



Department of Economics

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September 28, 2015

Professor Meg Daly
Chair, Arts and Sciences Curriculum Committee

Re: Approval of Revision to the GIS Minor Program

Dear Meg:

The SBS Panel on September 21, 2015 approved a proposal by Geography to revise its undergraduate Geographic Information Science minor program.

The proposal revises the requirements in both required courses and electives. Two courses in spatial data analysis are added to the required courses, three required courses are re-designated as electives, and two electives are removed from the program requirements. Students are required to take four instead of three required courses, raising the minimum required credit hours from 15 to 18.

The proposed changes aim to address the growing emphasis on data-driven approaches in the field. Geography has also hired new faculty with the expertise in the past few years in anticipation of the new teaching need. The panel agreed that the revision is worthwhile, and voted unanimously to approve the proposal.

Sincerely,

A handwritten signature in black ink, appearing to read "Pok-sang Lam".

Pok-sang Lam
Chair, ASCC SBS Panel



Bernadette Vankeerbergen, Ph.D.
Program Manager, Curriculum and Assessment
Arts and Sciences
The Ohio State University
154D Denney Hall
164 W 17th Ave.
Columbus, OH 43210

August 11, 2015

Dr. Vankeerbergen,

We are seeking Arts and Sciences Curriculum Committee and Council on Academic Affairs approval for a proposed revision to our GIScience minor. This letter explains the changes to our minor. The two attached documents are the old and revised advising sheets. The revised advising sheet is edited using track changes.

In general, we have overhauled our GIScience minor in order to reflect changes in the dynamic field of GIScience, and to reflect the cutting edge teaching expertise of new GIScience faculty hired in the department over the past two years. Is it typical that Geography departments routinely revamp their GIScience offerings to stay current with technological developments in the field.

The changes we made, which impact the minor, include:

- a change to our course numbering system, to create a clear and coherent pedagogic sequencing of knowledge and educational outcomes;
- retitling and renumbering our classes to better reflect content, and to be more transparent to students (see Appendix 1);
- addition of two existing courses to the minor (5100 Introduction to Spatial Data Analysis, 5225 Geographic Applications of Remote Sensing) as required classes (see explanation below);
- addition of a new course to the minor (GEOG 5212 Geospatial Databases), as a required class (see explanation below); and
- an expansion in the electives that students can choose from, now including 3 courses that we had previously designated as required (5222 GIS Algorithms and Programming, 5223 Design and Implementation of GIS and 5226 Spatial Simulation and Modeling) (see explanation below).

Overall, these changes add 3 credit hours to our GIScience minor. Our revised minor is 18 credit hours, whereas the old minor was 15 credit hours.



Our changes to the minor reflect the growing emphasis on data-driven approaches in GIScience. In order to bolster our offerings in this cutting-edge area, we have added a new course to the minor: 5212 Geospatial Databases for GIS. This course provides students with knowledge and skills on how to design and implement GIS data within larger, enterprise database systems and how to publish data via the web.

To support the emphasis of our minor on data-driven approaches to GIScience, we have also added 5100 Introduction to Spatial Data Analysis as a required class due to its focus on basic spatial data analysis. We have also added 5225 Geographic Applications of Remote Sensing as required class since remotely sensed data and imagery are increasingly important as sources of georeferenced data.

To accommodate the changes above, and to keep the minor manageable, we have removed 5222 GIS Algorithms and Programming, 5223 Design and Implementation of GIS and 5226 Spatial Simulation and Modeling as required classes and instead designated these as electives. These classes, while important, are more suitable as requirements for our GIS major since they involve advanced programming, software design and simulation techniques that are more appropriate for students who are seeking research and development knowledge and skills in GIScience. GIScience Minor students can nevertheless pick which of these courses are appropriate given their pedagogic and career goals.

Please get in touch with me if you have any questions. My email is coleman.373@osu.edu and my office number is 2-9686.

