

GEO3452: INTRODUCTION TO MEDICAL GEOGRAPHY

Course Number: GEO 3452

Credit Hours: 3

Semester/Year: Fall, 2024

Class meeting time & location: Asynchronous, 100% online via Canvas

General Course Information

Instructor:

Name: Ian Pshea-Smith, MPH | Ph.D. Student, Medical Geography in Global Health

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Phone Number: +1.517.677.7930

Office: Turlington 3014

Office Hours: 2-3pm Tuesdays and Thursdays via online Zoom meetings, or by appointment.

Office Hours Zoom Link: <https://ufl.zoom.us/j/99990483035>

Course Site: <https://elearning.ufl.edu/>

Prerequisites: Students with a sophomore standing or higher. Entry level knowledge of statistics is preferred (STA2023, GEO3162C, or equivalent), but not required.

Recommended Textbook: Emch, M., Root, E. D., & Carrel, M. (2017). *Health and medical geography* (4th ed.). New York, NY: The Guilford Press. **Free online access to the textbook is available through the [UF Library](#).** All required readings will be available via Canvas.

Course Material/Supply Fees: \$32.04

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.

Objectives:

At the end of this course, successful students will be able to:

1. Apply basic concepts, principles, and methods that are widely used in medical geography.
2. Investigate health problems with a systematic approach and spatial analysis methods.
3. Analyze real-world health problems using geographic information systems software.

General Educational Credit: Biological Sciences (B)

This course accomplishes the General Education objectives of the subject area listed above. A minimum grade of C is required for General Education credit. Courses intended to satisfy General Education requirements cannot be taken S-U.

General Education Learning Outcomes

At the end of this course, students will be expected to have achieved [General Education](#) learning outcomes as follows:

Category	Student Learning Outcomes	Course activities	Assessments
Content	Students demonstrate competence in the terminology, concepts, theories and methodologies used within the discipline.	Discuss and describe fundamental concepts, principles, and methods relating to medical geography.	Module quizzes, midterm exam, graded discussion boards, GIS labs, final term project.
Critical Thinking	Students carefully and logically analyze information from multiple perspectives and develop reasoned solutions to problems within the discipline.	Synthesize recent scientific literature related to a disease or health issue to identify alignment with the Triangle of Human Ecology.	Graded discussion boards, GIS labs, and final term project.
Communication	Students communicate knowledge, ideas and reasoning clearly and effectively in written and oral forms appropriate to the discipline.	Visualize health data in maps to communicate spatial patterns of health issues. Interpret quantitative statistical results from spatial health data. Explain key scientific findings in written, oral, and visual formats.	Graded discussion boards, GIS labs, and final term project.

Communication

Students can reach out to the instructor with any questions, clarifications, or concerns about the course via email or in office hours. If you cannot meet during the scheduled office hours, reach out to the instructor to arrange an alternative meeting time. Messages will typically receive a reply within 24 hours during weekdays – if you have not received a reply within 48 hours (not including weekends or holidays), please send a follow-up message.

Canvas

Important announcements and updates will be regularly posted to the course Canvas website, so students should check Canvas frequently. It is recommended that student's Canvas profile's be set to receive notifications.

Email Accounts

It is UF policy that you use GatorLink accounts or Canvas when emailing your instructor; emails sent from other accounts (e.g., personal Gmail, etc.) may be marked as spam and will not be answered given the official UF policy.

Professional Conduct

All members of the class are expected to conduct themselves in a professional and respectful manner at all times. Please use appropriate etiquette when interacting with your peers and instructor, including on Canvas and via email. Students who behave disrespectfully or disruptively will be reported to the Dean of Students Office.

Course Materials & Technology

Required Readings: Students are responsible for the interpretations of all assigned readings. Not all reading materials will be covered in the course lectures, so be sure to read carefully and critically.

Due Dates & Late Submissions: All assignments are due by 11:59 PM (ET) on the assigned date listed in the course schedule, unless otherwise specified. **A 10% deduction per day will be assigned for a late submission.** Students are advised to make backup copies of all work and submit your work early to avoid technical problems. **Large-file submissions usually require a longer time or cause upload failures – this is a critical point for the GIS lab quizzes and the presentation which may include larger files.**

Attendance and Make-up Exam: Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies. [Click here to read the university attendance policies.](#)

Technology: This course is facilitated 100% online through Canvas. You may access Canvas from UF's e-Learning webpage: <http://elearning.ufl.edu/>. You will also access geographic information system (GIS) software, ArcGIS Pro, via UFApps: <https://info.apps.ufl.edu/>. ArcGIS Pro is a mainstream software tool to create, store, analyze, and map geospatial datasets. Review [Accessibility in ArcGIS](#) for accommodation information.

Please contact the UF Help Desk, <http://helpdesk.ufl.edu>, if you have any technical difficulties with Canvas or UFApps.

