Tompkins Cortland Community College

Master Course Syllabus

Course Discipline and Number: BIOL 100 **Year: 2024-2025**
Course Title: Human Biology **Credit Hours: 3**

Attendance Policy: *To maintain good grades, regular attendance in class is necessary. Absence from class is considered a serious matter and absence never excuses a student from class work. It is the responsibility of all instructors to distribute reasonable attendance policies in writing during the first week of class. Students are required to comply with the attendance policy set by each of their instructors. Students are not penalized if they are unable to attend classes or participate in exams on particular days because of religious beliefs, in accordance with Chapter 161, Section 224-a of the Education Law of the State of New York. Students who plan to be absent from classroom activity for religious reasons should discuss the absence in advance with their instructors. See college catalog for more information.*

Services for Students with Disabilities: *It is the College's policy to provide, on an individual basis, appropriate academic adjustments for students with disabilities, which may affect their ability to fully participate in program or course activities or to meet course requirements. Students with disabilities should contact the Coordinator of Access and Equity Services, to discuss their particular need for accommodations. All course materials are available in alternate formats upon request.*

Course Description

Relates biological principles to important issues in human biology. Students learn basics of human biology (anatomy, physiology, life cycle, genetics, nutrition, fitness, disease and ecology). Selected problems, potentials, and breakthroughs in personal health, medical and genetic technology, and environmental sustainability are discussed. BIOL 100 fulfills the SUNY General Education Natural Sciences requirement. Prerequisites: MATH 090 and RDNG 099 if required by placement testing; prior completion or concurrent enrollment in ENGL 100. 3 Cr. (2 Lec., 2 Lab.) Fall and spring semesters.

Course Context/Audience

Students may take this course to prepare for a higher level introductory biology course (considerable overlap may occur with BIOL 101 and BIOL 104), and/or to satisfy the SUNY General Education requirement in the Natural Sciences. BIOL 101 and BIOL 104 are more likely to be accepted for transfer as introductory biology courses. Students should inquire with the college to which they intend to transfer regarding how BIOL 100 would transfer to that college.

Basic Skills/Entry Level Expectations

Writing: WC College level writing skills are required. See course co-requisites or pre-requisites.

Math: M2 Completed MATH 090 (if needed) - Course requires only the use of basic mathematical skills.

Reading: R2 Before taking this course, students must have a C or better in RDNG 099 or assessment indicating that RDNG 099 was not required.

Course Goals

By successfully completing this course, the student will

1. Learn the basics of human biology (anatomy, physiology, life cycle, genetics, nutrition, fitness, disease, and ecology).
2. Learn the basic science behind selected medical technologies and biotechnologies.
3. Use the scientific knowledge learned to think critically about selected problems or controversies in human biology.
4. Use the scientific knowledge learned to develop informed opinions and make appropriate choices related to personal health and environmental sustainability.

Course Objectives/Topics

Objective/Topic	% Course
Human anatomy and physiology	20%
Human nutrition, fitness, and disease	20%

Human life cycle and genetics	20%
Medical technologies and biotechnologies	20%
Humans and environmental sustainability	20%

General Education Goals - Critical Thinking & Social/Global Awareness

CRITICAL THINKING OUTCOMES	**HOW DOES THE COURSE ADDRESS THE OUTCOMES** (Include required or recommended instructional resources, strategies, learning activities, assignments, etc., that must or could be used to address the goal/outcomes)
Students will be able to ➢ develop meaningful questions to address problems or issues. ➢ gather, interpret, and evaluate relevant sources of information. ➢ reach informed conclusions and solutions. ➢ consider analytically the viewpoints of self and others.	Discussion of genetics, biotechnology and sustainability promote awareness of these issues. Relevant readings; presentation of short papers; and debates can be used to emphasize these outcomes. Current events discussions should include a discussion of where the information comes from, and how to evaluate it. Students can research a healthy diet and formulate a diet and exercise program for themselves by using a variety of sources. Students can develop short or position papers on a variety of controversial topics covered in the class. Discussion of genetics, biotechnology and sustainability typically lead to expression of differing opinions, due to the students' different backgrounds and life experiences. A debate on a topic such as whether or not human activities are responsible for climate change is recommended.
SOCIAL/GLOBAL AWARENESS OUTCOMES	**HOW DOES THE COURSE ADDRESS THE OUTCOMES** (Include required or recommended instructional resources, strategies, learning activities, assignments, etc., that must or could be used to address the goal/outcomes)
➢ Students will begin to understand how their lives are shaped by the complex world in which they live. ➢ Students will understand that their actions have social, economic and environmental consequences.	Twenty percent of the course addresses issues of environmental sustainability. Assignment of outside readings, e.g., Tragedy of the Commons, Land Ethic, etc., as well as showing "An Inconvenient Truth" is recommended. Students can carry out an "Energy audit" to see how much electricity they use and what it costs. Students may complete an "Eco" or "Carbon" footprint to evaluate their resource use.

Instructional Methods

PLANNING STAGE:
The instructor is encouraged to select technologies and critical issues in human biology that he or she finds most interesting, timely, or important for students to learn about. If feasible, the instructor is encouraged to give students some choice in which technologies and critical issues will be explored. Creative assignments that exercise a diversity of the multiple intelligences are encouraged. (See Diaz-Lefebvre, R. 1999. "Coloring Outside the Lines." John Wiley and Sons, Inc., New York.) The instructor is encouraged to selectively introduce very basic biological concepts and information that students can directly use to understand the technologies and critical issues that have been chosen for discussion.

ORDER OF TOPICS:
The instructor should ensure that for each technology or critical issue, sufficient explanations of basic biological concepts have been completed before the technology or issue is introduced and discussed. Main instructional modes should be lectures, laboratory exercises and discussions. Case studies and field trips are encouraged.

Methods of Assessment/Evaluation

Method	% Course Grade
Exams	20-50%
Laboratory assignments	20-50%
Oral presentations	0-50%
Participation during in-class and online discussion	0-33%
Journal	0-33%
Project	0-33%
Quizzes	0-30%
Term paper or smaller written assignments	0-30%

Text(s)

Human Biology, Mader, S., 7th Edition, © 2002 McGraw-Hill.

Bibliography

No print resources specified

Other Learning Resources

Audiovisual

Media Services has many videos on health and nutrition topics.

Other relevant videos and related materials can be borrowed from other institutions.

Electronic

The instructor is encouraged to set up an on-line discussion board.

Textbooks tend to come with image libraries and interactive software that can really enhance your class.

PowerPoint presentations to introduce technologies and issues are encouraged.

Selected Electronic Databases: MEDLINE, Health Reference Center, Science Direct can be accessed through the TC3 Library. NetLibrary has electronic books related to medicine

Other

No resources specified