

**San Francisco State University**  
**Inventory of Program Assessment Activities, 2009-2011**

**Program/Degree:** B.A. Geography

**College:** CoSE

**Date:** Dec. 10, 2013

**Program Mission:** Each graduate of the B.A. in Geography will develop a depth of understanding in the concepts, theories and skills within the discipline of Geography and will have been afforded the opportunity to prepare for a career or profession following graduation.

The Department of Geography & Environment assessment of student learning is an ongoing event. We continue to review our student learning objectives at the department level. The department continues to assess several of its SLOs for the BA as well as student success in its courses. Last year we evaluated student success in SLO 1B and 2 and have used our findings to provide changes in the curriculum that will enhance student learning. The chart below provides the department's SLOs and the actions undertaken in 2011-2013.

**Academic years 2011-2013: Findings and Actions** (see accompanying table)

SLO 1B. Because of faculty retirements, there are fewer courses offered under the GEOG 501+ level, these were the regional course offerings in the department. Students were required to take at least one course in the 501-599 (regional geography) series. Given the limited offering of regional courses compared to the past, the department has redefined this distribution requirement as *Human-Environment Interaction*, an important subfield in our discipline reflected in the SLOs and covered well in our department, and we have included courses that fit this broader definition into this distribution requirement.

SLO 4: Students in GEOG 103 were not prepared adequately for statistical analyses in this course. It was determined that Math 124: Probability & Statistics or the equivalent quantitative reasoning course should be implemented as a prerequisite for GEOG 103. This change was made to the major and went into effect in Fall 2013.

The department is using GEOG 690: *Proseminar in Geography* as our GWAR course. Upon assessment, it was determined that this course, which was also set to be our culminating experience course could not work as both junior level GWAR and senior culminating experience course. A new course Geog 500, was created and approved to serve as the junior level GWAR course in Fall 2014. GEOG 690 will be once again our culminating experience course. GEOG 500 will be added to curriculum to go into effect Fall 2014.

We will continue to evaluate the content of GEOG 103 to be sure students are receiving the required introduction to concepts that are discussed in upper division courses that this course is a prerequisite to. We are in the process of surveying faculty who teach these upper division courses to determine the introductory competencies required from GEOG 103 and will revise course if necessary.

During the 2013-2014 academic year we will be working with administration to follow through on these curriculum changes once CMS has been up and running. We will continue to look at course competencies and related SLOs and will assess these new curricular changes in the upcoming years.

**BS in Environmental Science & Management:** The department Curriculum Committee has developed a proposal for a new BS degree, and await discussions at CRAC on where we stand with this.

Measurable Student learning outcomes (SLOs)	Place in curriculum where each outcome is addressed	Academic year outcome was/will be assessed	Assessment/procedures Methods/strategies	Summary of findings	Use of findings for program improvement
<b>1A. Demonstrate knowledge of core concepts and theories in physical geography:</b>	GEOG 101 GEOG 300 series	2006-07	Core faculty imbedded questions in introductory and upper division courses.	Some improvement seen from lower division to upper division classes, but not uniformly	Worked with a new Lecturer to improve coverage of concepts, esp. in Geog 316
Relate global circulation patterns to spatial climate variability	GEOG 101, 313/314	2007-09	Core faculty imbedded questions in introductory and upper division courses.	Some continued improvement in Landforms but increased enrollment from ENVS students who took Geol, not Geog 101, poses some problems in continuity of assessment, especially for biogeography.	Increased enforcement of lower division prerequisites for upper division electives. Instituted team teaching of a large section of Geog 101 to increase students' exposure to different expertise.
Relate biomes with climate, geologic events & evolutionary history	Geog 101, 316	2011	Revision of Geog 314 as Bioclimatology to reflect the critical impact of boundary layer climates on biogeographic and agricultural activities.	Geog 314 <i>Bioclimatology</i> first offering in Spring 2011 was a great success, with apparent cross-fertilization among climate and biogeography interests.	
Interpret landscapes (identify landforms on maps/imagery.)	Geog 101, 312	2007-09	Developed online quizzes to reinforce key concepts in Geog 312 and 313.		
		2011-13	In 2013, redeveloped online quizzes in 312 for easier access.	Improved student access, though no noticeable improvement in understanding, but may be too early to tell.	

