I. CATALOG INFORMATION

A. Discipline: BIOLOGY

B. Subject Code and Number: BIOL M16L

C. Course Title: Human Biology Lab

D. Credit Course units:

Units: 1

Lecture Hours per week: 0

Lab Hours per week : 3

Variable Units : No

E. Student Learning Hours:

Lecture Hours:

Classroom hours: 0 - 0

Laboratory/Activity Hours:

Laboratory/Activity Hours 52.5 - 52.5

Total Combined Hours in a 17.5 week term: 52.5 - 52.5

F. Non-Credit Course hours per week

G. May be taken a total of: [X] 1 [ ] 2 [ ] 3 [ ] 4 time(s) for credit

H. Is the course co-designated (same as) another course: No [X] Yes [ ]
If YES, designate course Subject Code & Number:

I. Course Description:

Provides hands-on laboratory activities to support the understanding of human biology. Explores, through laboratory exercises, human anatomy and physiology, the scientific method and appropriate data analysis.

J. Entrance Skills

*Prerequisite: No [ ] Yes [X] Course(s)
BIOL M16 or concurrent enrollment.

*Corequisite: No [X] Yes [ ] Course(s)

Limitation on Enrollment: No [X] Yes [ ]

Recommended Preparation: No [X] Yes [ ] Course(s)

Other: No [X] Yes [ ]

K. Other Catalog Information:

II. COURSE OBJECTIVES

Upon successful completion of the course, a student will be able to:

		Methods of evaluation will be consistent with, but not limited by, the following types or examples.
1	demonstrate proper laboratory safety.	Classroom observation Exams Quizzes
2	apply the basic principles of the scientific method.	Laboratory exercise Exams Quizzes
3	understand the significance of water and its properties.	Laboratory activities Exams Quizzes
4	describe the basic aspects of cellular structure and function.	Laboratory exercise Exams Quizzes
5	identify the major organ systems and describe their structure and function.	Laboratory exercise Exams Quizzes
6	describe the process of reproduction at the cellular and organismal levels.	Laboratory exercises Exams Quizzes
7	describe the basics of human genetics, biotechnology, and the genetic basis of disease.	Laboratory exercises Exams Quizzes
8	develop an understanding of the macromolecules and their importance in the human body.	Laboratory exercises Quizzes Exams
9	describe human impacts on the ecosystem.	Laboratory exercises Exams Quizzes

III. COURSE CONTENT

Estimated %	Topic	Learning Outcomes
Lecture (must total 100%)		
Lab (must total 100%)		
5.00%	Scientific Method	1, 2
5.00%	Macromolecules	1, 3, 8
2.00%	Microscopes	1, 2, 4
5.00%	Cells and Tissues	1, 4
50.00%	Organ System Anatomy and Physiology	5
20.00%	Human Genetics: -chromosomes -genes -biotechnology -genes and disease	4, 6, 7
6.00%	Principles of Ecology -the ecosystem -human impacts on the biosphere	9
4.00%	Principles of Evolution	4, 6, 7
3.00%	Human Inheritance -Mendelian -molecular	4, 6, 7

IV. TYPICAL ASSIGNMENTS

A. Writing assignments

Writing assignments are required. Possible assignments may include, but are not limited to:	
1	concept questions on written exams and quizzes.
2	questions based on the laboratory activity and assigned readings.
3	report on a pathology affecting one of the organ systems studied in the course.
4	position paper on humans and their effects on the ecosystem.

B. Appropriate outside assignments

Appropriate outside assignments are required. Possible assignments may include, but are not limited to:	
1	research a specific human disease, and determine if disease pathology is due to a gene malfunction, a pathogen, or is unknown.
2	read a scientific paper that discusses current research on a human disease and how it is treated.

C. Critical thinking assignments

Critical thinking assignments are required. Possible assignments may include, but are not limited to:	
1	critical evaluation of laboratory data provided or measured in the laboratory.
2	questions that ask students to apply their basic knowledge of normal and abnormal human body functions.

3	evaluation of scientific data presented in the scientific literature.

