Term Information

Effective Term	Spring 2015

General Information

Course Bulletin Listing/Subject Area	Biology
Fiscal Unit/Academic Org	Introductory Biology - D0326
College/Academic Group	Arts and Sciences
Level/Career	Undergraduate
Course Number/Catalog	1141
Course Title	Peer Led Team Learning for Biology 1114 Students
Transcript Abbreviation	PLTL for Bio 1114
Course Description	Peer-led team learning (PLTL) provides a structure within which students will actively work together in groups to complete a series of activities and deepen their understanding of concepts associated with Biology 1114. A peer leader will work with the group on challenging and relevant activities to prepare biology students to apply scientific reasoning to authentic problems.
Semester Credit Hours/Units	Fixed: 1

Offering Information

Length Of Course	14 Week
Flexibly Scheduled Course	Never
Does any section of this course have a distance education component?	No
Grading Basis	Satisfactory/Unsatisfactory
Repeatable	No
Course Components	Workshop
Grade Roster Component	Workshop
Credit Available by Exam	No
Admission Condition Course	No
Off Campus	Never
Campus of Offering	Columbus, Lima, Mansfield, Marion, Newark, Wooster

Prerequisites and Exclusions

Prerequisites/Corequisites	Concur: Biology 1114
Exclusions	

Cross-Listings

Cross-Listings

Subject/CIP Code

Subject/CIP Code	26.0101
Subsidy Level	Baccalaureate Course
Intended Rank	Freshman, Sophomore, Junior, Senior

Requirement/Elective Designation

The course is an elective (for this or other units) or is a service course for other units

Course Details

Course goals or learning objectives/outcomes

- To help biology students actively work as groups to deepen each individual's understanding of Biology 1114 concepts and content, prepare biology students to apply scientific reasoning to authentic problems, and develop active learning & study habits.

Content Topic List

- Mechanisms of Evolution
- Diversity of Life
- Prokaryotes & Eukaryotes
- Plant Form & Function
- Fungi
- Animal Form & Function
- Behavior
- Ecology
- Problem solving
- Scientific literacy

Attachments

- PLTL syllabus AU 2014.pdf: Syllabus

(Syllabus. Owner: Eakins,Barbara Ann)

Comments

Workflow Information

Status	User(s)	Date/Time	Step
Submitted	Misicka,Matthew Alan	10/01/2014 11:59 AM	Submitted for Approval
Approved	Stetson,David Leete	10/01/2014 01:18 PM	Unit Approval
Approved	Hadad,Christopher Martin	10/02/2014 09:13 AM	College Approval
Pending Approval	Nolen,Dawn Vankeerbergen,Bernadette Chantal Hanlin,Deborah Kay Jenkins,Mary Ellen Bigler Hogle,Danielle Nicole	10/02/2014 09:13 AM	ASCCAO Approval

Course Syllabus

Biology 2194

Peer-Led Team Learning of Form, Function, Diversity, & Ecology (1 credit hour)
Autumn 2014

Course Coordinator: Sara Faust **Email: faust.60@osu.edu** **Office: JE 240A**
Office Hours: By appointment

Peer Leaders:
- Renjell Amatorio(.1)
- Odette Gutierrez del Arroyo Perez(.1)
- Devine Jackson(.2436)
- Kelly Johnson(.4872)
- Jason Kleinhenz(.38)
- Nathan Leppo(.2)
- Lindsey Loss(.11)
- Nathan Scarberry(.47)
- Molly Shockey(.37)
- Marisa Sloan(.821)
- Hannah Smith(.8223)
- Brianna VanNoy(.19)

Class meetings: 1.5 hrs per week (arranged), Jennings Hall (JE) 280, 330, or 336

Course Description:
The Biology 2194 peer-led team learning (PLTL) course provides a structure within which students will actively work together in groups of 6-8 to complete a series of activities and deepen their understanding of concepts associated with Biology 1114. A peer leader, who has previously taken Biology 1114 and has been trained to facilitate discussion, will work with the group. The workshop activities are challenging, relevant, and often have no single correct answer. In fact, the answer to the problem is less important than the exploration of the concepts and the analysis of the thought processes involved.

