

BIOLOGY, SOCIETY, AND BIOMEDICAL ISSUES - SPRING 2020

COURSE: Biology, Society and Biomedical Issues (01:119:150)

INSTRUCTOR: Martha Haviland, Ph.D.
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OFFICE HOURS: PLEASE SIGN-UP on CANVAS
(<https://community.canvaslms.com/docs/DOC-10580-4212716665>)
Mondays 3:30-4:30 and Wednesdays 12:00-1:00
Or by appointment (made in person or by e-mail)

REQUIRED TEXT: Goodenough, J and McGuire, B (2017) **Biology of Humans** (6th Ed.)
ISBN: 9780134045443

COURSE WEBSITE: <http://canvas.rutgers.edu>



SAS CORE LEARNING GOALS:

- NS. Students are expected to understand and apply basic principles and concepts in the physical or biological sciences.
- CC. Students are expected to analyze the relationship that science and technology have to a contemporary social issue.

GRADING:

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|---------------------|-----|---|
| Class Participation | 10% | **Will need a pack of index (3x5) cards** |
| Reading Quizzes (8) | 14% | |
| Assignments (4) | 11% | |
| Hourly Exams (2) | 30% | |
| Final Exam | 20% | |
| Final Paper | 15% | |

May miss two class participation activities with no loss of points; lowest reading quiz score will be dropped.

COURSE POLICIES:

Due Dates: Assignments and the Final Paper are to be submitted via the course Canvas website by the start of the class on the due date. Reading quizzes will be administered on the Canvas site as well and are to be completed one hour before class. All deadlines in this course are firm; no late assignments, papers or quizzes will be accepted. Except in the case of medical or family emergency, or religious observance, I give no individual extensions. If, due to such an emergency, you cannot meet a deadline, please contact me as soon as possible so that we may work out an alternative schedule of due dates and times.

Exams: Make-up/Conflict Exams will be given only under very unusual circumstance (which must be documented). Please contact me as soon as possible if such a circumstance arises.

Class Attendance: Students are expected to attend class having done the assigned readings. Late arrivals or early departures are a discourtesy to me and your colleagues. In the case of illness or emergency, please inform me as soon as possible. Unless we are engaged in a class exercise using phones, all cell phones and other hand-held electronic devices must be put away. Also, I encourage you to take notes by hand rather than by laptop.

Students with Disabilities: If you will be requesting accommodations, please follow the procedures outlined at <https://ods.rutgers.edu/>

Academic Honesty: Plagiarism is an extremely serious matter and is strictly prohibited by the University. When referring to ideas other than your own, always acknowledge your sources clearly and completely, whether you are quoting or paraphrasing. If you are unsure about what is legitimate citing of other people's ideas and what is illegitimate plagiarism, do not hesitate to ask me. Allowing your writing to be copied in whole or in part by another student is also considered cheating. For further information, please see the University's policies on academic integrity at <http://academicintegrity.rutgers.edu/>

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/

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/

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.

Scarlet Listeners

(732) 247-5555 / <http://www.scarletlisteners.com/>

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

TENTATIVE LECTURE SCHEDULE

| DATE | TOPIC | READINGS |
|-----------|--|-------------|
| 1/22 | Introduction | |
| 1/27 | Scientific Process | Ch. 1 |
| 1/29 | Chemistry (a.k.a. Building Blocks of Life) READING QUIZ 1 Due 1 hour before class | Ch. 2 |
| 2/3 | Cell Structure READING QUIZ 2 Due 1 hour before class | Ch. 3 |
| 2/5 | Tissue and Organ Structure READING QUIZ 3 Due 1 hour before class | Ch. 4 |
| 2/10 | Intro to Genetics | Ch. 21 |
| 2/12 | Survey of Human Genetic Diseases Part I ASSIGNMENT 1 Due before class | Ch. 19, 20 |
| 2/17 | Survey of Human Genetic Diseases Part II | Ch. 19, 20 |
| 2/19 | Genetic Testing, Genetic Counseling Part I ASSIGNMENT 2 Due before class | Ch. 20 |
| 2/24 | Genetic Testing, Genetic Counseling Part II | Ch. 20 |
| 2/26 | EXAM I (Introduction – Genetic Diseases) | |
| 3/2 | Gene Therapy | Ch. 21 |
| 3/4 | Genetically Modified Plants PAPER TOPICS Due before class | Ch. 21 |
| 3/9 | Genetically Modified Animals | Ch. 21 |
| 3/11 | Blood READING QUIZ 4 Due 1 hour before class | Ch. 11 |
| 3/16-3/20 | SPRING BREAK | |
| 3/23 | Cardiovascular System | Ch. 12, 12a |
| 3/25 | Respiratory System ASSIGNMENT 3 Due before class | Ch. 14 |
| 3/30 | Immune System READING QUIZ 5 Due 1 hour before class | Ch. 13 |
| 4/1 | Infectious Diseases Part I PAPER INTRO and ANNOTATED REFERENCES Due before class | Ch. 13a |
| 4/6 | Infectious Diseases Part II | Ch. 17a |
| 4/8 | EXAM II (Genetic Testing – Immune) | |
| 4/13 | Digestive System READING QUIZ 6 Due 1 hour before class | Ch. 15 |
| 4/15 | Nervous System READING QUIZ 7 Due 1 hour before class | Ch. 7, 8 |
| 4/20 | Reproduction of Cells | Ch. 19 |

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| 4/22 | Reproduction of Humans ASSIGNMENT 4 Due before class | Ch. 17 |
| 4/27 | Reproductive Technology | Ch. 17 |
| 4/29 | Stem Cells FINAL PAPERS Due before class | Ch. 18, 19a |
| 5/4 | Population Growth & Human Habitats READING QUIZ 8 Due 1 hour before class | Ch. 24 |
| 5/12 | FINAL EXAM 12-3 P.M. (Introduction – Habitats) http://finalexams.rutgers.edu/ | |