

# COURSE OUTLINE

## SECTION I: COURSE INFORMATION

**COLLEGE:** Los Angeles Southwest College

**SUBJECT TITLE:** BIOLOGY

**COURSE NUMBER:** 5

**COURSE TITLE:** INTRODUCTION TO HUMAN BIOLOGY

**UNITS:** 5

**CATALOG COURSE DESCRIPTION** –Provide a brief description of the course, including an overview of the topics covered:

The course includes basic biological principles as they apply to humans. The course will provide a foundation for advanced courses in Human Anatomy, Physiology and Microbiology. Topics will include human structure, function, heredity, development, evolution, ecology, disease and bio-ethics.

**CLASS HOURS:**

	Hours per week (for 18 weeks)	Total Hours per term
Lecture hours:	3	54
Lab hours:	3	54
Total hours:	6	108

**Note:** The Carnegie Rule and Title 5 section 55002 sets forth the minimum standards, which require 3 hours of work per unit of credit (e.g., hour lecture + 2 hours of home work; 3 hours of lab without homework, etc.). Two hours per week of lab with homework = 1 unit; 3 hours of lab per week without homework = 1 unit. Lecture also includes discussion and/or demonstration hours; laboratory includes activity and/or studio hours.

**SUBJECT CODE:** 133

**SUBJECT ABBREVIATION:** BIOLOGY

**SPC CODE** (assigned by District Office):

**ABBREVIATION FOR TRNASCRIPTS:** BIOLOGY

**DEPARTMENT CODE:** 07

**TOP CODE** (see Taxonomy of Programs at [www.cccco.edu/cccco/esed/curric/curriculum.htm](http://www.cccco.edu/cccco/esed/curric/curriculum.htm)):

**DEGREE APPLICABLE:**  No  Yes

**REPETITION:**

Number of times can this course be repeated for credit (two maximum): None

How does the repetition of this course meet Title 5 sections 55761-55765 and 58161 requirements?

---

Course Subject: BIOLOGY Course Number: 5 Title: General Biology Year: 2002-2003

BASIC SKILLS: NO  Yes

(Title 5, section 55502(d) defines "basic skills as "courses in reading, writing, computation, and English as a Second Language which are designated as non-degree credit courses pursuant to Title 5, section 55002(b).")

**COURSE CLASSIFICATION** (choose only one):

- Liberal Arts and Sciences
- Developmental Preparatory
- Basic Skills
- Course for Substantially Handicapped
- Occupational

**SAM CODE** (choose only one):

- A --Apprenticeship (approved for offering to apprentices only)
- B --Advanced Occupational (but not limited to Apprentices)
- C --Clearly Occupational (but not Advanced)
- D --Possibly Occupational
- E --Non-Occupational

**CROSS REFERENCE** (Is this course listed as equivalent in content to existing college/District courses in another discipline?)

NO  Yes  (If yes, list courses: (documentation of cross-discipline agreement must be provided)

**SPECIAL COURSE FOR STUDENTS WITH DISABILITIES:**

NO  Yes

**PREREQUISITE, CO-REQUISITE, ADVISORY, LIMITATION ON ENROLLMENT**

Prerequisites: NO  Yes  (If yes complete information below)

Subject	Number	Course Title	Units	Validation Approval Date

Coerequisites: NO  Yes  (If yes complete information below)

Subject	Number	Course Title	Units	Validation Approval Date

Advisories: NO  Yes  (If yes complete information below)

Subject	Number	Course Title	Units	Validation Approval Date

**OTHER LIMITATIONS ON ENROLLMENT** (see Title 5, 58106 and Board Rule 6803 for policy on allowable limitations):

Course Subject: BIOLOGY Course Number: 5 Title: General Biology Year: 2002-2003

None

**BIOLOGY 5**  
**Section II: RELATIONSHIP TO PROGRAMS**

**Relationship to College Programs**

**COURSE IS AN APPROVED REQUIREMENT FOR AN APPROVED ASSOCIATE DEGREE OR CERTIFICATE PROGRAM:**

No  Yes  If yes, list program(s) below. Approved programs are listed on the State Chancellor's Office website at [www.cccco.edu/cccco/esed/curric/inventory.htm](http://www.cccco.edu/cccco/esed/curric/inventory.htm)

