Program Change Request

Date Submitted: 12/09/20 4:00 pm

Viewing: SC-MS-GEOI : Geoinformatics and Geospatial Intelligence, MS

Last approved: 01/23/19 5:38 pm

Last edit: 12/11/20 12:14 pm

Changes proposed by: nburtch

Catalog Pages Using this Program

Geoinformatics and Geospatial Intelligence, MS

2021-2022

Rationale for

Are you completing this form on someone else's behalf?

No

Requestor:

Effective Catalog:	2021-2022
Program Level:	Graduate
Program Type:	Master's
Degree Type:	Master of Science

Title:

Geoinformatics and Geospatial Intelligence, MS

Banner Title:	Geoinformatics, MS

Is this a retitling of an existing

Existing Program

Registrar/OAPI Use Only – SCHEV Status	Approved

Registrar's Office Use Only –

In Workflow

1. **GGS Chair**
2. **SC Curriculum Committee**
3. SC Associate Dean
4. SC CAT Editor
5. Assoc Provost-Graduate
6. Registrar-Programs: Duration
7. Registrar-Programs

Approval Path

1. 12/10/20 4:05 pm Nathan Burtch (nburtch): Approved for GGS Chair

History

1. Nov 9, 2017 by clmig-jwehrheim
2. Jan 23, 2019 by Dieter Pfoser (dpfoser)

Program Start Term

Registrar/OAPI Use Only – SCHEV Letter

Registrar/OAPI Use Only – SACSCOC Status

Concentration(s):

INTO Major(s):

Registrar/IRR Use Only – Concentration CIP Code

College/School:	College of Science
Department / Academic Unit:	Geography & Geoinformation Science
Jointly Owned Program?	No

Participating

Participating

Justification

What: Switch GGS 579 and GGS 680 (579 to Core, 680 as a Image Analysis elective). Adding new remote sensing courses to the Image Analysis elective section. Adding a non-thesis option for the program

Why: Non-thesis option: our MS GEOI program, which was established in 2008, was one of the first few (3) programs in this area nationwide. Since then, 15 other programs have emerged in different universities across the country, which now offer a range of options for pursuing a masters in GEOI including non-thesis tracks (for example, Penn State's Master of Professional Studies in Homeland Security - Geospatial Intelligence Option - https://tinyurl.com/y2s8njsc). In conjunction. With these trends, we have also learned over the years from our own student cohorts that some of have a clear preference for a non-thesis option in this degree program. This issue has become particularly prominent for students who's degree is funded (or otherwise supported) by an employer or by the Department of Defense. The introduction of a non-thesis option will therefore allow us to maintain our competitiveness at a national level as well as better serve the needs of our students.

Switching GGS 579 to a required course and GGS 680 to an elective: Remote sensing is a core competency in geospatial intelligence. Students enrolling on our MS GEOI come from a wide range of academic backgrounds and may not always have an adequate academic training in this area. The inclusion of GGS 579, which is a basic graduate-level course in remote sensing, is

therefore necessary in order to ensure that all students are able to build a solid knowledgebase in this area.

Adding new Remote Sensing courses to electives to broaden selections for students.

Catalog Published Information

Total Credits Required: Total credits: 33

Registrar's Office Use Only - Program Code: SC-MS-GEOI

Registrar/IRR Use Only – Program CIP Code

Admission Requirements:

Admissions

University-wide admissions policies can be found in Graduate Admissions Policies.
To apply for this program, please complete the George Mason University Admissions Application.

Eligibility and Application Requirements

Applicants for this master's should hold a BA or BS degree in a discipline related to the program's theme from a regionally accredited university, with a minimum GPA of 3.00, including courses in differential and integral calculus. A working knowledge of a computer programming language is a plus. When the background of an individual student does not meet the program's requirements, remedial or preparatory courses tailored to student's needs may be recommended. To apply, prospective students should complete the George Mason University Admissions Application. Official transcripts from each college and graduate institution attended, a current résumé, and a goals statement will be required.
Applicants will also need three letters of recommendation and an official report of scores obtained on the GRE-GEN. The GRE requirement for admission may be waived if the student holds a master's degree from a regionally accredited US institution. TOEFL scores are required of all international applicants.

Program-Specific Policies:

Policies

For policies governing all graduate programs, see AP.6 Graduate Policies.

Secondary Program Options

Students enrolled in this master's program have the option of adding a secondary graduate certificate program. Depending upon the secondary program chosen, many courses may be applicable to both the certificate and the master's. Before adding a secondary program, students are advised to carefully review AP.6.8 Requirements for Graduate Certificates and AP.6.9 Requirements for Master's Degrees. Faculty advisors should be contacted for further guidance and for graduate certificate program suggestions.

Degree Requirements:

Students should refer to the Admissions & Policies tab for specific policies related to this program.