Measurable Student learning outcomes (SLOs)	Place in curriculum where each outcome is addressed	Academic year outcome assessed	Assessment/procedures Methods/strategies	Summary of findings	Use of findings for program improvement
<b>1B. Demonstrate knowledge of core concepts and theories in human geography:</b>	GEOG 102		Core faculty met to develop assessment activities with embedded assessment in Geog 102 and upper-level courses.	No findings initially.	n/a
Understand spatial dependency between humans & the envt	GEOG 102, 423, 600	Specific outcomes articulated 2005-06; assessment delayed by major personnel changes.  2007-09	SLO concepts were stressed in additional courses (423, 433, 443, 455.)  Student learning assessed via poster presentations and essay exams.	Students learn concepts more thoroughly when addressed in classes relating to different themes. Geog 107 World Regions & Interrelations course especially effective in teaching SLO concepts.	Added Geog 107 as an alternative to Geog 102 in major core requirements.
Use <i>site</i> and <i>situation</i> to analyze emergence & growth of a city	GEOG 102, 432, 433				
Critically evaluate how local processes relate to global processes	GEOG 102, 434, 455, 500 series	2011-13		Upper-division regional courses also highly effective, probably due to comparative content.	In progress: Revising curriculum to include additional courses within the 500 requirement to expand offerings to facilitate graduation.

Measurable Student learning outcomes (SLOs)	Place in curriculum where each outcome is addressed	Academic year outcome assessed	Assessment/procedures Methods/strategies	Summary of findings	Use of findings for program improvement
<b>2. Students will be able to identify and investigate a significant geographic question and present findings in a coherent and well-developed project.</b>	Geog 103 (Level 1), 690 (Capstone course)	Ongoing since 2003-04	Graded assignments in GEOG 103 and 690; Rubric being developed.	With the increasing sizes of classes, there are fewer upper-division writing assignments. We are looking at ways of improving writing earlier in the curriculum.	Faculty encouraged to assign more term papers and other analytical work in upper division classes.
		2009-11	GEOG 690 final presentations required; quality of work assessed by faculty.		GWAR course developed to address writing across a variety of genres in our field.
	Geog 690	2011-13	Senior project in culminating experience course (combined with GWAR)	This course does not work well as both junior level GWAR and senior culminating experience course. ,.	Created a new course to fulfill GWAR (Geog 500) so we will be investigating revising SLOs to return Geog 690 to its role as culminating experience
<b>3. Students will be able to critically evaluate the interactions of human activities with a given resource across time and space, at variable scales</b>	Geog 101, 102, 107 Geog 300, 400, 500, Geog 600-650 Geog 690	2005-06 2007-08	Faculty sought to develop an essay question for use at intro, intermediate and capstone levels.	Learning outcome too global, hard to measure.	
		2007-09	Renewed effort to address this objective within individual courses.	500- and 600-level courses more effective in achieving objective, esp. with international case study examples.	Increase use of international case studies in upper-level courses, e.g. 429 Transportation, 434 Health/Health Care