For each of the 10 workshops, students are required to complete a pre-workshop homework activity that will help them prepare for the group work. They will then meet with their group and peer leader to complete the workshop activities. Finally, students will complete a post-workshop activity designed to further assess their understanding of the workshop material through reflection and application.

Course Materials:
All materials will be provided through *Carmen* and during the workshop meetings. The Biology 1114 textbook is recommended but not required.

Goals of the Course:
a. To help biology students actively work as groups to deepen each individual's understanding of Biology 1114 concepts and course content.
b. To prepare biology students to apply scientific reasoning to authentic problems.
c. To help students develop as successful active learners and cultivate college-appropriate study habits.

Learning Outcomes:
Successful students will be able to:
- *Work with groups to solve problems.*
- *Solve problems through appropriate application of course concepts.*

- *Understand and apply metacognitive strategies when learning new material.*
- *Critically evaluate scientific readings and popular media.*
- *Explain the mechanisms of microevolution.*
- *Use concepts associated with microevolution and macroevolution to explain patterns of speciation and extinction.*
- *Explain mechanisms of sexual selection and the evolution of social behavior.*
- *Describe, create, and evaluate methods used to infer evolutionary relationships.*
- *Explain the relationship between evolutionary hypotheses and the biological classification system.*
- *Use the geologic time scale to identify when major biological evolutionary events occurred.*
- *Describe the major features of and evolutionary relationships within the Kingdoms Fungi, Plantae, and Animalia.*
- *Explain how different groups of plants reproduce and transport water and food.*
- *Describe the major groups of animals in terms of their characteristics, such as modes of reproduction, feeding specializations, skeletal system, sensory system, gas exchange, and osmoregulation.*
- *Explain ecological phenomena related to populations and communities in terms of basic mathematical models.*
- *Trace chemicals and energy through an ecosystem to explain human and global impacts of perturbations.*
- *Describe the interrelationship between biodiversity and community interactions, such as such as predation, competition, and symbiosis.*
- *Describe the development and evaluation of scientific explanations of natural phenomena.*
- *Apply biological concepts in the assessment of contemporary issues.*

Distribution of Homework and Class Work:
Students will spend the workshop time discussing readings and solving problems. That means that each student needs to prepare for class by doing the assigned reading and pre-workshop activities. This approach encourages active learning and makes the most out of our instructional time. **Completion of the pre-workshop activity is required for attendance**.

Post-workshop activities are essential for completing the learning experience and being successful both in Biology 2194 and Biology 1114. Each pre- and post-workshop activity is a valuable opportunity to practice applying course material and to develop your ability to self-evaluate your level of understanding.

Completion of **both** the pre-workshop and post-workshop activities is required to earn credit for each workshop week. Students should anticipate spending at least 30 minutes on each pre-workshop and post-workshop activity.

Assignments:

a. **Pre-workshop activities** – These will be available on Carmen and must be submitted to the dropbox prior to the workshop meeting. Pre-workshop assignments will include reading or reviewing research papers, secondary sources, or other posted materials and answering a series of questions intended to prepare students for the workshop. Student responses to pre-workshop activities are what allow the peer leader to tailor workshop pace and depth of discussion to best suit the group's current level of understanding.
b. **Workshop activities** – These will be completed and turned in during the workshop with the group. Workshop activity books and other supplies will be provided by the department. Students may occasionally be asked to bring resources to the workshop, such as a laptop or calculator.
c. **Post-workshop activities** – These will be completed following the workshop and should be submitted to a Carmen Dropbox within 48 hrs. The activity will vary from a reflection of the knowledge gained in the workshop and the knowledge still desired to an extension of the material and its application to novel situations.

Assignment Grades:
The primary goal of this course is to promote thoughtful discussion and develop lifelong active learning. Pre-workshop activities, workshop attendance and participation, and post-workshop activities will be graded based on quality and effort rather than quantity or accuracy. Students will receive either full, half, or no credit. Late assignments can receive a maximum of half credit. Students will have ten (10) class days to challenge any grade/score presented on Carmen they

feel may be incorrect, or to inquire about any grade not posted. The posted grade stands as permanent if left unchallenged past the ten class-day period.

