Student Learning Outcomes for Master of Science (Geospatial Science)

2011-2012

Outcome 1:	Spatial Analysis and Reasoning
Description:	Students will observe, interpret, analyze, and understand spatial patterns on Earth's surface.
Budget:	$0.00
Core Competencies Supported:	4,5
Assessed How Often:	Per semester
Assessed this Year?	Yes
Responsibility:	Graduate Director
Participation:	Department Chair and Faculty
Direct Assessments	
	Thesis defense
Indirect Assessments	
	Database of graduates' employment and/or further graduate study.
Results:	One student defended a thesis, and that student's information entered into database for graduate tracking.
Curriculum Actions/Improvements:	None yet.
Other Actions/Improvements:	None yet.
Future Actions:	Department is considering implementing a thesis proposal

	presentation in addition to the defense. Department is considering creating and implementing an exit survey as well as expanding database to include quantitative data.

Outcome 2:	Human Systems
Description:	Students will analyze and understand the human spatial patterns in the context of cultural, demographic, economic, social, and political processes.
Budget:	$0.00
Core Competencies Supported:	2,5
Assessed How Often:	Per semester
Assessed this Year?	Yes
Responsibility:	Graduate Director
Participation:	Department Chair and Faculty
Direct Assessments	
	Thesis defense
Indirect Assessments	
	Database of graduates' employment and/or further graduate study.
Results:	One student defended a thesis and that student's information entered into tracking database.
Curriculum Actions/Improvements:	None yet.
Other Actions/Improvements:	None yet.
Future Actions:	Department is considering implementing a thesis proposal presentation in addition to the defense. Department is considering creating and implementing an exit survey as well as expanding database to include quantitative data.

Outcome 3:	Physical Systems
Description:	Students will analyze and understand the spatial patterns and processes, as well as the interactions of the atmosphere, lithosphere, biosphere, and hydrosphere.
Budget:	$0.00
Core Competencies Supported:	2,5
Assessed How Often:	Per semester
Assessed this Year?	Yes
Responsibility:	Graduate Director
Participation:	Department Chair and Faculty
Direct Assessments	
	Thesis defense
Indirect Assessments	
	Database of graduates' employment and/or further graduate study.
Results:	One student defended thesis and information entered into tracking database.
Curriculum Actions/Improvements:	None yet.
Other Actions/Improvements:	None yet.
Future Actions:	Department is considering implementing a thesis proposal presentation in addition to the defense. Department is considering creating and implementing an exit survey as well as expanding database to include quantitative data.

Outcome 4:	Human-Environment Interaction

Description:	Students will understand the connections and relationships between humans and the environment.
Budget:	$0.00
Core Competencies Supported:	2,4
Assessed How Often:	Per semester
Assessed this Year?	Yes
Responsibility:	Graduate Director
Participation:	Department Chair and Faculty
Direct Assessments	
	Thesis defense
Indirect Assessments	
	Database of graduates' employment and/or further graduate study.
Results:	One student defended thesis and information entered into tracking database.
Curriculum Actions/Improvements:	None yet.
Other Actions/Improvements:	None yet.
Future Actions:	Department is considering implementing a thesis proposal presentation in addition to the defense. Department is considering creating and implementing an exit survey as well as expanding database to include quantitative data.

Outcome 5:	Tools and Techniques
Description:	Students will use maps, aerial imagery, and other tools and techniques including, but not limited to, Geographic Information Systems, cartography, the Internet, field data collection, qualitative and quantitative analysis, or Global Positioning System receivers.

Budget:	$0.00
Core Competencies Supported:	3
Assessed How Often:	Per semester
Assessed this Year?	Yes
Responsibility:	Graduate Director
Participation:	Department Chair and Faculty
Direct Assessments	
	Thesis defense
Indirect Assessments	
	Database of graduates' employment and/or further graduate study.
Results:	One student defended thesis and information entered into tracking database.
Curriculum Actions/Improvements:	None yet.
Other Actions/Improvements:	None yet.
Future Actions:	Department is considering implementing a thesis proposal presentation in addition to the defense. Department is considering creating and implementing an exit survey as well as expanding database to include quantitative data.