Measurable Student learning outcomes (SLOs)	Place in curriculum where each outcome is addressed	Academic year outcome assessed	Assessment/procedures Methods/strategies	Summary of findings	Use of findings for program improvement
<b>4. Students will be able to apply quantitative and technical skills to the analysis of a geographic problem or question.</b>	Geog 103 (intro) Geog 603, 606, 610, 611, 620, 621, 690	2002-05 2006-07 2007-09	Informal student feedback, evaluation of term projects	Discontinuities in skill level; problems with course articulation.	Techniques Committee meets to articulate curricula; poster presentations assigned in all techniques classes to reinforce this SLO.
		2009-11	Continues; also, sample projects now posted on classroom walls for peer review & discussion.  Diagnostic exam administered at start of each advanced class (620, 621) that requires 603 as a prerequisite.	Overall improvement apparent. Use of GIS technologies in other courses (e.g. 642) supports learning. Increased offerings of GIS courses due to MS.	Ongoing articulation. More faculty use of GIS/remote sensing products in non-technical courses.
	Geog 103 and classes that rely on 103 as prereq	2011-13	Quantitative reasoning skills on research projects.	Many students are not sufficiently prepared in quantitative methods for upper-division coursework.	Math 124 added as a prerequisite to Geog 103; Exercises in applied trigonometry added to 103. Enforcement of prerequisites.

Measurable Student learning outcomes (SLOs)	Place in curriculum where each outcome is addressed	Academic year outcome was/will be assessed	Assessment/procedures Methods/strategies	Summary of findings	Use of findings for program improvement
<b>4 a) Students should be able to demonstrate an understanding of how spatial data are handled in GIS and familiarity with basic functions in GIS.</b>	Geog 103 (intro) Geog 603, 606, 610, 611, 620, 621, 690	2005-06 2006-07	Pre-tests administered in upper level GIS courses (620 & 621.)	All students understand basic data models and most are familiar with major functions; Certain functions (choropleth mapping, e.g. ) are not consistently learned.	Geog 603 instructors devote more instructional time to map-making and how to choose the correct map type for data portrayal.
		2007-09		Pre-test in 621 abandoned due to unneeded stress.	Lab exercises modified to require maps as part of presentation.
		2009-11	Evaluation and redesign of introductory GIS courses, from 103 to 603 (continuing in 2011-2013)	Late-declaring majors (e.g. ENV5 transfers) sometimes lack core concepts from Geog 103.	Techniques committee developing a self-study option for students to who need to remedy 103 deficiencies.
		2011-13	Evaluation of success of self-study option for 103 deficiencies through interviews with faculty.	Too many students who missed taking 103 don't have the skills for classes requiring it as prerequisite.	Geog 103 prerequisite enforced.

**San Francisco State University  
Inventory of Program Assessment Activities, 2011-2013**

**Program/Degree:** Master of Arts in Geography      **College:** CoSE      **Date:** December 9, 2013

**Program Mission:** Each graduate of the MA Program in Geography will develop a depth of understanding in the concepts and theories, and the skills within the discipline of Geography and will have been afforded the opportunity to prepare for a career or further academic work following graduation.

Note: One additional assessment-related project was an assessment of any effect of the new MS in Geographic Information Science on the MA in Geography program, especially as the MS was proposed under the assumption that a subset of MA Geography students were *de facto* GISci students. One finding was that there was reduced enrollment in the regular MA (though not in the Resource Management & Environmental Planning concentration, and this reduced enrollment in Geog 801. A parallel observed need for MS students to gain from the topics covered in 801 led to our recent addition of 801 to the MS core, and a return to the mix of geographers to 801 has benefited students in each program.

Measurable Student learning outcomes (SLOs) <i>(Include all SLOs)</i>	Place in curriculum where each outcome is addressed <i>(Indicate level of instruction)</i>	Academic year outcome was/will be assessed <i>(provide for each outcome)</i>	Assessment/procedures Methods/strategies <i>(Provide for each SLO)</i>	Summary of findings <i>(What students do well and Where improvements are needed)</i>	Use of findings for program improvement
<b>Demonstrate writing skills appropriate to Masters level work in Geography</b>	Admissions review.	Annually	Analytical Writing score on the GRE must be 4.5 or better or remediation is required.	Most applicants whose GPAs meet department standards do achieve an AW score of 4.5/better.	Threshold score on AW raised to 4.5; those below are now redirected to writing courses.
		2011-13	Re-evaluated AW score on the GRE shows that 4.0 or better is sufficient.	Most applicants whose GPAs meet department standards do achieve an AW score of 4.0/better.	Threshold score on AW lowered to 4.0; those below are now redirected to writing courses
	Upon completion of a graduate seminar.	2006-07 2005-06	Faculty rate a randomly-selected set of papers using a department-approved matrix.	By the end of their first or second grad seminar, 70 - 75% of samples papers were gram-matical, succinct and well-punctuated. 15-20% of papers included poorly-written discussions of methods and theoretical frameworks.	Earlier interventions sought with weak writers. Students whose writing falls below department standards directed to take a second writing class or work with a writing tutor.

