UCONN
UNIVERSITY OF CONNECTICUT

BIOLOGY 1107: Principles of Biology I
Fall Semester, 2021

SYLLABUS for LECTURE

Section 001 (9:05-9:55AM, Mon-Wed-Fri)

Credits: 4
Format: Lectures M-W-F for 50 minutes, with one 3-hour laboratory session each week. Prerequisites: A course in high school level chemistry or concurrent enrollment in CHEM 1127 are recommended for students enrolling in BIOL 1107.
HuskyCT Course Site: https://lms.uconn.edu/

Professor: Dr. Thomas D. Abbott
Email: thomas.abbott@uconn.edu
Office Hours/Availability: By appointment
Office Location: Torrey Life Science, room 212

Required Materials: (Course materials should be obtained before the first day of class. They are available for purchase at the UConn Bookstore.)

- **Biology the Dynamic Science, custom 5th Edition, by Russell/HertzMcmillan-Pub. Cengage.**
- **Please see the class Biology 1107 HuskyCT site for Cengage pricing and contact information**
- **Laboratory Manual: Biology 1107 Laboratory Manual eBook, Fall 2021/Spring 2022 ed.**

Computer and Internet Access:
Access to the World Wide Web is required. Computers are available at the University Computer Center, Residential Life, University Library, and other locations on campus.

Course information will be posted on HuskyCT, which is accessible with your University net ID and password. You will have TWO HuskyCT course sites: (1) lecture and (2) lab.

HuskyCT is accessed at: https://lms.uconn.edu/. If you have difficulty accessing HuskyCT, contact the ITS Help Center at https://helpcenter.uconn.edu/. You also have 24x7 Course Support including access to live chat, phone, and support documents.

Course Goals

By the end of the semester, students should be able to:

1. Explore an area of science and technology through reading and experimentation that introduces students to a broad coherent body of knowledge and contemporary scientific or technical methods.

2. Demonstrate an understanding of the nature of modern scientific inquiry, the process of investigation, and the interplay of data, hypotheses, and principles in the development and application of scientific knowledge.

3. Discuss unresolved questions in some area of science or technology and using current methods of investigation describe how progress might be made in answering these questions.

4. Promote interest, competence, and commitment to continued learning about contemporary science technology and its impact upon the world and human society.

5. (LAB) Use lab equipment, such as spectrophotometer, micro-pipette, gel electrophoresis apparatus, probe-ware, scalpels, microscopes, glassware, chemicals, or biological specimens, to perform experiments.

Course Description

Biology 1107 is an introductory course that is aligned with the University General Education Guidelines/Criteria for all CA3 (Group 3) Science and Technology courses and will acquaint students with scientific thought, observation, experimentation, and formal hypothesis testing, and enable students to consider the impact that developments in science and technology have on the nature and quality of life.

Course Learning Objectives

Upon completion of this course, the student should be able to:

1. Examine the underlying principle that structure leads to function in living systems and how our understanding of this physiology can enable human beings to more efficiently address modern societal issues.

2. Describe current methods used in biotechnology, such as Gel Electrophoresis, and how it would be used to gain scientific or technical knowledge.

3. Explain the conceptual basis of the Scientific Method, including its definition, motivation, steps of application, hypothesis testing, and misapplications.

4. Analyze published articles from scientific journals to discern integrity of scientific claims.

Assessments used for all learning objectives would constitute: Lecture Exams, Laboratory Exercises, which can be in the form of Quizzes, Reports, Pre and Post Laboratory Assignments, and Laboratory Practical's.

Date	Lecture Topics	Text Readings
Mon. 08/30	Chap. 3: Biological Molecules: Proteins	pp 56-64
Wed. 09/01	Chap. 3: Biological Molecules: Proteins completed	
Fri. 09/03	Chap. 3: Biological Molecules: Nucleotides and Nucleic Acids	pp 65-68
Mon. 09/06	**Labor Day, no classes**	
Wed. 09/08	Chap. 3: Biological Molecules: Carbohydrates	pp 48-51
Fri. 09/10	Chap. 3: Biological Molecules: Lipids	pp 52-56
Mon. 09/13	Chap. 47: Animal Nutrition:	pp 1059-1066
Wed. 09/15	Chap. 47: Animal Nutrition, completed	pp 1066-1078
Fri. 09/17	Chap. 5: Membranes and Transport	pp 104-121
Mon. 09/20	Chap. 46: Gas Exchange: The Respiratory System	pp 1042-1056
Wed. 09/22	Chap. 46: Gas Exchange: The Respiratory System, completed	

