# B.S. in BIOLOGICAL SCIENCES (AY 2023-2024)
# CONCENTRATION IN ECOLOGY AND EVOLUTIONARY BIOLOGY (75 units)

## CORE REQUIREMENTS (39 units)

| ***Lower Division BIOL Courses*** | ***Units*** | ***Offered*** | ***Prerequisites*** |
|---|---|---|---|
| BIOL 140A Principles of Cell & Molecular Biology | 5 | Fall & Spring | N/A |
| BIOL 140B Principles of Organismal Biology | 5 | Fall & Spring | BIOL 140A* |
| ***subtotal*** | **10** | | |

| ***Lower Div Physical Science & Math Courses*** | ***Units*** | ***Offered*** | ***Prerequisites*** |
|---|---|---|---|
| CHEM 111 *& 111L Gen Chem I (Lec) & Lab* | 5 | Fall & Spring | MATH 120(25) or 130 (co-) |
| CHEM 112 *General Chemistry II* | 5 | Fall & Spring | CHEM 111 & 111L* |
| MATH 130 *Calculus I* | 4 | Fall & Spring | MATH 120 |
| PHYS 125, 126 *Principles of Physics I & II* | 8 | Fall & Spring | MATH 120 |
| ***subtotal*** | **22** | | |

| ***Upper Division BIOL Courses*** | ***Units*** | ***Offered*** | ***Prerequisites*** |
|---|---|---|---|
| BIOL 310 *Genetic Analysis I* | 4 | Fall & Spring | BIOL 140B* |
| BIOL 320 *Evolutionary Biology* | 3 | Fall & Spring | BIOL 310* |
| ***subtotal*** | **7** | | |

## CONCENTRATION REQUIREMENTS (36 units)

| ***Upper Division BIOL Courses*** | ***Units*** | ***Offered*** | ***Prerequisites*** |
|---|---|---|---|
| BIOL 350 *Ecology* | 4 | Fall & Spring | BIOL 140B* |
| BIOL 370 *Animal Physiology* | 4 | Fall & Spring | BIOL 140B*, CHEM 112 |
| BIOL 460 *EEB Undergraduate Seminar* | 2 | Spring | BIOL 350 |
| BIOL 469 *Conservation Biology*** | 4 | Spring | BIOL 350 |
| ***subtotal*** | **14** | | |

| ***Upper Division Physical Science Courses*** | ***Units*** | ***Offered*** | ***Prerequisites*** |
|---|---|---|---|
| CHEM 230 *Survey of Organic Chemistry* | 5 | Fall | CHEM 112* |
| CHEM 340 *Survey of Biochemistry* | 3 | Fall & Spring | CHEM 230* or 332* |
| STATS 303 *Statistical Methods in Biology* | 3 | Fall & Spring | GE Area B4 |
| ***subtotal*** | **11** | | |

***Upper Division Electives (select at least 11 units from the list of courses below)***
***(Note: BIOL 490 Independent Study, BIOL 493 Directed Research in Biology, BIOL 498 Internship*** *or a combination of two or more of these courses may be used for a maximum total of 3 units of elective credit. Enrollment in these courses requires approval by a faculty member and the Department Chair)..*

| ***Elective Courses*** | ***Units*** | ***Offered*** | ***Prerequisites*** |
|---|---|---|---|
| BIOL 315 *Marine Biology* | 3 | Intermittently | BIOL 310 |
| BIOL 352 *Biogeography* | 4 | Fall *(every other yr)* | BIOL 350 |
| BIOL 356 *Freshwater Environments* | 4 | Intermittently | BIOL 350 |
| BIOL 368 *Fungi of California* | 3 | Fall *(every other yr)* | BIOL 140B |
| BIOL 415 *PCR. Sequencing & Fragment Analysis* | 3 | Fall | BIOL 310 |
| BIOL 424 *Bioinformatics* | 3 | Fall | BIOL 310 |
| BIOL 454 *Biology of Fungi* | 4 | Fall *(every other yr)* | BIOL 140B |
| BIOL 458 *Animal Behavior* | 4 | Intermittently | BIOL 140B |
| BIOL 468 *Molecular Ecology* | 4 | Intermittently | BIOL 320 |
| BIOL 475 *Global Change Biology* | 4 | Spring | BIOL 370 |
| BIOL 488 *Environmental Physiology* | 3 | Fall | BIOL 370 |

* Must pass this prerequisite course with a C- or better to move onto the next course.
**Capstone course for the *Ecology and Evolutionary Biology* concentration.

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- FOR MAJOR CHECKS (Graduation): Mr. Avel Perez (avel.perez@csueastbay.edu) or cscistudentcenter@csueastbay.edu

**DEGREE:** B.S. in Biological Sciences (AY 2023-24)
**CONCENTRATION:** Ecology and Evolutionary Biology

Graduation Semester: _____

Name (Last, First): _____

Net ID: _____

## CORE REQUIREMENTS

| Course | Grade | Semester & Year | Units | College/University Where Equivalent Course Was Taken | Equivalent Course Number | TES Verification |
|---|---|---|---|---|---|---|
| CHEM 111 | | | 3 | | | |
| CHEM 111L | | | 2 | | | |
| CHEM 112 | | | 5 | | | |
| PHYS 125 | | | 4 | | | |
| PHYS 126 | | | 4 | | | |
| MATH 130 | | | 4 | | | |
| BIOL 140A | | | 5 | | | |
| BIOL 140B | | | 5 | | | |
| BIOL 310 | | | 4 | | | |
| BIOL 320 | | | 3 | | | |

## CONCENTRATION REQUIREMENTS

| Course | Grade | Semester & Year | Units | College/University Where Equivalent Course Was Taken | Equivalent Course Number | TES Verification |
|---|---|---|---|---|---|---|
| CHEM 230 | | | 5 | | | |
| CHEM 340 | | | 3 | | | |
| STATS 303 | | | 3 | | | |
| BIOL 350 | | | 4 | | | |
| BIOL 370 | | | 4 | | | |
| BIOL 460 | | | 4 | | | |
| BIOL 469 | | | 4 | | | |

## ELECTIVES (at least 11 units from the courses below)

| Course | Grade | Semester & Year | Units | College/University Where Equivalent Course Was Taken | Equivalent Course Number | TES Verification |
|---|---|---|---|---|---|---|
| BIOL 315 | | | 3 | | | |
| BIOL 352 | | | 4 | | | |
| BIOL 368 | | | 3 | | | |
| BIOL 415 | | | 3 | | | |
| BIOL 424 | | | 3 | | | |
| BIOL 454 | | | 4 | | | |
| BIOL 458 | | | 4 | | | |
| BIOL 466 | | | 4 | | | |
| BIOL 468 | | | 4 | | | |
| BIOL 475 | | | 4 | | | |
| BIOL 490 | | | | | | |
| BIOL 493 | | | | | | |
| BIOL 498 | | | | | | |

Total Units for Concentration: (75 min.) _____

Note: A C- or better required in all courses that serve as a prerequisite.