# GEOGRAPHIC INFORMATION SYSTEMS, MINOR

## College of Agricultural & Environmental Sciences

The Department of Biological & Agricultural Engineering offers a minor in Geographic Information Systems with an emphasis on spatial analysis. This minor is ideal for students interested in information processing of spatial data related to remote sensing, land information systems, marine cartography, thematic mapping, surface modeling, environmental modeling resources management, public utility planning, emergency response, geomarketing, geotechnics, precision agriculture, archaeology, military exercises, and computer-aided design. Prerequisites include MAT 016A-MAT 016B and PHY 007A-PHY 007C or PHY 009A-PHY 009B. Some electives may have additional prerequisites.

All core courses (ABT 150/LDA 150, ESM 186, and ABT 181N or ABT 182) must be taken for a letter grade. Up to one elective course may be taken P/NP.

## Minor Advisors

I. Kisekka, S.G. Vougioukas (Biological & Agricultural Engineering Department)

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>ABT/LDA 150</td>
<td>Introduction to Geographic Information Systems</td>
<td>4</td>
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<tr>
<td>ESM 186</td>
<td>Environmental Remote Sensing</td>
<td>5</td>
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<tr>
<td>ABT/HYD 182</td>
<td>Environmental Analysis Using GIS</td>
<td>4</td>
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<tr>
<td>or ABT 181N</td>
<td>Concepts &amp; Methods in Geographic Information Systems</td>
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Choose an additional five elective units:

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<tr>
<th>Code</th>
<th>Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>ABT 181N</td>
<td>Concepts &amp; Methods in Geographic Information Systems (If not chosen above.)</td>
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<tr>
<td>ABT 182</td>
<td>Environmental Analysis Using GIS (If not chosen above.)</td>
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<td>ESM 108</td>
<td>Environmental Monitoring</td>
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<tr>
<td>ESM 185</td>
<td>Aerial Photo Interpretation &amp; Remote Sensing</td>
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<tr>
<td>ESP 168A</td>
<td>Methods of Environmental Policy Analysis</td>
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<tr>
<td>ESP 168B</td>
<td>Methods of Environmental Policy Evaluation</td>
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<tr>
<td>ESP 171</td>
<td>Urban &amp; Regional Planning</td>
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<tr>
<td>ESP 179</td>
<td>Environmental Impact Assessment</td>
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<tr>
<td>PLS 120</td>
<td>Applied Statistics in Agricultural Sciences</td>
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<tr>
<td>STA 100</td>
<td>Applied Statistics for Biological Sciences</td>
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**Total Units**: 18