Fri. 09/24	**Exam I**	
Mon. 09/27	Chap. 6: Energy, Enzymes, and Biological Reactions:	pp 125-139
Wed. 09/29	Chap. 7: Cellular Respiration: Harvesting Chemical Energy:	pp 144-156
Fri. 10/01	Chap. 7: Cellular Respiration, completed	pp 156-164
Mon. 10/04	Chap. 48: Ectothermy, Endothermy and Bioenergetics:	pp 1097-1103
Wed. 10/06	Chap. 2: Life, Chemistry and Water:	pp 24-34
Fri. 10/08	Chap. 2: Life, Chemistry and Water, completed	pp 34-40
Mon. 10/11	Chap. 48: Regulating the Internal Environment:	pp 1082-1088
Wed. 10/13	Chap. 48: Kidney Structure and Function:	pp 1088-1096
Fri. 10/15	Chap. 48: Kidney Structure, completed	pp 1088-1096
Mon. 10/18	**Exam II**	
Wed. 10/20	Chap. 14: DNA Structure and Replication:	pp 290-309
Fri. 10/22	Chap. 12: Mendel, Genes and Inheritance:	pp 244-256
Mon. 10/25	Chap. 12: Mendel, Genes and Inheritance, completed	pp 256-262
Wed. 10/27	Chap. 18: DNA Technologies:	pp 388-411
Fri. 10/29	Chap. 18: DNA Technologies, completed	
Mon. 11/01	Chap. 16: Regulation of Gene Expression Prokaryotes:	pp 339-344
Wed. 11/03	Chap. 16 : Regulation of Gene Expression: Eukaryotes:	pp 344-350
Fri. 11/05	Chap. 16: Regulation of Gene Expression Eukaryotes, completed	pp 350-360
Mon. 11/08	**Exam III**	
Wed. 11/10	Chap. 15: From DNA to Protein:	pp 312-335
Fri. 11/12	Chap. 44: The Circulatory System:	pp 1004-1018
Mon. 11/15	Chap. 44: The Circulatory System, completed	

Wed. 11/17	Chap. 42: The Endocrine System: Introduction:	pp 968-975
Fri. 11/19	Chap. 42: The Endocrine System, completed	pp 975-998
(Mon-Fri) 11/22-11-26	**Thanks Giving Recess**	
Mon. 11/29	Chap. 39: Information Flow and the Neuron	pp 899-906
Wed. 12/01	Chap. 39: Information Flow and the Neuron, completed	pp 906-918
Fri. 12/03	Chap. 45: Defense against Disease:	pp 1023-1027
Mon. 12/06	Chap. 45: Defense against Disease, completed	pp 1027-1039
Wed. 12/08	**Exam IV**	

Course Requirements and Grading

Summary of Course Grading:

Course Components	Weight
4 Exams	55%
Laboratory	45%

Exams and Grades:

Exam dates: There will be four exams, each covering 1/4 of the course material. Exams will be held in our lecture classroom during scheduled class time using HuskyCT and personal computers/devices. Check the HuskyCT lecture site for announcements. Exam grades will be posted to your HuskyCT lecture section page.

Exam I: Friday, September 24, 2021
Exam II: Monday, October 18, 2021
Exam III: Monday, November 8th, 2021
Exam IV: Wednesday, December 8th, 2021

Exam format, content and point value: All four exams will consist of 50 questions in multiple-choice format. *Exams will be primarily based on lecture material, but will also include material from assigned text readings. ***The average of the four exam scores will comprise 55% of your course grade.*** **Your performance in the lab will contribute 45% of your course grade.**

Final Grades: Grades for each exam are not scaled. The only scaling, (if any) that counts towards your actual course grade depends on over-all class performance.

Exams for students with special needs: If you have a documented learning disability, the CSD Office using email will inform the instructor of your necessary accommodations. Additionally, CSD will encourage you to discuss these accommodations with your instructor.

Makeup Exams

Makeup Exam Policy: Makeup exams are available **only** to students who have a legitimate excuse for missing an exam, such as illness, scheduled job interview out of town athletic team events, etc. If you know in advance that you must miss an exam, contact the instructor.

Makeup Exam Dates: Makeup exams will be scheduled on a case-by-case basis. Makeup exams may include short- answer, short essay, and/or multiple-choice questions.

Laboratories:

(1) Laboratory start date: Lab begins the first week of classes, **Tuesday, August 31, 2021.**

(2) Location: Bronwell (Engineering III) room 120

(3) Information: Lab syllabus, lab schedules, TA and assignment information are posted on the **Lecture HuskyCT site**. Click on the "**Laboratory Information**" icon for these listings. Only lab grades are recorded in the Laboratory HuskyCT site.

(4) Please see the Laboratory Syllabus for the following: Attendance Policy, Laboratory Makeup Policy, Dissection Policy and Laboratory Grading Policy.

