Applied GIS

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R Markdown

Course Topics

- Map Algebra in ArcGIS
- Suitability Modeling
  - General suitability modeling
  - Predictive habitat suitability modeling
- Land cover change modeling
  - Change and time-series analysis
  - Simulation
- Terrain and watershed analysis
  - General terrain analysis techniques
  - Stream and watershed delineation
- 3D GIS
  - 3D data creation, visualization, analysis
  - Lidar data management, editing, and analysis

Approaches to Lectures & Demos

- A bit of theory on certain new topics
- Examples and case-studies from the readings
- Review / demonstration of particular GIS analysis or software skills on as-needed basis
- Compared to the other GIS courses, there will be much more time to work on lab assignments during scheduled class time

Readings

- Several required readings for each topic - most are journal articles
- Most of the readings are closely related to the lab assignments - we can't cover all the advanced techniques from the literature, but doing the readings will help with the lab assignments, in particular answering the questions
- Some readings use very advanced statistical methods or other non-GIS techniques - don't worry, you don't have to understand the nuts and bolts of each method - focus on the GIS elements

Expected Knowledge: ArcGIS

- Knowledge of the fundamentals of ArcGIS is required
  - support will be provided by the instructor on a as needed basis.
  - You will be given course codes for online ESRI Virtual Campus courses.
- A basic knowledge of Spatial Analyst is required -we'll do more advanced stuff throughout this course.

Expected Knowledge: Vector and Raster Analysis Tools

- Some text
  - Some more text
- Some more text
- blah, blah.

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