

BSC 4956: OVERSEAS STUDIES (3 CREDITS) — SUMMER A 2019
UF in Mérida: Understanding Infectious Diseases

Instructor: Thomas J. Hladish (tjhladish@ufl.edu)

Office: Carr 417 Hours: Scheduled as needed

Text: Infectious Disease: A Very Short Introduction, Wayne & Bolker 2015

Course website: Log in @ <http://elearning.ufl.edu>

This course provides an overview of human infectious diseases and their dynamics. After an initial look at how epidemics grow and the ways different professions think about diseases, each week will focus on a different mode of transmission (e.g. air borne, food and water, sexual interactions) and the associated diseases. As epidemiology is a highly integrative field, we will talk about everything from microbiology to statistics, pharmacology to public health decision making. There will be few lectures and no tests, but a lot of emphasis on critical thinking and effective oral and written communication. *Prerequisites: BSC 2011 and 2011L with minimum grades of C and undergraduate advisor permission.*

COURSE REQUIREMENTS AND ASSESSMENT

-Class participation	20%
-Assignments or presentations (5*10%)	50%
-Final project	<u>30%</u>
	100%

Grading scale: Course grade is based on percentage of total possible points earned. To make things convenient, the expected possible total is 100 points. 'A' grades correspond to [90%, 100%], 'B' grades correspond to [80%, 90%), 'C' to [70%, 80%), 'D' to [60%, 70%), 'E' to [0%, 60%). Ranges are further subdivided into thirds for assigning +/-; for example a 'B+' corresponds to [86 $\frac{2}{3}$ %, 90%), and an 'A-' to [90%, 93 $\frac{1}{3}$ %). Exceptions: there is no 'A+', 'E+', or 'E-'.

Attendance, participation and engagement: These requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with UF policies that can be found in the online catalog at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

Class meetings: Attendance at class meetings is mandatory. The class will generally meet for two hours on each day as scheduled below. Because this is a new study abroad program, schedule changes are likely. Changes to the schedule, e.g. to accommodate a guest lecturer or to deal with unpredicted logistical challenges, will be announced with as much advance notice as possible and made in coordination with other scheduled activities. Due to the active learning nature of the class, your presence and participation are essential. Any missed classes for reasons other than sickness will be penalized by a 2% deduction from your final grade. If you are sick and thus absent, please notify me within 24 hours by email. Class is offered for a letter grade; no S/U option is possible. The topics listed below are examples of what we will discuss in class, but we will also make comparisons with (genetically, symptomatically, or mechanistically) related diseases. We will also incorporate into the curriculum relevant experiences from our excursions and your interactions with Mérida residents, as well as news of ongoing or emerging epidemics.

Week	Reading	Topic	Assignment(s)
13-17 May	Chapter 1	Disease dynamics	Short essay
20-24 May	Chapter 2	GI infections	SIR, R ₀ simulations
27-31 May	Chapter 5	Respiratory infections	Press release
3-7 June	Chapter 3	STIs	Advocacy assignment
10-14 June	Chapter 4	Vector-borne infections	Presentation
17-21 June	Chapter 6	Presentations	Final Project

Class participation: Class participation is extremely important. Whether you are highly knowledgeable about the topic at hand or completely ignorant, I expect you to be engaged and contributing, either insights or questions. There is no penalty for trying to answer a question you find challenging and being wrong—that happens all the time in science. Knowing the answer is great, but thinking carefully and making intelligent guesses is more important: “truth” changes in science, but there’s no replacement for rigorous thinking.

The course will be divided into five units, each starting with a reading, a discussion based on the reading, and then an assignment and related exercises. On days with assigned readings, you must do the reading prior to coming to class. Please come to class prepared with three questions you had from the reading.

SIR simulation assignment: At the end of the first unit, you will use simulation software called EpiFire to explore the relationship between how infectious a disease is and how many people end up getting infected. In lieu of a normal essay, you will make a figure illustrating this relationship using data you generate. This figure should be accompanied by a 50-100 word caption explaining the relationship.

Short essays: For units 2-4, you will write short essays. The topics and style of the essays will vary, with assignment details provided to you the previous week. As an example, for the first essay, please consider the readings, in class discussions and your own sources and argue that the epidemiology of Gainesville, Florida and Mérida, Mexico are either fundamentally the same (describe parallels), or fundamentally different (highlight critical differences). As part of your short essay, please speak with at least one Mérida resident about their experiences and perceptions of infectious diseases and include this either within your essay or as a short appendix. Please provide detailed references.

Assignment due dates will be posted on the course page at <http://eLearning.ufl.edu>. Late assignments will be penalized 5% each day or fraction thereof.

Final project: For your final project, you will work in small groups to prepare a high-quality article (think *New Scientist*) and oral presentation about a recent event or discovery in epidemiology. The audience you are writing for is well-educated and scientifically literate, but not necessarily experts in your subject—essentially, your classmates. Your article should incorporate illustrations or images, and citations from primary literature. Your final project grade will be based on daily progress during the last week, and will depend both on your individual work, and on the results of your collaborative work.

UNIVERSITY AND PROGRAM POLICIES

Academic Integrity

All students are required to abide by the Academic Honesty Guidelines of the University. The UF Honor Code reads: “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.” For more information please refer to <http://www.dso.ufl.edu/studentguide>.

Accommodations

Students requesting classroom accommodation must register with the Dean of Students Office well in advance of the program. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation. Additionally, because this is an international program, students must meet with the instructor prior to arrival in Mexico to determine how accommodations will be handled. For more information see <http://www.dso.ufl.edu/drc>.