What is Geography?
Geography at EKU
By the Numbers

- Number of GEO courses offered by the department*: 25
- Number of GEO courses required by other programs: 18
- Number of programs requiring GEO courses in degree program curriculum: 16
- GEO Faculty lines with position number: 6

*Does not include Internship, Independent Study or Independent Research
# Transitioning to BS Geographic Information Science

<table>
<thead>
<tr>
<th>Timeline</th>
<th>Action</th>
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<tbody>
<tr>
<td>Fall 2013</td>
<td>Developed strong partnership with Kentucky Association of Mapping Professionals (KAMP)</td>
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</table>
| Spring 2014 | Hosted KAMP Quarterly Meeting (largest attendance on record)  
                  | Highlighted EKU’s GIS Certificate and geospatial techniques capabilities to KAMP members  
                  | Student poster gallery resulted in job offers for all student presenters                                                        |
| Fall 2014 | Evaluated BA Geography program and proposed changes to strengthen curriculum in areas of faculty expertise and job market need (geospatial techniques/environmental) |
| Spring 2015 | Began discussion of possible BS Geographic Information Science                                                                        |
| Fall 2015 | Presented BS Geographic Information Science program to departmental advisory board at KY-GIS conference  
                  | Worked with the National Geospatial Technology Center of Excellence to developed BS Geographic Information Science student learning outcomes and curriculum |
| Spring 2016 | Mapped proposed curriculum to BS Geographic Information Science SLOs  
                  | Completed environmental scan and began working on necessary EKU curriculum forms to propose new program                         |
Transitioning to BS Geographic Information Science: Cost Savings

• Reduction in use of part-time faculty
  • Total number of GEO courses in program reduced from 25 to 18
  • Reduction focused primarily on upper-level, lower-enrollment courses
  • Proposed curriculum uses courses already in existence on EKU’s campus

• RTP retirement in December 2018 = reduction in GEO faculty line
  • No additional lines required to support degree program with projected enrollments
  • Current department faculty being professionally developed to support new BS Geographic Information Science program

• Performance-based funding and STEM degrees
  • BS Geographic Information Science is more obviously a STEM degree
Workforce Readiness: Geographic Information Science

• Demand for EKU graduates with geographic information skills outpaces supply of graduates
• 5-8 employer inquiries PER SEMESTER seeking geospatial techniques-capable employees

<table>
<thead>
<tr>
<th>Geographic Information Science Career</th>
<th>Median Annual Salary in 2014</th>
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<tr>
<td>Mapping Technicians</td>
<td>$40,500</td>
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<tr>
<td>Remote Sensing Technicians</td>
<td>$43,500</td>
</tr>
<tr>
<td>Cartographers and Photogrammetrists</td>
<td>$60,500</td>
</tr>
<tr>
<td>Geographic Information Systems (GIS) Technicians</td>
<td>$82,000</td>
</tr>
<tr>
<td>Geospatial Information Scientists/Technologists</td>
<td>$82,000</td>
</tr>
<tr>
<td>Remote Sensing Scientists/Technologists</td>
<td>$92,000</td>
</tr>
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</table>

Source: US Department of Labor
Distribution of GIS Certificate Students

- 56 current GIS Certificate students
- 86% of GIS graduate respondents report that GIS skills were reason for first job offer (or preferred job placement for ROTC grads)

- GIS Certificate activated in Fall 2011
- 45 Certificates have been conferred since first conferral in Spring 2013
Impact of Suspension of BA Geography Prior to Approval of BS GIS Program

• GEO program and faculty support teaching mission of other programs
• GEO program and faculty support scholarship mission of EKU
• GEO program and faculty support stewardship mission of EKU
• GEO program and faculty support EKU operations
• All 5 current full-time GEO faculty needed to support BS Geographic Information Science degree program
• Perception is powerful – the message that EKU sends to external stakeholders by suspending BA Geography is a strongly negative one, hindering our bid for a BS Geographic Information Science program
BA Geography Supports EKU Teaching Mission

