Environmental Geoscience Track: Earth Science Major, Univ. of Oregon

- All courses must be taken for a grade (C- or better)
- Check prerequisites for upper division courses
- Total credits: 104 or 109

Core requirements (60 or 65 credits):

__ ERTH 201, 202, 203: Intro Earth Sciences (12) ***or*** ERTH 101, 102, 103 (12)
(ERTH 10x and 20x are interchangeable, average grade of B or better required for 101, 102, 103)
__ ERTH 311: Earth Materials (5) ***or*** ERTH 331: Mineralogy (5) and ERTH 332: Petrology (5)
__ ERTH 315: Earth Physics (4)
__ ERTH 316: Intro Hydrology (4)
__ ERTH 318: Intro Field Methods (3)
__ ERTH 363: Computational Tools for Earth Sciences (4) ***or*** CIS 122: Intro Programming and Problem Solving (4)
__ PHYS 201, 202: General Physics (8) ***or*** PHYS 251, 252: Foundations of Physics (8)
__ CH 221Z, 222Z: General Chem I, II (8) ***or*** CH 224H, 225H: Honors General Chem I, II (8)
__ MATH 251Z, 252Z: Calculus I, II (8) ***or*** MATH 246, 247: Calculus for Biological Sciences (8)
__ ERTH 418: Data Analysis for Earth and Environmental Science (4)
or select one of the following: MATH 253Z: Calculus III (4) | MATH 343: Stat Models (4) | MATH 425: Stat Methods (4)

Group A Electives (Select 24 credits from the following, additional credits from this group can be applied to Group B electives):

__ ERTH 310: Earth Resources and the Environment (4)
__ ERTH 334: Sedimentology and Stratigraphy (4)
__ ERTH 353: Geologic Hazards (4)
__ ERTH 406: Field Studies – Hydrology section (4)
__ ERTH 410: Physical Oceanography (4)
__ ERTH 410: Introducing Ice (4)
__ ERTH 410L: Satellite Remote Sensing (4)
__ ERTH 416: Geophysical and Environmental Sensors (4)
__ ERTH 441: Hillslope Geomorphology (4)
__ ERTH 451: Hydrogeology (4)
__ ERTH 454: Fluid Dynamics (4)
__ ERTH 455: Mechanical Earth (4)
__ ERTH 474: Soil and Environmental Chemistry (4)
__ ENVS 477: Soil Science (4)
__ GEOG 427: Fluvial Geomorphology (4)
__ GEOG 481, 482: GIScience I, II (4 each)

Group B Electives (Select 20 credits from the following): **suggested*

__ Group A Elective courses beyond 24 credits *
__ ERTH 301 to 309 (up to 4 credits)
__ ERTH 350,351,352: Structural Geology, Laboratory, and Problems (3+)
__ ERTH 401: Research (up to 4 credits; may be taken for P or P* grade)
__ ERTH 403: Thesis (up to 4 credits; may be taken for P or P* grade)
__ ERTH 406: Field Studies (up to 8 credits)
__ ERTH 407: Current Topics Seminar (up to 3 credits; may be taken for P or P* grade)
__ ERTH 410 and above, not taken as Group A Electives: *>20 courses spanning a broad swath of Earth Science topics including*:
420: Geocommunication (3) | 423M: Introduction to Space Physics (4) | 434: Vertebrate Paleontology (4) | 436: Paleoecology and Functional Morphology (4) | 453: Tectonics (4) | 456: Signal Processing (4) | 468: Introduction to Seismology (4) | 471: Thermodynamic Geochemistry (4) | 473: Isotope Geochemistry (4) | 480: Volcanology (4)
__ ENVS 350: Ecological Footprint of Energy Generation (4) | 465: Wetland Ecology (4)
__ GEOG 321: Climatology (4) | 322: Geomorphology (4) | 323: Biogeography (4) | 360: Watershed Sci (4) | 361: Global Enviro Change (4) | 421: Adv Climatology (4) | 423: Adv Biogeography (4) | 425: Hydrology and Water Resources | 430: Long-term Enviro Change (4) | 433: Fire and Natural Disturbances (4) | 485, 486: Remote Sensing I, II (4 each) | 490: GIScience Topics (4) | 491: Adv Geographic Info Systems (4) | 494: Spatial Analysis (4) | 495: Geographic Data Analysis (4)
__ BI 212: Organisms (4) | 213: Populations (4) | 214: Mechanisms (4)
__ BI 306 and above
__ CH 223: Gen Chem III (4) | 226: Honors Gen Chem III (4) | 227, 228, 229: Gen Chem Lab (2 each) | 237, 238, 239: Adv Gen Chem Lab (2 each)
__ CH 331 and above (includes Organic Chemistry, Physical Chemistry, and Biochemistry)
__ CIS 210, 211, 212: Computer Science I, II, III (4 each)
__ MATH 256: Intro Differential Eqn (4) | 281, 282: Several-Variable Calc I, II (4 each) | 341, 342: Elem Linear Algebra I, II (4 each) | 411: Functions Complex Variable I, II (4 each) | 421M, 422: Partial Differential Equations (4 each)