I have been working for Earth Tech for a year. I would like to get a masters degree in Geology, but with this new possible option, M.Geo, I am not sure which way to pursue my interests. I would also be very interested in the MS degree also. Please e mail me, or call me at the below numbers with more information, or let me know when a good time to come by POST would be.

Carrie Plath  
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P 808.356.5363  
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As a recent UH B.S. Grad, I would be very interested in this program. I am currently working with Mountain Edge Environmental, Inc. The program sounds excellent; however, I do believe that a technical writing course should be required as well as a final paper.

My personal challenge for this program is my husband is military and he is up for a duty change at the end of 2007. I am not sure if this program would be in effect before I left, but if so…SIGN ME UP!

Angela Peltier  
Mountain Edge Environmental, Inc.  
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Haleiwa, HI 96712  
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Phone: (808) 637-1200  
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I am writing to express my interest in the proposed M.Geo Degree discussed in your letter on the
I am Professional Geologist presently working for a geotechnical consulting firm in California. I currently have a Post Graduate Diploma in Engineering Geology from the University of Canterbury in New Zealand. The Diploma represents one year of post-grad course work in subjects related to engineering geology.

Although my present expertise is in the field of engineering geology, I am very interested in active volcanism and I plan to apply to the University of Hawaii as a graduate student. I hope to start studying next spring.

My long term goals are to teach, conduct research, or work for a government agency in a scientific role. Would the proposed M.Geo degree be suitable for someone with my background and aspirations? Would the M.Geo be suitable preparation for moving on to a Ph.D.?

I appreciate any advice or information you can offer.

Mark Davis, PG., REA.
geojobhunter@yahoo.com
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geojobhunter@yahoo.com

Have you made any progress on getting this program set up? I am definitely interested in the program. I believe there may be one or two other individuals in our office interested as well.

I certainly hope that enough folks are interested that the program will get initiated. We have very few opportunities here in Hawaii for additional training or workshops, and this would be a good way to really get some focused study. It also seems that it would be a good way to infuse some of the practical information gathered in the consulting world into the geology program at the UH - a way for those of us that have been out there working to share information/experience we have gained on projects with others in the geology program.

Thanks,
Marc Dexter,
RG Project Manager CH2M HILL, Honolulu Office New Address and Fax!
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Is it too late for me (and/or the PTWC) to help you make this new Degree program a reality? I for one would be very interested! I'm sure that we could get Chip or Stu to write up a Letter of Encouragement, or whatever would help.

Barry Hirshorn
Pacific Tsunami Warning Center
I am writing to obtain more information about the Master of Geoscience that was posted on the G&G website.

I graduated from the University of Washington, School of Oceanography with a degree in Marine geophysics. For the last two years I have been working as a data processor for a small company in Seattle, WA that specializes in marine survey’s using primarily sidescan and interferometry. I am currently looking to go back to school in a related field of study and the brief description that you gave in your memorandum sounded intriguing.

Am I qualified for the M.Geo. program? If so, where can I find more details about it?

Curtis Clement  
Marine Geophysicist  
Williamson & Associates  
206-285-8273

I'm Tracy Ibarra and currently a senior in the G & G undergrad B.S. program. I am expected to graduate Spring 2008. I am interested in a professional degree and was hoping that the department was offering a program for it.

Currently, I work for the U.S. Geological Survey Water Resources Division in Honolulu. I have been an employee here since May 2005 under their Student Career Employment Program. The USGS and the university have a joining contract to employ me as a student until 2010. I would like to earn a professional degree with a focus on what I do here at the USGS, but do not know how to go about it or what the grand details are. Suggestions?

Tracy Ibarra