Core Courses

GGS 550	Geospatial Science Fundamentals	3
GGS 553	Geographic Information Systems	3
GGS 579	**Remote Sensing**	**3**
GGS 664	Spatial Data Structures	3
GGS 684	Selected Topics in Geospatial Intelligence	3
GGS 685	Capstone Course in Geoinformatics	3
~~GGS 680~~	~~Earth Image Processing~~	~~3~~
GGS 787	Scientific Data Mining for Geoinformatics	3
Total Credits		21

Thesis or Non-thesis Option

~~GGS 799~~	~~Thesis~~	~~3~~
~~Total Credits~~		~~0~~

Students choose the culminating experience of either a thesis or a project and a comprehensive exam (either must total 3 credits). The same graduate-level quality will be expected from either option: 3

Thesis Option

GGS 799	**Thesis (3 credits)**

Non-thesis Option

GGS 700	**Comprehensive Exam (1 credit)**
GGS 798	**Master's Research Project (2 credits)**

Total Credits 3

Electives

~~Select three courses from the groups below (course selections must also be approved by the program coordinator), with no more than two from a single group (i.e. courses are taken from at least two groups):~~ ~~9~~

Select three courses from the groupings below, with no more than two courses from a single group (courses must be taken from at least two groups): 1 **9**

Image Analysis:

GGS 562	Photogrammetry
~~GGS 579~~	~~Remote Sensing~~

GGS 622	**Drone Remote Sensing**
GGS 626	**Physical Fundamentals of Remote Sensing**
GGS 629	**Remote Sensing of the Environment and Earth System**
GGS 680	**Earth Image Processing**
GGS 740	Hyperspectral Imaging Systems
GGS 760	Advanced Topics in Remote Sensing
GGS 840	Hyperspectral Imaging Applications
Geographic Information Science:	
GGS 550	Geospatial Science Fundamentals
GGS 563	Advanced Geographic Information Systems
GGS 653	GIS Analysis and Application
GGS 675	Location Science
GGS 772	Cloud Geographic Information Systems
GGS 791	Advanced Spatial Statistics
Computational Geoinformatics:	
GGS 650	Introduction to GIS Algorithms and Programming
GGS 671	Algorithms and Modeling in GIS
GGS 681	Social Media Analysis
GGS 692	Web-based Geographic Information Systems
GGS 754	Earth Science Data and Advanced Data Analysis
GGS 773	Interoperability of Geographic Information Systems
Total Credits	9

1 Course selections must be approved by the program coordinator.

Retroactive Requirements Updates:

Plan of Study:

Honors Information:

Accelerated Description/Dual Degree Description:

INTO-Mason Requirements:

College Requirements & Policies:

Department / Academic Unit Requirements & Policies:

Program Outcomes

Additional Program Information

This information is required by the Office of Accreditation and Program Integrity.

Courses offered via distance (if applicable):

Indicate whether students are able

What is the primary delivery format for the program?

Both Face-to-Face and Distance

Does any portion of this program occur off-campus?

No

Off-campus details:

Are you working with a vendor / other collaborators to offer your program?

No

Please explain:

Related Departments

Could this program prepare students for any type of professional licensure, in Virginia or elsewhere?

No

Please explain:

Are you adding or removing a licensure component?

No

Please explain:

Additional SCHEV & SACSCOC Information

Are you changing the total number of credits required for this program?

No

Are you changing the delivery format in any way (e.g adding an online option)?

No

Are you adding/removing a licensure option which was approved by SCHEV?

No

Will any portion of this program be offered at an off-campus location?

No

What off-campus location(s)? List all

What percentage of credits toward this program are offered at the off-campus location(s)? Please list percentages by site (i.e. 15% at Site A, 35% at Site B etc.)

Will this program change affect any specialized accreditation?

No

Is the content of the new program closely related to that of an existing approved program?

No

Which existing approved program(s)?

Is this new program considered to be "advancing the degree level of a currently approved program" (i.e. existing content is at lower degree level, new content is at the higher degree level)?

No

Which existing approved program(s)?

Is this new program considered to be "lowering the degree level of a currently approved program" (i.e. existing content is at higher degree level, new content is at the lower degree level)?

No

Which existing approved program(s)?

Does this change represent a repackaging of content in an existing approved degree/certificate program?

No

Which existing approved program(s)?

Percentage of total credits containing new course content, excluding gen ed courses for undergraduate programs ("New content" means content that is not currently included in an existing approved degree/certificate program.) Please choose a percentage (i.e. 0%-100%)

less than 25%

Are the total credits for the program increasing or decreasing by more than 3 credits?

No

Will any additional equipment/facilites be needed?

No

Description of institutional impact:

Will any additional faculty be required?

No

Description of institutional impact:

Will any additional financial resources be needed?

No

Description of institutional impact:

Will any additional library/learning resources needed?

No

Description of institutional impact:

OAPI Use Only – Determination of SACSCOC Impact

Comments or Notes

Green Leaf Program Designation

Is this a Green Leaf program? No

Green Leaf

Sustainability-focused academic programs require at least one green leaf course. Either that course is itself sustainability-focused or else the program requires a set of sustainability-related courses with aggregated

Relationship to Existing Courses

Relationship to Existing Programs

List sustainability-focused courses currently required in the degree

Sustainability-related academic programs either require at least one sustainability-related course or else offer any green leaf course as an option or elective. *

List sustainability-related courses currently required in the degree

Does this program cover material which crosses into another department?

No

Impacted Departments

Additional Attachments

SCHEV Proposal

Executive Summary

Reviewer Comments

Additional Comments

Is this course required of all students in this degree program?

%wi_required.eschtml%

Attached Document

Key: 212