Department of Geography MA/MS Program Annual Report for 2010-2011

This report documents the Department of Geography's efforts in assessing student learning outcomes in its graduate Masters of Arts (M.A.) and Masters of Science (M.S.) degree programs. The report's objective is to determine the effectiveness of the program's curriculum in achieving the desired student learning outcomes. Further, this report offers an opportunity to identify any potential areas for improvement and revision related to the program curriculum, student learning outcomes, and assessment program.

The Department of Geography offers a course of study and career training for graduate students combining the traditional foundations and tools of the discipline with the latest geospatial technologies and techniques. Students majoring in Geography may earn either a MA or MS degree. The MA degree in Geography is designed for students who intended to pursue careers in the fields such as economic development, urban and regional planning, cartography, foreign service, or GIS. The MS degree in Geography is designed for students who intended to pursue careers in the fields such as environmental management, meteorology/climatology, land use and natural resource planning, GIS, or remote sensing. In addition to Geography majors, students from a variety of other programs, including Liberal Arts and Science, also incorporate Geography courses and training into their graduate coursework.

Program's Mission: The Department of Geography's graduate program supports the mission statements and objectives of the University and College by:

- providing high quality undergraduate and graduate education for the state and the region;
- promoting student learning, retention, and academic success;
- fostering community outreach through service activities;
- promoting instruction through the use of innovative teaching methods that require students to become actively involved in the learning process and develop the critical thinking skills necessary for life-long learning;
- contributing to the body of knowledge through completion of scholarly and creative activities;
- engaging and mentoring students in scholarly, artistic, and creative endeavors;
- providing opportunities for students to use their knowledge, creativity, and critical thinking skills to make their communities better places in which to live;
- preparing students to examine critically the many issues facing society and, through the process of civil discourse, prepare themselves to become socially responsible individuals who contribute to the betterment of society.

Program's Student Learning Outcomes: The graduate program has six broad student learning outcomes related to the discipline of Geography (see accompanying chart). Students who earn a MA/MS in Geography will:

- employ GIS to create, display, and interpret map data;
- utilize quantitative methods to analyze data;
- compare, analyze, and evaluate geographical research methodology;
- conceptualize and design a geographical research project;
- describe, analyze, and evaluate geographical topics and research (non-thesis students);
- conduct, assess, and defend a completed independent research project (thesis students).

All six student learning outcomes are assessed and analyzed on an annual basis. In addition, the Department of Geography has two 'generic' rubrics for written and oral communication that are used across all Geography courses. Adjustments to improve student performance in relation to the above learning outcomes are made on a continual basis, rather than waiting for some pre-determined period of time to make any necessary changes.

Assessment Activities:

Assessment Tools: The Department of Geography employs a holistic approach to assessment that includes a broad and flexible range of direct measures including, but not limited to, test questions, writing assignments, discussions, oral presentations, debates, comprehensive exams, and thesis projects. The accompanying assessment rubrics list the main content and skills students must demonstrate to achieve each broader learning outcome. Since the MA/MS student learning outcomes cover distinct content/skills areas, the assessment tools are varied but they are all tailored to accurately measure student performance in accordance with accepted practices in Geography in higher education.

Each rubric contains a number of distinct content/skill areas that build on each other as students progress through the program's sequence of required courses. For example, GEO 526 provides the initial assessment opportunity for Student Learning Outcome #1. For this outcome, students demonstrate their proficiencies in four content/skill areas. These proficiencies are built through a sequence of activities that utilize GIS to analyze and display independent research. This requires that students first understand the geographical concepts and principles of GIS, as well as the actual functions of GIS software. Using these proficiencies, students will then be assessed on their ability to apply GIS techniques for analysis and eventually create and evaluate an independent research project through GIS. Since GEO 526 is the initial assessment opportunity for a program Student Learning Outcome, the Geography Department Curriculum Committee reviews the course assignments and assessment rubrics to ensure consistency with accepted practices in Geography in higher education.

Subsequent assessment of Outcome #1 is included in later required and elective courses culminating in the Comprehensive Exams or Thesis Research Project. For consistency, these later assessments utilize the same rubric for evaluating Outcome #1, but the actual assessment tools generally increase in difficulty, complexity, and individual responsibility. For example, the assessments in GEO 526 utilize basic principles and functions of GIS. By the time students reach their Comprehensive Exams or Thesis Research Project, their content/skill competencies in GIS have gained in breadth and depth, so they are required to utilize advanced geospatial technologies and demonstrate more professional writing and communication skills.

There is no standardized licensure exam for the discipline of Geography as a whole. The Department also utilizes an array of indirect measures including, but not limited to, discussions with graduating students, annual Fall Orientation Day focus groups, annual Assessment Day surveys and focus groups, and continuing discussions with known employers and alumni.

Benchmarks: Benchmark refers to the level of student performance on evaluative assessments embedded within the program's required curriculum. Assessments may vary by course and instructor but will utilize standardized assessment rubrics. The Geography Department uses the following performance levels:

- Advanced - students use critical thinking to appraise, analyze, and apply knowledge, techniques, and concepts;
- Mastery - students skillfully employ knowledge, techniques, and concepts;
- Proficient - students recognize and apply basic techniques and concepts;
- Novice - students recall concepts but fail to interpret, apply, or express knowledge and techniques;
- Limited - students may recognize a few concepts or techniques but struggle with application.