Measurable Student learning outcomes (SLOs) (Include all SLOs)	Place in curriculum where each outcome is addressed (Indicate level of instruction)	Academic year outcome was/will be assessed (provide for each outcome)	Assessment/procedures Methods/strategies (Provide for each SLO)	Summary of findings (What students do well and Where improvements are needed)	Use of findings for program improvement
<b>Demonstrate understanding and use of appropriate methods of inquiry in geographic research</b>	Geog 801	Annually (Fall)	Students write literature reviews and theoretical frameworks to guide their research	Students completing 801 successful in subsequent seminars.	
	Geog 895/898	2004-05	Faculty attended thesis defenses for which they were not committee members to review student preparation	Students' ability to explain and justify chosen research methods was inconsistent;	Implement methods of inquiry requirement in the curriculum for all Masters candidates.
	Thesis proposal presentations	2006-07	Faculty attended thesis proposal presentations by students who had recently submitted PCEs.	Students understanding of methods seems to be improving	Require Thesis Proposal Presentations by all students after Fall, 2006
		2007-09	Developed a scoring rubric for thesis proposal presentations. Used in AY 2007-08	Proposal presentations, have increased faculty (and fellow student) involvement in thesis advising, increased student interest in identifying appropriate methods and theoretical frameworks	Continued policy
		2009-11	Revised the scoring rubric. Focus meeting on Geog 897 at the end of the Spring 2011 semester used to identify changes that may be needed.	Rubric improved, and apparently clearer for students.	Graduation rate has increased, suggesting this step helps students frame their thesis in a manageable way and secure support they need.
	Geog 897 Research Project Formulation (as cohort class)	2009-11	Integrated thesis proposal presentations, defenses, workshops and colloquia into Geog 897.	First offering of 897 was largely a success, though we found that some students signed up before they were ready.	Research project (895) students should not be required to give oral proposal presentations.
		2011-13	Discussions at department meetings about the success of 897 for all masters' programs.	Success of 897 not proven, as use of 896 and proposal presentations provides the same benefit without the complexities of an 897 with all students. Also, many 897 assignments (lit review, etc.) are already covered in other classes.	897 not added to the MA requirement, though proposal presentations still required.

Measurable Student learning outcomes (SLOs) (Include all SLOs)	Place in curriculum where each outcome is addressed (Indicate level of instruction)	Academic year outcome was/will be assessed (provide for each outcome)	Assessment/procedures Methods/strategies (Provide for each SLO)	Summary of findings (What students do well and Where improvements are needed)	Use of findings for program improvement
<b>Demonstrate mastery in qualitative or quantitative analysis of geographic research question</b>	Techniques and Methods courses: Geog 103  Geog 602, 610, 611, 620, 621, 652, 657, 705, 815	2003-ongoing	Experience at Geog 103/or equivalent level required for classification	Inconsistency in content of technical or analytical courses.	Techniques subcommittee reviewed & revised techniques curriculum and continues to monitor content.
		2007-09	Evaluation of upper-division coursework  Informal student surveys, exit interviews, alumni follow-up	Some students graduate with few if any upper division methods classes. Lack of mastery evident at some thesis defenses; overall quality has improved significantly since 602/705 requirement added.	Required all Masters students to take a course in qualitative or quantitative field methods (601/602) or quantitative methods (705.)
		2009-11	Creation of paired courses from 611 (711), 620 (720) and 621 (721). Adoption of grad-level requirements, especially incorporating academic literature in course projects.	Establishment of MS in GIScience degree, starting Fall 2010, to be evaluated in next assessment period.	Development of special MA-level assignments and assessments during development of paired course proposals
	Geog 895/898	2011-13	Discussions among faculty individually and in department meetings about grad student methods preparedness for thesis research, and exit interviews in grad student defenses.	Some students remain unprepared in quantitative or qualitative methods, often due to changing topics or committee midstream. Two-year cycling of qualitative and physical field methods makes this challenging.	Need to discuss solutions to this at a department meeting, and consider ways of dealing with cycling of methods courses in the context of faculty teaching loads.

