



Program Approval Form

For approval of new programs and deletions or modifications to an existing program.

Action Requested:

- Create New (SCHEV approval required except for minors and certificates)
- Delete Existing
- Modify Existing (check all that apply)
 - Title (SCHEV approval required except for minors, certificates)
 - Concentration** (Choose one): Add Delete Modify
 - Degree Requirements
 - Admission Standards
 - Application Requirements
 - Other Changes: _____

Type (Check one):

- B.A. B.S. Minor
- Undergraduate Certificate
- M.A. M.S. M.Ed.
- Ph.D. Graduate Certificate
- Other: _____

College/School: **Department:**
Submitted by: **Ext:** **Email:**

Effective Term: Fall **Please note:** For students to be admitted to a new degree, minor, certificate or concentration, the program must be fully approved, entered into Banner, and published in the University Catalog.

Justification: (attach separate document if necessary)

Program Title: (Required)
 Title must identify subject matter. Do not include name of college/school/dept.
Concentration(s):

Admissions Standards / Application Requirements:
 (Required only if different from those listed in the University Catalog)

Degree Requirements:
 Consult University Catalog for models, attach separate document if necessary using track changes for modifications

Courses offered via distance:
 (if applicable)

TOTAL CREDITS REQUIRED:

| Existing | New/Modified |
|--------------|--------------|
| Geography | |
| | |
| | |
| See Attached | See Attached |
| | |
| | |

Approval Signatures

Department _____ Date _____ College/School _____ Date _____ Provost's Office _____ Date _____
Interdisciplinary Council Use Only

If this program may impact another unit or is in collaboration with another unit at Mason, the originating department must circulate this proposal for review by those units and obtain the necessary signatures prior to submission. Failure to do so will delay action on this proposal.

| Unit Name | Unit Approval Name | Unit Approver's Signature | Date |
|-----------|--------------------|---------------------------|------|
| | | | |
| | | | |

For Graduate Programs Only

Graduate Council Member _____ Provost Office _____ Graduate Council Approval Date _____

For Registrar Office's Use Only: Received _____ Banner _____ Catalog _____ revised 5/5/10

Proposed Program Modifications for Geography BS Fall 2015

The purpose of this program modification is to transform the BS in Geography from an unfocused degree into a much more direct, spatial technology-focused degree. The previous dichotomy between the BA and BS degrees was between human and physical geography, which was a concern to the geographic discipline in the 1990s and early 2000s. The GGS department is a blend of geography and scholars with a variety of geoinformatic and technical backgrounds; we believe it makes more sense to orient the degree to this new strength. The proposed changes also reduce the BS credit count slightly, bringing it in line with our Geography BA.

1) **Add** requirement for GGS 110 (Maps and Mapping)

Rationale: This course is intended to be our introductory geographic technology course, and we believe our students should be required to take this as part of their educational progress through our degree.
This modification is identical to the change implemented in the Geography BA for the 2013 catalog

2) **Modify** requirement for GGS 102 (Physical Geography) to allow GGS 102 OR GGS 121 (Dynamic Atmosphere and Hydrosphere)

Rationale: Having established lab-based versions of introductory physical geography, we believe our students should be able to take this sequence rather than mandating the non-lab version currently required.
This modification is identical to the change implemented in the Geography BA and minor for the 2013 catalog

3) **Remove** 4-course Systematic / Regional Requirement

4) **Add** Requirement for 1 Regional Course

5) **Add** Requirement for 1 Systematic Course

6) **Modify** elective requirement to be 2 upper-division GGS elective courses, 1 general GGS elective course

Rationale: This section requires adjustment because it frequently became used for application courses rather than regional and systematic courses. We seek to increase the flexibility of the curriculum while also ensuring that regional and systematic courses remain part of the student's program of study. We also wish to make sure a number of electives are upper division.

This modification set is identical to the change implemented in the Geography BA and minor for the 2013 catalog

We define Systematic and Regional Courses to be the following:

Systematic

GGG 301 - Political Geography
GGG 302 - Global Environmental Hazards
GGG 303 - Conservation of Resources and Environment
GGG 304 - Populations Dimensions of Global Change
GGG 305 - Economic Geography
GGG 306 - Urban Geography
GGG 307 - Sustainable Development
GGG 309 - Meteorology and Climate
GGG 312 - Physical Climatology
GGG 314 - Severe and Extreme Weather
GGG 319 - Air Pollution
GGG 321 - Biogeography: Space, Time and Life
GGG 322 - Issues in Global Change

GGG 357 - Structures in Urban Governance and Planning
GGG 398 - Selected Topics in Global Change
GGG 399 - Selected Topics in Geography
GGG 406 - Suburban Geography
GGG 420 - Physiography of North America

Regional

GGG 315 - Geography of the United States
GGG 316 - Geography of Latin America
GGG 320 - Geography of Europe
GGG 325 - Geography of North Africa and the Middle East
GGG 330 - Geography of the Soviet Succession States
GGG 333 - Issues in Regional Geography
GGG 380 - Geography of Virginia

7) **Remove** requirement for STAT 250 (Introductory Statistics I)

Rationale: We require GGS 300, which includes much of the statistical background necessary for geographers.

