

SECTION I. COURSE SUBMISSION INFORMATION

**WASHTENAW COMMUNITY COLLEGE
COURSE-SYLLABUS APPROVAL FORM (CSAF)**

SECTION III. COURSE SYLLABUS

For help screens, select a field and press F1.

A. COURSE DETAILS (discipline # and title will automatically be entered in 1 and 2 below upon saving or previewing)

1. Course Discipline & No.: <u>BIO 174</u>		2. Course Title: <u>Biology Co-op I</u>	
3. Course Description: Co-op courses provide students with worksite skills and experiences in an approved, compensated position related to their chosen field of study. Together, with an instructor, an employer, and the Workplace Learning Center, the student determines work assignments and learning objectives to connect classroom learning with career-related work experience. Co-op experiences are coordinated by the Workplace Learning Center in conjunction with WCC faculty and cooperating employers. Registration for a cooperative education requires attendance at a Co-op Orientation and a faculty signature.			
4. Credit Hours: <u>1-3</u> If Variable credit, Give Range: _____ to _____ If repeatable for credit, how many times? _____		5. Class Capacity: <u>24</u> (If nonstandard, attach Class Capacity Exception form.)	
		6. Course Options: ☐ Distance learning (Attach preliminary distance approval form and Section Handout.) ☐ Honors (Complete Part G.) ☐ P/NP Grading (Attach rationale.)	
7. Contact Hours per Semester in: Lecture: _____ Lab: _____ Clinical: _____ Experiential: <u>12</u> Total Contact Hrs: <u>TBA</u>		8. Prerequisite(s): _____ _____ _____	
		9. Corequisite(s): (limit to 2) _____ _____	
10. a. Course Purpose: ☒ Program Specialty ☒ Program Support ☐ Nonprogram Specialty ☐ Transfer ☒ Enrichment ☐ Basic Skills		b. Is this course a requirement for a program? ☐ Yes (specify the program(s) below) _____ ☒ No	
		c. Indicate schools to which you want Curriculum Services to send syllabus: (If transfer is approved, attach documentation.) ☐ EMU ☐ UM ☐ Other _____	

B. MAJOR INSTRUCTIONAL UNITS A major instructional unit is a grouping of topics that naturally relate to one another. List in order the major instructional units. Add additional numbers as needed.

1. To be determined by Job Description or equivalent and faculty approval
- 2.
- 3.
- 4.
- 5.
- 6.
- 7.
- 8.
- 9.
- 10.

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C. CORE ELEMENT INFORMATION

1. Core Element Submission Information: (Please check all that apply.)

- ☐ This course has been previously approved for core elements. List **currently** approved core elements: _____
- ☐ Please review this course for core elements marked in part 2 below. (Mark only core elements being added or those needing review because of proposed major changes to the course.)
- ☒ This course does not meet any core elements. Explain Specific coop too variable to assign core elements

2. Proposed Core Element(s): (Mark the boxes of only the elements to be reviewed at this time. For detailed information on the criteria for determining whether a course meets a core element, refer to the Core Element Annotations in the Curriculum Manual.)

- | | |
|---|--|
| ☐ 1. To read and listen in a critical and perceptive way; to speak in an organized, clear, and effective manner. | ☐ 14. To be aware of the nature and variety of the human experience through the methods and applications of the humanities |
| ☐ 2. To use information sources and information gathering techniques; to cite sources when producing written communications. | ☐ 15. To understand the basic principles of scientific inquiry. |
| ☐ 3. To develop, organize, and express thoughts in writing using Standard English. | ☐ 16. To have a knowledge of basic human biological principles, including those related to wellness. |
| ☐ 4. To apply basic mathematics through the level of elementary algebra. | ☐ 17. To understand the basic principles of the natural sciences, and their relationship to the environment. |
| ☐ 5. To represent and solve problems using mathematical techniques. | ☐ 18. To understand the basic principles and applications of technology. |
| ☐ 6. To interpret elementary descriptive statistics. | ☐ 19. To understand the principle of integrating technological elements into systems. |
| ☐ 7. To comprehend and use concepts and ideas. | ☐ 20. To understand the relationship of technology to individuals, society, and the environment. |
| ☐ 8. To develop, express, test, and evaluate ideas. | ☐ 21. To understand the methods and applications of the social sciences in exploring the dynamics of human behavior. |
| ☐ 9. To analyze problems, develop solutions, and evaluate results in a clear, logical, and consistent manner. | ☐ 22. To understand those principles and values, including individual rights and civic responsibilities, which maintain and enhance democracy and freedom in a pluralistic society. |
| ☐ 10. To distinguish between fact and opinion; to recognize biases and fallacies in reasoning. | ☐ 23. To have a working knowledge of the history, structure, and function of American social, political, and economic institutions. |
| ☐ 11. To use computer systems to achieve professional, educational, and personal objectives. | ☐ 24. To be aware of the contemporary global community, especially its geographical, cultural, economic, and historical dimensions. |
| ☐ 12. To apply the protocols of computer use and respect the legal and other rights of individuals or organizations. | |
| ☐ 13. To be aware of the artistic experience in personal and cultural enrichment, growth, and communication. | |