Recommended Elective only

**COURSE MEETS GENERAL EDUCATION REQUIREMENTS FOR THE ASSOCIATE DEGREE:**

No  Yes  (If yes indicate area)

Plans A and B, Area A, Natural Sciences

**Articulation Information**

(To be completed in consultation with the College Articulation Officer)

**TRANSFER STATUS:**

University of California: YES

California State University: YES

Date requested: Before 1996  
UC approval date: Before 1996

Date requested: Before 1996  
College approval date: Before 1996

**GENERAL EDUCATION FOR TRANSFER:**

IGETC Certification: NO

CSU Certification: NO

Area Requested: Area 5  
Biological Sciences  
Date requested: 2001  
IGETC approval date: 2001

Area Requested: Category B2  
Life Forms  
Date requested: 2001  
CSU approval date: 2001

2<sup>nd</sup> Area Requested: Date  
requested:  
IGETC approval date:

2<sup>nd</sup> Area Requested:  
Date requested:  
CSU approval date:

**MAJOR REQUIREMENTS FOR TRANSFER** – Has this course been articulated to meet lower division major requirements?

NO

**CAN NUMBER:** NO

Date Requested:  
CAN Approval Date:

### SECTION III: COURSE CONTENT AND OBJECTIVES

#### COURSE CONTENT AND OBJECTIVES:

COURSE CONTENT AND SCOPE: OUTLINE TOPICS TO BE INCLUDED IN THE LECTURE PORTION OF COURSE, IF APPLICABLE <i>(Outline reflects course description, all topics covered in class)</i>	Hours per topic	COURSE OBJECTIVES -- Lecture Upon successful completion of this course the student will be able to: <i>(Use action verbs – see Bloom's Taxonomy below for "action verbs requiring cognitive outcomes.")</i>
<ol style="list-style-type: none"> <li>1. Scientific Method, Definition of Life</li> <li>2. Diversity of Life</li> <li>3. Chemical Basis of Life</li> <li>4. Inorganic and Organic Compounds</li> <li>5. Enzymes and Biochemical Reactions</li> <li>6. Structure of the Cell</li> <li>7. Membrane Transport</li> <li>8. Photosynthesis</li> <li>9. Cellular Respiration and Fermentation</li> <li>10. Animal Tissues and Skeletomuscular Systems</li> <li>11. Human Digestive System and Nutrition</li> <li>12. Human Circulatory System</li> <li>13. Human Respiratory System</li> <li>14. Human Urinary System</li> <li>15. Human Reproduction</li> <li>16. Mendelian Genetics</li> <li>17. Human Inheritance</li> <li>18. Gene Expression: Protein Synthesis</li> </ol>		<ol style="list-style-type: none"> <li>1. Student will describe the scientific method and, after reading articles in professional journals, determine the quality of the reported research.</li> <li>2. Student will compare cellular and genetic processes across the 5 Kingdoms of living organisms.</li> <li>3. Student will identify basic human structures, describe their functions and discuss the evolution of the human body.</li> <li>4. Student will describe the disease process and how the human immune system fights off these processes.</li> <li>5. Student will describe the interrelationships between humans, other forms of life and the physical environment.</li> </ol>
Total lecture hours	54	

COURSE CONTENT AND SCOPE: OUTLINE TOPICS INCLUDED IN THE LABORATORY PORTION OF COURSE, IF APPLICABLE <i>(Outline reflects course description, all topics covered in class)</i>	Hours per topic	COURSE OBJECTIVES -- Laboratory Upon successful completion of this course the student will be able to: <i>(Use action verbs – see Bloom's Taxonomy below for "action verbs requiring cognitive outcomes.")</i>
Scientific Methods Metric Measurement and Microscopy Chemical Composition of Cells Cell Structure and Function Human Body Tissues Chemical Aspects of Digestion Energy Requirements and Ideal Weight Cardiovascular System Features of the Cardiovascular System Nervous System and Senses Mitosis and Meiosis Human Genetics DNA and Biotechnology Human Evolution/Effects of Pollution		
Total lab hours	54	

