**Course Name: Introduction to Programming for GIS and Remote Sensing**

**Course Description:**

This course will introduce students to Python programming and its applications to remote sensing and GIS. Through completing this course, students will be able to use Python to perform common GIS and remote sensing analysis tasks, automate workflows, and develop custom Python tools. Topics will include describing data, manipulating data, automating spatial analysis tasks, creating Python scripts and tools, and using Python for imagery analysis. We will also introduce students to WebGIS and how Python can be used to interface with data that is shared online.

**Desired Learning Outcomes:**

* Learn Python and understand how to use it to solve problems in GIS and Remote Sensing
* Encourage the use of Python through relevant examples and assignments
* Get graduate level students implementing it in their own research projects.

**Who are your students?**

My students are a mix of undergraduate and graduate students who already have some knowledge of GIS and remote sensing. They come from diverse backgrounds and include many adults who also have full-time jobs.

**Will they mostly be new to you or have you worked with them before?**

Almost all of them will be new to me.

**Are they new to SLU? New to a university in generally? New to your program or majors?**

No. This course is for advanced undergraduates and graduate students. They will already have some university experience and they should also already have taken a GIS and remote sensing course.

**Where will the students be?**

Likely at home. This course is usually offered from 4 to 7 PM in a lab because many of the students work full-time jobs during the day.

**What will their schedules be like?**

They will all be very different. Some will be working parents. Some are single adults. Some are single undergraduates. From my experience during March through May of 2020, some will have children and work full-time jobs so taking this class is online is challenging because their children want to spend time with them while they are home.

**What access to technology will they have?**

Most will have their own computer and a good internet connection, however, there will likely be 2 or 3 that don’t. My experience with the students that don’t have a good computer is that they need help getting setup. That being said, I have found tools online that have circumvented the problem of not having a computer.

**Will they have prior experience with online learning?**

I don’t know. I am inclined to think that most students probably have not taken a formal course online, but I do not know the answer to this.