DIRECTIONS: Each core element marked above must be included in the appropriate core element boxes next to the course objectives in SECTION D which directly support that core element.

3. Courses That Partially Satisfy A Core Element In Combination With Other Courses:

- ☐ If this course is part of a combination of courses that together meet a core element, mark this box. The courses must all be submitted and reviewed together for core element approval.

Other course(s) required _____

Dean's Comments:
Curriculum Committee's Comments:
Vice President's Comments:

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D. INSTRUCTIONAL OBJECTIVES AND CORE ELEMENTS SUPPORTED

DIRECTIONS: (These Units should match those listed in Section B.) Use student outcome based language. (Example: The student will develop and support a thesis in an essay.) If the objective is being used to directly support a core element, write the core element number in the box to the right. If needed, additional information on how the core element is to be met and/or assessed for accomplishment can be included under the objective. If desired you may add a section of "overall course objectives" which are not associated with a specific unit. This may be particularly helpful for addressing core elements.

Unit Objectives**Core Elements****Unit #1**

1

2

3

Unit #2

1

2

3

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E. INSTRUCTIONAL METHODS AND EVALUATION**1. Instructional Methods:** (Check the appropriate boxes and describe as needed.)

- | | |
|--|--|
| ☐ Lecture/Discussion _____
☐ Clinical Instruction _____
☐ Self-Paced Learning _____
☐ Internet Instruction _____
☐ Computer Simulations _____
☒ On-Site Work Experience 8 hr per week for 15 wks per academic credit
☒ Other 4 meetings per semester with student | ☐ Field Trips _____
☐ Team Assignments _____
☐ Telecourse _____
☐ Video Seminar _____
☐ Laboratory Assignments _____
☐ Interactive TV _____ |
|--|--|

2. Evaluation Criteria:

- | | |
|--|--|
| ☒ Attendance _____
☐ Class Discussion _____
☐ Papers _____
☐ Portfolio _____
☐ Projects _____
☐ Reports _____
☐ Clinical/Work _____
☒ Other on-site supervisor evaluation / other criteria to be determined by faculty | ☐ Quizzes _____
☐ Tests _____
☐ Midterm _____
☐ Final Exam _____
☐ Home Work _____
☐ Presentations _____
☐ Performances _____ |
|--|--|

3. Attendance Requirements: (For Certification or nonevaluative purposes.)**F. EQUIPMENT, FACILITIES, TEXTS, MATERIALS, AND SUPPLIES****1. Special Equipment/Facilities :** (Check the appropriate boxes and describe as needed.)

- | | |
|---|--|
| ☐ Lab equipment _____
☐ LRC Reserves _____
☐ Computers _____
☐ CD ROM _____
☐ Field Trips _____
☒ Other a) pre-interview with Division Counselor; b) signed liability waiver | ☐ Testing Center _____
☐ Student Competitions _____
☒ Off-Campus Sites coop site provides facilities
☐ Student Tutors _____
☐ Distance Learning Classroom _____ |
|---|--|

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Title: no textbook needed unless instructor requires otherwise
 Author: _____ Copyright Yr: _____
 Publisher: _____ Est. Cost: _____

Title: _____
 Author: _____ Copyright Yr: _____
 Publisher: _____ Est. Cost: _____

Title: _____
 Author: _____ Copyright Yr: _____
 Publisher: _____ Est. Cost: _____

Title: _____
 Author: _____ Copyright Yr: _____
 Publisher: _____ Est. Cost: _____

Title: _____
 Author: _____ Copyright Yr: _____
 Publisher: _____ Est. Cost: _____

Other Texts: _____

3. Supplies and/or Uniforms Student will have to Own or Acquire for Course:

(e.g. calculators, uniforms, tools, and software, etc., excluding pen, pencil, paper, or textbooks.)

