

680:401 Ethics and Issues in Microbiology  
Tuesday 9:30 – 10:25 am; Room 325, Lipman Hall, SEBS.

**CONTACT INFORMATION:**

Instructor(s): Dr. Ramaydalis Keddiss  
Office Location: Lipman Hall 215  
Phone: 848.932.4413                      Email: rcruz1@sebs.rutgers.edu  
Office Hours: By appointment

**COURSE WEBSITE, RESOURCES AND MATERIALS:**

- **Text:** Macrina, F. SL. 2005. *Scientific Integrity*. Text and cases in responsible conduct of research. (3<sup>rd</sup>. Ed). American Society for Microbiology (ASM Press), Washington, DC.

**COURSE DESCRIPTION:**

Ethical and current issues in microbiology are discussed from the perspective of scientific and ethical conduct. Case studies will be analyzed. The course is targeted for students in their junior/senior year majoring microbiology and provides a fundamental understanding of a code of ethics for microbiologists, including ethical conduct, scientific integrity and the dignity of the profession and practice of microbiology.

**LEARNING GOALS:**

**Undergraduate Major Learning Goal:**

- Summarize ethical and current issues in microbiology and apply a code of ethics for microbiologists including ethical conduct, scientific integrity, and the dignity of the profession and practice of microbiology.

**Student Learning Goals:**

1. Understand expectations and practice of academic/scientific integrity and responsible conduct of research.
2. Formulate and support personal positions on ethical issues of science relevant to the study of microbiology and related fields.

**ASSIGNMENTS/RESPONSIBILITIES, GRADING & ASSESSMENT:**

**Class Participation:**

- Class participation through discussion will make up 20% of your overall grade. Participating in discussion doesn't necessarily mean talking a lot or showing that you know more. Good discussion involves people trying to build on, synthesize, comment from other students points and on showing appreciation for others students' contributions. It also involves inviting others to say more about what they are thinking. That could mean: bring a new resource to the classroom, or post an observation for discussion on topics.

**Grade distribution:**

Attendance- 15%

Class Participation- 20%

Oral presentation- 35%

Final Paper-20%

Paraphrasing- 10%

### ACCOMODATIONS FOR STUDENTS WITH DISABILITIES

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: <https://ods.rutgers.edu/students/documentation-guidelines>  
If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: <https://ods.rutgers.edu/students/registration-form>

### Email Policy

According to Rutgers Email and Calendaring policy *"All email and calendaring used to conduct University Business at Rutgers must be created, stored, processed, and transmitted via the approved procedures and using the official Rutgers University Email and Calendaring systems."*

Please use CANVAS or your Scarletmail for any communication in this course. We will not be answering your emails if sent with an email account other than your Scarletmail.

### COURSE SCHEDULE:

TOPIC	CHAPTER
Course & Text Intro; COPE;	
Standard Practices; Who makes the rules?	1
Ethics and the Scientist; Responsible Conduct of Research; Academic Integrity	2
Mentoring	3 + Reading
Scientific Fraud; Scientists on Trial, CRSPR Scientist	Fraud – 1,4,5,6 Trial - All
Scientific Fraud	Readings 2,3,7,8,9
Compassionate Use	Discussion Folder Readings

Authorship & Peer Review;	
Dual Use/Mutant Flu	4 & "ONLINE JOURNALS" Folder Readings
Spring Break-No class	
Student presentations:	
Student presentations:	
Student presentations:	
Student presentations:	
Student presentations:	
Student presentations	

**Bibliography for Book Review:**

1. **Alcades, Philip.** 2009. *Dread: How Fear and Fantasy Have Fueled Epidemics from the Black Death to Avian Flu.* Public Affairs, New York, NY.
2. **Barry, John M.,** *The Great Influenza: The Story of the Deadliest Pandemic in History.* Penguin Group (USA) Inc., New York, NY.
3. **Blaser, Martin J.** 2014. *Missing Microbes.* Henry Holt and Co., New York, NY.
4. **Carroll, Michael.** 2004. *Lab 257.* Harper, NY.
5. **Cave, Stephanie.** 2001. *What Your Doctor May Not Tell You About Children's Vaccinations.* Wellness Central, NY.
6. **Fenn, Elizabeth A.,** *Pox Americana The Great Small Pox Epidemic of 1775-82.* Hill and Wang, New York, NY.
7. **Einstein, Mayer.** *Make an Informed Vaccine Decision.* New Atlantean Press, Santa Fe, NM.
8. **Ewald, Paul.** *Plague Time.* Anchor Books, Random House, NY.
9. **Harrison, Mark.** *Contagion: How Commerce Has Spread Disease.* Yale University Press, New Haven, CT.
10. **Hotez, Peter.** *Forgotten People, Forgotten Diseases.* ASM Press, Washington, DC.
11. **Johnson, Steven.** *The Ghost Map.* Penguin Group (USA) Inc., New York, NY.
12. **Lax, Eric.** *The Mold in Dr. Florey's Coat.* Henry Holt, NY, NY.
13. **Moritz, Andreas.** *Vaccine-nation: Poisoning the Population One Shot at a Time.* Ener-chi Wellness Press, USA.
14. **Needham, Cynthia and Richard Canning.** 2003. *Global Disease Eradication: The Race for the Last Child.* ASM Press, Washington, DC
15. **Oshinsky, David.** *Polio: An American Story.* Oxford University Press, New York, NY
16. **Offitt, P. A.** 2005. *The Cutter Incident: How America's First Polio Vaccine Let the Growing Vaccine Crisis.* Yale University Press, New Haven, CT.
17. **Offitt, P. A.** 2007. *Vaccinated.* HarperCollins Publishers, New York, NY.
18. **Offitt, P. A.** 2010. *Deadly Choices.* Basic Books, A Member of the Perseus Books Group, NY.
19. **Peters, C.J.** 1997. *Virus Hunter.* Anchor Books, NY.
20. **Preston, Richard.** 1994. *The Hot Zone.* Anchor Books, NY.

