

Geog594 – Introduction to Global Positioning System and other Geo-Technologies

Spring Semester 2024

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Class Time: TR 12:30-1:45 pm
Location: Carolina Hall 322
Office Hour: TBA

Course Description

The purpose of this class is to provide knowledge of modern geodetic reference systems, coordinate systems, fundamental GPS theory, GPS accuracy, position methods, application design, post processing, Urban GPS applications, as well as GIS techniques for urban mapping, such as geo-coding, address matching, etc. Besides these, students will also get exposed to other geo-technologies, such as integrating GPS with GIS, especially for urban mapping applications, writing SQL scripts, setting up ArcIMS websites, etc.

Course Objectives:

After completing this course, student should have a profound understanding of GPS related theories (geodetic systems, map projections, GPS accuracy, etc.), and gain hand-on experiences on operating two types of GPS receivers (GeoExplorer XH/XT and Garmin recreational GPS units). GIS datasets are often managed by commercial database, such as Oracle, or open source database (MySQL). If time allows, we will also discuss other two important techniques – writing SQL (scripts/command lines to query database) scripts and setting up an ArcIMS website to publish map data.

