



Medical Geography

GEV 4512

Dr. Francis A. Galgano
Associate Professor and Department Chair
Department of Geography and the Environment
G67 Mendel Science Center
francis.galgano@villanova.edu
9-3337

Dr. Robert J. Leggiadro
Adjunct Professor
Departments of Biology and
Geography and the Environment
G63 Mendel Science Center
robert.leggiadro@villanova.edu
9-3336; Office Hours: By Appointment

Mendel G 88
TR 2:30-3:45

Course Description

This course surveys medical geography, a field that focuses on geographical aspects of health and disease. Medical geography deals with human-environment interactions and the influence these interactions have on public health. Throughout the semester, we will use the concepts and techniques of the discipline of geography to investigate a variety of health-related issues. The course will cover three major and complementary approaches to medical geographic research: ecological (etiological), which systematically analyzes relationships between people and their environments; social, including political, economic, and behavioral approaches; and spatial, which employs maps and spatial analysis to identify and understand patterns of disease. Medical geography is integrative and multidisciplinary, incorporating contributions from a wide range of specialties. **Lessons and Case Studies will be conducted within the framework of social justice. Related service learning opportunities will be discussed.**

Course Objectives

This course will be case study driven, and introduce medical geography, including global health, disease diffusion, cluster detection, geographic information systems (GIS), health disparities, and health resource accessibility. **Where applicable, the One Health triad, the World Health Organization interdisciplinary collaboration and communication on health at the human-animal-environment interface, will be discussed.** Specific courses objectives include:

1. Facilitate a critical understanding of health, disease, and society;
2. Introduce major contemporary issues in global health, **including the principles of solidarity and economic justice;**
3. Explain how spatial and temporal patterns of health are affected by the natural and human landscape, **including the concept of environmental justice;**
4. Promote an understanding of how geography as a discipline contributes to understanding health and healthcare;

5. Understand the impact of ecological and population change on health, including climate change and human migration;
6. Explain how social and economic context impacts health, including the roles of government and food insecurity;
7. Utilize maps to examine the spatial patterns of disease and risk factors that may contribute to disease.

Course Text

Emch, ME, Root ED, Carrel M. Health and Medical Geography 2017, 4th ed., New York: The Guilford Press.

Assessment Plan:

<u>Event</u>	<u>Date</u>	<u>Weight</u>	<u>Remarks</u>
Mid-Term Exam	27 FEB	20%	
Final Exam	7 MAY	20%	
Quizzes (2)	1 FEB; 10 APR	10%	
Reaction Paper	30 JAN	10%	
Research Paper	26 APR	15%	
Hot Topic Presentation	TBD	15%	
Attendance / Participation	Ongoing	10%	

Assignments and Grading

Assignment Submissions. All assignments will be submitted at the start of class/lab on the due date. You are required to hand in all assignments in order to receive a passing grade in the course.

Late Assignment Policy. We expect you to inform us that an assignment is late: in other words, we should not have to find out on our own. Given that you inform us that an assignment is late, we will deduct one grade per day until the assignment is turned in. If we have to discover on our own that the assignment is late, you will automatically receive a grade of 0 points. Regardless of how late an assignment is, you will still have to turn it in, in order to pass the course.

Reaction Paper. This is a short, one or two page written analysis of medical geography paper. The purpose of the paper is to react, by critical analysis, to a question posed about the content of the paper. You will be graded on the originality and insight that you present in the paper. The paper is designed to be short and critical. This assignment is worth 10% of the course grade.

Hot Topic Presentation. Students will work in groups of two on a contemporary medical geography issue to be mutually determined. The project will include a 5-10 minute PowerPoint slide presentation, a

one page handout of major talking points, outlined using bullets, and a 3-5 page paper. Your professor will issue a format by which the student groups will present and submit their projects during the course of the semester. This assignment is worth 15% of the course grade.

Research Paper. This is a formal paper. The purpose of the paper is to have you present research into a topic related to medical geography. Your professor will issue a separate requirement sheet. However, this is a substantial writing requirement, and you will be expected to include basic data analysis as part of the project. This assignment is worth 15% of your course grade.