Outcome 6:	Geographic Tradition
Description:	Students will understand Geography’s historical and philosophical foundations.
Budget:	$0.00
Core Competencies Supported:	5

Assessed How Often:	Per semester
Assessed this Year?	Yes
Responsibility:	Graduate Director
Participation:	Department Chair and Faculty
Direct Assessments	
	Thesis defense
Indirect Assessments	
	Database of graduates' employment and/or further graduate study.
Results:	One student defended thesis and information entered into tracking database.
Curriculum Actions/Improvements:	None yet.
Other Actions/Improvements:	None yet.
Future Actions:	Department is considering implementing a thesis proposal presentation in addition to the defense. Department is considering creating and implementing an exit survey as well as expanding database to include quantitative data.

Annual Goals for Geography

2011-2012

Goal 1:	Research Initiative
Description:	To promote faculty research and scholarship in order to enhance the education and increase the opportunities for our students.
Budget:	0.00
University Goals Supported:	1,2,5
Strategic Goals Supported:	
Responsibility:	Chair
Participation:	Faculty
Results:	Four faculty members submitted articles to referred journals and ten articles and 16 maps or images have been or/are in process of being published. One faculty member published a Study Guide for Human Geography to accompany the text book. Three faculty members presented research at national conferences for a total of 16 presentations. Three undergraduate students with faculty mentors as co-authors made presentations at one national and one regional conference. The two major conferences are the Association of American Geographers (AAG) and the Sutheastern Divison of the AAG. The two large grants from NOAA and DoJ are continuing through the next academic year with two faculty PIs. Six undergraduate students, one graduate student and one additional faculty member provided research assistance for these grants. One faculty member was approved for an Association of American Geographers grant for Climate Change as part of the My Community Our Earth (MyCOE) project. Work continued on the CLiPSE grant managed by the University of Mississippi and Mississippi State and received from the National Science Foundation.
Actions/Improvements:	The PIs received reduced loads in the past in order to pursue their research plans as the NOAA and DoJ grants but will not have this benefit in the coming year. The PIs and undergraduate/graduate research assistants will present research findings at professional conferences and possible submission for publication. There is a continuing effort by the graduate director to secure university

	funding for graduate student assistance. There is discussion to promote more undergraduate student presentations at regional geography conferences in the next academic year.
Future Actions/Improvements:	

Goal 2:	Experiential Learning Initiative
Description:	To offer outside the classroom learning opportunities for geography students
Budget:	0.00
University Goals Supported:	1,2,4,5
Strategic Goals Supported:	
Responsibility:	Chair
Participation:	Faculty
Results:	The internship program continues to attract students with 14 taking this opportunity during the academic year. Thirty-two students completed a “Capstone Project” in 2011-2012. Geography faculty continued to incorporate external learning opportunities into their classrooms during the past year. Of all courses in 2011-2012, almost 60 % incorporated field trips including local field trips, local tours, and long distance trips. Dr. Koti and Dr. Gaston took students to the East African country of Tanzania and Dr. Gaston and Dr. Pretes will take students on a field experience to the American Northwest during the summer 2012. Dr. Pretes also took students to Washington, DC as part of an Interagency Cooperation course. He also took students to China in both the 2011 and 2012 summer semesters. Two funded research projects, National Oceanic and Atmospheric Administration and Department of Justice, continued during 2011-2012 and eight students were involved in supporting faculty with research. Four graduate students and one undergraduate student worked with the DOJ grant and three graduates worked with NOAA grant.
Actions/Improvements:	Two students presented their research findings at the Association of American Geographers meeting in New York City during February 2012. All students were mentored by faculty.. The Department of Geography’s MS in Geospatial Science program selected a new graduate coordinator who has created a plan for marketing and

	managing the program and one part of this plan was experiential learning opportunities.
Future Actions/Improvements:	

Goal 3:	Outreach Initiative
Description:	To promote UNA and geography as a major to potential students and to the community at large
Budget:	0.00
University Goals Supported:	2,5
Strategic Goals Supported:	
Responsibility:	Chair
Participation:	Faculty
Results:	As in past years, the department as a whole and individual faculty members participated in a wide range of outreach activities at UNA, in area schools and other venues, and at the state level. The Alabama Geographic Alliance now resides at UNA and receives grant funding from the National Geographic Society Education Foundation. Two faculty members are co-coordinators of this organization. With support from the National Geographic Society and directed by the Alabama Geographic Alliance, a Geography Technology institute was hosted at UNA. Fifteen teachers from Alabama, Tennessee and Pennsylvania learned how to integrate geographic technology into their geography-focused lessons. The two faculty members who are Alliance coordinators of the AGA participated in the MyCOE (My Community, Our Earth) international project with five other countries - Bolivia, Nicaragua, Ghana, Philippines and Australia. A grad student also participated in this project. With support from the National Geographic Society (NGS), faculty and UNA Geography students assisted with Geography Awareness Week activities by visiting a number of elementary and secondary schools and presenting lessons in spatial awareness and geographic concepts to an estimated 400 students. The office of the Alabama Geographic Alliance sponsored the NGS Giant Traveling Map of Africa at locations in North Alabama and schools in Birmingham with more than 500 elementary and university students attending. Faculty members participated in Research Day and Career Services day with poster presentations and departmental brochures. Faculty members

