GIS Programs at WKU

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http://www.wku.edu/gis/

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Survey

When did you first get introduced to GIS?

History of GIS (Source: *Geographic Information Systems & Science* by Longley et al.)

- Era of Innovation (1963 – 1979)
- Era of Commercialization (1980 – 1999)
- Era of Exploitation (2000 - Current)

WKU GIS Programs

- Certificate in GIS

- Minor in GIS

- Bachelor of Science in GIScience

- Graduate Certificate in GIScience

- Master of Science in Geoscience

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Certificate in GIS (14 Credit Hours)
(Available online)

- GEOG 316 *Fundamentals of GIS* (4hrs)

- GEOG 317 *GIS* (4hrs)
  - Requires prerequisite of GEOG 316

- GEOG 417(G) *GIS Analysis & Modeling* (3hrs)
  - Requires prerequisite of GEOG 317

- GEOG 419(G) *GIS Programming* (3hrs)
  - Requires prerequisite of GEOG 317
  - Requires prerequisite of CS 170 "Python"

- Must earn a grade of "C" or better in all courses.

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Student Majors earning a GIS Certificate

- Agriculture
- Architectural Sciences
- Biology
- Broadcasting
- Business
- Computer Information Science
- Computer Science
- Criminology
- Engineering

- Geography
- Geology
- Journalism
- History
- Journalism
- Marketing
- Photo Journalism
- Public Health
- Political Science
- Sociology

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Minor in GIS (23-24 credit hours)

- All courses in Certificate in GIS program
  (GEOG 316, 317, 417, and 419)
- Also the following courses:
  - Physical: GEOG 100 or GEOL 102 or GEOL 111
  - GEOG 110 *World Regional Geography*
  - One of the following courses:
    - GEOG 414 *Remote Sensing*
    - GEOG 418 *Internet GIS*
    - GEOG 423 *Urban GIS Applications*
    - GEOG 443 *GIS Databases*
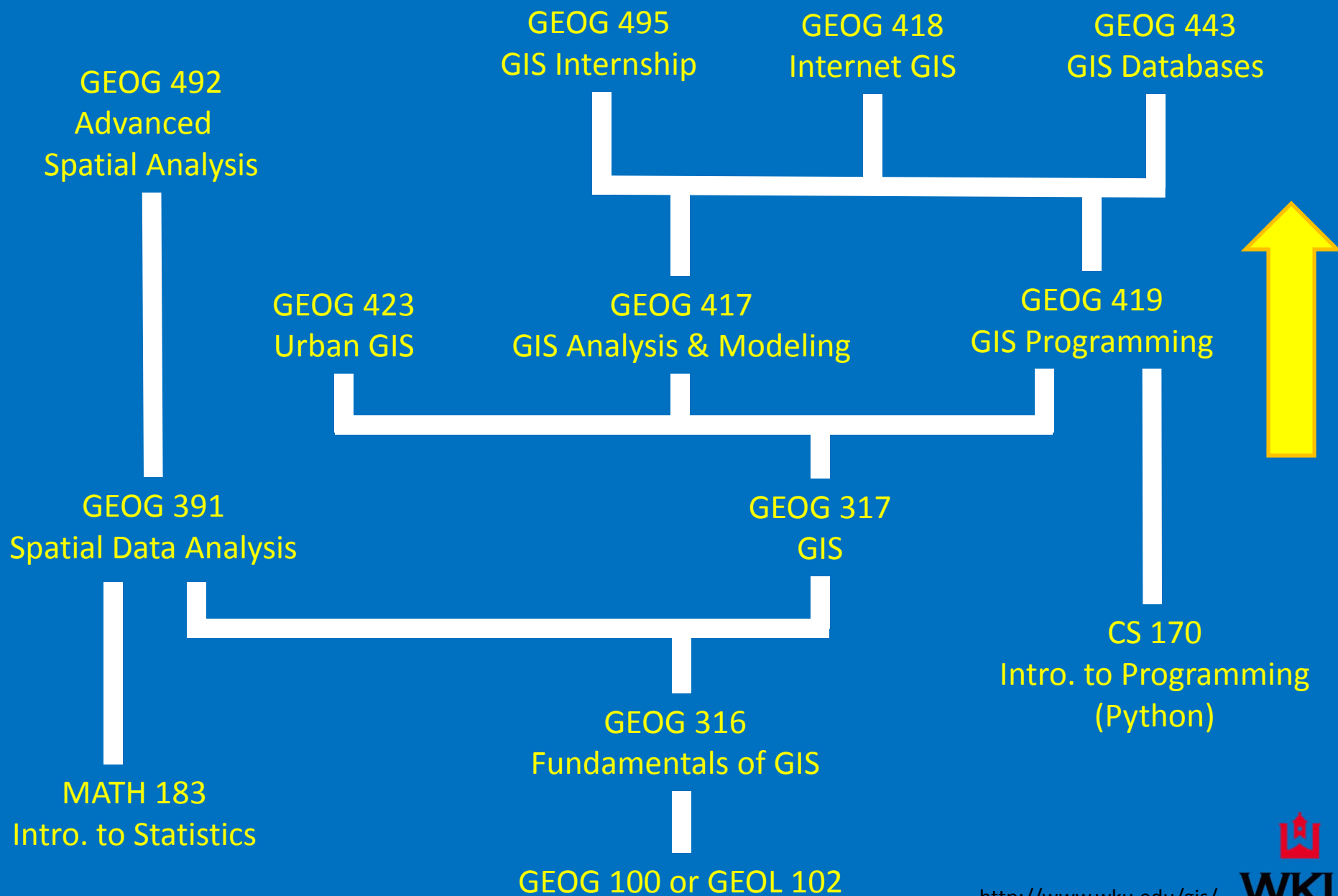   - GEOG 477 *Special Topics in GIS*