The faculty would prefer that 100% of students achieve the Advanced level of performance for all student learning outcomes. Graduation requires overall performance at the Mastery level.

Results/Analysis: Specific performance results are listed on the accompanying chart. Overall student performance was at the advanced, mastery, or proficient levels. Students failing to achieve performance levels of proficient or higher exhibited poor attendance and/or failed to turn in assignments.

Analysis/Planned Action: Results from 2009-10 appear comparable to the previous year, although direct comparisons are impossible because the individual Assessment Rubrics were just developed and will be first utilized during the 2011-12 academic year.

Instructors will continue to emphasize to students the importance of attending and actively participating in class as well as submitting the required assignments. Although detailed statistical evidence is not available, anecdotal evidence suggests a strong positive correlation between

students who do not attend class and/or submit assignments and students who fail to achieve satisfactory proficiencies in relation to the program's student learning outcomes.

Overview of Changes Implemented: No major changes were implemented regarding the MA/MS Student Learning Outcomes or required degree courses during the previous academic year. Minor adjustments are continually made as needed in terms of curriculum structure, course scheduling, and assessment methods. All changes result from the instructor's evaluation of specific student performances, feedback from students, consultation with other faculty, and discussions with alumni and employers.

Significant revisions were made to the Department's assessment program. Based on feedback from the 2009-10 annual program report, the Department developed and approved new assessment rubrics for all Student Learning Outcomes. These rubrics will be tested and refined as needed following the 2011-12 academic year. The rubrics will provide a common foundation for assessment across all geography courses and instructors, especially required courses. In subsequent years, these rubrics will help provide a baseline of data to determine overall trends in student performance and overall program effectiveness. Finally, a department Curriculum Committee was formed to review proposed changes to required and elective course curriculum and the department assessment procedures to ensure consistency with accepted practices in Geography in higher education.

Changes/Modifications Resulting from Assessment Day Activities: Student participation in Assessment Day activities was extremely high. Faculty participation was 100%. Students indicated satisfaction with the existing program requirements, content, facilities, and sequencing. Students did indicate a desire for more courses in terms of additional sections of existing courses and new courses.

Assistance Needed with Assessment: No.

Marshall University
Assessment Program for Student Learning Outcomes for the Geography MA/MS Program
2010/2011

Student Learning Outcomes[1]	Year	Assessment Tool[2]	Benchmark[3]	Results[4]	Analysis/Planned Actions[5]
#1: Students employ geospatial technology to create, display, and interpret map data	2010 /11	Initial GEO526; Subsequent GEO679, GEO681.	Mastery or above	Advanced: 1 Mastery: 1 Proficient: 0 Novice: 0 Limited: 0	Continued monitoring and refinement.
#2: Students utilize quantitative methods to analyze data	2010 /11	Initial GEO540; Subsequent GEO679, GEO681.	Mastery or above	Advanced: 3 Mastery: 3 Proficient: 3 Novice: 0 Limited: 0	Continued monitoring and refinement.
#3: Students compare, analyze, and evaluate geographical research methodology	2010 /11	Initial GEO615; Subsequent GEO616, GEO679, GEO 681.	Mastery or above	Advanced: 8 Mastery: 3 Proficient: 0 Novice: 0 Limited: 0	Continued monitoring and refinement.
#4: Students conceptualize and design a geographical research project	2010 /11	Initial GEO616; Subsequent GEO679, GEO 681.	Mastery or above	Advanced: 8 Mastery: 0 Proficient: 0 Novice: 0 Limited: 0	Continued monitoring and refinement.
#5: Non-thesis students describe, analyze, and evaluate geographical topics and research	2010 /11	GEO679 final comprehensive written and oral exams	Mastery or above	Advanced: 5 Mastery: 0 Proficient: 0 Novice: 0 Limited: 0	Continued monitoring and refinement.
#6: Thesis students conduct, assess, and defend a completed independent research project	2010 /11	GEO681 written thesis and oral defense	Mastery or above	Advanced: 2 Mastery: 0 Proficient: 0 Novice: 0 Limited: 0	Continued monitoring and refinement.

[1] Student Learning Outcomes and their corresponding Assessment Rubrics are reviewed and approved by the Department Curriculum Committee on a biennial basis (#1, 2, 3 on odd years; #4, 5, 6 on even years). Additionally, the Department has developed generic rubrics for Writing Assignments and Oral Presentations that are used across all GEO courses. Current Assessment Rubrics are included in the appendix.

[2] Assessment Tools are summative in nature and typically include, but are not limited to, a mixture of writing assignments, group projects, oral presentations, classroom debates, laboratory exercises, web-based exercises, essay exams, and multiple choice exams designed to assess students' performance related to the corresponding Student Learning Outcomes. The exact Assessment Tools used in required courses are reviewed and approved by the Department Curriculum Committee on a biennial basis (526, 540, 615 on odd years; 616, 679, 681 on even years). Examples of current Assessment Tools are included in the appendix.

[3] Benchmark refers to the level of student performance on evaluative assessments for the corresponding courses. The Geography Department uses the following performance levels: Advanced - students use critical thinking to appraise, analyze, and apply knowledge, techniques, and concepts; Mastery - students skillfully employ knowledge, techniques, and concepts; Proficient - students recognize and apply basic techniques and concepts; Novice - students recall concepts but fail to interpret, apply, or express knowledge and techniques; Limited - students may recognize a few concepts or techniques but struggle with application.

