

Microbes without Borders

3CR – WEB (Canvas <http://lss.at.ufl.edu>)

Prerequisites: no prerequisites required, open to all majors across campus, course is also a part of the UF International scholars' program

<https://www.ufic.ufl.edu/UAP/InternationalScholarsProgram.html>

Offered every Fall

Instructor:

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Introduction to Microbes without Borders by Dr. Oli:

<https://mediasite.video.ufl.edu/Mediasite/Play/8d8d0e326ca14cd494d37fbbca2b37811d>



Office Hours: Wednesdays 12-2pm or by appointment

Course TA: TBA

THIS IS A SAMPLE SYLLABUS – Current course syllabus is available within Canvas

Course Communications: Please send general questions to the TAs first. If you need to communicate with me directly, please email me at moli@ufl.edu - emails through Canvas may not be answered!

Required Text: A shorter version of Alcamo's Microbes and Society (4th edition, 2015) by Pommerville and Weeks (Jones and Bartlett Learning). The textbook is available as cheaper e-Book and students will purchase Access Codes (necessary for redemption of eBook) for the book directly through www.jblearning.com (this is the cheapest option):
Website: www.jblearning.com
ISBN: 9781284006711

Detailed reading materials are assigned week by week. Additional readings and audiovisual sources will be required and will be provided to the students.

If you want to buy the physical book you can purchase the 4th edition (green cover, ISBN-10: 1284023478) from any other source.

Course Description:

This course will make students aware of the importance of the diversity of microbes and the significance in our every day lives. Different microbes are explored in readings, audiovisual materials and hands on explorations. Topics include viruses, bacteria, parasites and fungi, microbes and art, bioterrorism, GMOs and biotechnology, food production and the role of microbes in agriculture. Issues like disease spread and prevention, vaccines and drug resistance will be examined. Students will participate in a challenge project to launch a public outreach campaign to educate people about microbial problems that are currently facing humanity.



Purpose of Course: The purpose of this course is to explore student's concepts about and attitude towards "germs" and microbes at large. Readings and activities should provide a mind opening, global journey to appreciate the amazingness, creativity and importance of microbes for each individual, for our communities and for our whole planet.

Topics of the course include but are not limited to:



Course Goals and/or Objectives: By the end of this course, students

- Have examined the building blocks of life and DNA replication, understand mutations and resistance mechanisms
- Can name and explain the basic historic milestones that caused paradigm shifts in our thinking and behavior as it pertains to microbiology
- Can define and identify the basic difference between groups of microbes (viruses, bacteria, protists, parasites and fungi)
- Show increased awareness of global microbial issues and geographic locations
- Can intellectually discuss controversial topics like GMOs, vaccines and antibiotic resistance
- Defend the importance of microbes in their personal lives, their community and across the globe
- Can discuss scientifically the difference between the Germ theory of disease and the hygiene hypothesis
- Are familiar with vocabulary and concepts in microbiology to excel in other courses like MCB3023

Goals for the Globalization of the Gator Nation: By the end of this course and with help of the activities, students will be able to

- Identify, describe, and explain global and intercultural conditions and interdependencies

- Analyze and interpret global and intercultural issues.
- Communicate effectively with members of other cultures

Teaching Philosophy: The overarching goal for my teaching program is to provide a holistic learning experience that fosters students' global awareness and critical-thinking skills, enhances their personal and professional development, and prepares them for the real world. Specifically, the goals for my students in this class are to:

- Be inspired to understand the global importance of microbiology
- Develop creative and critical habits of the mind
- Expand students' comfort zone and global and international awareness
- Empower students to make informed decisions based on scientific evidence

Instructional Methods: This course is a creative discourse into the world of microbiology. The fundamental knowledge and definitions will be acquired by textbook and other readings. Each week will have a "practical" component where you will have to explore a given topic, go on a field trip or create something at home. Weekly discussions should stimulate teamwork and also critical thinking. A 4-week block of the course is dedicated to the "**Global microbiological challenge project**", where teams of students will engage in a high quality outreach campaign to help educate citizens and or students and can focus on for example

Raising public awareness of microbiology and its impact on our lives.

Enthusiasing other students about microbiology.

Engaging an audience in discussion of the impact of microbiology on society.

Exploring the social and ethical aspects related to an aspect of microbiology research.

Engaging people in a citizen science project

Example activities include workshops, displays, presentations, debates, etc. Here are some examples - Pint of Science (<https://pintofscience.us/>), TED talks or TED ED presentation (<https://www.ted.com/topics/microbiology>), Citizen science (<http://microbe.net/citizen-science-2/>), designing educational material (<http://www.hhmi.org/biointeractive>), educational talks (<http://www.ibiology.org/>) etc.

Course Policies:

Attendance Policy: this is a Web class – no physical attendance is required. However, for the microbial challenge project, we will try to carve out physical meetings times if students want to.

Quiz/Exam Policy: Quizzes, assignments and activities are due on the announced date (usually Sunday night at 11:59pm).

Make-up/Late Policy: If you have a UF approved excuse not to complete your assignment on time, please email us with the appropriate documentation. See <http://www.registrar.ufl.edu/catalog1011/policies/regulationattendance.html#twelvedayrule> for more information about UF policy for excused absences/missed exams.

Course Technology: Canvas will be used as e-learning platform.

ePortfolio: WIX will be used to develop your personal ePortfolio and you will add your projects and submissions to the portfolio as well as submit them in canvas. Your final WIX portfolio will be counted as assignment as indicated. See a personal portfolio from one of UFs international scholars <http://www.sarahvititoe.com/> and a Wix portfolio specific to the Microbes without Borders course <http://sarahvititoe23.wix.com/mcb4934portfolio>

Grading Policies:

Graded activities

The table below shows the activity types contained within this course and the assigned points to determine the final course grade.