Descriptions	Cost Estimates
<u>determined by specific coop site</u>	_____
_____	_____
_____	_____

4. Reference Materials Students Will Use:

(e.g. journals, books, manuals, maps, LRC reserves, etc.)

may be assigned by instructor

5. Audio/Visual and Computer Materials Students Will Use:

(e.g. films, video tapes, slides, audio tapes, software, CDs, etc.)

Title	Source
<u>to be determined by instructor or provided by coop site</u>	_____
_____	_____
_____	_____
_____	_____
_____	_____

BIO 147: Hospital Microbiology 1 Credit

Prerequisites:
Corequisites: None
15 lecture, 0 lab, 0 clinical, 0 other, 15 total contact hours
Fulfills Core Elements: 7 10 16

This class provides a survey of the morphology, physiology and immunology of pathogenic organisms with emphasis on infection, aseptic, and sterilizing procedures.

BIO 174: Biology Co-op I 1-3 Credits

Prerequisites: Consent required
Corequisites: None
0 lecture, 0 lab, 0 clinical, 120 other, 120 total contact hours
Fulfills Core Elements: None

Co-op courses provide students with worksite skills and experiences in an approved, compensated position related to their chosen field of study. Together, with an instructor, an employer, and the Workplace Learning Center, the student determines work assignments and learning objectives to connect learning with career-related work experience. Co-op experiences are coordinated by the Workplace Learning Center in conjunction with WCC faculty and cooperating employers. Registration for cooperative education requires attendance at a Co-op Orientation and a faculty signature.

BIO 200: Current Topics in Biology 3 Credits

Prerequisites:
Corequisites: None
45 lecture, 0 lab, 0 clinical, 0 other, 45 total contact hours
Fulfills Core Elements: 7 15 16 17 18

This class is an examination from a biological point of view of the state of current knowledge in various fields of biology. It includes the state of current studies and the extent of our knowledge in the controversial fields of human genetic engineering; the biology of human behavior, human cycles, learning, sleep and cancer. Relationship of such knowledge to future technology and possible social and political implications also are discussed.

BIO 208: Genetics 4 Credits

Prerequisites: BIO 101 and ((CEM 057 until Fall 2002) or CEM 105)
Corequisites: None
45 lecture, 45 lab, 0 clinical, 0 other, 90 total contact hours
Fulfills Core Elements: 5 7 8 9 10 15

Introduction to the basic principles of genetics and their application to viruses, bacteria, plants and animals, including humans. Classical and molecular genetics are covered, with emphasis on experimental and statistical evidence from which genetic mechanisms are deduced. Laboratory experiments demonstrate genetic principles. Students who have taken one year of HS Chemistry with a grade of C or better may have the

BIO 215: Introduction to Cell Physiology 3 Credits

Prerequisites: CEM 111 and BIO 101
Corequisites: BIO 216
45 lecture, 0 lab, 0 clinical, 0 other, 45 total contact hours
Fulfills Core Elements: 7 8 9 10

Introduction to the chemistry and physiology of living cells, including cell metabolism, membrane permeability and excitability, movement and contractile elements, gene expression and protein synthesis. Properties common to all living things will be emphasized, as well as the importance of those properties in the human organism. Students who have experience equivalent to BIO 101 may contact the instructor for permission to waive the pre-requisite.

BIO 216: Cell Physiology Lab 1 Credit

Prerequisites:
Corequisites: BIO 215
0 lecture, 45 lab, 0 clinical, 0 other, 45 total contact hours
Fulfills Core Elements: 6 7 8 9 15 18 19

This is a lab course designed to be taken concurrently with BIO 215, Introduction to Cell Physiology.

the instructor's
signature
prior approval