**Bloom's Taxonomy**

Course Subject: BIOLOGY Course Number: 5 Title: General Biology Year: 2002-2003					
SIMPLE SKILLS <<----->>			COMPLEX SKILLS ----->>		
			Critical Thinking		
Knowledge	Comprehension	Application	Analysis	Synthesis	Evaluation
define	translate	interpret	distinguish	compose	judge
repeat	restate	apply	analyze	plan	appraise
record	discuss	employ	differentiate	propose	evaluate
list	describe	use	appraise	design	rate
recall	recognize	demonstrate	calculate	formulate	compare
name	explain	dramatize	experiment	arrange	value
relate	express	practice	test	assemble	revise
underline	identify	illustrate	compare	collect	score
	locate	operate	contrast	construct	select
	report	schedule	criticize	create	choose
	review	shop	diagram	set up	assess
	tell	sketch	inspect	organize	estimate
			debate	prepare	measure
			inventory		
			question		
			relate		
			solve		
			examine		
			categorize		

#### APPROPRIATE READINGS

Reading assignments may include, but are not limited to the following:

Science journals as recommended by the instructor

#### WRITING ASSIGNMENTS:

Writing assignments may involve, but are not limited to the following (Title 5, section 55002 requires grades to be based on demonstrated proficiency in subject matter and the ability to demonstrate that proficiency, at least in part, by means of essays, or, in courses where the curriculum committee deems them to be appropriate, by problemsolving exercises or skills demonstrations by students):

Laboratory reports, Essays/Essay Tests, Term Papers/Projects

#### APPROPRIATE OUTSIDE ASSIGNMENTS:

Out of class assignment may involve, but are not limited to:

Observation Record, Collaboration, Group Projects

#### APPROPRIATE ASSIGNMENTS THAT DEMONSTRATE CRITICAL THINKING:

Critical thinking may include, but is not limited to analysis, synthesis, and evaluation

1. Deducing valid conclusions, identifying reliable conclusions, anticipating or posing problems, synthesizing, comparing and contrasting, justifying, applying principle, conducting experiments and surveys.

#### METHODS OF EVALUATION:

A student's grade is determined by the following. Methods of evaluation may include, but are not limited to the following: (Please note that Title 5, section 55002 requires grades to be based on demonstrated proficiency in

Course Subject: BIOLOGY Course Number: 5 Title: General Biology Year: 2002-2003

subject matter and the ability to demonstrate that proficiency, at least in part, **by means of essays,**" except in courses where, or, in courses where the curriculum committee deems problemsolving exercises or skills demonstrations by students more appropriate:

Observation Record of Student Performance, Essays and Quizzes, Lab Reports, Term Papers/Projects, Problem Solving, Class Participation and Exams Assignment

**METHODS OF INSTRUCTION:**

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

Lecture/Laboratory, Demonstration, Audio Visual, Small Group Experience, Collaboration, Computer Interactive Assignment

**REQUIRED TEXTS:**

Provide a representative list of textbooks and other required reading; include author, title and date of publication:

Human Biology, S. Mader, WCB/McGraw-Hill 7<sup>th</sup> Edition  
Laboratory Manual, Human Biology, S. Mader, WCB/McGraw – Hill 7<sup>th</sup> Edition

**SUPPLIES:**

Provide a list of supplies the college will provide and a list of supplies that the student must provide.

Dissection kit, disposable latex gloves, lab coat

**COMPUTER/INFORMATION LITERACY:**

If applicable, explain how computer/information literacy is infused into the course.

Computer Interactive Assignments and Term Papers/Projects

**CULTURAL DIVERSITY:**

If applicable, explain how cultural literacy is infused into the course.

