



Concurrent Enrollment Course Outline

TC3 Course # & Title: BIOL 105 General Biology II **Credit Hours:** 4

Instructor e-mail: acostello@unatego.stier.org

Course Description:

Intended for students who plan to transfer to an upper level program in science, environmental science, medicine, or a science-related field. Students who have a strong interest in a rigorous study of biology may also enroll. Topics include evolution, biodiversity, botany, and ecology. Substantial outside preparation for lectures and laboratories is required.

Minimal Basic Skills Needed to Complete Course Successfully:

Basic skill requirements such as math, reading, and writing are required to successfully complete this course. The ability to take well organized notes during class lectures; to work in groups during lecture and laboratory sessions; to follow oral and written directions; and to read textbook material that contains a large amount of technical vocabulary to interpret complex diagrams and flowcharts.

Required Texts and Materials: All texts required & supplied by the school.

Starr, C., Taggart, R., Evers, C. & Starr, L. (2013). *Biology: Unity and Diversity of Life. 13th ed., AP ed.* Pacific Grove: Brooks/Cole Cengage Learning.

Quammen, D. (2009, February). Darwin's First Clues. *National Geographic*.

Ridley, M. (2009, February). Modern Darwins. *National Geographic*.

Fothergill, A. (Executive Producer). (2006). Planet *earth* [Television series]. United Kingdom: BBC One & BBC HD.

The History Channel (Producer). (2008). Evolve [Television series]. United States: History Channel.

Horvath, T. (2008). Economically viable strategy for prevention of invasive species introduction: Case study of Otsego Lake, New York. *Aquatic Invasions*, 3(1), 3-9.

Various peer reviewed scientific journal articles at student and teacher choosing

Class Modalities/Alternative Learning Strategies: Lectures and laboratory exercises form the core of this course. Students will also have to choose, read, and present a recent peer reviewed journal article on a biology topic of their choice. Additionally, the instructor may wish to include structured discussion sessions, student presentations, and/or original student research.

Statement of Academic Integrity: Students are expected to do their own works on tests, quizzes, reports, homework and all other forms of academic expression. Any student found to having in any way presented work not his/her own (including plagiarism) will, as a minimum, lose full credit for the assignment, test or quiz, and face other possible disciplinary consequences. (As stated in the Unatego Student-Parent Handbook 2-14-2015)

Make-Up Policy/Late Work: Late work will be accepted up until grades are due with penalty. Make-up exams will also be allowed at times determined by the instructor.

Attendance Policy: Unatego High School believes that classroom participation is related to and affects a student's performance and grasp of subject matter, and, as such, is properly reflected in a student's final grade. In order to obtain credit in a course, a student must attend a minimum of 90% of the scheduled class. This means a student could be absent no more than 27 periods for a full year science course (including lab periods) or 13.5 periods of a half-year course.

Student Responsibilities:

Students are expected to examine, connect, and integrate essential knowledge of biological topics rather than simply accumulate isolated facts. Students will develop this conceptual understanding as the course content works its way from the evolution of living things through ecology. The course also emphasizes developing science practices such as advanced inquiry and reasoning skills, in order to further connect concepts in and across domains.

In order to accomplish this feat, students will complete laboratory work, weekly quizzes, unit exams, laboratory notebooks, presentations to peers, and formal laboratory write-ups, all which are evaluated for student understanding. Students will also dissect a current peer reviewed scientific journal article for deep understanding, and discuss current events in biology in order to understand how science works as a process to provide new biological information to society, therefore allowing society to better understand the natural world.

Evaluation/Grading System:

Method	% Course Grade
3 examinations covering several chapters	30%
A cumulative final examination covering all core concepts	25%
Laboratory reports or other evaluation of work completed in the lab	26%
Student papers, quiz material, homework responses	19%

Your final grade is based on completion of the following tasks;

Unit Exams (3) Multiple choice & short answer format (100pts/each) 300 pts

Final Exam, Units 4-6, lab inclusive, multiple choice & short answer 250 pts

Laboratory reports (13) (20pts/report) 260 pts

Weekly quizzes (12) (5pts/each) 60 pts

Peer Reviewed Journal Article Project (4 parts: P1-12pts, P2- 28pts, P3 – 54pts, P4 –36pts) 130pts

EVALUATION/GRADING SYSTEM

Letter grades are based on point totals as follows;

1000 - 930 =A

929 – 900 = A-

899 – 870 = B+

869 – 840 = B

839 – 810 = B-

809 – 780 = C+

779 – 750 = C

749 - 720 = C-

719 – 690 = D+

689 – 660 = D

659 - 630 = D-

<629 = F

COURSE OUTLINE & DUE DATES: *Dates & assignment subject to change.*

Week of	Topic & Chapter	Lab	Assignments
1/31	Evolution	Pocket Mice & Natural Selection	Quiz 1 Quiz 2 (Darwin Article #1)
2/7	Evolution	Hardy-Weinberg Modeling (1) Natural Selection of Population - Dots (2)	Quiz 3 (Darwin Article #2) Quiz 4
2/14	Evolution	Cladogram (3) Comparing DNA with BLAST (4)	Quiz 5
2/21	Human Evolution Review EXAM 1 (Evolution)	Primordial Soup (5)	EXAM 1 (Evolution)
2/28	Ecology	Human Demographics (6)	Quiz 6
3/7	Ecology	Climate Change Investigation (7)	Quiz 7 Quiz 8
3/14	Ecology Plants	Lettuce Seed Environmental Toxin Bioassay (8) Whole Plant Transpiration (9)	
3/21	Plants EXAM 2 (Ecology & Plants)	Flower Dissection (10)	EXAM 2 (Ecology & Plants)

3/28	Animal Behavior	Animal Behavior (11)	Quiz 9 Quiz 10
4/4	Human Body – Reproduction & Development	Comparative Anatomy Human & Pig Uterus (12)	Quiz 11
4/18	Human Body Systems	Skeletal Stations (13)	Quiz 12
4/25	Human Body Systems	Heart Dissection Eye Dissection (both tentative to time & supplies)	
5/2	Human Body Review EXAM 3 (An. Behavior & Human body)		EXAM 3 (An. Behavior & Human body)
5/9	Final Exam Review FINAL EXAM	Final Exam Review	FINAL EXAM
5/16	Journal Article Project	Journal Article Project	Project Part 1
5/23	Journal Article Project	Journal Article Project	
5/30	Journal Article Project	Journal Article Project	Project Part 2
6/6	Journal Article Project	Journal Article Project	Project Part 3
6/13	Journal Article Project	Journal Article Project	Project Part 4