

# FOUR YEAR PLAN | Biology with an Education Minor

VISTA :: Biology:: Department of Biological Sciences  
This is a sample 4-year plan for **ODD** years. Students are required to meet with their Academic Advisors each semester.



YEAR ONE

## FALL SEMESTER

COURSE #	COURSE NAME	UNITS
BIOL 111/L	Principles of Cell and Molecular Biology	4
CHEM 120/L	General Chemistry I <sup>1</sup>	4
NT 101C	Cornerstone	1
MATH 180C	New Testament Survey	3
KINE 146C	Calculus I <sup>1</sup>	4
	Lifetime Fitness and Wellness (Activity)	1
TOTAL		17

## SPRING SEMESTER

COURSE #	COURSE NAME	UNITS
BIOL 112/L	Principles of Organismal Biology	4
CHEM 121/L	General Chemistry II	4
POLS 155C	American Democracy <sup>2</sup>	3
PSYC 103C	Introduction to Psychology	3
OT 201C	Old Testament Survey	3
KINE 145C	Lifetime Fitness and Wellness (Lecture)	1
TOTAL		18

YEAR TWO

## FALL SEMESTER

COURSE #	COURSE NAME	UNITS
BIOL 220/L	Cell Biology	4
ENGL 120C	Persuasive Writing	3
ANTH 102C or SOC 100C	Introduction to Cultural Anthropology or Introduction to Sociology	3
THEO 101C	Foundations of Christian Life	3
HIST 203C or HIST 204C	World Civilization I or World Civilization II	3
TOTAL		16

## SPRING SEMESTER

COURSE #	COURSE NAME	UNITS
COMM 201C	Speech Composition	3
FINA	Fine Arts Requirement	3
THEO 300C	Christian World View	3
ANTH 453	Language, Culture and Linguistics <sup>2</sup>	3
BIOL 311/L	Genetics / Lab	4
TOTAL		16

YEAR THREE

## FALL SEMESTER

COURSE #	COURSE NAME	UNITS
PSCI 130C/ L	General Physics I or Mechanics and Heat	4
CHEM 304/L	Organic Chemistry I	4
ENGL 220C	Researched Writing	3
EDUC 315	Teaching in a Multicultural Setting	3
BIOL 309/L	Microbiology	4
BIOL 450	Biology Research or Internship <sup>3</sup>	2
TOTAL		18-20

## SPRING SEMESTER

COURSE #	COURSE NAME	UNITS
PSCI 131/ PSCI 225	General Physics II or Electricity, Magnetism and Light	4
ELECTIVE	BIOL Elective and Lab	4
BIOL 346C	Desert Field Ecology <sup>4</sup>	4
ENGL 230C	Literature/Human Experience	4
CHIS 400C	Christian Heritage	3
TOTAL		18

YEAR FOUR

## FALL SEMESTER

COURSE #	COURSE NAME	UNITS
EDUC 424	Foundations in Teaching SS	2
EDUC 426	Instructional Design and Pedagogy	4
EDUC 435	Early Supervised Field Work	4
EDUC 444	Language Acquisition	1
EDUC 447	Metacognition and Reading	1
EDUC 452	Literacy in the Content Area	1
EDUC 464	Use of Technology in the Classroom	1
EDUC 442	Cal TPA Cycle 1 BST	0.5
TOTAL		14.5

## SPRING SEMESTER

COURSE #	COURSE NAME	UNITS
BIOL 499C	Capstone	2
EDUC 434	Curriculum Unit Planning for SS	2
EDUC 488	Clinical Practice Seminar for SS	2
EDUC 489	Clinical Practice Fieldwork for SS	8
EDUC 443	Cal TPA Cycle 2 AST	0.5
TOTAL		14.5

### NOTES

<sup>1</sup> A passing score on the placement exam is required for enrollment.

<sup>2</sup> POLS 155C and ANTH 453 are Credential program requirements.

<sup>3</sup> BIOL 485 is typically taught in summer. A limited number of fellowships are available. Off-campus internships (BIOL 450) as well as Senior Project (BIOL 488) are acceptable for degree requirements.

<sup>4</sup> Options for Ecology requirements include: BIOL 315/L, BIOL 348C, BIOL 346C, and BIOL 345C.