[4] The Results reflect student performance on summative Assessment Tools designed to evaluate Student Learning Outcomes. This is distinct from final course grades, which may incorporate student performance on non-summative (diagnostic or formative) assessments, including rough drafts, peer review, class attendance/participation, pre-tests, etc.

[5] The Department Curriculum Committee reviews Student Learning Outcomes, Rubrics, and Assessments on a biennial basis. On odd years, Student Learning Outcomes #1, 2, and 3, their corresponding Assessment Rubrics, and the initial Assessment Tools used in GEO526, 540, and 615 are reviewed and revised as needed. On even years, Student Learning Outcomes #4, 5, and 6, their corresponding Assessment Rubrics, and the initial Assessment Tools used in GEO616, 679, and 681 are reviewed and revised as needed.

Student Learning Outcome #1 Geo-Spatial Technologies: Assessment Rubric

	Advanced	**Mastery**	**Proficient**	**Novice**	**Limited**
Students will define, explain, apply, and evaluate geographic concepts and principles that form the foundation of GIS	Student can define, explain, apply, and evaluate the geographic principles of GIS	Student can define, explain, and apply the geographic principles of GIS	Student can define and explain the geographic principles of GIS	Student can define the geographic principles of GIS	Student cannot define the geographic principles of GIS
Students will define, explain, apply, and evaluate computing principles of GIS	Student can define, explain, apply, and evaluate the computing principles of GIS	Student can define, explain, and apply the computing principles of GIS	Student can define and explain the computing principles of GIS	Student can define the computing principles of GIS	Student cannot define the computing principles of GIS
Students will practice and employ a broad range of techniques of GIS software to examine and analyze GIS problems	Student practices and employs a broad range of techniques of GIS software to explore and analyze problems	Student employs many techniques of GIS software to explain and analyze problems	Student employs some techniques of GIS software to explain and analyze problems	Student employs a few techniques of GIS software to explain problems	Student cannot employ techniques of GIS software to explore problems
Students will produce independent GIS projects that integrate techniques and principles to evaluate research problems	Student produces independent GIS projects that integrate techniques and principles to evaluate research problems	Student produces independent GIS projects that integrate techniques and principles to begin to evaluate research problems	Student produces independent GIS projects that integrate techniques and principles	Student struggles to produce GIS projects using GIS techniques	Student cannot produce independent GIS projects that integrate techniques and principles to evaluate research problems

Student Learning Outcome #2 Quantitative Methods: Assessment Rubric

	Advanced	Mastery	Proficient	Novice	Limited
Introduction	Valid research problem clearly stated, integrating appropriate sources to pique interest; dependent and independent variables clearly defined; strong revisions as recommended	Research problem stated, integrating at least three appropriate sources; dependent and independent variables defined; revisions as recommended	Research problem stated but unclear with some sources not well integrated; variables named and distinguished; some revisions	Research problem unclear or invalid with weak reference to sources; variables present but not clearly distinguished	Little development
Flow Chart	Clearly delineates the flow of research; strong revisions as recommended	Delineates the flow of research; revisions as recommended	Present to accompany research flow but may lack development	Present, but unclear	Missing or very unclear
Data and Description	Excel table properly formatted; complete description of data and their quality, applying most required terms such as interval, primary, discrete; validity, accuracy, reliability clearly described; strong revisions as recommended	Excel table properly formatted; description of data and their quality, applying most required terms; revisions as recommended	Excel table present; weak description of data; some data terms used correctly	Excel table has problems; data descriptions unclear; few data terms used correctly	Missing or very unclear
Descriptive Statistics	Formulae presented and described accurately; statistics calculated correctly and presented properly; strong revisions as recommended	Formulae presented and described; most statistics calculated correctly and presented properly; strong revisions as recommended	Formulae presented, but descriptions are weak; basic statistical analysis with few mistakes, but some weaknesses in presentation	Formulae not presented; some statistics with errors and little accurate presentation	Missing or very unclear
Quantitative Analysis	Methods chosen after consulting with instructor; six steps of hypothesis testing applied and described; formulae presented and described accurately; statistics calculated correctly and presented properly; scholarly article logically integrated	Methods chosen with instructor; classical hypothesis testing applied and described; most formulae presented and described accurately; most statistics calculated correctly and presented properly; scholarly article integrated	Methods may not all be appropriate; some classical hypothesis testing elements present; formulae presented, but descriptions are weak; basic statistical analysis with few mistakes; scholarly article mentioned but not well integrated	Methods may not all be appropriate; classical hypothesis testing not followed accurately; formulae descriptions very weak; several statistical mistakes; scholarly article not used correctly	Missing or very unclear
Conclusions	Well-written, thoughtful summation of techniques, research question, analysis results, and weaknesses	Good summation of techniques, research question, analysis results, and weaknesses	Contains summary of some elements	Weak summary	Missing or very weak

