

Glendale College

Course Outline of Record Report

Course ID 005081
Cyclical Review - May 2025

BIOL122 : Introduction To Biology

General Information

Author:	<ul style="list-style-type: none"> Karoline Rostamiani
Course Code (CB01) :	BIOL122
Course Title (CB02) :	Introduction To Biology
Department:	BIOL
Proposal Start:	Spring 2026
TOP Code (CB03) :	(0401.00) Biology, General
CIP Code:	(26.0101) Biology/Biological Sciences, General.
SAM Code (CB09) :	E - Non-Occupational
Distance Education Approved:	No
Will this course be taught asynchronously?:	No
Course Control Number (CB00) :	CCC000330581
Curriculum Committee Approval Date:	05/28/2025
Board of Trustees Approval Date:	07/08/2025
Last Cyclical Review Date:	05/28/2025
Course Description and Course Note:	BIOL 122 is a survey course in biological sciences designed to meet the laboratory science or life science requirement for most general education programs. Students learn about scientific methods, molecular and cellular organization and function, genetics, and plant/animal anatomy and physiology. Students also study evolution, a survey of biodiversity, ecology, and the impact of humans on the environment. Note: A material/lab fee may be required for this course.
Justification:	Mandatory Revision
Academic Career:	<ul style="list-style-type: none"> Credit
Mode of Delivery:	No value
Author:	<ul style="list-style-type: none"> Karoline Rostamiani
Course Family:	No value

Academic Senate Discipline

Primary Discipline:	<ul style="list-style-type: none"> Biological Sciences
Alternate Discipline:	No value
Alternate Discipline:	No value

Course Development

Basic Skill Status (CB08)

Course is not a basic skills course.

Allow Students to Gain Credit by Exam/Challenge

Course Special Class Status (CB13)

Course is not a special class.

Pre-Collegiate Level (CB21)

Not applicable.

Grading Basis

- Grade with Pass / No-Pass Option

Course Support Course Status (CB26)

Course is not a support course

General Education and C-ID

General Education Status (CB25)

Not Applicable

Transferability

Transferable to both UC and CSU

Transferability Status

Approved

Cal-GETC

Area 5B: Biological Science

Area

Biological Science

Status

Approved

Approval Date

09/02/2025

Comparable Course

No Comparable Course defined.

Area 5C: Laboratory

Laboratory

Approved

09/02/2025

GCC General Education Requirements

Area 5: Natural Sciences

Area

Natural Sciences

Status

Approved

Approval Date

09/02/2025

Comparable Course

No Comparable Course defined.

Units and Hours

Summary

Minimum Credit Units (CB07)

4

Maximum Credit Units (CB06)

4

Total Course In-Class (Contact Hours)

108

Total Course Out-of-Class Hours

108

Total Student Learning Hours

216

Credit / Non-Credit Options

Course Type (CB04)

Credit - Degree Applicable

Noncredit Course Category (CB22)

Credit Course.

Noncredit Special Characteristics

No Value

Course Classification Code (CB11)

Credit Course.

Variable Credit Course

Funding Agency Category (CB23)

Not Applicable.

Cooperative Work Experience Education

Status (CB10)

Weekly Student Hours

	In Class	Out of Class
Lecture Hours	3	6
Laboratory Hours	3	0
Studio Hours	0	0

Course Student Hours

Course Duration (Weeks)	18
Hours per unit divisor	0
Course In-Class (Contact) Hours	
Lecture	54
Laboratory	54
Studio	0
Total	108
Course Out-of-Class Hours	
Lecture	108
Laboratory	0
Studio	0
Total	108

Time Commitment Notes for Students

No value

Units and Hours - Weekly Specialty Hours

Activity Name	Type	In Class	Out of Class
No Value	No Value	No Value	No Value

Prerequisites, Corequisites, Recommended Corequisites, and Recommended Preparation

Advisory

ENGLC1000E - Academic Reading and Writing

Objectives

- Read analytically to understand and respond to diverse academic texts.
- Demonstrate strategies for planning, outlining, drafting, revising, editing, and proofreading written work.
- Write timed, in-class essays exhibiting acceptable college-level control of mechanics, organization, development, and coherence.
- Proofread and edit essays for presentation so they exhibit no disruptive errors in English grammar, usage, or punctuation.

