**Mel and Enid Zuckerman College of Public Health**
**University of Arizona**

**EPID 676 Spatial Epidemiology**

**Catalog Description**: This course familiarizes students with spatial analysis emphasizing epidemiologic and public health applications. (3 units)

**Course Topics:**
- GIS Basics
- Spatial Resolution
- Story Maps
- ENM
- Clustering
- Geoadditive Models in R
- Geospatial Models in R

**Course Objectives:** During this course, students will:

- Identify and apply the following to epidemiologic and public health practice:
    - basic concepts of spatial epidemiology
    - basic methods of spatial epidemiology
    - critically review spatial epidemiology literature
    - identify pros and cons of a variety of analytic tools
    - competently review and present (oral and written) spatial epidemiologic topics

**Learning Outcomes (Competencies Obtained):** Upon completion of this course students will be able to:

1. Interpret these epidemiological analyses in the context of published literature and communicate key findings to various audiences
2. Organize and deliver clear presentations of research findings in varying professional formats to diverse audiences
3. Describe sentinel events in humans, animals, and the environment for detection of hazardous exposures and prevention of long-term negative effects
4. Analyze quantitative and qualitative data using biostatistics, informatics, computer-based programming and software, as appropriate
5. Interpret results of data analysis for public health research, policy or practice