Student Need for Geography Courses

- GEO 100: 238
- GEO 210: 428
- GEO 115/315: 284
- GEO 353: 542
- GEO 456: 131
- Other GEO Courses: 295
Programs Supported by BA Geography Faculty Through Required GEO Courses

*Graph does not include Earth Science for Teachers to support new BS Elementary Education curriculum (400 students) taught by two GEO faculty beginning Spring 2017*

- BS Homeland Security/Pre-Homeland Security
- BS Aviation/Aviation Flight Minor
- BS Middle Grades Teaching - Social Studies Emphasis
- BS Wildlife Management
- BS Middle Grades Teaching - Science Emphasis
- Intelligence Studies Certificate
- BA History/Teaching
- Geographic Information Systems Certificate
- BS Computer Science - Interactive Multimedia
- BS Geology
- BA Globalization & International Affairs
- BS Agriculture (specific concentrations)
- Appalachian Studies Minor/Certificate
- Land Surveying Minor/Certificate
- Environmental Sustainability & Stewardship Minor/Certificate
- Earth Science Teaching BS and Minor

1596 individual students
GEO 110 and GEO 210: Science General Education of Choice for non-STEM Majors

Distribution of Students Enrolled in GEO 110 Environmental Geography

- Business and Tech: 28%
- CLASS: 20%
- Science: 12%
- Exploratory Students: 9%
- Justice and Safety: 11%
- General Studies: 3%
- Education: 4%
- Health Sciences: 13%

Distribution of Students Enrolled in GEO 210 Introductory Physical Geography

- Justice and Safety: 26%
- CLASS: 24%
- Science: 5%
- Exploratory Students: 3%
- General Studies: 10%
- Education: 3%
- Health Sciences: 18%
- Business and Tech: 11%
GEO 110 and 210
Supporting Student Athletes

- Students must complete two Gen Ed Element 4 courses
- The vast majority of student athletes choose BIO 100 and GEO 110 or 210
- 141 Student Athletes on current rosters have successfully completed, or are currently enrolled in, GEO 110 or 210
BA Geography Classified as STEM by Army ROTC

• “Army ROTC STEM scholarships designed to recruit and retain officers who have technical backgrounds.” – Col. Paul Webber

• Geographic information plays a critical role in tactical Army operations

• Geographic information skills are readily applicable to a post-military career
BA Geography Supports Scholarship Mission

• Every BA Geography student graduates with research experience

• Geography faculty have provided geography expertise to support research in other programs
  
  Agriculture  
  Anthropology  
  Biology  
  College of Education  
  Criminal Justice  
  Env. Health Science  
  Environmental Studies  
  Geology  
  Government  
  Homeland Security  
  Honors Program  
  Military Science  
  Natural Areas  
  Recreation and Park Admin.  
  Sociology  
  Surveying  
  Wildlife Management

• Geography faculty were PI or Co-PI on grants funded for $754,181 during the time period of program review
BA Geography Supports Stewardship Mission through Curricular Activities

• GEO 405 collaborated with Livingston, KY for three years to provide mapping and tourism development ideas that contributed to its status as a Kentucky Trail Town (G. Campbell)

• GEO 405 collaborated with Manchester, KY to develop the Pioneer Village and Museum that opened 2013 (G. Campbell)

• GEO 405 collaborated with Winchester Tourism to develop a tourism plan for a parcel of land along the Kentucky River (G. Campbell)

• GEO 405 collaborated with Laurel County to develop an enhancement plan for the Camp Wildcat Civil War Battle Reenactment (G. Campbell)

• GEO 490 collaborated with City of Richmond’s Planning and Zoning Department for two years on urban flooding issues (D. Yow)

• GEO 490 collaborated with City of Berea’s GIS/Land Surveying Department on federally mandated stormwater management plan (D. Yow)