Student Learning Outcome #3 Geographic Thought/Methods: Assessment Rubric

	Advanced	Mastery	Proficient	Novice	Limited
Students will demonstrate literacy with different geographic methods	Student can identify, describe, apply, and analyze a particular type of geographic methodology	Student can identify, describe, and apply a particular type of geographic methodology	Student can identify and describe a particular type of geographic methodology	Student can identify a particular type of geographic methodology	Student is not able to identify a type of geographic methodology
Student will demonstrate organization of their own geographic methodologies	Student can reproduce, explain, analyze, and evaluate a type of organization or structure	Student can reproduce, explain, and analyze a type of organization or structure	Student can reproduce and explain a type of organization or structure	Student can reproduce a basic type of organization or structure	Student is not able to reproduce any type of organization or structure
Student will utilize verbal skills during classroom discussions	Student can recall, describe, criticize, and evaluate information verbally	Student can recall, describe, and criticize information verbally	Student can recall and describe information verbally	Student can recall information verbally	Student cannot recall information verbally
Student will utilize non-verbal skills during classroom discussions	Student recognizes, demonstrates, distinguishes, and critiques appropriate eye contact, posture, gestures, etc	Student recognizes, demonstrates, and distinguishes appropriate eye contact, posture, gestures, etc	Student recognizes and demonstrates appropriate eye contact, posture, gestures, etc.	Student recognizes appropriate eye contact, posture, gestures, etc	Student cannot recognize appropriate eye contact, posture, gestures, etc
Student will present visual material to compliment presentations	Student reproduced, discussed, contrasted and critiqued information in visual material to compliment presentation	Student reproduced, discussed, and contrasted information in visual material to compliment presentation	Student reproduced and discussed information in visual material to compliment presentation	Student reproduced visual material to compliment presentation	Student did not reproduce any significant visual material
Student will respond to critical audience questions	Student can recall, prepare examples, debate and assess answers to audience questions or comments	Student can recall, prepare examples, and debate answers to audience questions or comments	Student can recall and prepare examples to respond to audience questions or comments	Student can recall answers to respond to audience questions or comments,	Student could not respond to audience questions or comments

Student Learning Outcome #4 Research Design: Assessment Rubric

	Advanced	Mastery	Proficient	Novice	Limited
Content	Student demonstrates critical, in-depth knowledge of the relevant components of the proposal, and addresses all of them	Student demonstrates in-depth knowledge of the relevant components of the proposal, and addresses all of them	Student demonstrates basic knowledge of the relevant components of the proposal, but addresses only some of them	Student demonstrates limited knowledge of the relevant components of the proposal; addresses only some of them	Student demonstrates lack of knowledge of many of the relevant components of the proposal
Organization	Student critically addresses all the relevant components of the proposal in a logical progression; the proposal has a coherent line of critical reasoning and internal consistency	Student addresses all the relevant components of the proposal in a logical progression; the proposal has a coherent line of reasoning and internal consistency	Student demonstrates basic knowledge of the logical placement of the component sections of the proposal; only one section is illogically placed	Student demonstrates limited knowledge of the logical organization of the proposal; section sub-headings are difficult to interpret; up to two sections are illogically placed	Student presents a poorly organized proposal; three or more sections are either missing or illogically placed; some themes are addressed in the wrong sections
Title and title page	Student's proposal has a title page containing the title, the student's name, course name and course title, semester information, and the instructor's name; the title contains words that are all necessary for its wholeness; it clearly reveals meaning and conveys adequate information about the topic; the student also states that the proposed research is in partial fulfillment of the requirements of the master's degree	Student's proposal has a title page containing the title, the student's name, course name and course title, semester information, and the instructor's name; the title contains words that are all necessary for its wholeness; it clearly reveals meaning and conveys adequate information about the topic	Student's proposal has a title page containing only the title of the proposed study and the student's name; the title contains words that are all necessary for its wholeness; it clearly reveals meaning and conveys adequate information about the topic	Student's proposal has no title page; has a title containing words that only partially reveal meaning; all words in the title are necessary for wholeness; but the title conveys only partial information about the topic	Student's proposal has no title page; has a title containing words that completely obscure meaning, and/or contains words that can be omitted without compromising completeness; title conveys no information about the proposed topic

	Advanced	Mastery	Proficient	Novice	Limited
Abstract	Student provides an abstract that is distinct from the introduction; the abstract clearly states what the proposed study is about in terms of research a question(s), and summarizes the essential elements of the proposal; the abstract also states how the study will answer the research question(s)	Student provides an abstract that is distinct from the introduction, and summarizes the essential elements of the proposal; the abstract clearly specifies what the proposed study is about	Student provides an abstract that is distinct from the introduction, and summarizes the essential elements of the proposal	Student provides an abstract consisting of a repetition of sentences and phrases in the introduction, or simply a restatement of themes in the introduction using different words	Student provides no abstract for the proposal
Introduction	Student identifies a research area and specifies a research topic; gives the background and context of the topic; states the purpose of the proposed research; establishes the research problem and specifies the research question(s); casts the problem within the larger scholarly literature; points out gaps in the literature about the research problem; identifies a target audience for the research; and critically discusses the significance of the research problem to the audience	Student identifies a research area and specifies a research topic; gives the background and context of the topic; states the purpose of the proposed research; establishes the research problem and specifies the research question(s); casts the problem within the larger scholarly literature; points out gaps in the literature about the research problem; identifies a target audience for the research; and points out the significance of the research problem to the audience	Student is able to identify a research area and the topic; is able to provide a background and an appropriate context; spells out the research problem and specifies the research question(s); is able to link the proposed study to existing literature, but fails to point out gaps in the literature about the research problem; identifies a target audience but fails to point out the significance of the research problem to the audience	Student is able to identify a research area and the topic; is able to provide a background for the topic but specifies an inappropriate context; mistakes the research question(s) for the research problem and, hence, does not spell out the research problem; attempts to, but is unsuccessful in linking the proposed study to existing literature; is able to identify a target audience but fails to point out the significance of the proposed study to the audience	Student is only able to identify a research area and the research topic; fails to provide a background and context for the topic; is unable to spell out the research problem and does not specify any research question; does not link the proposed study to existing literature; does not identify any target audience; student fails to point out the significance of the proposed study