Grades and Grading: please refer to <http://www1.villanova.edu/villanova/vpaa/catalog.html>

A	Represents distinction and excellence. Reserved for accomplishment that is truly distinctive and demonstrably outstanding. It represents mastery of course material. Demands originality or creativity. The grade indicates independent work with unusual effectiveness and indicates that the student takes the initiative.
A-	
B+	
B	Represents above-average achievement. Achievement is considerably above base-line acceptable standards. Student performance demonstrates a high degree of preparation, originality, and creativity. The grade indicates that the student works well independently and often demonstrates initiative. Analysis, synthesis, and critical expression are considerably above average.
B-	
C+	
C	Average performance, preparation, and achievement. Indicates a satisfactory degree of attainment and is the acceptable standard for graduation from college. The grade may be expected of a student who gives to the work a reasonable amount of time and effort. This grade implies familiarity with the course content.
C-	
D+	
D	Work is below standard. Indicates a limited understanding of the subject, meeting only minimum requirements. Performance is deficient in analysis, synthesis, and critical expression; there is little evidence of originality, creativity, or both.
D-	
F	Did not meet course standards. Indicates inadequate or unsatisfactory attainment, serious deficiency in understanding of course material, and/or failure to complete requirements of the course.

Numerical and Letter Scale

93-100	90-92	87-89	83-86	80-82	77-79	73-76	70-72	67-69	63-66	60-62	<59
A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F

Academic Integrity

The University's position on academic integrity is stated clearly in the Student Handbook or Bluebook (<http://studentlife.villanova.edu/dean/StudentHandbook.pdf>). Written assignments must be original work that is not plagiarized. Provide appropriate citations and reference lists. The intent is to have you behave as a young professional. We will operate from the expectation that you are doing this unless you otherwise cause us to doubt you. *Please see Dr. Galgano or Dr. Leggiadro if you are unsure about when citation is necessary or what is considered plagiarism.*

ACADEMIC INTEGRITY CODE

[June 15, 1998, University Senate Resolution #9798-7-1, Approved April 17, 1998, Revised January 15, 2000, Academic Policy Committee. Reformatted on January 14, 2002]

Statement of Purpose: Integrity is essential and students receive credit for doing assignments because they are supposed to learn from them, and the vast majority do so honestly. Anyone who hands in work that is not his/her own, cheats on a test, or plagiarizes a paper, is not learning, and is thus receiving credit dishonestly. Therefore, it is crucial that students do their own work. Students who use someone else's work or ideas without saying so, or who otherwise perform dishonestly in a course, are cheating. Such dishonesty, moreover, threatens the integrity not only of the individual student, but also of the university community as a whole.

Code of Academic Integrity: The following are rules and examples that delineate academic dishonesty. Since academic dishonesty takes place whenever anyone undermines the academic integrity of the institution, this list is not and cannot be exhaustive. Academic integrity is not a matter of conforming to certain rules; it must be understood in terms of the broader academic purposes of a Villanova education.

A. *Cheating:* While taking a test or examination, students will rely on their own knowledge and not attempt to receive help in any way not explicitly approved by the instructor: for example, students will not use notes, study aids, or another's work.

B. *Fabrication:* Students shall not falsify, invent, or use in a deliberately misleading way, any information, data, or citations. This includes making up or changing data or results, or relying on someone else's results, in an experiment or lab assignment. It also includes citing sources that one has not actually used or consulted.

C. *Plagiarism:* Students shall not rely on or use someone else's words, ideas, data, or arguments without clearly acknowledging the source and extent of the reliance or use. The most common way to acknowledge this reliance is to use footnotes or other form of documentation. It is the students' responsibility to show clearly, when and where they are relying on others. Since this indebtedness may be of many kinds, some definitions and examples of plagiarism are listed below.

- Using someone else's words without acknowledgment. If you use someone else's words, not only must you give the source, but you must also put them within quotation marks or use some other appropriate means of indicating that the words are not your own. This includes spoken words and written words, and mathematical equations, whether or not they have been formally published.
- Using someone else's ideas, data, or argument without acknowledgment, even if the words are your own. If you use someone else's examples, train of thought, or experimental results, you must acknowledge that use. Paraphrasing, summarizing, or rearranging someone else's words, ideas, or results does not alter your indebtedness.
- Acknowledging someone else in a way that will lead a reader to think your indebtedness is less than it actually was. For example, if you take a whole paragraph worth of ideas from a source, and include as your final sentence a quotation from that source, you must indicate that your

indebtedness includes more than just the quotation. Make clear that you have used more than the quotation.

- The examples given above constitute plagiarism regardless of the source. The words or ideas of a roommate or of an encyclopedia, or notes from another class, require acknowledgment just as much as do the ideas of a scholarly book. Introductions and notes to books also require acknowledgment.
- The examples above constitute plagiarism even if you simply forget to include a reference, forget that you used a certain source, or forget that you found certain ideas, a certain argument, or certain data in a source. You are responsible for taking careful notes on sources. Notes must clearly identify the information you have obtained and where you acquired it, so that later you can acknowledge your indebtedness accurately. Do not look at a source without having something handy with which to take such notes.