Sincerely,

Mat Coleman
Chair of Undergraduate Studies
1156 Derby Hall
Department of Geography

Cc: Morton O'Kelly (Chair, Department of Geography), Harvey Miller (Professor, Department of Geography, Brooke Raake (Undergraduate Adviser, Department of Geography)



Appendix 1

New course titles and numbers	Old course titles and numbers
GEOG 5100 Spatial Data Analysis	GEOG 5100 Quantitative Geographical Methods
GEOG 5200 Cartography and Map Design	GEOG 5200 Elements of Cartography
GEOG 5201 GeoVisualization	GEOG 5201 Computer Cartography and Geographic Visualization
GEOG 5210 Fundamentals of GIS	GEOG 5220 Fundamentals of GIS
GEOG 5212 Geospatial Databases for GIS	N/A
GEOG 5222 GIS Algorithms and Programming	GEOG 5222 GIS Applications in Social Science and Business
GEOG 5223 Design and Implementation of GIS	GEOG 5223 Design and Implementation of GIS
GEOG 5225 Geographic Applications of Remote Sensing	GEOG 5270 Geographic Applications of Remote Sensing
GEOG 5226 Spatial Simulation and Modeling	GEOG 5221 Spatial Simulation and Modeling
GEOG 5229 Emerging Topics in GIS	GEOG 5224 Emerging Topics in GIS

**The Ohio State University
College of Arts and Sciences**

Geographic Information Science Minor (GIS MN)

Brooke Raake
Undergraduate Advisor
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Overview

The GIScience minor aims to provide fundamental training in GIScience that is needed for students from various disciplines to advance their career. The curriculum of the GIScience minor is based on that of the GIScience major, which includes a diverse range of courses that can be selected by students to count toward the proposed minor degree. These classes will provide students with extensive experience in mapping, geospatial analysis, geospatial modeling, environmental modeling, and statistical methods. Most the courses include a lab companion to give students hands-on training.

Minor Requirements

The minor in GIScience requires a minimum of 15 semester credit hours of course work.

Required: 9 hours

Students must take GEOG 5200 (3), 5210 (3), and one of the following three courses: 5222 (3), 5223 (3), and 5226 (3).

Electives: 6 hours

Students must take two elective courses. All courses below may count toward the minor, unless taken as a required course. All these courses are 3 credit hours.
GEOG 2200, 5100, 5201, 5222, 5223, 5226, 5229, 5225, 5275, 5300, 5402, 6220

Geographic Information Science minor program guidelines

Required for graduation No

Credit hours required A minimum of 15 credit hours. 1000-level courses shall not be counted in the minor. At least 6 credit hours must be at the 3000-level or above.

Transfer and EM credit hours allowed

A student is permitted to count up to 6 total hours of transfer credit and/or credit by examination.

Overlap with the GE A student is permitted to overlap up to 6 credit hours between the GE and the minor.

Overlap with the major and additional minor(s)

- The minor must be in a different subject than the major.
- The minor must contain a minimum of 12 hours distinct from the major and/or additional minor(s).

Grades required

- Minimum C- for a course to be counted on the minor.
- Minimum 2.00 cumulative point-hour ratio required for the minor.
- Course work graded Pass/Non-Pass cannot count on the minor.
- No more than 3 credit hours of course graded Satisfactory/Unsatisfactory may count toward the minor

X193 credits No more than 3 credit hours.

Minor approval The minor must be approved by the academic unit. Please see the undergraduate advisor for approval.

Filing the minor program form The minor program form must be filed at least by the time the graduation application is submitted to a college/school counselor.

Changing the minor Once the minor program is filed in the college office, any changes must be approved by the academic unit offering the minor. Please see the undergraduate advisor for approval.

College of Arts and Sciences
Curriculum and Assessment Services
154 Denney Hall, 164 W. 17th Ave.
<http://artsandsciences.osu.edu>

Received 8/31/12 DH
BV 7/15/14
BV 7/27/15

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College of Arts and Sciences

Geographic Information Science Minor (GIS MN)

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Minor Requirements *Effective for students declaring the minor SP16 and beyond.*

The minor in GIScience requires a minimum of [15-18](#) semester credit hours of course work.

Required: [9-12](#) hours

Students must take GEOG 5100 (3), 5200 (3), 5210 (3), and one of the following two courses: 5212 (3) and 5225 (3).

Students must take GEOG 5200 (3), 5210 (3), and one of the following three courses: 5222 (3), 5223 (3), and 5226 (3).

Electives: 6 hours

Students must take two elective courses. All courses below may count toward the minor, unless taken as a required course. All these courses are 3 credit hours.

[GEOG 5201, 5212, 5222, 5223, 5225, 5226, 5229, 5275, 5300, 5402](#)

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