About the program

It is the time for a spatial turn in health research. Medical geography, an important “new” area of health research, is a hybrid between geography and medical sciences. It uses concepts, methods, and technologies from geography to investigate health-related topics, focusing on spatial aspects of human illness and healthcare.

The Department of Geography at the University of Florida now offers a new program in medical geography, complementing its existing strengths in human-environment studies and spatio-temporal analysis. There are strong ties on campus with the Emerging Pathogens Institute and the Center for African Studies, to which many faculty are affiliated. This program aims to develop skills in analytical thinking and hands-on experience for health applications. Students are prepared for positions in private sector firms, government health agencies, and medical research labs, as well as academic appointments at universities.

Medical geography courses

Introductory level
GEO 3452/6451 Introduction to Medical Geography
A board-based, comprehensive survey of geographic approaches in medical studies

Intermediate level
GIS 3420C/6425C GIS Models for Public Health
An introduction of spatial models and GIS technologies for disease habits, disease diffusion, and health planning

Advanced level
GEO 4938/6938 GIS for Spatial Epidemiology & Disease Ecology
An overview of several GIS methods for identifying spatial and space/time patterns of disease data (cluster analysis, space-time simulation) and ecological niche modeling for host, vector, and pathogen mapping

GIS 4113/6938 Geospatial Networks
Quantitative methods for analyzing networks in geography, epidemiology, social science, transportation, etc.

Department supporting courses

GIS 3043 Foundation of Geographic Information System
GEO 3162C/6160 Intro Quantitative Analysis
GEO 4167C/6161 Intermediate Quantitative Analysis
GEO 4938/6938 Advanced Methods in GIS
GEO4938/6938 Applied Geo-statistics
GIS 4037/5038C Digital Image Processing
GEO 6938 Environmental Biogeography

Concentration of Particulate Matter 2.5 in Florida estimated from MODIS satellite data and spatial regression model

The VBD-AIR tool for a user interested in airline imported dengue infection risks to Miami in January
Information for admission
http://geog.ufl.edu/programs/undergrad/  
http://geog.ufl.edu/programs/grad/

Facilities
GIS/Remote Sensing laboratories
Turlington 3018 and Turlington 3006 are our primary computer labs where all remote sensing, cartography and GIS related classes are taught.

Spatial Epidemiology and Ecology Research Laboratory (SEER Lab)
The SEER Lab is an interdisciplinary research laboratory jointly housed in the Emerging Pathogens Institute (EPI) and the Department of Geography at the University of Florida. Visit http://www.epi.ufl.edu/seer for more information.

Core Faculty
Jason Blackburn, Assistant Professor, Email: jkblackburn@ufl.edu  
Website: http://geog.ufl.edu/people/faculty/blackburn/  
Areas of Specialization:  
- Spatial Epidemiology  
- GIS and Remote Sensing for health applications  
- Models for predicting species’ distributions with GIS  
- Space/time models for understanding disease patterns  
- Wildlife movement behavior during outbreaks  
- Field mapping disease outbreaks with GPS

Liang Mao, Assistant Professor, Email: liangmao@ufl.edu  
Website: http://geog.ufl.edu/people/faculty/mao/  
Areas of Specialization:  
- Spatial modeling for disease epidemics  
- Disease control strategies  
- GeoSocial network analysis  
- GIS/RS for environmental health

Related Faculty
Timothy Fik http://geog.ufl.edu/people/faculty/fik/  
Peter Waylen http://geog.ufl.edu/people/faculty/waylen/