Advanced Spatial Analysis and Modeling (PSMA 6520) – 3 credit hours

TENNESSEE STATE UNIVERSITY
College of Agriculture, Human and Natural Sciences

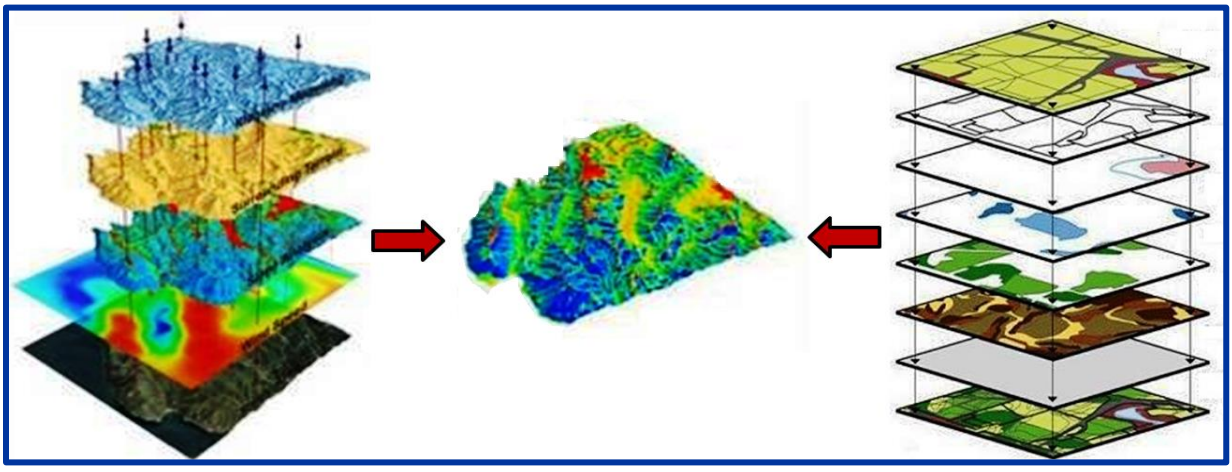
Spatial analysis and modeling is where all the hard work of digitizing, database design and development, geometric error correction, coordinate system and projections eventually pays off. It is the problem solving aspect of GIS, which encompasses the process by which GIS analysts reveal things about the data that one cannot see by simple graphic (map) display. Therefore, in this course the students will use existing data to discover or say new things, while not creating a new data. After completing, this course the students are expected to know the appropriate GIS tools to solve spatial problems and process of setting-up designs (i.e., orders of map combination) to solve the problem and support spatial decision making. Additionally, students will be able to: apply the terminology and concepts of spatial analysis and modeling; interpret the representation of spatial data through spatial analysis; and implement the planning used in the spatial analysis decision- making processes.

Students in this Course are Competent in:

- Acquiring spatial data and displaying their distribution.
- Mapping quantities, classes and densities
- Spatial overlays, selecting features and quantifying nearness
- Creating buffer, distance surface and calculating cost
- Mapping changes, center of geographic data, standard and mean distance

Topic Covered are:

- Geospatial zonal analysis and extraction
- neighborhood analysis and calculating cost along network;
- Spatial change detection i.e., mapping changes in location, magnitude and value.
- Quantitative measurement of spatial distribution



For more Information Contact:

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