V. METHODS OF INSTRUCTION

Methods of instruction may include, but are not limited to:

- [ ] Distance Education – When any portion of class contact hours is replaced by distance education delivery mode (Complete DE Addendum, Section XV)
- [X] Lecture/Discussion
- [X] Laboratory/Activity
- [X] Other (Specify) Group presentation
- [ ] Optional Field Trips
- [ ] Required Field Trips

VI. METHODS OF EVALUATION

Methods of evaluation may include, but are not limited to:

- [X] Essay Exam
- [X] Classroom Discussion
- [X] Skill Demonstration
- [X] Problem Solving Exam
- [X] Reports/Papers/ Journals
- [X] Participation
- [X] Objective Exams
- [X] Projects
- [X] Other (specify)

Oral presentation
Lab practical
Genetic problems

VII. REPRESENTATIVE TEXTS AND OTHER COURSE MATERIALS

Douglas, Matthew M., and Jonathan M. Douglas. Exploring Human Biology in the Laboratory. Morton, 2016.

Mader, Sylvia. Laboratory Manual for Human Biology. 15th ed. McGraw-Hill, 2018.

VIII. STUDENT MATERIALS FEES

[X] No [ ] Yes

IX. PARALLEL COURSES

College	*Course Number*	*Course Title*	*Units*
Humboldt State	BIOL 102L	Human Biology Lab	1
San Francisco State University	BIOL 101	Human Biology Laboratry	1
Canada College	BIOL 132	Human Biology Laboratry	1

X. MINIMUM QUALIFICATIONS

Courses Requiring a Masters Degree:

Master's degree in any biological science OR bachelor's degree in any biological science AND master's degree in biochemistry, biophysics, or marine science OR the equivalent

XI. ARTICULATION INFORMATION

A. Title V Course Classification:

1. This course is designed to be taken either:

   ☐ Pass/No Pass only (no letter grade possible); or
   ☒ Letter grade (P/NP possible at student option)

2. Degree status:
   Either ☒ Associate Degree Applicable; or ☐ Non-associate Degree Applicable

B. Moorpark College General Education:

1. Do you recommend this course for inclusion on the Associate Degree General Education list?
   Yes: ☒ No: ☐ If YES, what section(s)?

   ☒ A1 - Natural Sciences - Biological Science
   ☐ A2 - Natural Sciences - Physical Science
   ☐ B1 - Social and Behavioral Sciences - American History/Institutions
   ☐ B2 - Social and Behavioral Sciences - Other Social Behavioral Science
   ☐ C1 - Humanities - Fine or Performing Arts
   ☐ C2 - Humanities - Other Humanities
   ☐ D1 - Language and Rationality - English Composition
   ☐ D2 - Language and Rationality - Communication and Analytical Thinking
   ☐ E1 - Health/Physical Education
   ☐ E2 - PE or Dance
   ☐ F - Ethnic/Gender Studies

C. California State University(CSU) Articulation:

1. Do you recommend this course for transfer credit to CSU? Yes: ☒ No: ☐

2. If YES do you recommend this course for inclusion on the CSU General Education list?
   Yes: ☒ No: ☐ If YES, which area(s)?

   A1 ☐ A2 ☐ A3 ☐ B1 ☐ B2 ☐ B3 ☒ B4 ☐

   C1 ☐ C2 ☐ D1 ☐ D2 ☐ D3 ☐ D4 ☐ D5 ☐

   D6 ☐ D7 ☐ D8 ☐ D9 ☐ D10 ☐ E ☐

D. University of California (UC) Articulation:

1. Do you recommend this course for transfer to the UC? Yes: ☒ No: ☐

2. If YES do you recommend this course for the Intersegmental General

Education Transfer Curriculum (IGETC)? Yes: [X] No: [ ]

IGETC Area 1: English Communication

- [ ] English Composition
- [ ] Critical Thinking-English Composition
- [ ] Oral Communication

IGETC Area 2: Mathematical Concepts and Quantitative Reasoning

- [ ] Mathematical Concepts

IGETC Area 3: Arts and Humanities

- [ ] Arts
- [ ] Humanities

IGETC Area 4: Social and Behavioral Sciences

- [ ] Anthropology and Archaeology
- [ ] Economics
- [ ] Ethnic Studies
- [ ] Gender Studies
- [ ] Geography
- [ ] History
- [ ] Interdisciplinary, Social & Behavioral Sciences
- [ ] Political Science, Government & Legal Institutions
- [ ] Psychology
- [ ] Sociology & Criminology

