GEOG 381 Advanced Geographic Information Systems

This course blends traditional GIS assignments with a problem-based approach to learning organized around five assignments. Assignments focus on the introduction of students to advanced functions of GIS, including automation through model building and scripting. This course uses **ArcGIS Pro** software. Each assignment will be focused on solving a real-world problem using GIS. There is no single 'correct' answer, but rather, students will be required to think creatively, build on topics taught in class and data provided, and develop an appropriate solution using GIS. This format is intended to mirror how GIS is often used in the working world - where solutions are not prescribed, but rather, created.

The course builds on the knowledge and skills developed in GEOG/PLAN 281 and focuses on using GIS to perform selected types of spatial analyses. Students will learn how to perform different types of spatial analyses, identify the types of questions different analysis approaches can answer, critically evaluate the advantages and limitations of different approaches, and gain a better understanding of the use of capabilities of spatial analysis.

This course is for you if you are passionate about finding creative GIS solutions to real-world problems, and want to build on geospatial principles using state-of-the-art software and methods.

Transition to Online
The course utilizes Python and ArcGIS Pro, both of which will be made available to students through the use of remote desktop technology. Lectures and lab assignment introductions will be completed using voice over Powerpoint and, screen-captured examples of how to complete specific tasks. The course is comprised of five assignments with an online mid-term and final test.