

# GEO 3452 Introduction to Medical Geography

<b>Time:</b>	<b>Tuesday:</b> 3:00 to 4:55; <b>Thursday:</b> 4:05 to 4:55
<b>Location:</b>	<b>Live section:</b> Class will meet in Pugh Hall 120
	<b>Online section:</b> All class sessions will be held via Zoom. The Zoom link will be provided on the front page of our Canvas course
<b>Instructor:</b>	Dr. Gabriela Hamerlinck Turlington 3122   352.294.7513
<b>Office Hours:</b> All office hours will be held via Zoom. The Zoom link will be provided on the front page of our Canvas course.	Monday 3:00 pm – 4:30 pm Wednesday 10:00 am – 1:00 pm Thursday 10:00 am – 11:30 am (or by appointment)
<b>E-Mail:</b>	<a href="mailto:ghamerlinck@ufl.edu">ghamerlinck@ufl.edu</a>

## 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

This course will ...

- Explore the basic concepts, principles, and methods that are widely used in medical geography studies;
- Investigate health problems with spatial analysis skills;
- Apply geographic information system techniques for medical studies using real-world data;
- Provide the background necessary 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

Emch, M., Root, E. D., & Carrel, M. (2017). *Health and medical geography* (4th ed.). New York, NY: The Guilford Press.

**\*\*Free online access** to *Health and medical geography* in the [UF Library](#).

Optional textbook: Gatrell, A. C. and Elliott, S. J. (2014). *Geographies of Health: An Introduction* (3<sup>rd</sup> ed.). John Wiley & Sons.

## Tentative course schedule

Students should note that the syllabus is a guideline and that there may be changes to the class schedule.

Week	Topics	Assignment
<b>Introduction and Module 1: Basic concepts, principles, and methodologies</b>		
January 11-15	Introduction; Geography and medical science	Textbook Chapters 1 & 2
January 18-22	Triangle of human ecology; Measuring diseases I	Textbook Chapter 12; Homework 1
January 25-29	Measuring diseases II; Data collection	Textbook Chapter 12;
February 1-5	Basic methodology designs (QUIZ 1)	Textbook Chapter 12; Homework 2
February 8-12	Statistical inference; Principles of maps	Textbook Chapter 3
<b>Module 2: Landscape epidemiology</b>		
February 15-19	GIS basics; Mosquito-borne disease I (GIS Lab 1: Basic mapping)	Textbook Chapter 4; Homework 3
February 22-26	Mosquito-borne disease II; GIS Lab 2 Spatial query	Textbook Chapter 4; Homework 4
March 1-5	Tick-borne disease; Mid-term exam prep (QUIZ 2)	
March 8-12	<b>Mid-term exam (3/9/21)</b> ; Discussion of exam and term paper; Weather-related diseases	
<b>Module 3: Climate change and global health</b>		
March 15-19	Climate change and global health; Air pollution and health GIS Lab 3 Buffers and spatial estimation of exposure	Textbook Chapter 6; Homework 5
<b>Module 4: Modeling disease diffusion</b>		
March 22-26	Human health and mobility; Spatial patterns of disease diffusion (QUIZ 3)	Textbook Chapter 10
March 29-April 2	Human health behavior; Spatial disparity of health	Textbook Chapter 5
<b>Module 5: Health disparities and planning</b>		
April 5-9	Student presentations	
April 12-16	Geography of health systems (QUIZ 4) GIS Lab 4 Hospital service areas	Textbook Chapter 11; Homework 6
April 19-23	Course summary; Final project help	
<b>TERM PAPER DUE APRIL 26<sup>th</sup> at 11:59 PM</b>		

\*Any GIS lab day (such as 2/16) will occur online via Zoom to safely facilitate help with ArcMap. All GIS lab days will be announced in class ahead of time and posted to Canvas.

## Grading system

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

## Assignments

There will be 6 homework assignments in class, each graded on a scale of 100 points. Additionally, there are four GIS labs to complete, also graded out of 100 points. The average of the 6 assignments and 4 labs accounts for 30% of your final grade. Students should hand in the assignments by the due date. A 10% deduction in points will be automatically applied per day for 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 throughout the semester. All quizzes will occur during class time and will be administered through either Canvas or Zoom. Quiz start time will be posted in advance on Canvas and announced in class. These will test you on material covered since the previous quiz, 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 9, 2021](#))

A closed-book exam will cover all course content by that time. Review of the course notes and PowerPoints is strongly encouraged. The exam will be taken on Canvas using Honorlock.

### 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 mapping techniques to address this health issue. After the final class, each student will hand in a reading report in a designated format. A rubric and template will be available on Canvas at least three weeks prior to the deadline. **The due date for submission is April 26th, 2021.**

### Final presentation & Peer reviews

April 5-9: Students are expected to prepare a recorded 10-minute presentation about selected topics based on their term papers. Each student will be assigned two of their peers to review using a provided rubric.

## 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 valid 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.

# VI. University Policies

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## **Students Requiring Accommodation**

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

## **UF Evaluations Process**

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.ua.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their

Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

## **University Honesty Policy**

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. 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.” The Honor Code (<https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

## **Counseling and Wellness Center**

Contact information for the Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc/Default.aspx>, 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

## **The Writing Studio**

The writing studio is committed to helping University of Florida students meet their academic and professional goals by becoming better writers. Visit the writing studio online at <http://writing.ufl.edu/writing-studio/> or in 2215 Turlington Hall for one-on-one consultations and workshops.

## **Virtual Classroom Environment Policy**

Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.