Course Points:

10 Workshops @ 30 points each	300 points
▪ Pre-workshops: 10 points	
▪ Workshops: 10 points	
▪ Post-workshops: 10 points	
3 Cmap Checks @ 20 points each	60 points
Student Assessment of Learning Gains survey (SALG)	5 points
Course total:	365 points

Course Grade:
This course will be graded Satisfactory/Unsatisfactory (S/U). Students must attend at least 70% of the workshops, complete all of the activities associated with those workshops, **and** earn a minimum of 70% of the total course points in order to pass the course. Completion of all three workshop components (Pre-workshop, Workshop, and Post-workshop) is required to earn credit for each workshop week. Peer leaders will post if students have completed the required work associated with each workshop within one week following the workshop.

How to Benefit From PLTL:
Unlike a traditional lecture or recitation where information is passively received and recited, PLTL students will benefit from discussion-based workshops by taking a serious, active role in the discussions each week. Biology 2194 is not "just a 1-credit S/U course"; by removing the fear of a "bad grade" harming a student's course grade or their GPA, Biology 2194 frees students to explore and evaluate their understanding without perceived consequence. Active learning is new to many students, and like any new skill, requires effortful practice in order to become effective and reap benefits.

Absences:
Class attendance is essential for students to participate in class activities and have their achievement of learning outcomes assessed. Maintaining group cohesion and a motivated atmosphere is critical to deriving a benefit from each workshop. When even one member of a small group is absent, the cohesion and productivity of the group suffers. Please see the course coordinator if you have a circumstances that will interfere with your class attendance.

Academic Misconduct:
It is the responsibility of the Committee on Academic Misconduct to investigate or establish procedures for the investigation of all reported cases of student academic misconduct. The term "academic misconduct" includes all forms of student academic misconduct wherever committed; illustrated by, but not limited to, cases of plagiarism and dishonest practices in connection with examinations. The instructor will report all instances of alleged academic misconduct to the Committee on Academic Misconduct for adjudication (Faculty Rule 335-5-487). For additional information, see the University's Code of Student Conduct, http://studentlife.osu.edu/pdfs/csc_12-31-07.pdf .

Disability Services:
Students with disabilities that have been certified by the Office for Disability Services will be appropriately accommodated, and should inform Dr. Ridgway of their needs within the first two weeks of the quarter. The Office for Disability Services is located in room 150 Pomerene Hall, 1760 Neil Avenue; telephone 614-292-3307, TDD 292-0901; http://www.ods.ohio-state.edu/ .

Sexual Harassment:
OSU and the Center for Life Sciences Education consider sexual harassment offences to be unacceptable behaviors that disrupt opportunities for learning. Please report any concerns about questionable or unwanted behavior to Dr. Ridgway.

Course Schedule

Week	Dates	Workshop Activity
1	8/27-9/1	No workshop – Complete pre-workshop for Week 2
2	9/2-9/8	First Meeting/Introductions • Workshop Topic: Active Learning
3	9/9-9/15	Evolution: Misconceptions and Teleological Language
4	9/16-9/22	Evolution: Quantitative Genetics
5	9/23-9/29	No workshop – Cmap Check due in dropbox Sept. 21st
6	9/30-10/6	Phylogenetics: Mapping Evolutionary History
7	10/7-10/13	Critical Thinking: Biology in Popular Media
8	10/14-10/20	Phylogenetics: Modern Applications of Phylogenetic Analysis
9	10/21-10/27	Evolution: Simon's Giraffe
10	10/28-11/3	Evolution: Geologic Time Scales and the Fossil Record
11	11/4-11/10	No workshop – Cmap Check due in dropbox Nov. 2nd
12	11/11-11/17	Mathematical Modeling in Ecology: Climate Change
13	11/18-11/24	End-of-Semester PLTL Review
14	11/25-12/1	No workshops – Thanksgiving Break
15	12/2-12/8	No workshops – Cmap Check due in dropbox Nov. 30th
16	12/9-12/15	No workshops

Please note: Workshop weeks start on Tuesday and end the following Monday. Monday is the last day of any given workshop week.

To preserve compatibility with the Biology 1114 lecture and lab schedule, some workshop dates may be adjusted in order to accommodate changes in lecture. Notice will be given as far in advance as possible, both on Carmen and through your peer leader.