AND

Advisory

ENGLC1000H - Academic Reading and Writing - Honors

Objectives

- Read analytically to understand and respond to diverse academic texts.
- Demonstrate strategies for planning, outlining, drafting, revising, editing, and proofreading written work.
- Write timed, in-class essays exhibiting acceptable college-level control of mechanics, organization, development, and coherence.
- Proofread and edit essays for presentation so they exhibit no disruptive errors in English grammar, usage, or punctuation.

AND**Advisory****ENGLC1000 - Academic Reading and Writing****Objectives**

- Read analytically to understand and respond to diverse academic texts.
- Demonstrate strategies for planning, outlining, drafting, revising, editing, and proofreading written work.
- Write timed, in-class essays exhibiting acceptable college-level control of mechanics, organization, development, and coherence.
- Proofread and edit essays for presentation so they exhibit no disruptive errors in English grammar, usage, or punctuation.

Entry Standards

Entry Standards	Description
No value	No value

Course Limitations

Cross Listed or Equivalent Course	Description
No value	No value

Specifications**Methods of Instruction**

Methods of Instruction	Lecture
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Methods of Instruction	Laboratory
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Methods of Instruction	Discussion
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Methods of Instruction	Multimedia
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Methods of Instruction	Collaborative Learning			
Methods of Instruction	Demonstrations			
Methods of Instruction	Field Activites (Trips)			
Methods of Instruction	Presentations			
Out of Class Assignments				
<ul style="list-style-type: none"> • Reading quizzes • Completion of laboratory reports • Homework (e.g., practice Mendelian genetics problems) 				
Methods of Evaluation	Rationale			
Exam/Quiz/Test	Laboratory quizzes			
Exam/Quiz/Test	Lecture exams			
Textbook Rationale				
No Value				
Textbooks				
Author	Title	Publisher	Date	ISBN
Phelan, J.	What is Life? A Guide to Biology with Physiology	New York, NY: W.H. Freeman	2021	978-1319272531
Simon, Eric	Campbell Essential Biology	Pearson	2018	978-0134765037
Other Instructional Materials (i.e. OER, handouts)				
Description	Concepts of Biology			
Author	Samantha Fowler, Rebecca Roush, and James Wise			
Citation	https://openstax.org/details/books/concepts-biology			
Online Resource(s)	OER			

Description	Biology 122 Lab Manual
Author	GCC Biology Division, 2020
Citation	No value
Online Resource(s)	No value

Learning Outcomes

Course Objectives

Describe the structure of atoms, the properties of water and structure and function of biological macromolecules.

Describe the flow of information from DNA to protein.

Describe the mechanisms of evolution including natural selection.

Describe basic ecological principles and the impact of humans on the environment.

Identify the defining characteristics of major groups of organisms.

Compare prokaryotic and eukaryotic cells, and describe the structure and function of eukaryotic organelles.

Describe the principles of inheritance and solve basic Mendelian genetics problems.

Describe basic principles of mammalian physiology.

Describe the flow of information from DNA to protein.

SLOs

Explain the basic principles of population and community ecology and describe the effects of human activities on the biosphere.

Expected Outcome Performance: 70.0

<i>BIOL</i> Health Science - A.S. Degree Major	Be well-prepared for courses in the health science professions
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<i>BIOL</i> Health Science AS Degree	Be well-prepared for courses in the health science professions
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<i>ILOs</i> Core ILOs	Communicate clearly, ethically, and creatively; listen actively and engage respectfully with others; consider situational, cultural, and personal contexts within or across multiple modes of communication.
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<i>PSYCH</i> Psychology - AA-T	Communicate how genetics and environmental factors interact to affect behaviors. Students will be able to critically analyze research articles.
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<i>SOC</i> Social Work and Human Services AA-T Degree	Explain the qualities and characteristics of effective human service professionals who view clients as whole persons in the context of their family, culture, and community using a biopsychosocial perspective.
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<i>BIOL</i> Biotechnology A.S. Degree	Fulfill requirements for transfer to a college with a BS in Biotechnology
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<i>ILOs</i> General Education	apply reasoning to evaluate hypotheses and theories
	examine causality or associations between or among variables of the natural world

Explain the major mechanisms of evolution and identify the defining characteristics of major groups of organisms. Expected Outcome Performance: 70.0

<i>BIOL</i> Biotechnology Research Lab Assistant Certificate	Acquire work-readiness skills
	Learn skills necessary for a manufacturing or biomanufacturing technician job

<i>BIOL</i> Biotechnology Certificate	Acquire work-readiness skills
	Master basic biotechnology laboratory skills

