Geophysics Track Requirements: Earth Science Major, Univ. of Oregon

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

Core requirements (40 credits):

__ ERTH 315: Earth Physics (4)
__ ERTH 363: Computational Tools for Earth Sciences (4) ***or*** CIS 122: Intro Programming and Problem Solving (4)
__ PHYS 251, 252, 253: Foundations of Physics I (12)
__ MATH 251Z, 252Z, 253Z: Calculus I, II, III (12)
__ CH 221Z, 222Z: General Chem I, II (8) ***or*** CH 224H, 225H: Honors General Chem I, II (8)

Track requirements (36 credits):

__ ERTH 455: Mechanical Earth (4)
__ ERTH 423M to 470 (*choose two from the following*): ERTH 423M: Introduction to Space Physics (4) | ERTH 441: Hillslope Geomorph (4) | ERTH 451: Hydrogeology (4) | ERTH 453: Tectonics (4) | ERTH 454: Fluid Dynamics (4) | ERTH 467: Fault Mechanics (4) | ERTH 468: Intro Seismology (4)
__ MATH 256: Intro Differential Equations (4)
__ MATH 281, 282: Several Variable Calculus I, II (8)
__ PHYS 351, 352, 353: Foundations of Physics II (12) ***or*** PHYS 411,412,413: Mechanics, Electricity, Magnetism (12)

Track electives (select 28 credits from the following):

__ ERTH 410 and above*: *>20 courses spanning a broad swath of Earth Science topics, including* ERTH 416: Geophysical and Environmental Sensors (4) | ERTH 418: Data Analysis for Earth and Environmental Science (4) | ERTH 420: Geocommunication (3) | ERTH 434: Vertebrate Paleontology (4) | ERTH 436: Paleoecology and Functional Morphology (4) | ERTH 456: Signal Processing (4) | ERTH 471: Thermodynamic Geochemistry (4) | ERTH 473: Isotope Geochemistry (4) | ERTH 474: Soil and Environmental Chemistry (4) | ERTH 480: Volcanology (4)
__ ERTH 101 to 310 (up to 8 credits with average grade of B or higher)
__ ERTH 311: Earth Materials (5) *(note prereqs)*
__ ERTH 316: Intro Hydrology (4)
__ ERTH 318: Intro Field Methods (3) *(note prereqs)*
__ ERTH 331, 332: Mineralogy (5), Petrology (5) *(note prereqs)*
__ ERTH 334: Sedimentology/Stratigraphy (4) *(note prereqs)*
__ ERTH 350, 351, 352: Structural Geology, Laboratory, and Problems (3+) *(note prereqs)*
__ ERTH 353: Geologic Hazards (4) *(note prereqs)*
__ ERTH 399: Building an Atmosphere (4)
__ 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 12 credits)
__ CH (up to 4 credits) from 223Z: Gen Chem III (4) | 226H: Hon Gen Chem III (4) | 411: Phys. Chem (4)
__ MATH (up to 8 credits) from 341, 342: Elementary Linear Algebra I, II (4 each) | 411: Functions of Complex Variable I, (4) | 421,422: Partial Differential Eqns I, II (4 each)
__ CIS (up to 8 credits) from 210,211,212: Computer Science I, II, III (4 each)