

NATURAL SCIENCE, ASSOCIATE IN SCIENCE DEGREE

Banner Code: 1_AS_NS
Financial Aid Eligible

Complete eighteen (18) units from the following and the Associate in Science graduation requirements as outlined in the Graduation Requirements section of the catalog. If a student chooses this degree option, a plan must be developed with a counselor and placed on file prior to petitioning for graduation.

Review Graduation Requirements (<https://catalog.cccd.edu/orange-coast/graduation-requirements/associate-degree/>) and General Education (<https://catalog.cccd.edu/orange-coast/general-education-patterns/>).

| Course | Title | Units |
|---|---|-------|
| Required Courses | | |
| Select a minimum of eighteen (18) units from the following: | | |
| <i>ASTRONOMY</i> | | |
| ASTR A100 | Introduction to Astronomy | 3 |
| or ASTR A100H | Introduction to Astronomy Honors | |
| ASTR A100L | Introduction to Astronomy Laboratory | 1 |
| or ASTR A100M | Introduction to Astronomy Laboratory Honors | |
| ASTR A101 | Planetary Astronomy | 3 |
| ASTR A102 | Stellar Astronomy | 3 |
| ASTR A103 | Cosmology | 3 |
| <i>BIOLOGY</i> | | |
| BIOL A100 | Principles of Biology | 4 |
| BIOL A101 | The Biology of Cooking | 4 |
| BIOL A114 | Basic Microbiology | 2 |
| BIOL A125 | Human Biology | 3 |
| BIOL A172 | Nature of Birds | 1 |
| BIOL A180 | Introduction to Biology for Majors 1: Cell and Molecular Biology | 4 |
| BIOL A182 | Zoology | 3 |
| BIOL A182L | Zoology Lab | 1 |
| BIOL A183 | Botany | 3 |
| BIOL A183L | Botany Lab | 1 |
| BIOL A185 | Introduction to Biology for Majors 2: Ecology, Evolution, Diversity, and Physiology | 5 |
| BIOL A210 | General Microbiology | 5 |
| BIOL A220 | Human Anatomy | 5 |
| BIOL A221 | Anatomy-Physiology | 4 |
| BIOL A225 | Human Physiology | 5 |
| BIOL A280 | Evolutionary Ecology | 4 |
| BIOL A281 | Biochemistry | 2 |
| BIOL A282 | Molecular Biology | 2 |
| BIOL A283 | Genetics | 4 |
| <i>CHEMISTRY</i> | | |

| Course | Title | Units |
|---|--|---------------|
| CHEM A100 | Principles of Chemistry | 3 |
| CHEM A110 | Introduction to Chemistry | 5 |
| CHEM A130 | Preparation for General Chemistry | 4 |
| CHEM A180 | General Chemistry A | 5 |
| CHEM A185 | General Chemistry B | 5 |
| CHEM A220 | Organic Chemistry A | 3 |
| CHEM A220L | Organic Chemistry A Lab | 2 |
| CHEM A225 | Organic Chemistry B | 3 |
| CHEM A225L | Organic Chemistry B Laboratory | 2 |
| <i>ENVIRONMENTAL SCIENCE</i> | | |
| ESEC A100 | Introduction to Environmental Science | 3 |
| ESEC A110 | Island Ecology | 3 |
| ESEC A121 | Marine Intertidal Ecology | 1 |
| ESEC A124 | Ecology of the Gray Whale | 1 |
| <i>GEOLOGY</i> | | |
| GEOL A101 | Age of the Dinosaurs | 4 |
| GEOL A105 | General Geology | 3 |
| or GEOL A105H | General Geology Honors | |
| GEOL A105L | General Geology Laboratory | 1 |
| or GEOL A105M | General Geology Laboratory Honors | |
| GEOL A106 | Earth Science for Teachers | 4 |
| GEOL A110 | Physical Geology | 4 |
| GEOL A115 | California Geology | 3 |
| GEOL A160 | Environmental Geology | 4 |
| GEOL A185 | Evolution of the Earth | 3 |
| GEOL A185L | Evolution of the Earth Lab | 1 |
| <i>MARINE SCIENCE</i> | | |
| MRSC A100 | Oceanography | 3 |
| or MRSC A100H | Oceanography Honors | |
| MRSC A100L | Oceanography Laboratory | 1 |
| or MRSC A100M | Oceanography Laboratory Honors | |
| MRSC A120 | Marine Aquarium Science | 2 |
| MRSC A180 | Marine Biology | 3 |
| MRSC A180L | Marine Biology Lab | 1 |
| MRSC A185 | Coastal Oceanography | 3 |
| MRSC A185L | Coastal Oceanography Lab | 1 |
| MRSC A187 | Marine Mammals | 3 |
| <i>PHYSICS</i> | | |
| PHYS A110 | Conceptual Physics | 3 |
| PHYS A111 | Introductory Physics Laboratory | 1 |
| PHYS A120 | Algebra-Based Physics 1: Mechanics with Lab | 4 |
| PHYS A125 | Algebra-Based Physics 2: Electricity/ Magnetism with Lab | 4 |
| PHYS A130 | University Physics 1 (non-majors) | 4 |
| PHYS A135 | University Physics 2 (non-majors) | 4 |
| PHYS A185 | Calculus Based Physics: Mechanics | 4 |
| PHYS A280 | Calculus Based Physics: Electricity/ Magnetism | 4 |
| PHYS A285 | Calculus Based Physics: Modern | 4 |
| Total | | 18 |
| AS General Education Option 1, 2, or 3 | | Varies |