• GEO 490 is collaborating with Madison County Information Technology in its effort to improve data accuracy for NextGen 911 (D. Yow)
BA Geography Supports Stewardship Mission through Scholarly and Service Activities

• D. Yow is providing microclimate assessment to KDFW to help develop ideal quail habitat on reclaimed surface mine land
• D. Yow is the EKU liaison to the Kentucky Mesonet
• S. Yow, K. Watson and G. Campbell reach out to K-12 community to provide geographic and GIS education to schools in service region
• T. Huffman is collaborating on project to prepare legal needs assessment for Appalachian Research and Defense Fund of Kentucky
• K. Watson (SEDAAG), T. Huffman (KAMP), D. Yow (KY Mesonet), S. Yow (KGA) and G. Campbell (KAMP) serve in leadership positions in Kentucky- and regional-based professional organizations
BA Geography Supports EKU Operations

• D. Yow helped to install and continues to maintain the Kentucky Mesonet automated weather station on EKU’s campus
• GEO students collect ongoing, updated EKU data for operations on campus, including data for the following divisions:
  • Alumni Relations
  • Facilities Services
  • Parking and Transportation
  • Physical Plant
  • Natural Areas
• GEO students provide up-to-date data for LiveSafe APP
• “I am a GIS certificate student and member of the Alumni and Development department staff... I chose the program because I believe mapping data is an innovative means for locating and better understanding our donors. The more we understand our donors, the better we can grow our donor database.”-LuAnn Farrar
• Department supports geography education at Model Laboratory School through the Giant Traveling Map, plus lesson planning and the creation of the world map on the kindergarten patio by D. Yow and S. Yow
• T. Huffman is the ESRI site license manager for EKU, supporting all ArcGIS users
• Collected departmental GPS coordinates for former CAS website
• Developed campus map for EKU website – need permissions to upload
GEO Faculty Efficiency

• In the timespan of Fall 2011-Spring 2016, GEO faculty have exceeded their contractual teaching obligations (30 credit hours per year for lecturer ranks, 24 credit hours per year for professor ranks) by a total of 27 credit hours.

• Additionally, GEO faculty supervised the following high-impact learning opportunities for ZERO workload credit:
  • 7 internships
  • 29 independent research projects
  • 7 independent study projects
  • 5 Honors theses

• Most lower-enrollment upper-level courses are some combination of:
  • Field-intensive (transportation limitations due to one driver/instructor)
  • Project-based learning with extensive supervisory role for instructor
  • “Client-based” group research projects with real clients (e.g., GEO 405 and 490)
Record of Improved Efficiency
Strategic Plan Progress 2013-2016

• Dropped eight GEO courses with low enrollment/demonstrated need
• Reduced frequency of course offerings for four courses with low enrollment
• Increased enrollment in two low-enrollment courses by offering them via ITV to extended campuses
• Increased maximum enrollment caps in GEO 100 to reduce number of sections offered (every seat full)
• Developed online GEO 315 course to meet needs of new online Aviation program
Impacts of Strategic Plan Implementation 2013-2016

Recruiting plan established in 2013 has increased the number of new BA Geography majors by 100%

Changes to BA Geography program that focus on environment and geographic information have improved retention of students from declaration of major to graduation by 100%
Summary

• GEO courses support 16 programs from 5 different EKU Colleges and E-Campus
• GEO courses support the success of EKU student athletes and non-STEM degree programs via general education
• GEO faculty support the scholarly pursuits of EKU faculty and students from 17 programs in all 6 Colleges
• GEO faculty provide valuable expertise necessary for the successful operation of EKU
• Geosciences has actively worked to reduce inefficiency over the past 3 years
• Loss of GEO faculty, courses and degree program at this critical time would be devastating to the future BS Geographic Information Science program AND to many other programs on this campus
• Geographic Information Science is a workforce ready STEM discipline with high demand and continued projected high demand for the foreseeable future
Geography: Without us, you would LITERALLY be lost!