WKU GIScience Major

- 2007: GIScience Major at WKU
- *GIScience & Technology Body of Knowledge*
- Focus: The Practical World of GIS
  - Conferences: Past, Present and Future GIS
  - Feedback from former students
  - Input from GIS Industry
- Internship Required for Practical Experience
- Goal: Enterprise GIS

The "Definition" of GIS

- A computerized system used to…
  - Input, collect, and correct geospatial data;
  - Storage and retrieval of geospatial data;
  - Manipulation and analysis geospatial data;
  - Create charts, reports, graphs, and **maps**.

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GEOG 495
GIS Internship

GEOG 418
Internet GIS

GEOG 443
GIS Databases

GEOG 492
Advanced
Spatial Analysis

GEOG 423
Urban GIS

GEOG 417
GIS Analysis & Modeling

GEOG 419
GIS Programming

GEOG 391
Spatial Data Analysis

GEOG 317
GIS

CS 170
Intro. to Programming
(Python)

MATH 183
Intro. to Statistics

GEOG 316
Fundamentals of GIS

GEOG 100 or GEOL 102

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Additional Courses in the GIScience Major

- CS 180 Programming I (Java Based)
- CE 160/161 Surveying I
- GEOG 300 Geographic Research
- GEOG 414 Remote Sensing
- GEOG 477 Special Topics in GIS

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Minor Required for the GIScience Major?

- No.

- However, students do choose a minor.
  - Land Surveying minor (or certificate)
  - CIS minor (or Information Systems Certificate)
  - Floodplain Management Minor
  - City and Regional Planning Minor

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Graduate Programs in GIS

- Graduate Certificate in GIScience (Available Online)
  - Spans the collection, management, analysis, interpretation, and display of geospatial data using GIS.

- Master of Science Degree in Geoscience

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Future Programs in GIS ("In the Works")

- PSM in GIS&T
  - Emphasizes on practical skills
  - Online

- Geospatial Intelligence Certificate Program (United States Geospatial Intelligence Foundation)

Who is using GIS at WKU?

- Kentucky Geographic Alliance
- Centers
    - Kentucky Climate Center
    - Kentucky Mesonet
    - Hoffman Environmental Research Institute
    - Center for Water Resources
    - Center for Biodiversity Studies
- WKU Planning, Design and Construction
- WKU Facilities Management
- Department of Engineering
- Department of Biology
- Department of Agriculture
- Baker Arboretum

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GIS Software at WKU

- ESRI University Site License (i.e., everything ESRI)
- Integraph
  - ERDAS Imagine
  - GeoMedia Pro
- Pathfinder Office

Questions or Comments?

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