IGETC Area 5: Physical and Biological Sciences (mark all that apply)

- [ ] Physical Science Lab or Physical Science Lab only (none-sequence)
- [ ] Physical Science Lecture only (non-sequence)
- [X] Biological Science
- [ ] Physical Science Courses
- [ ] Physical Science Lab or Biological Science Lab Only (non-sequence)
- [ ] Biological Science Courses
- [ ] Biological Science Lab course
- [ ] First Science course in a Special sequence
- [ ] Second Science course in a Special Sequence
- [X] Laboratory Activity
- [ ] Physical Sciences

IGETC Area 6: Language other than English

- [ ] Languages other than English (UC Requirement Only)
- [ ]

☐ U.S. History, Constitution, and American Ideals (CSU Requirement ONLY)

☐ U.S. History, Constitution, and American Ideals (CSU Requirement ONLY)

XII. REVIEW OF LIBRARY RESOURCES

A. What planned assignment(s) will require library resources and use?

The following assignments require library resources:
Research, using the Library's print and online resources, for papers on such topics as a pathology affecting one of the organ systems studied in the course.

B. Are the currently held library resources sufficient to support the course assignment?

YES: ☒ NO: ☐

If NO, please list additional library resources needed to support this course.

XIII. PREREQUISITE AND/OR COREQUISITE JUSTIFICATION

Requisite Justification for BIOL M16 or concurrent enrollment.

☐ A. Sequential course within a discipline.

☐ B. Standard Prerequisite or Corequisite required by universities.

☒ C. Corequisite is linked to companion lecture course.

☐ D. Prerequisite or Corequisite is authorized by legal statute or regulation.
Code Section: _____

☐ E. Prerequisite or Corequisite is necessary to protect the students' health and safety.

☐ F. Computation or communication skill is needed.

☐ G. Performance courses: Audition, portfolio, tryouts, etc. needed.

XIV. WORKPLACE PREPARATION

BIOL M16L: Not Applicable

XV. DISTANCE LEARNING COURSE OUTLINE ADDENDUM

BIOL M16L: Not Applicable

XVI. GENERAL EDUCATION COURSE OUTLINE ADDENDUM

General Education Division of Learning [check all applicable boxes]:

☒ Natural Sciences

☐

- [X] Biological Science
- [ ] Physical Science

- [ ] Social and Behavioral Sciences
  - [ ] American History/Institutions
  - [ ] Other Social Science
- [ ] Humanities
  - [ ] Fine or Performing Arts
  - [ ] Other Humanities
- [ ] Language and Rationality
  - [ ] English Composition
  - [ ] Communication and Analytical Thinking
- [ ] Health/Physical Education
- [ ] Ethnic/Women's Studies

Check either Option 1 or Option 2

- [X] **OPTION #1:** Moorpark College has already received approval from the CSU and/or UC systems for this course to fulfill a GE requirement. Note: This option applies only to technical revisions and updated courses.
- [ ] **OPTION #2:** Moorpark College has not received approval from the CSU and/or UC systems for this course to fulfill a GE requirement. This option applies to all new and substantively revised courses.

XVII. STUDENT MATERIALS FEE ADDENDUM

BIOL M16L: Not Applicable

XVIII. REPEATABILITY JUSTIFICATION TITLE 5, SECTION 55041

BIOL M16L: Not Applicable

XIX. CURRICULUM APPROVAL

Course Information:

Discipline: BIOLOGY

Discipline Code and Number: BIOL M16L

Course Revision Category: Outline Update

Course Proposed By:

Originating Faculty Audrey Chen 09/12/2018

Faculty Peer: Paul Kores 09/13/2018

Curriculum Rep: Beth Miller 09/12/2018

Department Chair: Audrey Chen 09/12/2018

Division Dean: Carol Higashida 09/13/2018

Approved By:

Curriculum Chair: Jerry Mansfield 02/08/2019

Executive Vice President: _____

Articulation Officer: Letrisha Mai 02/06/2019

Librarian: Mary LaBarge 02/04/2019

Implementation Term and Year: Fall 2019

Approval Dates:

Approved by Moorpark College Curriculum Committee: 02/19/2019

Approved by Board of Trustees (if applicable): _____

Approved by State (if applicable): 02/27/2019