**San Francisco State University**  
**Inventory of Program Assessment Activities, 2011-2013**

**Program/Degree:** Master of Arts in Geography, Conc in Resource Mgt & Env Planning **College:** CoSE **Date:** December 9, 2013

**Program Mission:** Each graduate of the MA Program in Geography: Concentration in Resource Management & Environmental Planning will develop a depth of understanding in the concepts and theories, and the skills within the discipline of Geography applied to environmental management and planning, and will have been afforded the opportunity to prepare for a career or further academic work following graduation.

Measurable Student learning outcomes (SLOs) <i>(Include all SLOs)</i>	Place in curriculum where each outcome is addressed <i>(Indicate level of instruction)</i>	Academic year outcome was/will be assessed <i>(provide for each outcome)</i>	Assessment/procedures Methods/strategies <i>(Provide for each SLO)</i>	Summary of findings <i>(What students do well and Where improvements are needed)</i>	Use of findings for program improvement
<b>Demonstrate writing skills appropriate to Masters level work in Geography</b>	Admissions review.	Annually	Analytical Writing score on the GRE must be 4.5 or better or remediation is required.	Most applicants whose GPAs meet department standards do achieve an AW score of 4.5/better.	Threshold score on AW raised to 4.5; those below are now redirected to writing courses.
		2011-13	Re-evaluated AW score on the GRE shows that 4.0 or better is sufficient.	Most applicants whose GPAs meet department standards do achieve an AW score of 4.0/better.	Threshold score on AW lowered to 4.0; those below are now redirected to writing courses
	Upon completion of a graduate seminar.	2006-07 2005-06	Faculty rate a randomly-selected set of papers using a department-approved matrix.	By the end of their first or second grad seminar, 70 - 75% of samples papers were gram-matical, succinct and well-punctuated. 15-20% of papers included poorly-written discussions of methods and theoretical frameworks.	Earlier interventions sought with weak writers. Students whose writing falls below department standards directed to take a second writing class or work with a writing tutor.

Measurable Student learning outcomes (SLOs) (Include all SLOs)	Place in curriculum where each outcome is addressed (Indicate level of instruction)	Academic year outcome was/will be assessed (provide for each outcome)	Assessment/procedures Methods/strategies (Provide for each SLO)	Summary of findings (What students do well and Where improvements are needed)	Use of findings for program improvement
<b>Demonstrate understanding and use of appropriate methods of inquiry in geographic research</b>	Geog 801	Annually (Fall)	Students write literature reviews and theoretical frameworks to guide their research		
	Geog 895/898	2004-05	Faculty attended thesis defenses for which they were not committee members to review student preparation	Students' ability to explain and justify chosen research methods was inconsistent;	Implement methods of inquiry requirement in the curriculum for all Masters candidates.
	Thesis proposal presentations	2006-07	Faculty attended thesis proposal presentations by students who had recently submitted PCEs.	Students understanding of methods seems to be improving	Require Thesis Proposal Presentations by all students after Fall, 2006
		2007-09	Developed a scoring rubric for thesis proposal presentations. Used in AY 2007-08	Proposal presentations, have increased faculty (and fellow student) involvement in thesis advising, increased student interest in identifying appropriate methods and theoretical frameworks	Continued policy
		2009-11	Revised the scoring rubric. Focus meeting on Geog 897 at the end of the Spring 2011 semester used to identify changes that may be needed.	Rubric improved, and apparently clearer for students.	Graduation rate has increased, suggesting this step helps students frame their thesis in a manageable way and secure the support they need.