	Advanced	Mastery	Proficient	Novice	Limited
Research Questions	Student specifies general research questions and logically subdivides them into specific research questions in a section logically following the statement of purpose in the introduction section; student points out the data needed to answer the specific questions; student also points out alternative data that can be used	Student specifies general research questions and logically subdivides them into specific research questions; student points out the data needed to answer the specific questions	Student specifies general research questions and logically subdivides them into specific research questions, but fails to identify the data needed for addressing the specific questions	Student states both general and specific research questions, but there is disconnect between the general and specific questions stated; fails to identify the data needed for addressing the specific questions	Student is unable to identify any research question
Conceptual Framework	Student states clearly if the study will use a predetermined conceptual framework; student presents a critical appraisal of the selected framework, and notes whether or not any modifications will be needed; student states clearly if a new conceptual framework will be developed during the research	Student states clearly if the study will use a predetermined conceptual framework (and presents it, noting whether or not any modifications will be needed), or if a conceptual framework will be developed during the research	Student selects an existing conceptual framework for the proposed study but is either unable to explain its fit with the study or fails to point out obvious modifications that need to be made to suit the proposed study	Student selects an inappropriate conceptual framework for the proposed study and demonstrates lack of knowledge of the misfit	Student fails to state a conceptual framework for the proposed study
Theory and Hypotheses	Student critically appraises the role of theory in the proposed study; states the null and alternative hypotheses correctly; and explains steps to be taken to avoid making Type I and Type II errors	Student states the role of theory in the proposed study; student states the null and alternative hypotheses correctly. Student explains steps to be taken to avoid making Type I and Type II errors	Student states the role of theory in the proposed study; states the null and alternative hypotheses correctly, but does not explain steps to be taken to avoid making Type I and Type II errors	Student notes the role of theory in the proposed study, but either states the null and alternative hypotheses incorrectly or omits one of them; does not explain steps to be taken to avoid making Type I and Type II errors	Student fails to state whether or not theory will play a role in the proposed study

	Advanced	Mastery	Proficient	Novice	Limited
Literature Review	Student identifies the body of literature relevant to the proposed study and indicates how it will be dealt with; describes the structure of the literature review to come; the literature reviewed comes mostly from primary sources; student's review illustrates the building of a critical argument; finishes off review by leading back to the purpose and research questions of the proposed study to show how it is related to the literature just reviewed; student provides a critical discussion of the contribution the proposed study will make to the existing body of literature	Student identifies the body of literature relevant to proposed study and indicates how it will be dealt with; describes the structure of the literature review to come; the literature reviewed comes mostly from primary sources; student's review illustrates the building of an argument; finishes off review by leading back to the purpose and research questions of the proposed study to show how they are related to the literature just reviewed; student specifies the contribution the proposed study will make to the literature	Student identifies the body of literature relevant to proposed study and indicates how it will be dealt with; describes the structure of the literature review to come; the literature reviewed comes mostly from primary sources; student's review illustrates the building of a rather weak argument; the literature review does not lead back to the purpose and questions of the proposed research; and student fails to specify the contribution the proposed study will make to the literature	Student identifies the body of literature relevant to proposed study but does not indicate how it will be dealt with; does not describe the structure of the literature review to come; the literature reviewed comes mostly from secondary sources; student uses too many quotes or direct quotes are too long; the review does not illustrate the building of an argument, and does not lead back to the purpose and questions of the proposed research; fails to specify the contribution the proposed study will make to the literature	Student is unable to identify a body of literature relevant to proposed study; fails to describe the structure of the literature review to come; the literature reviewed comes entirely or almost entirely from secondary sources; student uses too many quotes or direct quotes are too long, and student appears to report everything read or known; the review does not illustrate the building of an argument; and student fails to specify the contribution the proposed study will make to the literature

	Advanced	Mastery	Proficient	Novice	Limited
Research Design – strategy	Student states a complete, logical, and critical reasoning by which the study will proceed in answering the stated research questions	Student states a complete, logical reasoning by which the study will proceed in answering the stated research questions	Student states a logical, albeit incomplete reasoning by which the study will proceed to answer the research questions	The stated reasoning by which the study will proceed to answer the stated research questions is sometimes illogical	Student does not spell out the reasoning by which the study will proceed in answering the stated research questions
Research Design – sample	Student describes clearly the sampling strategy and critically discusses the generalizability of the findings; states and justifies the sample size and provides a comparative description of steps to be taken to avoid or minimize sampling error	Student describes clearly the sampling strategy and the generalizability of the findings; states and justifies the sample size and describes steps to be taken to avoid or minimize sampling error	Student describes clearly the sampling strategy and the generalizability of the findings; describes and justifies the sample size, but does not describe steps to be taken to avoid or minimize sampling error	Student describes clearly the sampling strategy, but fails to state the generalizability of the findings; student does not justify the sample size, and does not describe steps to be taken to avoid or minimize sampling error	Student is unable to describe any sampling strategy
Research Design – data collection instruments	Student identifies a suitable data collection instrument and successfully describes how it will be used in the proposed study. Student critically appraises the history of the instrument's use in research, and states how the drawbacks of the instrument will be addressed.	Student identifies a suitable data collection instrument and successfully describes how it will be used in the proposed study. Student describes the history of the instrument's use in research, and states how the drawbacks of the instrument will be addressed	Student identifies a suitable data collection instrument and successfully describes how it will be used in the proposed study. Student describes the history of the instrument's use in research, but fails to state how the drawbacks associated with it might be addressed	Student identifies a suitable data collection instrument but fails to describe how it will be used in the proposed study. Student does not describe the history of the instrument's use in research, and does not state how the drawbacks of the instrument might be addressed	Student fails to identify an appropriate data collection instrument for the proposed study.