8) **Remove** requirement for IT 103 (Introduction to Computing)

Rationale: This course (or other, potentially superior, options) is covered by general education requirements, and we have our own required introductory technology course in GGS 110 (Maps and Mapping).

9) **Add** requirement for CS 112 (Intro to Computer Programming)

Rationale: We believe it is important for students to have experienced a rigorous programming environment, as it is increasingly involved in geographic analysis. The CS 112 course is an in-depth programming course (currently teaching python) that will insure that our students are capable.

10) **Modify** requirement for MATH 114 (Analytic Geography and Calculus II) to be either MATH 114, IT 207 (Applied IT Programming), or STAT 250

Rationale: We wish our students to have the option of how they increase their technical background. MATH 114 provides further instruction in math, IT 207 furthers their applied programming skills, and STAT 250 increases their statistical background.

11) **Remove** requirement for GEOL/BIOL 3-course sequence

Rationale: This sequence was put in place to shore up the degree's credentials in physical science. Given that the purpose of the degree is changing from a physical science focus to a technology focus, this sequence is no longer necessary. Removing this requirement frees students up to take a natural science sequence of their choosing. The upper level requirements in biology and geology frequently conflicted with GGS core courses, delaying degree completion (or requiring a substitution)

12) **Remove** requirements for 411 (Advanced Digital Cartography), and 416 (Satellite Image Analysis) OR 463 (Applied Geographic Information Systems)

13) **Add** requirement for 3 GGS advanced technology courses

Rationale: The department offers many more technology courses (many of which are infrequently offered) than 411, 416, and 463 (although these are important courses). We wish students to be able to use these courses, when taught, in their degree program without a substitution form. We define the current set of GGS advanced technology courses to be:

GGS 308 - Field Mapping Techniques

GGS 354 - Data Analysis and Global Change Detection Techniques

GGS 410 - Introduction to Hyperspectral Imaging

GGS 411 - Advanced Digital Cartography

GGS 416 - Satellite Image Analysis

GGS 463 - Applied Geographic Information Systems

GGS 470 - Special Topics in Geographic Techniques

Approval History: Discussed in November 2013 GGS department meeting. Discussed with BIOL and AOES representatives December 2013. Approved in GGS department meeting, February 2014.

Geography BS

Current

Core: (16 credits)

GGS 102 (Physical Geography)

GGS 103 (Human Geography)

GGS 300 (Quantitative Methods)

GGS 310 (Intro Cartography)

GGS 311 (Intro GIS)

GGS 415 (Seminar in Geography)

Technique Courses: (9 credits)

GGS 411 (Advanced Cartography)

GGS 412 (Air Photography Interpretation)

GGS 416 (Satellite Image Analysis) OR 463 (Applied

Geographic Information Systems)

4-course set (12 credits)

1x Regional Course

1x Systematic Course

2x Regional/Systematic/Applied

2 GGS electives (6 credits)

Outside Requirements (25-26 credits)

- MATH 113 (Analytic Geography and Calculus I)

-MATH 114 (Analytic Geography and Calculus II)

- STAT 250 (Introductory Statistics I)

- IT 103 (Introduction to Computing)

- BIOL or GEOL 3-course sequence

71-72 credits

Geography BS

After Proposed Modifications

Core: (22-23 credits)

GGS 102 OR GGS 121 (Dynamic Atmosphere
and Hydrosphere)

GGS 103

GGS 110 (Maps and Mapping)

GGS 300

GGS 310

GGS 311

GGS 415

Breadth and Experience (27 credits)

3 x Advanced Technique Courses

GGS 412

1 x Regional Course

1 x Systematic Course

2 x GGS 300/400-level elective

1 x GGS elective (3 credits)

Outside Requirements (11-12 credits)

- MATH 113

- CS 112 (Intro to Computer Programming)

- MATH 114, IT 207 (Applied IT Programming), or STAT
250

60-62 credits