<p><b>Demonstrate understanding and use of appropriate methods of inquiry in geographic research</b></p> <p>(continued)</p>	<p>Geog 897 Research Project Formulation (as cohort class)</p>	<p>2009-11</p>	<p>Integrated thesis proposal presentations, defenses, workshops and colloquia into Geog 897.</p>	<p>First offering of 897 was largely a success, though we found that some students signed up before they were ready.</p>	<p>Research project (895) students should not be required to give oral proposal presentations.</p>
		<p>2011-13</p>	<p>Discussions at department meetings about the success of 897 for all masters' programs.</p>	<p>Success of 897 not proven, as use of 896 and required proposal presentations provides the same benefit without the complexities of an 897 with all students. Also, many 897 assignments (lit review, etc.) are already covered in other classes.</p>	<p>897 not added to the MA requirement, though proposal presentations still required.</p>
	<p>Geog 898</p>	<p>ongoing</p>	<p>Developing theses as published journal articles.</p>	<p>Increasing numbers of successful journal publications in good journals. This does require extra effort by the thesis committee members and the grad student, but in general the results are a superior thesis product. We have established policy for authorship on the department web site.</p>	<p>Continue promoting journal article submission</p>

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<b>Demonstrate mastery in qualitative or quantitative analysis of geographic research question</b>	Techniques and Methods courses: Geog 103  Geog 602, 610, 611, 620,621,652, 657, 705, 815	2003-ongoing	Experience at Geog 103/or equivalent level required for classification	Inconsistency in content of technical or analytical courses.	Techniques subcommittee reviewed & revised techniques curriculum and continues to monitor content.
		2007-09	Evaluation of upper division coursework  Evaluation and acceptance of thesis at Mastery level  Informal student surveys, exit interviews, alumni follow-up	Some students graduate with few if any upper division methods courses.  Lack of mastery evident at some thesis defenses.  Overall quality has improved significantly since 602/705 requirement added.	Required all Masters students to take a course in qualitative or quantitative field methods (601/602) or quantitative methods (705.)
		2009-11	Creation of paired courses from 611 (711), 620 (720) and 621 (721). Adoption of grad-level requirements, especially incorporating academic literature in course projects.	Establishment of MS in GIScience degree, starting Fall 2010, to be evaluated in next assessment period.	Development of special MA-level assignments and assessments during development of paired course proposals
	Geog 895/898	2011-13	Discussions among faculty individually and in department meetings about grad student methods preparedness for thesis research, and exit interviews in grad student defenses.	Some students remain unprepared in quantitative or qualitative methods, often due to changing topics or committee midstream. Two-year cycling of qualitative and physical field methods makes this challenging.	Need to discuss solutions to this at a department meeting, and consider ways of dealing with cycling of methods courses in the context of faculty teaching loads.

**San Francisco State University**  
**Inventory of Program Assessment Activities, 2011-2013**

**Program/Degree:** Master of Science in Geographic Information Science **College:** CoSE

**Date:** December 9, 2013

**Program Mission:** Each graduate of the MS Program in GIScience will develop a depth of understanding in the concepts and theories, and the skills within the discipline of Geographic Information Science and will have been afforded the opportunity to prepare for a career or further academic work following graduation.

