executing a geoprocessing approach that addresses a real-world issue/problem.

5) Present the results from the final project both as a professional 10-minute talk and online in the form of an ESRI Story Map.

STUDENT LEARNING OUTCOMES (SLOS)

By the end of the course, students are expected to:

1. Construct effective queries, joins, and spatial joins using GIS software that accurately address geospatial questions.
2. Understand, perform, and evaluate appropriate geoprocessing tools and spatial overlay analysis methods.
3. Understand and apply both utility and transportation network analysis approaches.
4. Understand, apply, analyze, and evaluate raster-based spatial analysis using Map Algebra.
5. Understand, apply, analyze, and evaluate specific raster-based spatial analysis techniques (e.g., surface/terrain, watersheds, spatial interpolation).
6. Understand, apply, analyze, evaluate, and create geospatial models using both raster and vector data.
7. Understand and apply remote sensing concepts in the context of imagery used in a GIS, such as finding, displaying, and enhancing satellite and airborne images to support spatial analysis.
8. Apply multiple concepts and software operations learned in SLOs 1 – 7 to solve a geospatial problem.

PREREQUISITE:

GEO 1720: GEO 1710

GEO 3720: GEO 3710

LAB FEES

$50

The fees in this course are used to purchase expendables such as printer paper and color printer cartridges used for student printing in the lab. The remaining funds are pooled with funds from other courses to help pay for nonexpendable items such as annual software license fees (e.g., ESRI ArcGIS, ENVI, Trimble, etc.) and replacement of computer workstations / other equipment.

COURSE POLICIES

Methods of Evaluation: Grades are based on overall performance, measured by the scores earned from **exams, lab exercises, and a final project** assigned during the semester. This course will use the standard +/- grade scale in accordance with university