Number: BIOL G205  
TITLE: Biology Laboratory Learning Skills

ORIGINATOR: Nikki Plaster  
EFF TERM: Fall 2011

FORMERLY KNOWN AS:

DATE OF OUTLINE/REVIEW: 01-16-2008

CROSS LISTED COURSE:  
TOP NO: 0401.00

SEMESTER UNITS: 1.0 – 2.0
HRS LEC: 0.0  
HRS LAB: 54.0 – 108.0  
HRS OTHER: 0.0

CONTACT HRS TOTAL: 54.0 – 0.0
STUDY NON-CONTACT HRS RECOMMENDED: 0.0 - 0.0

CATALOG DESCRIPTION:
This is a course in which students will help peers in lab sections of Biology classes. After successfully completing a lab course, students will assist lab instructors by monitoring lab safety, clarifying lab skills and techniques, and explaining experiments that are presented. Students will prepare and present one or more oral and/or written presentations of topics not covered in lecture. This course is recommended for students interested in teaching science.

JUSTIFICATION FOR COURSE:

PREREQUISITES:
• Instructor Permission

COREQUISITES:

ADVISORIES:

ASSIGNED DISCIPLINES:
Biological sciences

MATERIAL FEE: Yes [ ] No [X] Amount: $0.00

CREDIT STATUS: Noncredit [ ] Credit - Degree Applicable [X] Credit - Not Degree Applicable [ ]

GRADING POLICY: Pass/No Pass [ ] Standard Letter [X] Not Graded [ ] Satisfactory Progress [ ]

OPEN ENTRY/OPEN EXIT: Yes [ ] No [X]

TRANSFER STATUS: CSU Transferable[X] UC/CSU Transferable[ ] Not Transferable[ ]

BASIC SKILLS STATUS: Yes [ ] No [X]  
LEVELS BELOW TRANSFER: Not Applicable

CALIFORNIA CLASSIFICATION CODES: Y - Not Applicable

NON CREDIT COURSE CATEGORY: Y - Not applicable, Credit Course

OCCUPATIONAL (SAM) CODE: E

REPEATABLE ACCORDING TO STATE GUIDELINES: No [X] Yes [ ] NUMBER REPEATS:

REQUIRED FOR DEGREE OR CERTIFICATE: No [X] Yes [ ]

GE AND TRANSFER REQUIREMENTS MET:

COURSE LEVEL STUDENT LEARNING OUTCOME(S) Supported by this course:
BIOL G205-Biology Laboratory Learning Skills

1. explain the core concepts and methods in the sciences, including cell theory, basic biochemistry, animal physiology and anatomy, microscopy, and the scientific method, as appropriate.
2. apply critical thinking and analytical skills to correctly interpret data including grade analysis and analysis of experimental data.
3. practice and monitor adherence to all lab safety rules.
4. explain scientific techniques, experiments, and exercises.
5. formulate and evaluate critical biologically related questions.

COURSE OBJECTIVES:
1. practice and monitor adherence to all lab safety rules.
2. write and critique quiz questions and lab practical questions.
3. demonstrate the ability to explain scientific concepts, techniques, experiments and exercises.
4. exemplify successful laboratory demeanor, study skills and professional decorum.
5. lead study and review groups.

COURSE CONTENT:

LECTURE CONTENT:

A. Laboratory Safety
   1. Equipment
   2. Materials
   3. Disposal procedures
   4. Protective clothing/gear/personal grooming
   5. Adherence to safety rules and regulations

B. Assessment Techniques
   1. Quiz Questions
   2. Directed study
   3. Discussion questions
   4. Lab Practical questions

C. Scientific Method
   1. Hypothesis development
   2. Experimental design
   3. Data collection
   4. Data analysis
   5. Control groups
   6. Troubleshooting

D. Laboratory Demeanor
   1. Proper lab clothing/gear/personal grooming
   2. Maintenance of equipment and materials
   3. Respectful interaction with professors, lab assistants and students
   4. Adherence to attendance/tardy rules
   5. Supervisory help or advice -when to seek
   6. Response to challenges by students in the lab

LABORATORY CONTENT:

A. Laboratory Safety
   1. Equipment
   2. Materials
   3. Disposal procedures
4. Protective clothing/gear/personal grooming
5. Adherence to safety rules and regulations

B. Assessment Techniques
1. Quiz Questions
2. Directed study
3. Discussion questions
4. Lab Practical questions

C. Scientific Method
1. Hypothesis development
2. Experimental design
3. Data collection
4. Data analysis
5. Control groups
6. Troubleshooting

D. Laboratory Demeanor
1. Proper lab clothing/gear/personal grooming
2. Maintenance of equipment and materials
3. Respectful interaction with professors, lab assistants and students
4. Adherence to attendance/tardy rules
5. Supervisory help or advice -when to seek
6. Response to challenges by students in the lab

METHODS OF INSTRUCTION:

A. Lab:
B. Independent Study:

INSTRUCTIONAL TECHNIQUES:

COURSE ASSIGNMENTS:

Reading Assignments
Websites
Out-of-class Assignments

Writing Assignments
Possible activities could include: oral and/or written presentations on a topic not covered in lecture and contribution of potential questions for quizzes and lab practicals.

METHODS OF STUDENT EVALUATION:
Written Assignments
Report
Projects (ind/group)
Problem Solving Exercises
Oral Presentations
Skills Demonstration

Demonstration of Critical Thinking:
Critical listening to instructor presentations in order to develop appropriate quiz and lab practical questions. Ability to: answer student questions about lab exercises, techniques and concepts presented by the instructor, identify student needs (academic and instructional) and communicate those needs to instructor, observe and evaluate adherence to lab safety rules, identify and correct inappropriate laboratory behavior and apprise instructor if necessary.
**Required Writing, Problem Solving, Skills Demonstration:**

Possible activities could include: oral and/or written presentations on a topic not covered in lecture and contribution of potential questions for quizzes and lab practicals.

**TEXTS, READINGS, AND RESOURCES:**

**TextBooks:**

**LIBRARY:**

Adequate library resources include:

**Comments:**

**Attachments:**

[Attached Files](#)