Use of AI: While AI tools like Chat GPT can be efficient, students should be critical of it as with any other source of information. These tools may interpret technical information poorly, may get facts wrong and frequently do not appropriately credit sources, often creating false sources. Direct copy-paste of text or minimal revision of artificially generated is a form of plagiarism, as would be from any other text or document, so please always thoroughly revise, edit, fact-check, and improve any writing generated with AI tools. It is expected that students will produce their own writing for assignments in this course. Any use of AI must be disclosed in any writing. If deemed a copy/paste, credit will not be assigned.

Grading Policies

Methods of Evaluation & Bases for Grading

Grading Policy: Final grades are determined based on the following assignment -

Items	Percentages (%)
Discussions	10
Quizzes	40
Midterm	20
Final Assignment	30
Total	100

Discussions: There are multiple modules with discussion forums (combined for 10% of overall grade). These are opportunities to extend what students have learned in the same module. Students are expected to adhere to professional etiquette standards (see UF Policies) in all posts and to engage in CONSTRUCTIVE dialogue. Posts are expected to be thoughtful, detailed responses (i.e., "yes," "no," "I agree," or "I disagree" answer is not sufficient). In most cases, discussions require some research or reading before initial post. Follow-up posts are typically required. For discussion forum assignments, timeliness is critical, and due dates should be strongly adhered to.

Quizzes

There are two types of quizzes in the course, module quizzes and GIS lab quizzes, combined for 40% of the final grade. All quizzes will be due on Sunday night for the week listed in the course schedule at 11:59 PM (ET).

Module quizzes: There are eight module quizzes across the six weeks. Each module quiz is graded, timed, and worth 100 points. Questions are asked based on the objectives,

lectures, and readings of the module. Time limits and quiz lengths will vary, depending on the content covered; see each individual quiz for details.

GIS lab quizzes: There are six lab quizzes after the GIS labs with no time limit. There is also an extra GIS lab setup quiz to prepare for the labs; this is optional but highly recommended for students unfamiliar with the required software. Students should follow the PDF instructions for each lab and answer the lab-related questions completely and accurately to receive full credit on these quizzes.

Midterm Exam: The exam will include modules 1-8, covering all content from the modules preceding the exam. Review of the course notes and PowerPoints is strongly encouraged beforehand. No questions will be asked about the ArcGIS Pro-related tasks. Additional details are available on the Canvas site.

Final Assignment: The purpose of the Final Assignment is to share your knowledge on a specific topic with your classmates so you would be able to learn more diverse disease problems and their ecological triangles. You will choose any disease problem or any other health-related issue that has NOT been covered in the class. Please follow the instructions provided in Canvas.

Step 1: Topic selection and approval

Step 2: Final video presentation

Step 3: Peer review of video presentations

Step 4: Final term paper

Grading Scale:

Letter Grades	Percentage Ranges	UF Grade Points
A	93.00-100%	4.0
A-	90.0-92.9%	3.67
B+	88.00-89.9%	3.33
B	83.5-87.9%	3.0
B-	80.0-83.4%	2.67
C+	78.00-79.9%	2.33
C	73.5-77.9%	2.0
C-	70.0-73.4%	1.67
D+	68-69.9%	1.33
D	60-67.9%	1.0
E	Less than 60%	0.0

A minimum grade of C is required for general education credit. More information on grading policies can be found here: <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Final grades are determined based on the quality of the assignments submitted. Consequently, a student’s time management skills, time spent on assignments, and communication with the instructor when you have questions or concerns regarding quizzes and assignments will impact your success or failure within this course. With this approach of grading on adherence to predetermined standards, there is no preconceived distribution of grades. Everyone or no one can receive an “A.” **The official course policy is to not round grades.**

UF Grading Policies: Information on current UF grading policies for assigning grade points can be found in the [UF Undergraduate Catalog](#).

Extra Credit: Extra credit assignments may be posted at the instructors’ discretion only. Any other extra work submitted in order to raise a grade will not be accepted and requests for additional extra credit will not be considered.

Weekly Schedule of Topics and Assignments (Subject to Change):

Dates	Module	Topics	Readings	Assignments
August 22 - 25	Orientation	Course Overview	Syllabus, Lab_Setup.pdf	Introduce Yourself, Orientation Quiz
August 26 – September 1	1	Introduction to Medical Geography	Zika Virus news article Medical Geography web page	Discussion 1 Module Quiz 1
August 28 (Wednesday) End of Course Add/Drop Period September 2 (Monday) Labour Day – Official UF Holiday				
September 3 - 8	2	Basic Concepts and Principles	On Airs, Waters, and Places Module 2 Definitions	GIS Lab Setup Quiz