	participated in Geographic Information Systems day and the mayor of the city of Florence recognized the importance of GIS during an address given on GIS day. The Geography Department hosted the UNA Geography Alumni Association annual meeting in Wesleyan Hall where more than 60 alumni from around the country attended with several making professional presentations. Many undergraduate students attended sessions to learn about our former students and to network with them. The conference was well attended by faculty, students, administration, and general public. The keynote address was given by the V.P. of the NGS Mapping Division. Dr. Keys-Mathews directed the annual Research Day and the participated in the Career Services day event. The Department is recognized for its importance in GIS education and a representative from the faculty continues to serve on the State of Alabama GIS Executive Committee's Education and Outreach advisory committee. Faculty members helped promote the discipline of geography by participating in more than 20 other activities within the community and state. These included presentations at civic clubs (such as Rotary and Kiwanis), the Learning in Retirement organization, Florence/Lauderdale Public Library, Career Day, Geography Club, the International Geography Honor Society of Gamma Theta Upsilon, at Virginia Tech and San Francisco State University, and, internationally, at the University of Dar es Salaam in Tanzania. Faculty also served as judges/moderators for local, county, and state level academic Geography competitions (Geography Bees).
Actions/Improvements:	The Geography Department has long recognized the fact that students and the general public have less than full understanding of the nature of geography as a discipline and as a potential career. The entire faculty share this tasking and we will continue to schedule events and professional development activities to inform the public of the value of a geography education.
Future Actions/Improvements:	

Goal 4:	Curriculum Initiative
Description:	To provide our students with the appropriate knowledge and skills needed for successful careers in the field of geography
Budget:	0.00
University Goals Supported:	1,2,5
Strategic Goals	

Supported:

Responsibility: Chair

Participation: Faculty

Results: In order to provide our students with the appropriate knowledge and skills needed for successful careers in the field of geography, the Department of Geography faculty: •Reviewed, evaluated, and implemented a standard learning outcome-based assessment plan for GE102, GE111 and GE112 where a pre and post testing system was used to test learners' proficiency in fundamental geographic concepts taught during the semester. The pre-test is usually administered unannounced in the beginning of the semester while the post-test is administered at the end of the semester. A scantron analysis is conducted and the results compared. A 30% class improvement or a B-grade class average on the post-test are typically considered a positive (and sufficient) indicator of high proficiency in fundamental concepts learned. This learning outcome-based assessment plan which was formally implemented in 2010 has produced favorable results in the past two years. For example, the course averages for the 2011-2012 academic year were as follows: GE102 – 21% improvement and 83% course average; GE111 - 31% improvement and 75% course average; and GE112 – 40% improvement and 70% course average. •Reviewed and implemented curriculum changes in the undergraduate program which among other things: changed Geographic Information Systems (GE384) and Remote Sensing (GE454) from three to four-credit hour courses with a lab; changed the course numbering for the Urban and Regional Planning course from GE310 to GE420/520; and made catalogue course description changes for GE384; GE390; GE420; and GE454. •Implemented online instruction for all of the following lower level courses including: GE102, GE111; GE112 and GE260. It is expected that this effort will make lower-level our courses more accessible to our majors. •Extended the technical aspect of GIS instruction to make our graduates more competitive in the geospatial industry job market. This has been implemented by introducing an in-house course in GIS programming and geovisualization. •Broadened departmental course offerings with a focus on international experience and also to reinforce field work. A geography study abroad program in Tanzania, Africa was successfully conducted for the second year by two faculty members in the May intersession in 2012 offering 2 courses at both undergraduate and graduate levels. Another study abroad course was offered in China for the second time in the May intersession in 2012. •An interagency cooperation course was offered in the spring semester in 2012 at both undergraduate and graduate levels. •The

