

Glendale College

Course Outline of Record Report

Course ID 005082
Cyclical Review - May 2025

BIOL123 : Evolution

General Information

Author:	<ul style="list-style-type: none"> Karoline Rostamiani
Course Code (CB01) :	BIOL123
Course Title (CB02) :	Evolution
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) :	CCC000169702
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 123 examines the history of life on earth and the mechanisms that have led to the diversity we see today. Students study a brief history of evolutionary thought, adaptive vs. neutral evolution (natural selection and genetic drift), biogeography, the origin of life, population genetics and speciation, an exploration of the fossil record and modern systematics, and recent work in the fields of sexual selection, behavior, development, and human evolution.
Justification:	Mandatory Revision
Academic Career:	<ul style="list-style-type: none"> Credit
Mode of Delivery:	<ul style="list-style-type: none"> In-Person
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.

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)

3

Maximum Credit Units (CB06)

3

Total Course In-Class (Contact) Hours

54

Total Course Out-of-Class Hours

108

Total Student Learning Hours

162

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)

Funding Agency Category (CB23)

Cooperative Work Experience Education Status (CB10)

Credit Course.

Not Applicable.

Variable Credit Course

Weekly Student Hours

	In Class	Out of Class
Lecture Hours	3	6
Laboratory Hours	0	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	0
Studio	0
Total	54
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.
- Find, evaluate, analyze, and interpret primary and secondary sources, incorporating them into written essays using appropriate documentation format.

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.
- Find, evaluate, analyze, and interpret primary and secondary sources, incorporating them into written essays using appropriate documentation format.

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.
- Find, evaluate, analyze, and interpret primary and secondary sources, incorporating them into written essays using appropriate documentation format.

Entry Standards

Entry Standards	Description
No value	No value

Course Limitations

Cross Listed or Equivalent Course	Description
BIOL 123H	No Value

Specifications**Methods of Instruction**

Methods of Instruction	Lecture
Methods of Instruction	Discussion
Methods of Instruction	Multimedia

Methods of Instruction	Collaborative Learning			
Methods of Instruction	Demonstrations			
Out of Class Assignments				
<ul style="list-style-type: none"> • Written responses to assigned readings or videos • Homework exercises (e.g., radiometric dating of fossils, DNA sequence database search) 				
Methods of Evaluation	Rationale			
Exam/Quiz/Test	Quizzes			
Activity (answering journal prompt, group activity)	Homework exercises			
Presentation (group or individual)	Student presentations			
Exam/Quiz/Test	Exams			
Textbook Rationale				
No Value				
Textbooks				
Author	Title	Publisher	Date	ISBN
Emlen, Douglas J. Zimmer, Carl	Evolution: Making Sense of Life	WH Freeman	2019	978-13190-79864
Other Instructional Materials (i.e. OER, handouts)				
No Value				

Learning Outcomes

Course Objectives

Describe Darwin's contribution to our understanding of how evolution works.

Describe the major evolutionary forces that act to change populations over time.

Explain the processes of speciation and adaptive radiation.

Describe key events in the history of life on earth, including the origin of life and major extinction events.

Identify some important finds in the fossil record and Describe what they demonstrate about the nature of evolution.

Describe what is known about human evolution and the impact of our evolutionary past on modern humans.

SLOs

Describe the mechanisms of evolution and their influences on populations over time.

Expected Outcome Performance: 70.0

ILOs
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.

ILOs
General apply reasoning to evaluate hypotheses and theories
Education examine causality or associations between or among variables of the natural world

Describe the processes of speciation and their responsibility for the diversity of life on earth.

Expected Outcome Performance: 70.0

ILOs
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.

ILOs
General apply reasoning to evaluate hypotheses and theories
Education examine causality or associations between or among variables of the natural world

Interpret evolutionary relationships as depicted in a cladogram or phylogeny.

Expected Outcome Performance: 70.0

ILOs
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.

ILOs
General analyze, interpret, and present research evidence
Education apply reasoning to evaluate hypotheses and theories

examine causality or associations between or among variables of the natural world

Identify key events in the history of life on earth, including fossil discoveries and extinctions.

Expected Outcome Performance: 70.0

ILOs
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.

ILOs
General apply reasoning to evaluate hypotheses and theories
Education

Course Content

Lecture Content

Overview of Topics in Evolutionary Biology (2 hours)

- Importance of understanding life and biodiversity
- Evolution as descent with modification
- Common ancestry
- The fossil record

History of Evolutionary Ideas (6 hours)

- Pre-Darwinian Ideas
- Charles Darwin
- Influences on Darwin

Deep Time (3 hours)

- Radiometric dating
- The fossil record

Genetics Primer (3 hours)

- Mendelian Inheritance
- Mitosis and Meiosis
- Transcription and Translation

Microevolution (10 hours)

- Mutation
- Genetic drift
- Gene flow
- Natural Selection
 - Stabilizing
 - Directional
 - Diversifying

Speciation (3 hours)

- Allopatric vs. Sympatric
- Pre-zygotic vs. Post-zygotic isolation
- Biological Species Concepts
- Adaptive radiations

Origin of Life (3 hours)

- RNA world
- Prokaryotes and the origin of photosynthesis
- Endosymbiosis and the origin of eukaryotes

Development (3 hours)

- Homologous features
- Master control genes
- Gene duplication
- Constraints

Extinction (3 hours)

- History of mass extinctions
- Permian extinction and Pangaea
- K-T extinction and the rise of mammals
- Human-caused extinctions

Co-evolution (3 hours)

- Mutualism
- Arms race

Disease and Evolutionary Medicine (3 hours)

- Parasite and host
- Bacteria and antibiotic resistance
- Viruses (HIV case study)

Evolution of Sex (3 hours)

- The two-fold cost of sex

- Advantages of sexual reproduction
- Sexual selection
- Mating systems

Behavior (3 hours)

- Parent-offspring conflict
- Maternal investment
- Cooperation and inclusive fitness

Phylogeny and Systematics (3 hours)

- Biological classification
- Cladistics
- DNA sequence comparisons

Human Evolution (3 hours)

- Human ancestry
- Modern humans and our evolutionary legacy

Total hours= 54**Laboratory/Studio Content**

No value

Additional Information**Repeatability**

Not Repeatable

Justification (if repeatable was chosen above)

No Value

Is it possible this course will have a material fee?

No

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