D. Multiple submissions of work: Students shall not submit academic work for a class, which has been done for another class without the prior approval of the instructor. In any assignment, an instructor is justified in expecting that a certain kind of learning will be taking place. Handing in something done previously may preclude this learning. Consequently, if a student hands in work done elsewhere without receiving his or her instructor's approval, he or she will face penalties.

★★★★★

Administrative Notes

Special Needs: If you have special needs or are limited from participating in any aspect of the course, please see one of us as soon as possible. Please also contact Learning Support Services (9-5636) if your needs relate to the academic environment.

Absences/ Illness: If you miss a lecture because of an unexcused absence or illness, it is your responsibility to contact Dr. Galgano or Dr. Leggiadro to find out what you missed and determine what you need to do to make up the material. We will make every effort to help you catch up.

DATE	LESSON	ASSIGNMENT	REMARKS
JANUARY/FEBRUARY 2018			
16 JAN	Definitions and Terminology	Emch, Ch. 1	Leggiadro
18 JAN	What is Medical Geography?	Emch, Ch. 1	Galgano
23 JAN	Disease Ecology 1	Emch, Ch. 2	Leggiadro
25 JAN	Disease Ecology 2	Emch, Ch. 2	Galgano
30 JAN	Emerging and Reemerging Diseases	Emch, Ch. 7	Leggiadro Reaction Paper 1
1 FEB	Evolution of Pathogens and People	Emch, Ch. 7	Leggiadro Quiz 1
FEBRUARY/MARCH 2018			
6 FEB	Food and Nutrition	Emch, Ch. 8	Leggiadro
8 FEB	Demographic and Epidemiological Transitions	Emch, Ch. 4 and 10	Galgano
13 FEB	Disease Diffusion in Space	Emch, Ch. 6	Galgano
15 FEB	Environmental Exposure	Emch, Ch. 11 and 12	Galgano Paper Topic Due
20 FEB	Health Services Planning	Emch, Ch. 13	Danielle Johnson
22 FEB	GIS Lab	Emch, Ch. 5	Meet in G83 Wagner
27 FEB	MID TERM EXAM		
1 MAR	Case Study: Chagas Disease		Leggiadro
MARCH/APRIL 2018			
SPRING BREAK: 5 MARCH–9 MARCH			
13 MAR	The Social Context of Disease	Emch, Ch. 9	Hot Topic Assigned
15 MAR	The Political Ecology of Health and Healthcare	Emch, Ch. 3	Galgano

20 MAR	Case Study: Polio and Influenza	Emch, Ch. 6; pp. 244-49	Leggiadro
22 MAR	Case Study: Smallpox and Plague	Emch, Ch. 6; pg. 225 Ch. 8; pg. 286	Fr. Ryan
27 MAR	Case Study: Arboviruses	Emch, Ch. 2; pp. 267-9 Ch. 7; pp. 57-9	Leggiadro
3 APR	Case Study: Malaria and Schistosomiasis	Emch, Ch. 2; pp. 30-2; 62-8 Ch. 4; pp. 158-60	Leggiadro
5 APR	Case Study: Tick-Borne Diseases	Emch, Ch. 2; pp. 68-71	Leggiadro
EASTER BREAK: 29 MARCH–2 APRIL			
APRIL/MAY 2018			
10 APR	Case Study: Cholera	Emch, Ch. 2; pp. 51-4; Ch. 5; pp. 201-3; Ch. 10; pp. 353-4	Leggiadro Quiz 2
12 APR	Case Study: HIV	Emch, Ch. 3; pp. 111-18; Ch. 6; pp. 238-9; Ch. 7; pp. 255-6; 266-7	Leggiadro
17 APR	Case Study: Viral Hemorrhagic Fever	Emch, Ch. 3; pp. 76-80; Ch. 7; pp. 255-6	Leggiadro
19 APR	Case Study: Environmental Justice		Leggiadro
24 APR	Case Study: Military		Galgano
26 APR	Non-Communicable Diseases (Opioid Use)		All Hot Topics presented Research Paper Due in Class
1 MAY	VILLANOVA FRIDAY – NO CLASS		
3 MAY	WRAP UP Exam Review		
7 MAY	FINAL EXAM		2:30 – 5:00