	department successfully secured additional funding for graduate assistantships for our MS in Geospatial Science. •The GE 300W – History and Philosophy of Geography course was redesigned to accommodate instruction in basic research methods and writing. •The MS in Geospatial Science program format was revamped for better learning and understanding of scholarly activities.
Actions/Improvements:	•To fully implement the learning outcome-based system for all lower level courses, the approach will also be implemented for GE260; GE224 and GE225. • To prepare our students for advanced courses, a quantitative-based Geography course is being proposed at the undergraduate and graduate levels. • To provide more breadth and widen the scope of our graduate course offerings, new courses will be introduced into our MS in Geospatial Science curriculum.
Future Actions/Improvements:	

Student Learning Outcomes for Master of Science (Geospatial Science)

2011-2012

Outcome 1:	Spatial Analysis and Reasoning
Description:	Students will observe, interpret, analyze, and understand spatial patterns on Earth's surface.
Budget:	$0.00
Core Competencies Supported:	4,5
Assessed How Often:	Per semester
Assessed this Year?	Yes
Responsibility:	Department Chair
Participation:	Faculty
Direct Assessments	
	Exit Exam
Indirect Assessments	
Results:	The graduating seniors in the 201-2012 academic year scored a low of 59% on the exit exam questions related to this outcome
Curriculum Actions/Improvements:	
Other Actions/Improvements:	
Future Actions:	The Department will continue to assess the validity of the questions related to this outcome and whether or not students are

taking the no-stakes exam seriously.

Outcome 2:	Human Systems
Description:	Students will analyze and understand the human spatial patterns in the context of cultural, demographic, economic, social, and political processes.
Budget:	$0.00
Core Competencies Supported:	2,5
Assessed How Often:	Per semester
Assessed this Year?	Yes
Responsibility:	Department Chair
Participation:	Faculty
Direct Assessments	
	exit exam
Indirect Assessments	
Results:	Graduating seniors in the 2011-2012 academic year scored an average of 65% on the exit exam questions related to this outcome
Curriculum Actions/Improvements:	
Other Actions/Improvements:	
Future Actions:	This score is below expectations and the faculty will review the questions to determine their validity for this outcome and to assess whether or not the students take the exam seriously or not.

Outcome 3:	Physical Systems

Description:	Students will analyze and understand the spatial patterns and processes, as well as the interactions of the atmosphere, lithosphere, biosphere, and hydrosphere.
Budget:	$0.00
Core Competencies Supported:	2,5
Assessed How Often:	Per semester
Assessed this Year?	Yes
Responsibility:	Department chair
Participation:	Faculty
Direct Assessments	
	exit exam
Indirect Assessments	
Results:	Graduating Seniors in the 2011-2012 academic year scored an average of 60% correct on the exit exam questions related to this outcome.
Curriculum Actions/Improvements:	
Other Actions/Improvements:	
Future Actions:	The faculty will revisit the exit exam to ascertain the validity of the questions for this outcome and discuss with students the need to take the exam seriously.

Outcome 4:	Human-Environment Interaction
Description:	Students will understand the connections and relationships between humans and the environment.
Budget:	$0.00

Core Competencies Supported:	2,4
Assessed How Often:	Per semester
Assessed this Year?	Yes
Responsibility:	Department chair
Participation:	faculty
Direct Assessments	
	exit exam
Indirect Assessments	
Results:	Graduating seniors in the 2011-2012 academic year scored an average of 60% correct answers on the exit exam questions related to this outcome.
Curriculum Actions/Improvements:	
Other Actions/Improvements:	
Future Actions:	The faculty will take action on assessing the exit exam questions and their validity in providing good data to determine why students score on the exit exam.

Outcome 5:	Tools and Techniques
Description:	Students will use maps, aerial imagery, and other tools and techniques including, but not limited to, Geographic Information Systems, cartography, the Internet, field data collection, qualitative and quantitative analysis, or Global Positioning System receivers.
Budget:	$0.00
Core Competencies Supported:	3

Assessed How Often:	Per semester
Assessed this Year?	Yes
Responsibility:	Department Chair
Participation:	Faculty
Direct Assessments	
	exit exam
Indirect Assessments	
Results:	Graduating seniors in the 2011-2012 academic year scored 62% correct answers on the exit exam questions related to this outcome.
Curriculum Actions/Improvements:	
Other Actions/Improvements:	
Future Actions:	The faculty will revisit the exit exam in view of the low score to determine what actions will be taken in the upcoming academic year.

