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