

# MINOR IN NATURAL SCIENCES



- By completing the minor, future teachers:
  - Gain additional preparation in science content areas;
  - Learn about important and current concepts and issues in science; and
  - Prepare for teaching earth, life, and physical science in grades 5-10.
- The minor readily combines with any major when the student carefully selects the appropriate lower division general education classes. Assuming efficient lower division GE science selections, the minor may require only 9-11 units of additional coursework.

## There are two credential pathways to middle school science teaching via the Foundational Level General Science Credential

- Candidates may earn a **Multiple Subject Credential** and add the Foundational Level General Science Credential by passage of #118 and #119 CSET Subtests AND successful completion of EDSC 542S Advanced Methods of Teaching Middle School Science (offered each summer)
- Candidates earn a **Single Subject Credential** in Foundational Level General Science by completing the single subject credential program.

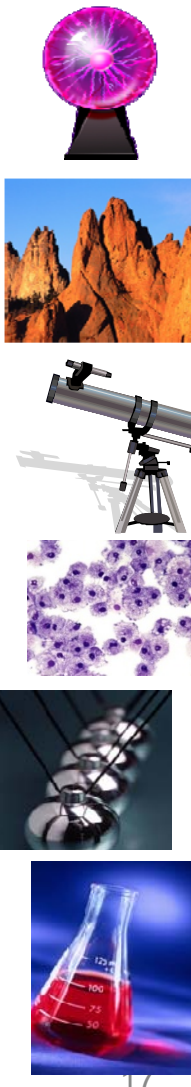
## The *Minor in Natural Sciences* helps prepare candidates for CSET subtests:

- #119 Subtest I General Science: Astronomy; Dynamic Processes of the Earth; Earth Resources; Waves; Forces and Motion; Electricity and Magnetism
- #119 Subtest II General Science: Ecology; Genetics and Evolution; Molecular Biology and Biochemistry; Cell and Organismal Biology; Heat Transfer and Thermodynamics; Structure/Properties of Matter

# Minor in Natural Sciences Requirements

**Lower Division Courses**  
 Take at least 3 units from each group for a total of 9-11 units  
 Must have an \* course from Life Science and a second one from either Physical Sciences or Earth/Astronomical Sciences.

**Upper Division Courses**  
 12 Units Total: At least 2 units from three course groups: Teacher Education Core, Biology, Chemistry, Geology, and Physics. Natural Sciences Minor advisor must approve course election.



**Life Science**  
 3 Units Minimum  
 Biology 101, 101L\*, 102 or equivalent

**Earth/Astronomical Sciences**  
 3 Units Minimum  
 Geology 101, 101L\*, 102\*, or equivalent.  
 Physics 120

**Physical Sciences**  
 3 Units Minimum  
 Chemistry 100, 100L\*, 105, 111, 115 or 120A\*, 120B\*,  
 Physics/Chem 102\*  
 Physics 101, 101L\*, 115, 211\*, 212\*

**Teacher Education Core Courses Group 1**  
 Biology 453, Geology 410

**Biological Science Courses Group 2**  
 Biology 300, 305, 306, 310, 311, 318, 319, 330, 352, 360, 409, 453

**Chemistry/Biochemistry Courses**  
 Chemistry 303 A, B, C, 311, and 313 A, B, C

**Geological Sciences Courses**  
 Geology 310T, 410, 420

**Physics Courses**  
 Physics 301

See [www.assist.org](http://www.assist.org) to identify community college and lower division courses that articulate with Cal State Fullerton courses.