Academic Misconduct Policy:

UConn's Policy: A fundamental tenet of all educational institutions is academic honesty; academic work depends upon respect for and acknowledgement of the research and ideas of others. Misrepresenting someone else's work as one's own is a serious offense in any academic setting and it will not be condoned.

Academic misconduct includes, but is not limited to the following:

- Providing or receiving assistance in a manner not authorized by the instructor in the creation of work to be submitted for academic evaluation (e.g. papers, projects).
- Any attempt to influence improperly (e.g. bribery, threats) any member of the faculty, staff, or administration of the University in any matter pertaining to academics or research.
- Presenting as one's own work the ideas or words of another for academic evaluation.
- Doing unauthorized academic work for which another person will receive credit or be evaluated.
- Presenting the same or substantially the same papers or projects in two or more courses without the explicit permission of the instructors involved.

A student who knowingly assists another student in committing an act of academic misconduct shall be equally accountable for the violation, and shall be subject to the sanctions and other remedies described in The Student Code at http://www.dos.uconn.edu/.

Student Responsibilities and Resources

As a member of the University of Connecticut student community, you are held to certain standards and academic policies. In addition, there are numerous resources available to help you succeed in your academic work. Review these important standards, policies and resources, which include:

- **The Student Code**
- **Academic Integrity**
- **Resources on Avoiding Cheating and Plagiarism**
- **Copyrighted Materials**
- **Netiquette and Communication**
- **Adding or Dropping a Course**
- **Academic Calendar**
- **Policy Against Discrimination, Harassment and Inappropriate Romantic Relationships**
- **Sexual Assault Reporting Policy**
- **Students with Disabilities**

The University of Connecticut is committed to protecting the rights of individuals with disabilities and assuring that the learning environment is accessible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please let me know immediately so that we can discuss options. Students who require accommodations should contact the Center for Students with Disabilities, Wilbur Cross Building Room 204, (860) 486-2020 or http://csd.uconn.edu/.

Until further notice, to ensure a safe learning environment for everyone, masks/face coverings must be worn at all times when inside buildings, including in the classroom, regardless of vaccination status. If a student is not wearing a mask/face covering, they will be asked by the instructor to put one on immediately or leave the classroom. Repeatedly failing to follow this expectation will result in a referral to Community Standards. Activities that involve temporarily removing the mask, such as eating or drinking are not allowed. Please leave the classroom for such activities. If an instructor is not wearing a mask/face covering, students should feel comfortable asking the instructor to put one on immediately. More information about proper usage of masks is available from UConn Environmental Health and Safety at this link.

Although social distancing will not be required inside classrooms for vaccinated individuals, please be respectful of the wishes of others who prefer to maintain social distancing. For their own protection, unvaccinated individuals are requested to maintain 6 feet social distancing from others.

Blackboard measures and evaluates accessibility using two sets of standards: the WCAG 2.0 standards issued by the World Wide Web Consortium (W3C) and Section 508 of the Rehabilitation Act issued in the United States federal government." (Retrieved March 24, 2013 from Blackboard's website)

Software/Technical Requirements (with Accessibility and Privacy Information)

The software/technical requirements for this course include:

- **HuskyCT/Blackboard (HuskyCT/ Blackboard Accessibility Statement, HuskyCT/ Blackboard Privacy Policy)**
- **Adobe Acrobat Reader (Adobe Reader Accessibility Statement, Adobe Reader Privacy Policy)**
- **Google Apps (Google Apps @ UConn Accessibility, Google for Education Privacy Policy)**
- **Microsoft Office (free to UConn students through uconn.onthehub.com) (Microsoft Accessibility Statement, Microsoft Privacy Statement)**
- **Dedicated access to high-speed internet with a minimum speed of 1.5 Mbps (4 Mbps or higher is recommended).**

Help

Technical and Academic Help provides a guide to technical and academic assistance.

This course is completely facilitated online using the learning management platform, HuskyCT. If you have difficulty accessing HuskyCT, you have access to the in person/live person support options available during regular business hours through the Help Center. You also have 24x7 Course Support including access to live chat, phone, and support documents.

Minimum Technical Skills

To be successful in this course, you will need the following technical skills:

- **Use electronic mail with attachments.**
- **Save files in commonly used word processing program formats.**
- **Copy and paste text, graphics or hyperlinks.**
- **Work within two or more browser windows simultaneously.**
- **Open and access PDF files.**

University students are expected to demonstrate competency in Computer Technology. Explore the Computer Technology Competencies page for more information.

Evaluation of the Course

Students will be provided an opportunity to evaluate instruction in this course using the University's standard procedures, which are administered by the Office of Institutional Research and Effectiveness (OIRE).

Additional informal formative surveys may also be administered within the course as an optional evaluation tool.

Have a Great Semester