	Advanced	Mastery	Proficient	Novice	Limited
Research Design – data collection procedures	Student describes in detail the actual process of data collection; student indicates an awareness that the procedural choices stated in the proposal might need to be changed as the study unfolds; student critically analyzes an alternative procedure to be used if a change become necessary	Student describes in detail the actual process of data collection; student indicates awareness that the procedural choices stated in the proposal might need to be changed, and describes alternative procedure to be used if a change become necessary	Student describes in detail the actual process of data collection; student indicates awareness that the procedural choices stated in the proposal might need to be changed as the study unfolds, but does not indicate an alternative procedure to be used if a change become necessary	Student describes a data collection procedure, but does not indicate an awareness that the procedural choices stated in the proposal might need to be changed as the study unfolds	Student is unable to describe a data collection procedure; or student describes a procedure that will either be ineffective or problematic
Research Design – data analysis	Student indicates in specific terms what analytic techniques will be used in order to analyze the data to be collected; student also indicates what computer programs will be used in the analysis, irrespective of the type of data; indicates a critical self-assessment of methodological expertise, and indicates awareness of the need to seek expert advice as well as what type of expert advice will be needed	Student indicates in specific terms what analytic techniques will be used in order to analyze the data to be collected; student also indicates what computer programs will be used in the analysis, irrespective of the type of data; student indicates awareness of the need to seek expert advice and indicates what type of expert advice will be needed; does not make any self-assessment of methodological expertise	Student indicates specifically what analytic techniques will be used in order to analyze the data to be collected; student also indicates what computer programs will be used in the analysis, irrespective of the type of data; student indicates awareness of the need to seek expert advice, but does not indicate what type of expert advice will be needed; does not make any self-assessment of methodological expertise	Student indicates in sometimes vague terms what analytic techniques will be used in order to analyze the data to be collected; student does not indicate what computer programs will be used in the analysis; student does not make any self-assessment of methodological expertise, and hence, does not indicate awareness of the need to seek expert advice	Student fails to identify what analytic techniques will be used in order to analyze the data to be collected; student does not indicate what computer programs will be used in the analysis; student does not make any self-assessment of methodological expertise, and hence, does not indicate awareness of the need to seek expert advice

	Advanced	Mastery	Proficient	Novice	Limited
Significance of Research	Student spells out the specific contribution the proposed study will make to knowledge in the area, to policy consideration, and to practitioners. Student critically appraises the impact of the contribution on each of the three areas.	Student spells out the specific contribution the proposed study will make to knowledge in the area, to policy consideration, and to practitioners. Student points out the impact of the contribution on each of the three areas.	Student spells out the specific contribution the proposed study will make to knowledge in the area, to policy consideration, and to practitioners. Student does not appraise the impact of the contribution on each of the three areas.	Student indicates that the proposed study will make a contribution, but is unable to specify how the existing body of knowledge, policy, and practice will benefit from the proposed study	Student is unable to anticipate what contribution the proposed study will make to the existing body of knowledge, policy, and practice.
Limitations and Delimitations	Student states restrictive weaknesses which are present in the proposed study's design; explains why they will be unavoidable; student critically analyzes the expected adverse impacts on the outcome of the study, and suggests ways in which they might be reduced. Student argues that the proposed study will be significant nonetheless. Student also clearly defines the boundaries of the proposed study and points out what will not be included.	Student states restrictive weaknesses which are present in the proposed study's design; explains why they will be unavoidable; student analyzes the expected adverse impacts on the outcome of the study, and suggests ways in which they might be reduced. Student argues that the proposed study will be significant nonetheless. Student also clearly defines the boundaries of the proposed study and points out what will not be included.	Student states restrictive weaknesses which are present in the proposed study's design; explains why they will be unavoidable; student does not analyze the expected impact of the limitations on the outcome of the study. Student argues that the proposed study will be significant nonetheless. Student does not define the boundaries of the proposed study.	Student states restrictive weaknesses which are present in the proposed study's design; does not explain why they will be unavoidable; student does not analyze the expected impact of the limitations on the outcome of the study, but argues that the proposed study will be significant nonetheless. Student does not define the boundaries of the proposed study.	Student is unable to identify limitations that are present in the proposed study's design; or mistakes normal surmountable challenges of executing research for its limitations. Student does not define the boundaries of the proposed research

