Minor in Geographic Information systems (COD/CRP) – Info for Geology undergrads

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Website: https://www.design.iastate.edu/programs-minors/minors/gis/

The minor is open to undergraduates in all university majors with a minimum overall GPA of 2.0 prior to enrolling.

Students must complete a minimum of **15** undergraduate credits of GIS coursework to receive the minor:

Foundations of GIS – complete **two** of the following courses (6 credits):

- CRP 251X: Introduction to Geographic Information Systems (3 credits), Fall, Spring, Summer
- **GEOL 452: GIS for Geoscientists (3 credits),**
  Fall (Chris Harding), Spring (Yuyu Zhou)
  Although it's a 400-level course, it can easily be taken in the 3. Year!
- CRP 351X: Intermediate Geographic Information Systems (3 credits), Fall, Spring, Summer (only take CRP 351 if Geol 452 is full or if you need to take it in Summer!)

GIS Tools and Techniques – choose **three** courses (9 credits) from the following:

I ordered them by decreasing priority for geologist (IMO!) but availability/timing and interest certainly play a role. I would recommend taking a programming centric course (CRP 456 or CRP 458). Remote Sensing also makes sense; if you take Geol 489 do it in Fall and also take the lab (Pete Wolter, uses Erdas), even if that gets you to 16 total creds.

- **GEOL 488: GIS for Geoscientists II (3 credits), every odd Spring (Chris Harding)**
- CRP 456: GIS Programming and Automation (3 credits), Fall
- **GEOL 468x: Applied Geostatistics for Geoscientists, Fall (Yuyu Zhou)**
- CRP 454: Fundamentals of Remote Sensing (3 credits), Spring, or **substitute**
  GEOL 489: Survey of Remote Sensing Technologies (Jim), Spring: 3 cr. lecture (online), Fall: 3 cr. + optional 1 cr. Lab
- CRP 458: Web Mapping/GIS (3 credits), Spring

(I don't know a lot about these courses, so go talk to the teacher and look at its syllabus first!)

- NREM 345: Natural Resource Photogrammetry and Photo-Interpretation (3 Credits), Spring
- NREM 446: Integrating GPS and GIS for Natural Resource Management (3 Credits), Fall
- CRP 450X: Geodesign (3 credits), Spring
- CRP 452: Geographic Data Management and Planning Analysis (3 credits), Spring
- CRP 457X: GeoGames for Civic Engagement (3 credits), Spring