Outcome 6:	Geographic Tradition
Description:	Students will understand Geography's historical and philosophical foundations.
Budget:	$0.00
Core Competencies Supported:	5
Assessed How Often:	Per semester
Assessed this Year?	Yes
Responsibility:	Department Chair
Participation:	faculty

Direct Assessments

exit exam

Indirect Assessments

Results:	The graduating seniors in the 2011-2012 academic year scored a low score of 47% correct on the exit exam questions related to this outcome.
Curriculum Actions/Improvements:	
Other Actions/Improvements:	
Future Actions:	The faculty will assess the validity of the questions in the exam in view of changes in the curriculum of the course from which these questions emerge to determine if changes should be made in the exam.

Annual Goals for Geography

2011-2012

Goal 1:	Research Initiative
Description:	To promote faculty research and scholarship in order to enhance the education and increase the opportunities for our students.
Budget:	0.00
University Goals Supported:	1,2,5
Strategic Goals Supported:	
Responsibility:	Chair
Participation:	Faculty
Results:	Four faculty members submitted articles to referred journals and ten articles and 16 maps or images have been or/are in process of being published. One faculty member published a Study Guide for Human Geography to accompany the text book. Three faculty members presented research at national conferences for a total of 16 presentations. Three undergraduate students with faculty mentors as co-authors made presentations at one national and one regional conference. The two major conferences are the Association of American Geographers (AAG) and the Sutheastern Division of the AAG. The two large grants from NOAA and DoJ are continuing through the next academic year with two faculty PIs. Six undergraduate students, one graduate student and one additional faculty member provided research assistance for these grants. One faculty member was approved for an Association of American Geographers grant for Climate Change as part of the My Community Our Earth (MyCOE) project. Work continued on the CLiPSE grant managed by the University of Mississippi and Mississippi State and received from the National Science Foundation.
Actions/Improvements:	The PIs received reduced loads in the past in order to pursue their research plans as the NOAA and DoJ grants but will not have this benefit in the coming year. The PIs and undergraduate/graduate research assistants will present research findings at professional conferences and possible submission for publication. There is a continuing effort by the graduate director to secure university

	funding for graduate student assistance. There is discussion to promote more undergraduate student presentations at regional geography conferences in the next academic year.
Future Actions/Improvements:	

Goal 2:	Experiential Learning Initiative
Description:	To offer outside the classroom learning opportunities for geography students
Budget:	0.00
University Goals Supported:	1,2,4,5
Strategic Goals Supported:	
Responsibility:	Chair
Participation:	Faculty
Results:	The internship program continues to attract students with 14 taking this opportunity during the academic year. Thirty-two students completed a “Capstone Project” in 2011-2012. Geography faculty continued to incorporate external learning opportunities into their classrooms during the past year. Of all courses in 2011-2012, almost 60 % incorporated field trips including local field trips, local tours, and long distance trips. Dr. Koti and Dr. Gaston took students to the East African country of Tanzania and Dr. Gaston and Dr. Pretes will take students on a field experience to the American Northwest during the summer 2012. Dr. Pretes also took students to Washington, DC as part of an Interagency Cooperation course. He also took students to China in both the 2011 and 2012 summer semesters. Two funded research projects, National Oceanic and Atmospheric Administration and Department of Justice, continued during 2011-2012 and eight students were involved in supporting faculty with research. Four graduate students and one undergraduate student worked with the DOJ grant and three graduates worked with NOAA grant.
Actions/Improvements:	Two students presented their research findings at the Association of American Geographers meeting in New York City during February 2012. All students were mentored by faculty.. The Department of Geography’s MS in Geospatial Science program selected a new graduate coordinator who has created a plan for marketing and

	managing the program and one part of this plan was experiential learning opportunities.
Future Actions/Improvements:	

