

Spring 2020 GEO 3452/6451 Introduction to Medical Geography

Time: Tuesday: 3:00 to 4:55; Thursday: 4:05 to 4:55 **Location:** Leigh Hall 0242

Instructor: Stephanie Mundis

Email: s.mundis@ufl.edu **Office:** Turlington 1215 **Office hours:** Monday 12-3pm or by appointment

Course description

Medical geography deals with human-environment interactions and the influence of these interactions on public health. This course provides a broad-based, comprehensive survey of geographic topics and approaches in medical sciences. Hands-on experiences will be emphasized through GIS labs.

Course objectives

The successful students are expected to learn:

- Basic concepts, principles, and methods that are widely used in medical geography studies;
- Ability to investigate health problems with spatial analysis skills;
- Real-world applications of geographic information system for medical studies;
- Background for upper-level courses of medical geography.

Prerequisites

Students with a sophomore standing or higher. Entry level knowledge of statistics is preferred(STA2023 or equivalent), but not required.

Textbooks and readings

Textbook: Melinda S. Meade and Michael Emch, 2010. *Medical Geography*, 3rd ed. New York: The Guilford Press (Free on-line access in UF Library).

Tentative course schedule (Subject to change based on actual progress)

Week	Topics	Assignment
Introduction and Module 1: Basic concepts, principles, and methodologies		
January 6-10	Introduction; Geography and medical science	Textbook Chapters 1 & 2
January 13-17	Triangle of human ecology; Measuring diseases I	Textbook Chapter 12; Homework 1
January 20-24	Measuring diseases II; Data collection	Textbook Chapter 12;
January 27-31	Basic methodology designs (QUIZ 1)	Textbook Chapter 12; Homework 2
February 3-7	Statistical inference; Principles of maps	Textbook Chapter 3
Module 2: Landscape epidemiology		
February 10-14	GIS basics; Mosquito-borne disease I (GIS Lab 1: Basic mapping)	Textbook Chapter 4; Homework 3

February 17-21	Mosquito-borne disease II; GIS Lab 2 Spatial query	Textbook Chapter 4; Homework 4
February 24-28	Tick-borne disease; Mid-term exam prep (QUIZ 2)	
March 2-6 SPRING BREAK		
March 9-14	Mid-term exam (3/10/20) ; Discussion of exam and term paper; Weather-related diseases	
Module 3: Climate change and global health		
March 16-20	Climate change and global health; Air pollution and health GIS Lab 3 Buffers and spatial estimation of exposure	Textbook Chapter 6; Homework 5
Module 4: Modeling disease diffusion		
March 23-27	Human health and mobility; Spatial patterns of disease diffusion (QUIZ 3)	Textbook Chapter 10
Module 5: Health disparities and planning		
March 30-April 3	Human health behavior; Spatial disparity of health	Textbook Chapter 5
Module 5: Health disparities and planning		
April 6-10	Geography of health systems (QUIZ 4) GIS Lab 4 Hospital service areas	Textbook Chapter 11; Homework 6
April 13-17	Student presentation	
April 20-24	Course summary; Final project help	
TERM PAPER DUE APRIL 28th at 11:59 PM		

Grading system

Course component	Weight
Assignments (6 homework assignments; 4 GIS labs)	30%
Mid-term exam	20%
Quizzes (4 in-class quizzes)	20%
Term paper	15%
Final presentation	10%
Attendance	5%
Total	100%

Assignments

There will be 6 assignments in class, each graded on a scale of 100 points. The average of the 6 assignments accounts for 30% of your final grade. Students should hand in the assignments by the due date. 10% will be automatically applied to late assignments up to 7 days after they are due. Assignments received after the 7 day late period will automatically receive 0 points.

PLEASE let the instructor know as soon as possible if unexpected circumstances prevent you from completing your work.

Quizzes

There will be four in-class quizzes that occur at two-week intervals. Quiz time will be posted in advance on Canvas and announced in class. These will test you on material covered in the last two weeks, although some early, foundational material may appear in later quizzes. Quizzes can only be made up if the instructor receives prior notification of absence or formal documentation (e.g. note from a physician) excusing the absence. The absence of such a notice will prevent students from making up missed quizzes.

Mid-term exam (March 10, 2020)

A close-book exam will cover all course contents by that time. Review of the course notes and PowerPoints is strongly encouraged.

Term paper

Each student will be asked to select ONE specific health topic based on interest, and read **6** research papers on this topic. The selected papers should use GIS or maps to address this health issue. After the final class, each student needs to hand in a reading report in a designated format. In addition, graduate students are required to write down their own COMMENTS/CRITIQUES on each study. **The due date for submission is April 28th, 2020.**

Final presentation

April 14 and April 16: Students are expected to give a 10-minute presentation about selected topics based on their term papers.

Attendance/participation

Attendance is mandatory for all students and is the easiest way to do well in this class. To encourage uninterrupted participation in class, it is expected that cell phones are silenced and put away prior to entering the classroom.

Absences may be excused if they are documentable. For expected absences, students must provide at least two business days advance notice of the absence. Acceptable reasons for absences include but are not limited to personal or family illness or emergency, religious holidays, official university events, etc. Oversleeping, missing the bus, etc., are not excusable excuses. Students may be required to provide written documentation in order to receive an excused absence. Any absence without a reasonable excuse will result in a loss of 1 point in Attendance/Participation.

If absence is excused, students are responsible for material missed during any class session (lab or lecture). S/he should obtain notes from a peer for the material covered in class. If the absence is unexcused, assignments not turned in at the assigned time will be considered late and a penalty applied.

Policy on make-up work

Students are allowed to make up assignments and exams ONLY as the results of official university events, religious holidays, illnesses, or other unanticipated circumstances warranting a medical excuse and resulting in the student missing a homework or exam. Documentation from a health care provider is required. Assignments and exams missed for any other reason will receive a grade of zero.

Other important information

Academic integrity

Each student is bound by the academic honesty guidelines of the University and the student conduct code printed in the Student Guide and on the University website:

<http://www.registrar.ufl.edu/catalog/policies/students.html>

Cheating or plagiarism in any form is unacceptable and inexcusable behavior. The Honor Code states: “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: On my honor, I have neither given nor received unauthorized aid in doing this assignment.”

Accommodations for students with disabilities

Students requiring accommodations must first register with the Dean of Students' Office. The Dean of Students' Office will provide documentation to the student, who must then provide this documentation to the faculty member when requesting accommodation. If students experience personal, academic, and social issues, please consider either of the following assistances:

University Counseling Services (P301 Peabody Hall –392-1575)

<http://www.counsel.ufl.edu/base.asp?include=counselingServices.inc>

Student Mental Health Services in the Student Health Care Center (Room 245, Infirmary Bldg. – 392-1171)

<http://www.health.ufl.edu/shcc>