| Course | Title | Units |
|---|-------|---------------|
| Transferable electives to satisfy unit requirement | | Varies |
| Total Degree Units | | 60 |

² OCC AS GE AREA A2 - Required if 100-level MATH will not be taken to meet Math competency. If MATH A100 or higher will be taken, then needs to take 3-4 degree applicable elective units

³ TO REACH MINIMUM 18 UNITS OF MAJOR

⁴ VARIES TO REACH MINIMUM 60 DEGREE APPLICABLE UNITS

Program Sequence

These sequences at Orange Coast College are general course curriculum maps for students to finish all major and general education requirements for two-year completion of degrees, and/or fulfillment of transfer requirements. The course sequence may include course prerequisites and other placement requirements. **Students are advised to meet with an Orange Coast College Counselor to review course selections and sequences to ensure that completion of this program will meet a student's transfer and career goals.**

| Course | Title | Units |
|---|--|--------------|
| Year 1 | | |
| Semester 1 | | |
| AS MAJOR COURSE: ASTR, BIOL, CHEM, ECOL, ESEC, GEOL, MRSC, PHYS (See Requirements for Courses) | | 3-5 |
| OCC AS GE AREA A1- CHOOSE ONE | | 3 |
| OCC AS GE AREA C1- CHOOSE ONE | | 3 |
| OCC AS GE AREA D- CHOOSE ONE | | 3 |
| OCC AS GE AREA C2- CHOOSE ONE | | 3 |
| Units | | 15-17 |
| Semester 2 | | |
| Select one of the following or satisfy Math competency (completion of High School Algebra 2 with a "C" or better) | | 3-4 |
| MATH A030 or MATH A045 | Intermediate Algebra ¹ or Combined Elementary and Intermediate Algebra | |
| AS MAJOR COURSE: ASTR, BIOL, CHEM, ECOL, ESEC, GEOL, MRSC, PHYS (See Requirements for Courses) | | 3-5 |
| OCC AS GE AREA A2- CHOOSE ONE ² | | 3-4 |
| ELECTIVE (DEGREE APPLICABLE) | | 3 |
| Units | | 12-16 |
| Year 2 | | |
| Semester 1 | | |
| AS MAJOR COURSE: ASTR, BIOL, CHEM, ECOL, ESEC, GEOL, MRSC, PHYS (See Requirements for Courses) | | 3-5 |
| ELECTIVE (DEGREE APPLICABLE) | | 12 |
| Units | | 15-17 |
| Semester 2 | | |
| AS MAJOR COURSE: ASTR, BIOL, CHEM, ECOL, ESEC, GEOL, MRSC, PHYS (See Requirements for Courses) | | 3-5 |
| AS MAJOR COURSE: ASTR, BIOL, CHEM, ECOL, ESEC, GEOL, MRSC, PHYS (See Requirements for Courses) ³ | | 0-6 |
| ELECTIVE (DEGREE APPLICABLE) ⁴ | | 15 |
| Units | | 18-26 |
| Total Units | | 60-76 |

¹ Math A030 or higher OR take 3-4 degree applicable elective units if math competency was met through completion of High School Algebra 2 with a "C" or better; *100-level Math courses satisfy AS Math Requirement and OCC AS GE AREA A2