Graduate Certificate in Geographic Information Science

Geographic information systems (GIS) consist of computer hardware, software, data, and people that are used to capture, manage, analyze, display, and distribute all forms of geographically referenced information. Effective use of GIS has evolved into a requisite skill in most academic research, as well as for agencies in both the public and private sectors. Graduate students from such varied disciplines as geography, atmospheric science, biology, engineering, economics, urban planning, landscape architecture, and sociology benefit from applying GIS and related technologies such as global positioning systems (GPS), remote sensing, spatial statistics, and computer programming to input, analyze, model, and display (map) location-based data. As such, it has found wide applications in the sciences and engineering, as well as in business, government, military, and consumer areas.

The certificate program is designed to provide graduate students with the knowledge and skills necessary to succeed in the rapidly expanding field of GIScience or apply GIScience concepts in their own field of study. The graduate certificate program complements the existing M.A., M.S., and Ph.D. degrees and builds upon the existing graduate concentrations in GIScience within the department.

Admission to Graduate Studies

An applicant seeking to pursue graduate study in the College may be admitted as either a degree-seeking or non-degree seeking student. Policies and procedures of Graduate Studies govern the process of Graduate admission. These may be found in the Graduate Studies (http://catalog.ku.edu/graduate-studies) section of the online catalog.

Please consult the Departments & Programs (http://catalog.ku.edu/liberal-arts-sciences) section of the online catalog for information regarding program-specific admissions criteria and requirements. Special admissions requirements pertain to Interdisciplinary Studies degrees, which may be found in the Graduate Studies section of the online catalog.

All current graduate students entering the certificate program must speak with their academic advisor before entering the certificate program. The Director of this certificate program will be available to meet with each student and design a curriculum that best meets the student’s needs. Each student will have a personalized plan depending on their interests and current enrollment in a graduate program or otherwise.

KU graduate students should complete the online application for the GIScience Graduate Certificate Program found at http://graduate.ku.edu/ku-graduate-application and pay the associated fee. Departmental application requirements include:

1. A GIScience Certificate Program Application that includes a statement of interest in GIScience
2. Current Degree Progress Report (DPR) if applicable
3. A graduate GPA of 3.0 or higher is required if currently enrolled in a graduate program
4. A letter of support from your graduate program

Prospective students seeking the certificate only should complete the online application for the GIScience Graduate Certificate Program found at http://graduate.ku.edu/ku-graduate-application and pay the associated fee. Departmental application requirements include:

1. Copy of official transcripts from all previous post-secondary educational institutions
2. Letter of recommendation from persons familiar with their academic work or potential for graduate school
3. A GIScience Certificate Program Application that includes a statement of interest in GIScience

Please see the policy on Graduate Certificate Programs - Eligibility and Admission Criteria (http://catalog.ku.edu/graduate-studies/#certificatestext) for more information on minimum requirements for graduate certificate admission.

For more information on admission to a graduate certificate program at KU, see the policy on Admission to Graduate Study (http://policy.ku.edu/graduate-studies/admission-to-graduate-study).

A total of 12 credit hours are required to earn the certificate. Only one course outside of the Department of Geography and Atmospheric Science may be included in these 12 credit hours. Course requirements include the following:

Select 2 of the 3 core GIS courses (6-7 credit hours) listed below:

- GEOG 528 Spatial Databases 3
- GEOG 558 Intermediate Geographical Information Systems 4
- GEOG 560 GIS Application Programming 3

Core courses may be waived and replaced with approved electives in cases where students have completed the same course for undergraduate credit.

Select an additional 5-6 credit hours of electives from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATMO 642</td>
<td>Remote Sensing</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 512</td>
<td>Advanced Cartography and Geovisualization</td>
<td>4</td>
</tr>
<tr>
<td>GEOG 518</td>
<td>Geoinformatics Internship</td>
<td>1-3</td>
</tr>
<tr>
<td>GEOG 526</td>
<td>Remote Sensing of Environment I</td>
<td>4</td>
</tr>
<tr>
<td>GEOG 648</td>
<td>Location Modeling</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 658</td>
<td>Topics in Geospatial Technologies:</td>
<td>1-6</td>
</tr>
<tr>
<td>GEOG 716</td>
<td>Advanced Geostatistics</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 726</td>
<td>Remote Sensing of Environment II</td>
<td>4</td>
</tr>
<tr>
<td>GEOG 758</td>
<td>Geographic Information Science</td>
<td>3</td>
</tr>
<tr>
<td>GEOG 898</td>
<td>Readings in Geography</td>
<td>1-4</td>
</tr>
</tbody>
</table>

Any graduate-level GIS application course from another department/ school (in consultation with advisor)

Or, a third core course from the core GIS courses listed above

At least once per year students are required to meet with the certificate Director to discuss progress in the program.

A student can take no longer than 4 years to pursue the certificate unless a leave of absence or other extenuating circumstances are present. In either event a petition letter must be submitted to the Director during the 4th year of enrollment.