Activity Types	Percent of grade
WIX ePortfolio activities and travel log	15
Projects	15
Discussions, persuasions and debates	15
Module assessments/quizzes	15
Comprehensive midterm exam	20
Global microbial challenge, Team project	20
TOTAL	100

There will be weekly quizzes that cover the reading and other posted materials, you have to take each quiz, but have 2 attempts for each. You have to complete a total of 5/8 discussions and 5/8 projects, which amounts to 1-2 submissions per week. Your WIX ePortfolio and travel log will be submitted and graded twice during the semester and you are responsible to maintain and upkeep the work independently throughout the semester.

Extra credit maybe offered throughout the semester (5% of grade max)

1. Develop your ePortfolio according to ISP expectations
2. Participate in ISP/international campus activities and summarize your experience

Letter grades for the course will be based on the following grading scale:

Letter Grade	Percentage	Grade Point
A	92–100%	4
A-	90–91.9%	3.67
B+	87–89.9%	3.33
B	82–86.9%	3

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B-	80-81.9%	2.67
C+	77-79.9%	2.33
C	72-76.9%	2
C-	70-71.9%	1.67
D+	67-69.9%	1.33
D	62-66.9%	1
D-	60-601.9%	0.67
E,I,F	<60%	0

Grading Scale: For more information, see: <http://www.isis.ufl.edu/minusgrades.html>

Course Schedule (tentative):

Week	Module	Topic	Activity	Reading/Video	Discussion topics
1	Intro	Intro, syllabus, Introduce global microbial challenge	Microbes across campus	Ch 1-2	Introductions
2	1	How we see and examine Microbes	Microscopy practice and DNA replication	Ch 1-4	Microbes across campus
3	2	Viruses and Prokaryotes	Kitchen Lab	Ch 5-6	Vaccines
4	3	Protists and Fungi	Fungi identification or fungi scavenger hunt	Ch 7-8	Antibiotics and drug resistance
5	4	Extremophiles and Metabolism	Extreme living	Ch 9-10, 16	Bioremediation
5		Travel Plan	First Draft of Travel Plan	Individual	
6	5	Art and biodegradation	Visit the caves of Lasceaux or microbes at the museum	Ch 11	Biodegradation
7	6	Diseases Epidemics and Bioterrorism	Gideon game	Ch 17-19	Plague.inc
8	7	Biotechnology and GMO Debate	GMO interviews and survey	Ch 14-15	GMO Crops - Roundup and our Microbiome
9	8	Food and Microbes	Food label junkie	Ch 12-13	The new Gut Feeling - Germ th vs Hygiene Hypothesis
10-15	9	Global Microbial Challenge	<ul style="list-style-type: none"> - Form team - Decide on topic for high quality outreach campaign - Decide on mode of activity - Find a sponsor or public advocate - Submit draft of your work – peer feedback - Complete your project and actually execute/implement it. 		
16	10	The next chapter	Design a new module with activities for this class		

UF Policies:

Students Requiring Accommodations: Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this

procedure as early as possible in the semester. Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

Make-Up Policy: Excused missing submission deadlines or lack of participation in the team project are consistent with university policies in the undergraduate catalog (<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>) and require appropriate documentation. Make up opportunities will be discussed with the instructor

University Policy on Academic Misconduct: Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Student Honor Code at <http://www.dso.ufl.edu/students.php>. 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 (<http://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 obliged 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.

Netiquette: Communication Courtesy: All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats.

Course evaluations: Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

Campus Resources: Resources are available on campus for students having personal problems or lacking clear career and academic goals, which interfere with their academic performance. These resources include:

Health and Wellness

- U Matter, We Care: If you or a friend is in distress, please contact umatter@ufl.edu or 352 392-1575 so that a team member can reach out to the student.
- Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc/Default.aspx>, 392-1575;
- Sexual Assault Recovery Services (SARS) at the Student Health Care Center, 392-1161.
- For emergencies call: University Police Department, 392-1111 (or 9-1-1 for emergencies). <http://www.police.ufl.edu/>

Academic Resources

- E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. <https://lss.at.ufl.edu/help.shtml>.
- Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling. <http://www.crc.ufl.edu/>
- Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.
- Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. <http://teachingcenter.ufl.edu/>
- Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. <http://writing.ufl.edu/writing-studio/>

Any requests for make-ups due to technical issues MUST be accompanied by the ticket number received from LSS 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.

Netiquette guide for online courses: It is important to recognize that the online classroom is in fact a classroom, and certain behaviors are expected when you communicate with both your peers and your instructors. These guidelines for online behavior and interaction are known as netiquette. <http://teach.ufl.edu/wp-content/uploads/2012/08/NetiquetteGuideforOnlineCourses.pdf>

Software Use: All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

Microsoft Office 365 Software is free for UF students
<http://www.it.ufl.edu/gatorcloud/free-office-365-downloads/>

Other free software is available at:
<http://www.software.ufl.edu/>

To check for availability of the media and technical requirements, contact the UF Computing Help Desk at (352)392-HELP(4357).

University of Florida Complaints Policy and Student Complaint Process: Most problems, questions and concerns about the course will be resolved by professionally communicating with the instructor or the TAs. The University of Florida believes strongly in the ability of students to express concerns regarding their experiences at the University. The University encourages its students who wish to file a written complaint to submit that complaint directly to the department that manages that policy.

Student complaints

If a problem really cannot be resolved by communicating with the instructor or the TAs you can contact

- Residential Course: https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf.
- Online Course: <http://www.distance.ufl.edu/student-complaint-process>.

Misconduct of a student can also be reported by the instructor to the Dean of Student office in form of a complaint.

University Police Department: 392-1111 or 9-1-1 for emergencies.

Sample Syllabus