September 9 - 15	3	Measuring Diseases	Kentucky Cancer Registry	Discussion 3 Module Quiz 3
September 16 - 22	4	Methodology Design	4.1 Where to Find Data for Medical Geography Studies? Data Analysis of Epidemiological Studies	Module Quiz 4
September 23 - 29	5	Inferring Causal Relationships	Data Analysis of Epidemiological Studies (Again!)	Module Quiz 5 Midterm Study Guide (Part 1)
September 30 – October 6	6	Maps and GIS	6.1 Principles of Maps & 6.2 GIS Basics Spatial Turn in Health Research	Discussion 4 GIS Lab 1

October 7 - 13	7	Vector-borne diseases	Malaria Transmission in the U.S. 7.3-7.5 Mosquito-Borne Diseases 8.3 RMSF & 8.4 STARI	Case Study #1 Discussion GIS Lab 2 Midterm Study Guide (Part 2) Exam Practice Quiz (Optional)
October 14 - 17	8	Zoonoses	Zoonoses presentation Chapter 2 – Ecology of Health & Disease Paper readings	Case Study #2 Discussion GIS Lab 3
October 17 – 18 (Thursday & Friday) Homecoming – Official UF Holiday				
October 21 - 27	9	Midterm Exam	Midterm Exam	Midterm Exam

October 28 – November 3	10	Climate Change & Global Health	10.4 Climate Change Case Study 3	Discussion 5 Module Quiz 6 GIS Lab 4
November 4 - 10	11	Air Pollution & Human Health	11.1 – 11.3 Air Pollutants & Health Ghost Factories Article	Case Study 4 Discussion GIS Lab 5 Topic Approval for Final Assignment
November 11 (Monday) Veteran’s Day – Official UF Holiday				
November 12 - 17	12	Spatial Diffusion of Disease	No Readings!	Case Study 5 Discussion Module Quiz 7

November 18 - 23	13	Human Behaviour & Health	No Readings!	Case Study 6 Discussion Module Quiz 8 Final Video Presentation
November 23 – December 1 (Saturday – Sunday) Thanksgiving Break – Official UF Holiday				
December 2- 4	14	Spatial Disparities in Healthcare	No Readings!	Case Study 7 Discussion GIS Lab 6 Peer Review of Final Video Presentations
<p>December 5 – 6 (Thursday & Friday) Reading Days</p> <p>December 7 – 13 (Saturday – Friday) Exam Days</p> <p>December 15 (Sunday) Finalized Course Grades Due</p>				

University Policies

UNIVERSITY POLICY ON ACCOMMODATING STUDENTS WITH DISABILITIES: Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the Disability Resource Center. [Click here to get started with the Disability Resource Center](#). 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.

UNIVERSITY POLICY ON ACADEMIC CONDUCT: 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 honesty 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 Conduct Code specifies a number of behaviors that are in violation of this code and the possible sanctions. [Click here to read the Conduct Code process](#). 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 in this class.

CLASS DEMEANOR OR NETIQUETTE: All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions, and chats.

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.aa.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/>.

GETTING HELP:

Health and Wellness

U Matter, We Care: If you or someone you know is in distress, please contact umatter@ufl.edu, 352-392-1575, or visit [U Matter, We Care website](#) to refer or report a concern and a team member will reach out to the student in distress.

Counseling and Wellness Center: Visit the [Counseling and Wellness Center website](#) or call 352-392-1575 for information on crisis services as well as non-crisis services.

Student Health Care Center: Call 352-392-1161 for 24/7 information to help you find the care you need, or visit the [Student Health Care Center website](#).

University Police Department: Visit [UF Police Department website](#) or call 352-392-1111 (or 9-1-1 for emergencies).

UF Health Shands Emergency Room / Trauma Center: For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville, FL 32608; Visit the [UF Health Emergency Room and Trauma Center website](#).

GatorWell Health Promotion Services: For prevention services focused on optimal wellbeing, including Wellness Coaching for Academic Success, visit the [GatorWell website](#) or call 352-273-4450.

Academic Resources

E-learning technical support: For issues with technical difficulties for Canvas, please contact the [UF Computing Help Desk](#) at 352-392-4357 or via e-mail at helpdesk@ufl.edu. Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from the Help Desk when the problem was reported to them. The ticket number will document the time and date of the problem. You MUST e-mail your instructor within 24 hours of the technical difficulty if you wish to request a make-up.

[Career Connections Center:](#) Reitz Union Suite 1300, 352-392-1601. Career assistance and counseling services.

[Library Support:](#) Various ways to receive assistance with respect to using the libraries or finding resources.

[Teaching Center:](#) Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420. General study skills and tutoring.

[Writing Studio:](#) 2215 Turlington Hall, 352-846-1138. Help brainstorming, formatting, and writing papers.

Student Complaints On-Campus: Visit the [Student Honor Code and Student Conduct Code webpage](#) for more information.

On-Line Students Complaints: View the [Distance Learning Student Complaint Process](#).