Content is universal in its application across cultures and demographics

**SCANS COMPETENCIES** (required for all courses with vocational TOP Codes):

SCANS (Secretary's Commission on Necessary Skills) are skills the Department of Labor identified, in consultation with business and industry leaders, which reflect the skills necessary for success in the workplace. Check the appropriate boxes to indicate the areas in where the following skills are developed (please note that all SCANS competencies do not apply to all courses):

RESOURCES

- Manages Time:** Selects relevant goal-related activities, ranks them in order of importance, allocates time to activities, and understands, prepares and follows schedules.
- Manages Money:** Uses or prepares budgets, including making cost and revenue forecasts; keeps detailed records to track budget performance, and makes appropriate adjustments.
- Manages Material and Facility Resources:** Acquires, stores, allocates, and distributes materials, supplies, parts, equipment, space or final products in order to make the best use of them.

INTERPERSONAL

- Participates as Member of a Team:** Works cooperatively with others and contributes to groups efforts with ideas, suggestions and effort
- Teaches Others New Skills:** Helps others learn needed knowledge and skills.
- Exercises Leadership:** Communicates thoughts, feelings, and ideas to justify a position, encourage, persuade, convince or otherwise motivate an individual or group, including responsibly challenging existing procedures, policies or authority.
- Negotiates:** Works toward agreement that may involve exchanging specific resources or resolving divergent interests.
- Works with Cultural Diversity:** Works well with men and women and with people from a variety of ethnic, social, or educational backgrounds.

#### INFORMATION

- Acquires and Evaluates Information:** Identifies a need for data, obtains the data from existing sources or creates them, and evaluates their relevance and accuracy.
- Organizes and Maintains Information:** Organizes, processes and maintains written or computerized records and other forms of information in a systematic fashion.
- Interprets and Communicates Information:** Selects and analyzes information and communicates the results of others using oral, written, graphic, pictorial, or multimedia methods.
- Uses Computers to Process Information:** Employs computers to acquire, organize, analyze and communicate information.

#### SYSTEMS

- Understands Systems:** Knows how social, organizational and technological systems work and operates effectively with them.
- Monitors and Corrects Performance:** Distinguishes trends, predicts impacts of actions on system operations, diagnoses deviations in the functioning of a system/organization, and takes necessary steps to correct performance.
- Improves or Designs Systems:** Makes suggestions to modify existing systems in order to improve the quality of products or services and develops new or alternative systems

#### TECHNOLOGY

- Selects Technology:** Judges which sets of procedures, tools or machines, including computers and their programs, will produce the desired results.
- Applies Technology to Task:** Understands overall intent and proper procedures for setting up and operating machines, including computers and their reprogramming systems.
- Maintains and Troubleshoots Equipment:** Prevents, identifies, or solves problems with equipment, including computers and other technologies.

Course Subject: BIOLOGY Course Number: 5 Title: General Biology Year: 2002-2003

**Section IV: APPROVAL INFORMATION**

**APPROVAL STATUS:**

New Course  District Approval Date:  
Addition of Existing District Course  College Approval Date:  
Course Change  College Approval Date:  
Outline Update  College Approval Date: Oct. 30,02

**INDICATE HOW THE COLLEGE PLANS TO MEET THE EXPENSE OF THIS COURSE: An existing course. No new funding required**

By providing additional funds Describe:

By canceling class sections. Describe:

By deleting/rotating sections of existing courses: Number of Sections to be deleted:

First year:      Second year:      Third year:

Will this directly impact other programs on campus  No  Yes If yes, briefly explain how?

**METHOD OF SUPPORT:** (Indicate How the college plans to support the propose course)

Number of faculty needed: Full-time:      Part-time:

Number of other Staff:      Classified:      Student Worker:

Classroom type needed:

Equipment: Needed -- List equipment is currently available and what new equipment is needed and indicate funding source for any new equipment.

Supplies needed: -- List supplies and indicate dollar value.

Library/Learning Resources -- List existing and needed Library and Learning Resources, including the cost and funding source for needed resources.

College:	Course Subject:	Course Number:	9/20/02
----------	-----------------	----------------	---------

**CERTIFICATION AND RECOMMENDATION**

- This course meets Title 5 requirements for Associate Degree applicable college credit towards an Associate of Arts Degree.
- This course meets Title 5 requirements, but does not satisfy the requirements for an Associate Degree applicable course.

We certify that the information and answers above properly represent this course.