<i>BIOL</i> Biotechnology A.S. Degree	Acquire work-readiness skills
	Fulfill requirements for transfer to a college with a BS in Biotechnology
	Learn skills necessary for a lab technician job

<i>BIOL</i> Biotechnology Research Lab Technician Certificate	Acquire work-readiness skills
	Learn necessary skills for a lab technician job

<i>BIOL</i> Health Science - A.S. Degree Major	Be well-prepared for courses in the health science professions
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<i>BIOL</i> Health Science AS Degree	Be well-prepared for courses in the health science professions
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<i>ILOs</i> Core ILOs	Communicate clearly, ethically, and creatively; listen actively and engage respectfully with others; consider situational, cultural, and personal contexts within or across multiple modes of communication.
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<i>PSYCH</i> Psychology - AA-T	Communicate how genetics and environmental factors interact to affect behaviors. Students will be able to critically analyze research articles.
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<i>SOC</i> Social Work and Human Services AA-T Degree	Explain the qualities and characteristics of effective human service professionals who view clients as whole persons in the context of their family, culture, and community using a biopsychosocial perspective.
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<i>ILOs</i> General Education	apply reasoning to evaluate hypotheses and theories
	examine causality or associations between or among variables of the natural world

Define a gene, demonstrate the flow of information from DNA to protein, and solve basic Mendelian genetics problems.

Expected Outcome Performance: 70.0

<i>BIOL</i> Biotechnology Research Lab Assistant Certificate	Acquire work-readiness skills
	Learn skills necessary for a manufacturing or biomanufacturing technician job
	Master basic biotechnology laboratory skills and good documentation practices in biomanufacturing
<i>BIOL</i> Biotechnology Certificate	Acquire work-readiness skills
	Learn skills necessary for a manufacturing technician job
	Master basic biotechnology laboratory skills
<i>BIOL</i> Biotechnology Research Lab Technician Certificate	Acquire work-readiness skills
	Learn necessary skills for a lab technician job
	Master advanced biotechnology laboratory skills and good documentation practices
<i>BIOL</i> Biotechnology A.S. Degree	Acquire work-readiness skills
	Fulfill requirements for transfer to a college with a BS in Biotechnology
	Learn skills necessary for a lab technician job
	Master advanced biotechnology laboratory skills and good documentation practices
<i>ILOs</i> Core ILOs	Analyze and solve problems using critical, logical, and creative thinking; ask questions, pursue a line of inquiry, and derive conclusions; cultivate creativity that leads to innovative ideas.
	Communicate clearly, ethically, and creatively; listen actively and engage respectfully with others; consider situational, cultural, and personal contexts within or across multiple modes of communication.
<i>BIOL</i> Health Science - A.S. Degree Major	Be well-prepared for courses in the health science professions
<i>BIOL</i> Health Science AS Degree	Be well-prepared for courses in the health science professions
	Identify anatomical structures and describe the functions of important systems in the human body
<i>PSYCH</i> Psychology - AA-T	Communicate how genetics and environmental factors interact to affect behaviors. Students will be able to critically analyze research articles.
<i>SOC</i> Social Work and Human Services AA-T Degree	Explain the qualities and characteristics of effective human service professionals who view clients as whole persons in the context of their family, culture, and community using a biopsychosocial perspective.
<i>ILOs</i> General Education	apply reasoning to evaluate hypotheses and theories
	examine causality or associations between or among variables of the natural world
Describe eukaryotic cell structure and cell division (mitosis and meiosis).	
Expected Outcome Performance: 70.0	
<i>BIOL</i> Biotechnology Research Lab Assistant Certificate	Acquire work-readiness skills
	Master basic biotechnology laboratory skills and good documentation practices in biomanufacturing
<i>BIOL</i> Biotechnology A.S. Degree	Acquire work-readiness skills
	Fulfill requirements for transfer to a college with a BS in Biotechnology
	Master advanced biotechnology laboratory skills and good documentation practices