	Advanced	Mastery	Proficient	Novice	Limited
Ethical Issues	Student demonstrates critical thinking though the ethical issues involved in the proposed project; makes statements that indicate commitment to academic integrity and honesty. Student includes specific statements on how each ethical issue involved will be addressed. In addition, student includes a completed ethics checklist of the University.	Student demonstrates thinking though the ethical issues involved in the proposed project; makes statements that indicate commitment to academic integrity and honesty. Student includes specific statements on how each ethical issue involved will be addressed. Student does not include a completed ethics checklist of the University.	Student demonstrates thinking though the ethical issues involved in the proposed project; makes statements that indicate commitment to academic integrity and honesty. Student includes only generic statements on how the ethical issues involved will be addressed. Student does not include a completed ethics checklist of the University.	Student shows limited awareness of ethical issues involved in the proposed project and includes only generic statements on how the issue of ethics will be addressed. Student does not include a completed ethics checklist of the University.	Student does not demonstrate awareness of any ethical issues involved in the proposed project and does not include a completed ethics checklist of the University.
References	Student provides a list of references cited in the proposal; uses the Chicago Citation Style; uses the appropriate citation format for each reference; lists references cited alphabetically by last name of the lead author. Student also provides bibliographical information for sources from which ideas were taken but which were not cited in the proposal	Student provides a complete list of references cited in the proposal, using the Chicago Citation Style; uses the appropriate citation format for each reference; lists references cited alphabetically by last name of the lead author	Student provides a complete list of references cited in the proposal, but is inconsistent in the citation style used; uses the appropriate citation format for each reference; lists all references cited alphabetically by last name of the lead author	Student provides a complete list of references cited in the proposal, but is inconsistent in the citation style used; uses an inappropriate citation format for some of the references; lists references cited alphabetically by last name of the lead author, but some references cited in the proposal are missing from the list	Student provides a partial list of references cited in the proposal, using a confusing mixture of different citation styles; or does not use any authentic citation style; or uses inappropriate formats for publications; does not list references cited alphabetically; and some references cited in the proposal are missing from the list

	Advanced	Mastery	Proficient	Novice	Limited
Appendices	Student includes appended items with the proposal; arranges the appendices in the order in which they are applied in the proposal; and includes the sources of all appended items in the list of references. Material from which ideas were derived but which were not included in the appendices are acknowledged in the bibliographical information	Student includes appended items with the proposal; arranges the appendices in the order in which they are applied in the proposal; and includes the sources of all appended items in the list of references	Student includes appended items with the proposal; arranges appendices in the order in which they are applied in the proposal; the complete citations of some appended items are missing from the list of references	Student includes appended items with the proposal, but appendices are not arranged in the order in which they are applied in the proposal; fails to cite the sources of appended items	Student does not include material referred to in the proposal that obviously should be included with the proposal; or such items are inappropriately inserted in the body of the proposal, and no citation is provided

Student Learning Outcome #5 Non-Thesis Comprehensive Exams: Assessment Rubric[1]

	Advanced	Mastery	Proficient	Novice	Limited
Students demonstrate effective writing skills based on Written Communication Rubric	Student performs at advanced level	Student performs at mastery level	Student performs at proficient level	Student performs at novice level	Student performs at limited level
Students demonstrate effective oral communication based on Oral Communication Rubric	Student performs at advanced level	Student performs at mastery level	Student performs at proficient level	Student performs at novice level	Student performs at limited level
Students utilize geospatial technology based on Assessment Rubric #1	Student performs at advanced level	Student performs at mastery level	Student performs at proficient level	Student performs at novice level	Student performs at limited level
Students utilize quantitative methods based on Assessment Rubric #2	Student performs at advanced level	Student performs at mastery level	Student performs at proficient level	Student performs at novice level	Student performs at limited level
Students recognize, analyze, and interpret geographical research methodology based on Assessment Rubric #3	Student performs at advanced level	Student performs at mastery level	Student performs at proficient level	Student performs at novice level	Student performs at limited level
Students recognize, analyze, and interpret geographical research design based on Assessment Rubric #4	Student performs at advanced level	Student performs at mastery level	Student performs at proficient level	Student performs at novice level	Student performs at limited level

[1] The Comprehensive Exams are the final evaluation for students in the non-thesis MA degree track. The exam committee consists of three full-time faculty members, two of which must be from the Geography Department. Each committee member assigns a short project. The student has about one month to complete each project to the satisfaction of the corresponding faculty member. After the completion of all three projects, the student orally presents one of the projects to the full committee.

Student Learning Outcome #6 Thesis Research Project: Assessment Rubric[1]

	Advanced	Mastery	Proficient	Novice	Limited
Students demonstrate effective writing skills based on Written Communication Rubric	Student performs at advanced level	Student performs at mastery level	Student performs at proficient level	Student performs at novice level	Student performs at limited level
Students demonstrate effective oral communication based on Oral Communication Rubric	Student performs at advanced level	Student performs at mastery level	Student performs at proficient level	Student performs at novice level	Student performs at limited level
Students compile the introductory elements of their write-up – title page, abstract, and tables of content – based on Assessment Rubric #4	Student performs at advanced level	Student performs at mastery level	Student performs at proficient level	Student performs at novice level	Student performs at limited level
Students conduct appropriate literature review based on Assessment Rubric #4	Student performs at advanced level	Student performs at mastery level	Student performs at proficient level	Student performs at novice level	Student performs at limited level
Students make use of a suitable conceptual/theoretical framework based on Assessment Rubric #4	Student performs at advanced level	Student performs at mastery level	Student performs at proficient level	Student performs at novice level	Student performs at limited level
Students utilize geospatial technology based on Assessment Rubric #1	Student performs at advanced level	Student performs at mastery level	Student performs at proficient level	Student performs at novice level	Student performs at limited level
Students utilize quantitative methods based on Assessment Rubric #2	Student performs at advanced level	Student performs at mastery level	Student performs at proficient level	Student performs at novice level	Student performs at limited level
Students recognize, analyze, and interpret geographical research methodology based on Assessment Rubric #3	Student performs at advanced level	Student performs at mastery level	Student performs at proficient level	Student performs at novice level	Student performs at limited level
Students recognize, analyze, and interpret geographical research design based on Assessment Rubric #4	Student performs at advanced level	Student performs at mastery level	Student performs at proficient level	Student performs at novice level	Student performs at limited level

[1] The Thesis is the final evaluation for students in the MS degree track. The thesis committee consists of three full-time faculty members, two of which must be from the Geography Department. Student must complete an independent research project to the satisfaction of each faculty member. After approval of the written thesis, the student orally presents the project to the full committee.

