

Fall 2017 GEO3452/6451: Medical Geography

Time: MWF 12:50-1:40pm

Location: 3012 Turlington hall

Instructor: Dr. Liang Mao

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Office: TUR3121

Office hour: Wednesday 2-4pm 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)

Weeks	Topics	Assignment
08/21	Module 1: Introduction	
	Module 2: Basic concepts, principles, and methodologies	
08/23-08/25	Geography and Medical science Triangle of human ecology	Textbook, Chapter 1, 2
08/28-09/01	Measuring diseases (I-II)	Textbook, Chapter 12 Homework #1
09/06-09/08	Data collection Basic methodology designs (I-II) (Quiz 1)	Textbook, Chapter 12 Homework #2
09/11-09/15	Statistical inference Principles of Maps	Textbook, Chapter 3
	Module 3: Landscape epidemiology	
09/18-09/22	GIS basics Mosquito-borne diseases(I) GIS Lab 1 Basic mapping	Textbook, Chapter 4 Homework #3
09/25-09/29	Mosquito-borne diseases(II-III) GIS Lab 2 Spatial query	Textbook, Chapter 4 Homework #4
10/02-10/06	Tick-borne diseases (I-II) (Quiz 2)	
10/9-10/11	Mid-term exam (10/09) Discussion of the exam	
	Module 4: Climate change and Global health	
10/16-10/20	Weather-related diseases Climate change and Global health GIS Lab 3 Spatial test with buffers	Textbook, Chapter 6 Homework #5
10/23-10/27	Air pollution and Health (I-II) GIS Lab 4 Spatial estimation of exposure	Textbook, Chapter 7 Homework #6
	Module 5: Modeling Disease diffusion	
10/30-11/03	Human health and mobility Spatial patterns of disease diffusion (I-II) (Quiz 3)	Textbook, Chapter 10
	Module 6: Health disparities and planning	
11/06-11/08	Human health behavior Spatial disparity of health	Textbook, Chapter 5
11/13-11/17	Geography of health systems (I-II) (Quiz 4) GIS Lab 5 Hospital service areas	Textbook, Chapter 11 Homework #7
11/20	Course Summary	
11/27-12/06	Student presentations	

Grading Policies

Items	
Assignments	30%
Mid-term exam	20%
Quizzes	20%
Term paper	15%
Final Presentation	10%
Attendance	5%
Total	100%

The grading scale for this course consists of the standard scale, including minus grades, below:

93 - 100 = A 90 - 92 = A- 87 - 89 = B+ 83 - 86 = B 80 - 82 = B-
77 - 79 = C+ 73 - 76 = C 70 - 72 = C- 67 - 69 = D+ 63 - 66 = D 60 - 62 = D-
Below 60 = E

“Please note that C- is not considered a passing grade for major, minor, Gen Ed, Gordon Rule, or basic distribution requirements.”

More information on current UF grading policies for assigning grade points can be accessed by the following link: <http://www.registrar.ufl.edu/catalog/policies/regulationgrades.html>

Assignments: 7 assignments will be given in class, with each worthy of 100 points. The average of 7 assignments account for 30% of your final score. Students should hand in the assignments by the due date. Otherwise 10% penalty per day will be AUTOMATICALLY applied to late assignments up to 7 days after they are due. Assignments received after the 7-day late period will not be graded, and will automatically receive 0 points. **If something unexpected happens, please inform the instructor in advance.**

Quizzes: There will be **four in-class quizzes** that occur at about a two-week interval. Quiz time will be informed in advance during the class and online. These will test you on material covered usually within the most recent two weeks, although testing outside of this period may also occur due to the nature of the subject. Quizzes can only be made up if the instructor receives prior notification of absence. The absence of such a notice will prevent students from making up missed quizzes.

Mid-term exam (October 09, 2017): 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/CRITICS on each study. **The due date for submission is December 13, 2017.**

Final presentation: Between 11/27-12/06, 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 phone and pagers be TURNED OFF 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, illness, 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>