Measurable Student learning outcomes (SLOs) <i>(Include all SLOs)</i>	Place in curriculum where each outcome is addressed <i>(Indicate level of instruction)</i>	Academic year outcome was/will be assessed <i>(provide for each outcome)</i>	Assessment/procedures Methods/strategies <i>(Provide for each SLO)</i>	Summary of findings <i>(What students do well and Where improvements are needed)</i>	Use of findings for program improvement
<b>Demonstrate writing skills appropriate to Masters level work in Geographic Information Science</b>	Admissions review.	Annually, including 2011-13	Analytical Writing score on the GRE must be 4.0 or better or remediation is required.	Most applicants whose GPAs meet department standards do achieve an AW score of 4.0/better.	Threshold score on AW set to 4.0; those below are now redirected to writing courses.
	Upon completion of a graduate seminar.	2011-13	Successful completion of graduate seminar.	Results were mixed. Some students were quite capable as writers in general seminars, but others did not have the right background in specific capabilities – especially writing a scientific literature review.	Changing the program to require Geog 801, which provides experience in writing literature reviews as well as general graduate-level writing.

<b>Demonstrate understanding and use of appropriate methods of inquiry in geographic information science research</b>	GEOG 815	Annually (Fall)	Students learn the scope and methods of GIScience research, reviewing research works produced by specialists in the field.	Many students coming with prior work in GIScience did well with this, though some did not have the appropriate GIScience background for this seminar. We learned from this that assuming that this seminar would do double-duty as an introduction to graduate research and writing (similar to our Geog 801), as well as in specific GIScience research, was not correct.	We are changing the program to require Geog 801, removing the requirement of Geog 897 to make room, and allowing students to take 815 <i>after</i> having completed the appropriate courses in skill areas of geographic information science, such as Geog 711, 720 and 721.
	Geog 895/898	2011-13	Faculty attended thesis defenses for which they were not committee members to review student preparation.	Students' ability to explain and justify chosen research methods was inconsistent;	Implement methods of inquiry requirement in the curriculum for all Masters candidates.
	Geog 897	2011-13	<p>Holding Geog 897 as a cohort class, where all students at this stage of their program would go through literature review, methodological development and proposal as a group, with faculty working with all students in short (2-week) course modules.</p> <p>Discussions at department meetings about the success of 897 for all masters' programs.</p>	Great idea which worked for a few students, but did not consider the challenges of scheduling and contrasting timeframes of students going through the program. Combined with grad division rules on submission of forms (ATC, PCE), could sometimes create challenges for timely program completion. Thesis proposals can also be completed as part of Geog 896, so building it into 897 is unnecessary. Other 897 assignments (lit review, methodology, etc.) are already covered in other classes.	Revision of program to remove Geog 897 as a requirement. Students can still apply the course to their program, but will be as a supervision course with their thesis adviser.

	Thesis proposal Presentations	2011-13	Faculty attended thesis proposal presentations by students who had recently submitted PCEs.	Proposal presentations, have provided faculty (and fellow student) involvement in thesis advising, increased student interest in identifying appropriate methods and theoretical frameworks.	Maintain thesis proposal presentations, but not linked to 897 (see below).
	Geog 895/898	Ongoing	Developing theses as published journal articles	Still early to tell since the program is new, but one of two completed MSGISc theses has been published, and that one was in <i>Global and Planetary Change</i> . (impact factor 3.2). All three being defended Fall 2013 are being submitted to journals.  GIScience faculty attest to the higher quality of theses when planned for journal submission.	Continue promoting journal article submission

<b>Demonstrate ability to use skills and knowledge in a real-world situation</b>	Geog 789 GIScience Internship	Ongoing	Reports from internship sponsors	General satisfaction with the quality of our students	No change.
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<b>Demonstrate mastery in quantitative analysis of geospatial research question</b>	Geog 705 and GIScience coursework (711, 720, 721, and others)	Ongoing	Evaluation of coursework	Some students need better statistical and other quantitative skills as background.	Revisions to prerequisites for Geog 625, 711, and 721.
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