Goal 3:	Outreach Initiative
Description:	To promote UNA and geography as a major to potential students and to the community at large
Budget:	0.00
University Goals Supported:	2,5
Strategic Goals Supported:	
Responsibility:	Chair
Participation:	Faculty
Results:	As in past years, the department as a whole and individual faculty members participated in a wide range of outreach activities at UNA, in area schools and other venues, and at the state level. The Alabama Geographic Alliance now resides at UNA and receives grant funding from the National Geographic Society Education Foundation. Two faculty members are co-coordinators of this organization. With support from the National Geographic Society and directed by the Alabama Geographic Alliance, a Geography Technology institute was hosted at UNA. Fifteen teachers from Alabama, Tennessee and Pennsylvania learned how to integrate geographic technology into their geography-focused lessons. The two faculty members who are Alliance coordinators of the AGA participated in the MyCOE (My Community, Our Earth) international project with five other countries - Bolivia, Nicaragua, Ghana, Philippines and Australia. A grad student also participated in this project. With support from the National Geographic Society (NGS), faculty and UNA Geography students assisted with Geography Awareness Week activities by visiting a number of elementary and secondary schools and presenting lessons in spatial awareness and geographic concepts to an estimated 400 students. The office of the Alabama Geographic Alliance sponsored the NGS Giant Traveling Map of Africa at locations in North Alabama and schools in Birmingham with more than 500 elementary and university students attending. Faculty members participated in Research Day and Career Services day with poster presentations and departmental brochures. Faculty members

	participated in Geographic Information Systems day and the mayor of the city of Florence recognized the importance of GIS during an address given on GIS day. The Geography Department hosted the UNA Geography Alumni Association annual meeting in Wesleyan Hall where more than 60 alumni from around the country attended with several making professional presentations. Many undergraduate students attended sessions to learn about our former students and to network with them. The conference was well attended by faculty, students, administration, and general public. The keynote address was given by the V.P. of the NGS Mapping Division. Dr. Keys-Mathews directed the annual Research Day and the participated in the Career Services day event. The Department is recognized for its importance in GIS education and a representative from the faculty continues to serve on the State of Alabama GIS Executive Committee's Education and Outreach advisory committee. Faculty members helped promote the discipline of geography by participating in more than 20 other activities within the community and state. These included presentations at civic clubs (such as Rotary and Kiwanis), the Learning in Retirement organization, Florence/Lauderdale Public Library, Career Day, Geography Club, the International Geography Honor Society of Gamma Theta Upsilon, at Virginia Tech and San Francisco State University, and, internationally, at the University of Dar es Salaam in Tanzania. Faculty also served as judges/moderators for local, county, and state level academic Geography competitions (Geography Bees).
Actions/Improvements:	The Geography Department has long recognized the fact that students and the general public have less than full understanding of the nature of geography as a discipline and as a potential career. The entire faculty share this tasking and we will continue to schedule events and professional development activities to inform the public of the value of a geography education.
Future Actions/Improvements:	

Goal 4:	Curriculum Initiative
Description:	To provide our students with the appropriate knowledge and skills needed for successful careers in the field of geography
Budget:	0.00
University Goals Supported:	1,2,5
Strategic Goals	

Supported:

Responsibility: Chair

Participation: Faculty

Results: In order to provide our students with the appropriate knowledge and skills needed for successful careers in the field of geography, the Department of Geography faculty: •Reviewed, evaluated, and implemented a standard learning outcome-based assessment plan for GE102, GE111 and GE112 where a pre and post testing system was used to test learners' proficiency in fundamental geographic concepts taught during the semester. The pre-test is usually administered unannounced in the beginning of the semester while the post-test is administered at the end of the semester. A scantron analysis is conducted and the results compared. A 30% class improvement or a B-grade class average on the post-test are typically considered a positive (and sufficient) indicator of high proficiency in fundamental concepts learned. This learning outcome-based assessment plan which was formally implemented in 2010 has produced favorable results in the past two years. For example, the course averages for the 2011-2012 academic year were as follows: GE102 – 21% improvement and 83% course average; GE111 - 31% improvement and 75% course average; and GE112 – 40% improvement and 70% course average. •Reviewed and implemented curriculum changes in the undergraduate program which among other things: changed Geographic Information Systems (GE384) and Remote Sensing (GE454) from three to four-credit hour courses with a lab; changed the course numbering for the Urban and Regional Planning course from GE310 to GE420/520; and made catalogue course description changes for GE384; GE390; GE420; and GE454. •Implemented online instruction for all of the following lower level courses including: GE102, GE111; GE112 and GE260. It is expected that this effort will make lower-level our courses more accessible to our majors. •Extended the technical aspect of GIS instruction to make our graduates more competitive in the geospatial industry job market. This has been implemented by introducing an in-house course in GIS programming and geovisualization. •Broadened departmental course offerings with a focus on international experience and also to reinforce field work. A geography study abroad program in Tanzania, Africa was successfully conducted for the second year by two faculty members in the May intersession in 2012 offering 2 courses at both undergraduate and graduate levels. Another study abroad course was offered in China for the second time in the May intersession in 2012. •An interagency cooperation course was offered in the spring semester in 2012 at both undergraduate and graduate levels. •The