Department of Geography Written Communication Assessment Rubric

	Advanced	**Mastery**	**Proficient**	**Novice**	**Limited**
Content	Student demonstrates critical thinking to appraise, analyze, and apply geographical knowledge, techniques, and concepts	Student skillfully employs geographical knowledge, techniques, and concepts	Student recognizes and applies basic geographical techniques and concepts correctly	Student recalls geographical concepts but fails to interpret, apply or express knowledge and techniques	Student recognizes a few geographical concepts or techniques but cannot apply them correctly
Organization	Coherent structure with an introduction, main body, and conclusion; the main points/concepts are clear and critically analyzed; keeps to allotted time with skillful time management	Coherent structure with an introduction, main body, and conclusion; the main points/concepts are clear and employed correctly; keeps to allotted time with efficient time management	Coherent structure with an introduction, main body, and conclusion; the main points/concepts are clear; keeps to allotted time	Coherent structure with an introduction, main body, and conclusion; the main points/concepts are not clear; does not keep to allotted time	No apparent structure; no apparent main points/concepts; no apparent time management effort
Writing Skills	Student demonstrates specialized writing skills, including complete sentences, proper grammar, professional vocabulary, etc	Student employs basic writing skills, including complete sentences, proper grammar, appropriate vocabulary, etc	Student demonstrates basic writing skills, including complete sentences, proper grammar, appropriate vocabulary, etc with minor errors	Student makes frequent errors regarding complete sentences, proper grammar, vocabulary, etc	Student cannot write
Visual Material	Student demonstrates professional use of maps or other graphics, including geospatial technologies, which are clearly integrated into the paper	Student demonstrates basic use of maps or other graphics, including geospatial technologies, which are integrated into the paper	Student employs maps or other graphics, including geo-spatial technologies, but they are not integrated into the paper	Student employs maps or other graphics, including geo-spatial technologies, but they are not integrated into the paper and contain errors	Student did not use visual materials

Department of Geography Oral Communication Assessment Rubric

	Advanced	**Mastery**	**Proficient**	**Novice**	**Limited**
Content	Student demonstrates critical thinking to appraise, analyze, and apply geographical knowledge, techniques, and concepts	Student skillfully employs geographical knowledge, techniques, and concepts	Student recognizes and applies basic geographical techniques and concepts correctly	Student recalls geographical concepts but fails to interpret, apply or express knowledge and techniques	Student recognizes a few geographical concepts or techniques but cannot apply them correctly
Organization	Coherent structure with an introduction, main body, and conclusion; the main points/concepts are clear and critically analyzed; keeps to allotted time with skillful time management	Coherent structure with an introduction, main body, and conclusion; the main points/concepts are clear and employed correctly; keeps to allotted time with efficient time management	Coherent structure with an introduction, main body, and conclusion; the main points/concepts are clear; keeps to allotted time	Coherent structure with an introduction, main body, and conclusion; the main points/concepts are not clear; does not keep to allotted time	No apparent structure; no apparent main points/concepts; no apparent time management effort
Verbal Skills	Student demonstrates specialized verbal skills, including complete sentences, proper grammar, professional vocabulary, etc	Student employs basic verbal skills, including complete sentences, proper grammar, appropriate vocabulary, etc	Student demonstrates basic verbal skills, including complete sentences, proper grammar, appropriate vocabulary, etc with minor errors	Student makes frequent errors regarding complete sentences, proper grammar, vocabulary, etc	Student cannot speak intelligibly
Non-Verbal Skills	Student demonstrates a professional demeanor, including eye contact, posture, gestures, etc	Student demonstrates a casual demeanor, including eye contact, posture, gestures, etc	Student demonstrates a indifferent demeanor including eye contact, posture, gestures, etc	Student demonstrates an unprofessional demeanor including eye contact, posture, gestures, etc	Student demonstrates completely inappropriate eye contact, posture, gestures, etc
Visual Material	Student demonstrates professional use of maps or other graphics, including geospatial technologies, which are clearly integrated into the presentation	Student demonstrates basic use of maps or other graphics, including geospatial technologies, which are integrated into the presentation	Student employs maps or other graphics, including geo-spatial technologies, but they are not integrated into the presentation	Student employs maps or other graphics, including geo-spatial technologies, but they are not integrated into the presentation and contain errors	Student did not use visual materials
Audience	Student demonstrates ability to critically analyze and respond effectively to audience questions or comments	Student demonstrates ability to analyze and respond to audience questions or comments	Student demonstrates ability to respond to audience questions or comments with basic answers or responses	Student responds to audience questions or comments, but is unable provide basic answers or responses	Student did not respond to audience questions or comments