21. **Preston, Richard.** 2002. *The Demon in the Freezer*. Ballantine Books, NY.
22. **Peter, Pringle.** *Experiment Eleven: Dark Secrets Behind the Discovery of a Wonder Drug*. Walker & Company, NY.
23. **Quammen, David.** *Spillover*. W. W. Norton & Company, New York, NY.
24. **Quammen, David.** *The Chimp and the River*. W. W. Norton & Company, New York, NY.
25. **Salyer, Abigail and Dixie Whitt.** 2005. *Revenge of the Microbes: How Bacterial Resistance is Undermining the Antibiotic Miracle*. ASM Press, Washington, DC.
26. **Sherman, Irwin W.** *The Power of Plagues*. ASM Press, Washington, DC.
27. **Yong, E.** *I contain multitudes: The microbes within us and a grander view of life*. HarperCollins Publishers, New York, NY
28. **Doudna, Jennifer and Sterberg Samuel .** *A crack in creation: Gene editing and the Unthinkable Power to Control Evolution*. HMH Books, New York, NY

## FINAL EXAM/PAPER DATE AND TIME

Online Final exam Schedule: <http://finalexams.rutgers.edu/>

Position Paper due the last day of class

## ACADEMIC INTEGRITY

The university's policy on Academic Integrity is available at <http://academicintegrity.rutgers.edu/academic-integrity-policy>. The principles of academic integrity require that a student:

- properly acknowledge and cite all use of the ideas, results, or words of others.
- properly acknowledge all contributors to a given piece of work.
- make sure that all work submitted as his or her own in a course or other academic activity is produced without the aid of impermissible materials or impermissible collaboration.
- obtain all data or results by ethical means and report them accurately without suppressing any results inconsistent with his or her interpretation or conclusions.
- treat all other students in an ethical manner, respecting their integrity and right to pursue their educational goals without interference. This requires that a student neither facilitate academic dishonesty by others nor obstruct their academic progress.
- uphold the canons of the ethical or professional code of the profession for which he or she is preparing.

Adherence to these principles is necessary in order to ensure that

- everyone is given proper credit for his or her ideas, words, results, and other scholarly accomplishments.
- all student work is fairly evaluated and no student has an inappropriate advantage over others.
- the academic and ethical development of all students is fostered.
- the reputation of the University for integrity in its teaching, research, and scholarship is maintained and enhanced.

Failure to uphold these principles of academic integrity threatens both the reputation of the University and the value of the degrees awarded to its students. Every member of the University community therefore bears a responsibility for ensuring that the highest standards of academic integrity are upheld.

## STUDENT WELLNESS SERVICES

Just In Case Web App <http://codu.co/cee05e>

Access helpful mental health information and resources for yourself or a friend in a mental health crisis on your smartphone or tablet and easily contact CAPS or RUPD.

**Counseling, ADAP & Psychiatric Services (CAPS)**

(848) 932-7884 / 17 Senior Street, New Brunswick, NJ 08901 / [www.rhscaps.rutgers.edu/](http://www.rhscaps.rutgers.edu/)

CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance, and psychiatric services staffed by a team of professional within Rutgers Health services to support students' efforts to succeed at Rutgers University. CAPS offers a variety of services that include: individual therapy, group therapy and workshops, crisis intervention, referral to specialists in the community and consultation and collaboration with campus partners.

**Violence Prevention & Victim Assistance (VPVA)**

(848) 932-1181 / 3 Bartlett Street, New Brunswick, NJ 08901 / [www.vpva.rutgers.edu/](http://www.vpva.rutgers.edu/)

The Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty. To reach staff during office hours when the university is open or to reach an advocate after hours, call 848-932-1181.

**Disability Services**

(848) 445-6800 / Lucy Stone Hall, Suite A145, Livingston Campus, 54 Joyce Kilmer Avenue, Piscataway, NJ 08854 / <https://ods.rutgers.edu/>

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**Scarlet Listeners**

(732) 247-5555 / <https://rutgers.campuslabs.com/engage/organization/scarletlisteners>

Free and confidential peer counseling and referral hotline, providing a comforting and supportive safe space.