	department successfully secured additional funding for graduate assistantships for our MS in Geospatial Science. •The GE 300W – History and Philosophy of Geography course was redesigned to accommodate instruction in basic research methods and writing. •The MS in Geospatial Science program format was revamped for better learning and understanding of scholarly activities.
Actions/Improvements:	•To fully implement the learning outcome-based system for all lower level courses, the approach will also be implemented for GE260; GE224 and GE225. • To prepare our students for advanced courses, a quantitative-based Geography course is being proposed at the undergraduate and graduate levels. • To provide more breadth and widen the scope of our graduate course offerings, new courses will be introduced into our MS in Geospatial Science curriculum.
Future Actions/Improvements:	

Student Learning Outcomes for Geography

2011-2012

Outcome 1:	Spatial Analysis and Reasoning
Description:	Students will observe, interpret, analyze, and understand spatial patterns on Earth's surface.
Budget:	$0.00
Core Competencies Supported:	4,5
Assessed How Often:	Per semester
Assessed this Year?	Yes
Responsibility:	Department Chair
Participation:	Faculty
Direct Assessments	
	exit exam
Indirect Assessments	
Results:	Graduating seniors in the 2011-2012 academic year scored 59% on the exit exam questions related to this ourcome.
Curriculum Actions/Improvements:	
Other Actions/Improvements:	
Future Actions:	The Department will assess the low scores to determine the value of each question and try to determine whether or not the students are taking the exam seriously or just going through the motions.

Outcome 2:	Human Systems
Description:	Students will analyze and understand the human spatial patterns in the context of cultural, demographic, economic, social, and political processes.
Budget:	$0.00
Core Competencies Supported:	2,5
Assessed How Often:	
Assessed this Year?	
Responsibility:	
Participation:	
Direct Assessments	
Indirect Assessments	
Results:	
Curriculum Actions/Improvements:	
Other Actions/Improvements:	
Future Actions:	

Outcome 3:	Physical Systems
Description:	Students will analyze and understand the spatial patterns and processes, as well as the interactions of the atmosphere, lithosphere, biosphere, and hydrosphere.
Budget:	$0.00
Core Competencies Supported:	2,5

Assessed How Often:

Assessed this Year?

Responsibility:

Participation:

Direct Assessments

Indirect Assessments

Results:

Curriculum Actions/Improvements:

Other Actions/Improvements:

Future Actions:

Outcome 4:	Human-Environment Interaction
Description:	Students will understand the connections and relationships between humans and the environment.
Budget:	$0.00
Core Competencies Supported:	2,4

Assessed How Often:

Assessed this Year?

Responsibility:

Participation:

Direct Assessments

Indirect Assessments

Results:

Curriculum Actions/Improvements:

Other Actions/Improvements:

Future Actions:

Outcome 5:	Tools and Techniques
Description:	Students will use maps, aerial imagery, and other tools and techniques including, but not limited to, Geographic Information Systems, cartography, the Internet, field data collection, qualitative and quantitative analysis, or Global Positioning System receivers.
Budget:	$0.00
Core Competencies Supported:	3
Assessed How Often:	
Assessed this Year?	
Responsibility:	
Participation:	

Direct Assessments

Indirect Assessments

Results:

Curriculum Actions/Improvements:

Other Actions/Improvements:

Future Actions:

Outcome 6:	Geographic Tradition
Description:	Students will understand Geography's historical and philosophical foundations.
Budget:	$0.00
Core Competencies Supported:	5
Assessed How Often:	
Assessed this Year?	
Responsibility:	
Participation:	

Direct Assessments

Indirect Assessments

Results:

Curriculum Actions/Improvements:

Other Actions/Improvements:

Future Actions:

Student Learning Outcomes for Geography

2011-2012

Outcome 1:	Spatial Analysis and Reasoning
Description:	Students will observe, interpret, analyze, and understand spatial patterns on Earth's surface.
Budget:	$0.00
Core Competencies Supported:	4,5
Assessed How Often:	Per semester
Assessed this Year?	Yes
Responsibility:	Department Chair
Participation:	Faculty
Direct Assessments	
	exit exam
Indirect Assessments	
Results:	Graduating seniors in the 2011-2012 academic year scored 59% on the exit exam questions related to this ourcome.
Curriculum Actions/Improvements:	
Other Actions/Improvements:	
Future Actions:	The Department will continue to assess the validity of the questions releated to this outcome and whether or not students are taking the no-stakes exam seriously.

Outcome 2:	Human Systems
Description:	Students will analyze and understand the human spatial patterns in the context of cultural, demographic, economic, social, and political processes.
Budget:	$0.00
Core Competencies Supported:	2,5
Assessed How Often:	Per semester
Assessed this Year?	
Responsibility:	Department Chair
Participation:	Faculty
Direct Assessments	
	exit exam
Indirect Assessments	
Results:	Graduating seniors in the 2011-2012 academic year scored an average of 65% on the exit exam questions related to this outcome
Curriculum Actions/Improvements:	
Other Actions/Improvements:	
Future Actions:	This score is below expectations and the faculty will review the questions to determine their validity for this outcome and to assess whether or not the students take the exam seriously or not.

Outcome 3:	Physical Systems
Description:	Students will analyze and understand the spatial patterns and processes, as well as the interactions of the atmosphere, lithosphere, biosphere, and hydrosphere.

Budget:	$0.00
Core Competencies Supported:	2,5
Assessed How Often:	Per semester
Assessed this Year?	Yes
Responsibility:	Department Chair
Participation:	Faculty
Direct Assessments	
	exit exam
Indirect Assessments	
Results:	Graduating Seniors in the 2011-2012 academic year scored an average of 60% correct on the exit exam questions related to this outcome.
Curriculum Actions/Improvements:	
Other Actions/Improvements:	
Future Actions:	The faculty will revisit the exit exam to ascertain the validity of the questions for this outcome and discuss with students the need to take the exam seriously.

Outcome 4:	Human-Environment Interaction
Description:	Students will understand the connections and relationships between humans and the environment.
Budget:	$0.00
Core Competencies Supported:	2,4

Assessed How Often:	Per semester
Assessed this Year?	Yes
Responsibility:	Department Chair
Participation:	Faculty
Direct Assessments	
	exit exam
Indirect Assessments	
Results:	Graduating seniors in the 2011-2012 academic year scored an average of 60% correct answers on the exit exam questions related to this outcome.
Curriculum Actions/Improvements:	
Other Actions/Improvements:	
Future Actions:	The faculty will take action on assessing the exit exam questions and their validity in providing good data to determine why students score on the exit exam.

Outcome 5:	Tools and Techniques
Description:	Students will use maps, aerial imagery, and other tools and techniques including, but not limited to, Geographic Information Systems, cartography, the Internet, field data collection, qualitative and quantitative analysis, or Global Positioning System receivers.
Budget:	$0.00
Core Competencies Supported:	3
Assessed How Often:	Per semester
Assessed this Year?	Yes

Responsibility:	Department Chair
Participation:	Faculty
Direct Assessments	
	exit exam
Indirect Assessments	
Results:	Graduating seniors in the 2011-2012 academic year scored 62% correct answers on the exit exam questions related to this outcome.
Curriculum Actions/Improvements:	
Other Actions/Improvements:	
Future Actions:	The faculty will revisit the exit exam in view of the low score to determine what actions will be taken in the upcoming academic year.

Outcome 6:	Geographic Tradition
Description:	Students will understand Geography's historical and philosophical foundations.
Budget:	$0.00
Core Competencies Supported:	5
Assessed How Often:	Per semester
Assessed this Year?	Yes
Responsibility:	Department Chair
Participation:	Faculty
Direct Assessments	
	exit exam

Indirect Assessments

Results:	The graduating seniors in the 2011-2012 academic year scored a low score of 47% correct on the exit exam questions related to this outcome.
Curriculum Actions/Improvements:	
Other Actions/Improvements:	
Future Actions:	The faculty will assess the validity of the questions in the exam in view of changes in the curriculum of the course from which these questions emerge to determine if changes should be made in the exam.