Geography M.S. - Cartography and GIS

Master of Science - Geography; Cartography and GIS Concentration

Summary

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td></td>
<td><strong>Required Core Courses (≥10)</strong></td>
<td>10</td>
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<tr>
<td></td>
<td><strong>Required Research Design Course</strong></td>
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<td></td>
<td><strong>Required Methods Course</strong></td>
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<td></td>
<td><strong>Required Option Courses</strong></td>
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<tr>
<td></td>
<td><strong>Option Elective Courses (≥9)</strong></td>
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<td></td>
<td><strong>Electives (≥4)</strong></td>
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<td><strong>Total Hours</strong></td>
<td>30</td>
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Degree Specific Credits:

- 34 credits are required for the thesis and professional paper tracks.
- 40 credits are required for the non-thesis (portfolio) track.

Required Cumulative GPA: 3.0

Notes

- For the M.S. Geography degree, students may select among the general degree option or an option in Cartography & GIS or in Community and Environmental Planning.
- The M.S. degree in Geography with an Option in Cartography and GIS is appropriate for those whose work is focused on spatial mapping and analysis. Beyond the core requirements specified for the General MS (≥10 credits), an additional 16 credits are required for the option (19 if the Methods course is not a GIS class), and electives as needed to complete the 34 to 40 credits for the degree.
- Choices in the core and elective credits will be selected in consultation with the graduate committee to support the research program and student’s professional goals. Coursework must be approved by the committee no later than the second semester in residence, but earlier if possible. Per Graduate School policy, at least 20 of the total credits must be taken within the major discipline; at least 20 of the total credits must be in coursework and at least half of the coursework credits (minimum 10 credits) must be at the 500 level or above; courses below the 400 level do not count towards the M.S. course requirements; and up to 10 of the 34 or 40 credits may be taken as thesis (GPHY 599).

Required Core Courses

Complete all of the following courses:

- GPHY 525 Advanced Physical Geography
- GPHY 560 Seminar in Planning
- GPHY 580 Seminar GIS & Cartography
- Or approved alternative

Complete one of the following research design courses:

- GPHY 504 & GPHY 505 Research Design in the Geographical Sciences I and Research Design in Geographical Sciences II
- NRSM 500 Conservation and Social Science Methods
- GEO 508 Fundamentals of Academic Research
- WILD 540 Research Design & WILD 541 Research Design Lab

Required Option Courses

Complete the following required option courses:

- GPHY 487 Remote Sensing/Raster GIS
- GPHY 488 Applications of GIS
- GPHY 489 Cartography/GIS Laboratory
- GPHY 587 Image Analysis & Modeling
- GPHY 589 Spatial Analysis and Modeling
- GPHY 598 Internship

Complete one methods course

- GPHY 485 Internet GIS
- GPHY 489 & GPHY 485 Cartography/GIS Laboratory and Internet GIS
- GPHY 587 & GPHY 587 Image Analysis & Modeling
- GPHY 589 & GPHY 589 Cartography/GIS Laboratory and Spatial Analysis and Modeling
- GPHY 598 Internship
- FORS 505 Sampling Methods

Courses

- Non-thesis (Portfolio) track: Requires the successful completion of a portfolio and written and oral comprehensive examinations described in the addendum of the “PDF of Graduate Degree Requirements” downloadable through the link above.
- There is no minimum number of thesis credits that must be taken for any of the tracks.

Degree Tracks

For the M.S. degree, with or without option, students are required to complete one of the following tracks:

- Thesis track: Successfully complete and defend a thesis or one or more papers (i.e., articles) of publishable quality before an examining committee.
- Professional Paper track: Successfully complete and defend a professional paper or one or more papers (i.e., articles) of publishable quality before an examining committee. The difference between a thesis and a professional paper is that while the thesis is directed toward advances in the discipline, the professional paper may be
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>FORS 551</td>
<td>Digital Image Processing</td>
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<tr>
<td>WILD 562</td>
<td>Wildlife Habitat Modeling</td>
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<td><strong>31-32</strong></td>
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See the Geography Advising Guide for a list of suggested courses

Minimum Required Grade: C