**VISTA PROGRAM: BIOLOGY 134 units**  
Biology Integrated Teaching Credential with an Education Minor

**Core Curriculum**

- CORE 100C** ..... 1  
Core 100C: Cornerstone
- ENGL 120C** ..... 3  
ENGL 120C: Persuasive Writing
- KINE 145C/146C** ..... 2  
o KINE 145C: Lifetime Fitness (Lecture)  
o KINE 146C: Lifetime Fitness (Activity)
- POLS 155C** ..... 3  
<sup>1</sup> POLS 155C: American Democracy
- COMM 201C** ..... 3  
COMM 201C: Speech Composition
- ENGL 220C** ..... 3  
ENGL 220C: Researched Writing
- ENGL 230C** ..... 3  
ENGL 230C: Literature/Human Exp.
- Social Science (CHOOSE 2)** ... 6  
o ANTH 102C: Intro to Cultural Anthro  
o PSYC 103C: General Psychology  
o SOC 100C: Intro to Sociology
- World Civilization (CHOOSE 1)** 3  
o HIST 203C: World Civilization I  
o HIST 204C: World Civilization II
- Fine Arts (CHOOSE 1)** ..... 3  
ART 252C, FINA 215C, MUJZ 355C,  
MUSC 202C, THEA 102C, THEA  
200C, THEA 202C
- Bible/Theology** ..... 15
- NT 101C: New Testament Survey .. 3
- Theology (Choose 1) ..... 3  
o THEO 101C: Found/Christian Life  
o THEO 103C: Intro to Theology
- OT 201C: Old Testament Survey .. 3
- THEO 300C: Christian World View 3
- CHIS 400C: Christian Heritage .... 3

Total Core units ..... 30  
Total Bible/Theology units ..... 15  
**Total Core units ..... 45**

**VISTA: Biology  
LOWER DIVISION**

- BIOL 111/L** ..... 4  
<sup>+</sup> Principles of Cell & Molecular Biology
- BIOL 112/L** ..... 4  
<sup>+</sup> Principles of Organismal Biology
- CHEM 120/L** ..... 4  
General Chemistry I
- CHEM 121/L** ..... 4  
General Chemistry II
- Physical Science (Choose 1)**.. 4  
o PSCI 130C/L: General Physics I  
o PSCI 223C/L: Mechanic and Heat
- Physical Science (Choose 1)**.. 4  
o PSCI 131/L: General Physics II  
o PSCI 225/L: Electricity/Mag./Light
- Math 180C**..... 4  
Calculus I
- BIOL 220/L** ..... 4  
Cell Biology

**UPPER DIVISION**

- CHEM 304/L** ..... 4  
Organic Chemistry I
- BIOL 309/L** ..... 4  
<sup>+</sup> Microbiology
- BIOL 311/L** ..... 4  
<sup>+</sup> Genetics
- EDUC 315** ..... 3  
Teaching in Multicultural Setting
- + Ecology (Choose 1)** ..... 4  
o BIOL 315/L: General Ecology  
o BIOL 345C: Mountain Field Ecology  
o BIOL 346C: Desert Field Ecology  
o BIOL 348C: Coastal Ecology
- ANTH 453**..... 3  
Language, Culture & Linguistics
- Research/Project (Choose 1)** 2  
o BIOL 450: Internship Program  
o BIOL 485: Undergraduate Research  
o BIOL 488: Biology Senior Project
- BIOL 499C** ..... 2  
Capstone Seminar in Chemistry
- Elective** ..... 4  
Biology Elective & Lab

Lower Division units ..... 32  
Upper Division units ..... 30  
**Total Biology units ..... 62**

**Single Subject Credential  
FIRST SEMESTER:**

- EDUC 424**..... 2  
Foundations in Teaching Single Subject
- EDUC 426**..... 4  
Instructional Design & Subject Specific  
Pedagogy for Single Subject
- EDUC 435**..... 4  
<sup>2</sup> Early Supervised Field Work
- EDUC 444**..... 1  
Language Acquisition for the  
Secondary Student
- EDUC 447**..... 1  
Metacognition & Reading Strategies for  
Student Learning
- EDUC 452**..... 1  
Literacy in the Content Area
- EDUC 464**..... 1  
Use of Technology in the Classroom
- EDUC 442**..... 0.5  
Cal TPA Cycle 1 BST

**SECOND SEMESTER:**

- EDUC 434**..... 2  
Curriculum Unit Planning for SS
- EDUC 488**..... 2  
Clinical Practice Seminar for SS
- EDUC 489**..... 8  
<sup>3</sup> Clinical Practice Fieldwork for SS
- EDUC 443**..... 0.5  
Cal TPA Cycle 2 AST

**LEGEND:**

- <sup>+</sup> Subject Matter Preparation Program (SMPP) Required Courses
- <sup>1</sup> Credential Program Requirement
- <sup>2</sup> BST Semester: 2 full-time days per week (100 hours) at a school site. Lab Fee.
- <sup>3</sup> AST Semester: 5 full-time days per week (500 hours) at a school site. Lab Fee.

First semester ..... 14.5  
Second semester ..... 12.5  
**Total Credential units ..... 27**