<i>BIOL</i> Biotechnology Research Lab Technician Certificate	Acquire work-readiness skills Master advanced biotechnology laboratory skills and good documentation practices
<i>BIOL</i> Health Science - A.S. Degree Major	Be well-prepared for courses in the health science professions Identify anatomical structures and describe the functions of important systems in the human body
<i>BIOL</i> Health Science AS Degree	Be well-prepared for courses in the health science professions Identify anatomical structures and describe the functions of important systems in the human body
<i>ILOs</i> Core ILOs	Communicate clearly, ethically, and creatively; listen actively and engage respectfully with others; consider situational, cultural, and personal contexts within or across multiple modes of communication.
<i>PSYCH</i> Psychology - AA-T	Communicate how genetics and environmental factors interact to affect behaviors. Students will be able to critically analyze research articles.
<i>SOC</i> Social Work and Human Services AA-T Degree	Explain the qualities and characteristics of effective human service professionals who view clients as whole persons in the context of their family, culture, and community using a biopsychosocial perspective.
<i>BIOL</i> Biotechnology Certificate	Master basic biotechnology laboratory skills
<i>ILOs</i> General Education	apply reasoning to evaluate hypotheses and theories examine causality or associations between or among variables of the natural world

Course Content

Lecture Content

Scientific Method (3 hours)

- Metric system
- Hypothesis and theory
- Biological organization

Basic Chemistry (9 hours)

- Atoms and bonding
- Properties of water
- Macromolecules
- Carbohydrates
- Lipids
- Proteins
- Nucleic acids

Cell Structure and Function (3 hours)

- Prokaryote vs. eukaryote
- Plant vs. animal
- Cellular organelles
- Diffusion and osmosis

Energy (3 hours)

- Kinetic vs. potential
- Photosynthesis
- Cellular respiration

Cell Division (4 hours)

- DNA replication
- Mitosis
- Meiosis

- Cancer
- Non-disjunction

Mendelian Genetics (5 hours)

- Mendel's pea plants
- Incomplete and co-dominance
- Sex-linked traits
- Dihybrid cross and linked genes

DNA and Biotechnology (4 hours)

- Transcription
- Translation
- Biotechnology
- Gene therapy
- Genetically modified crops
- Forensic applications

Evolution (10 hours)

- Historical perspective
- Mechanisms
- Natural selection
- Genetic drift
- Gene flow
- Mutation
- Non-random mating
- Evidence
- Fossil record
- Biogeography
- Long-term experiments

Origin of Life (5 hours)

- Big bang and early earth
- RNA world and first cells
- Origin of eukaryotes and Cambrian explosion
- Speciation
- Vertebrate origins

Ecology (5 hours)

- Populations
- Communities
- Ecosystems
- Human impact on the biosphere

Mammalian Physiology (3 hours)

- Sensory physiology
- Digestive system
- Circulatory and respiratory systems
- Reproductive system

Total hours: 54

Laboratory/Studio Content**Scientific Method (3 hours)**

- Metric system
- Hypothesis and theory
- Biological organization

Basic Chemistry (3 hours)

- Atoms and bonding
- Properties of water
- Macromolecules
- Carbohydrates
- Lipids
- Proteins
- Nucleic acids

Cell Structure and Function (7 hours)

- Prokaryote vs. eukaryote
- Plant vs. animal
- Cellular organelles
- Diffusion and osmosis

Energy (3 hours)

- Kinetic vs. potential
- Photosynthesis
- Cellular respiration

Cell Division (3 hours)

- DNA replication
- Mitosis
- Meiosis
- Cancer
- Non-disjunction

Mendelian Genetics (3 hours)

- Mendel's pea plants
- Incomplete and co-dominance
- Sex-linked traits
- Dihybrid cross and linked genes

DNA and Biotechnology (3 hours)

- Transcription
- Translation
- Biotechnology
- Gene therapy
- Genetically modified crops
- Forensic applications

Evolution (3 hours)

- Historical perspective
- Mechanisms
- Natural selection
- Genetic drift
- Gene flow
- Mutation
- Non-random mating
- Evidence
- Fossil record
- Biogeography
- Long-term experiments

Ecology (8 hours)

- Populations
- Communities
- Ecosystems
- Human impact on the biosphere

Biodiversity Survey (12 hours)

- Microorganisms
- Plants
- Animals
- Focus on mammals (Greater Los Angeles Zoo)

Mammalian Physiology (6 hours)

- Sensory physiology
- Digestive system
- Circulatory and respiratory systems
- Reproductive system

Total hours: 54

Additional Information**Repeatability**

Not Repeatable

Justification (if repeatable was chosen above)

No Value

Is it possible this course will have a material fee?

Yes

I have contacted my library liaison (<https://campusguides.glendale.edu/faculty/liasons>):

No

What term(s) will this course be offered?

Fall/Winter/Spring/Summer

Will any additional resources be needed for this course? (Click all that apply)

- No

If additional resources are needed, add a brief description and cost in the box provided.

No Value