

WOU Earth Science Career Tracks and Recommended Course Preparation

I. Career Tracks for B.S./B.A. Earth Science Degrees

- a. Graduate School/Advanced Professional Studies in Earth Science-Geology
- b. Physical Science Education (6-12 Teacher Preparation)
- c. Geotechnical/Environmental Workforce
- d. Environmental Law
- e. Liberal Arts/General Studies

II. Recommended Course Preparation Arranged by Career Track

a. Graduate School / Advanced Professional (B.S. Earth Science, leading to M.S. / Ph.D.)

- i. Required geology core
- ii. LACC Lab Science: CH221, 222, 223
- iii. Science Elective: *PH 211,212,213 or PH201,202,203 (option based on level of high school math/science proficiency; *calculus-based physics preferred)
- iv. Math Elective: calculus
- v. Earth Science Electives: Choose 1 elective from each of 3 focus areas: Surface Processes/Environmental, Petrology/Volcanology, Sedimentology/Paleobiology (selections based on personal interests)
- vi. Recommended List of Supporting Minors: Biology, Chemistry, Environmental Studies, Geography, or Math
- vii. Special Note: students intending to go to graduate school should select a specialty interest area from one of the three focus areas during their senior year. Please contact the relevant faculty member for more information on their specialty and what will be expected of you in graduate school. Completion of the Graduate Record Exam will be required prior to graduate school application, typically completed in the fall term of senior year. An independent research project is recommended during senior year, contact relevant faculty for ideas and options.

b. Physical Science Education (B.S. Earth Science, leading to M.A.T. in Education)

- i. Required geology core
- ii. LACC Lab Science: CH104,221,222 or CH221,222,223 (option based on level of high school chemistry proficiency)
- iii. Science Elective: PH201,202,203 or PH211,212,213 (option based on level of high school math/science proficiency)
- iv. Math Elective: computer science or calculus (selection based on personal preference)
- v. Earth Science Electives: Choose 1 elective from each of 3 focus areas: Surface Processes, Petrology/Volcanology, Sedimentology/Paleobiology (selections based on personal interests)
- vi. Recommended List of Supporting Minors: Biology, Chemistry, Environmental Studies, Geography, or Math
- vii. Special Note: The Master of Arts in Teaching (M.A.T.) degree will provide graduates with a fifth-year education program leading to an initial teaching license at the master's level. Please contact the College of Education for more information on requirements for the M.A.T. Completion of the Praxis Exam will be required prior to graduate school application.

- c. Geotechnical/Environmental Workforce (B.S. Earth Science)**
- i. Required geology core
 - ii. LACC Lab Science: CH104,221,222 or CH221,222,223 (option based on level of high school chemistry proficiency)
 - iii. Science Elective:
 1. Environmental/Bioresource Focus: BI101,102,103 or BI211,212,213
 2. Environmental/Geotechnical/Water Resources Focus: PH201,202,203 or PH211,212,213
 - iv. Math Elective:
 1. Environmental/Bioresource Focus: computer science or calculus
 2. Environmental/Geotechnical/Water Resource Focus: calculus
 - v. Earth Science Electives: Choose 1 elective from each of 3 focus areas: Surface Processes, Petrology/Volcanology, Sedimentology/Paleobiology.
 - vi. Recommended List of Supporting Minors: Biology, Chemistry, Environmental Studies, Geography, or Math
 - vii. Special Note: a B.S. Earth Science will provide graduates with the necessary minimum qualifications for entry-level positions in the Geotechnical and Environmental industry. Advanced management-level positions commonly require 5+ years of experience and a master's degree. The State of Oregon requires a license to practice professional geology for the public. It is recommended that students apply for the initial "Geologist-In-Training" (GIT) license upon graduation through the Oregon State Board of Geologist Examiners in Salem. The initial licensing process involves successful completion of 45 quarter hours of geology courses and passing a nationally-standardized fundamental geology exam. The initial GIT license will allow work as an apprentice under the supervision of a "Registered Professional Geologist" (RPG) for a minimum of three years. After a total of five years professional experience beyond the B.S. degree, graduates will qualify for completion of the advanced practice exam and the RPG license. Up to three years of professional experience is awarded for full-time graduate studies in geology or related fields at the master's / Ph.D. level.
- d. Environmental Law (B.S. Earth Science leading to the Juris Doctor degree)**
- i. Required geology core
 - ii. LACC Lab Science: CH104,221,222 or CH221,222,223 (option based on level of high school chemistry proficiency)
 - iii. Science Elective: BI101,102,103 or BI211,212,213
 - iv. Math Elective: computer science
 - v. Earth Science Electives: Choose 1 elective from each of 3 focus areas: Surface Processes, Petrology/Volcanology, Sedimentology/Paleobiology
 - vi. Required Minor: Legal Studies
 - vii. Special Note: It is suggested that pre-law students take the Legal Studies minor and additional coursework in the following areas: Accounting, Economics, History, Political Science, Philosophy, Psychology, Sociology, Speech and Writing. Admission to law school is highly competitive. Applicants are usually expected to achieve an undergraduate GPA of at least 3.0 and perform well on the Law School Admission Test (LSAT), although strength in one of these areas may compensate for weakness in the other. The LSAT should be taken early in the senior year. For more information about preparatory materials, contact the Pre-Law advisor in the Social Science Division.

- e. **Liberal Arts / General Studies (B.A. Earth Science as a Liberal Arts degree)**
 - a. Required geology core
 - b. LACC Lab Science: CH104,105,106 (advisor approval required for substitution of CH104,221,222)
 - c. Science Elective: BI101,102,103
 - d. Math Elective: computer science
 - e. Earth Science Electives: Choose 1 elective from each of 3 focus areas: Surface Processes, Petrology/Volcanology, Sedimentology/Paleobiology (selections based on personal interests)
 - f. Recommended List of Supporting Minors: Health, Spanish, Environmental Studies
 - g. Special Note: Not recommended for graduate school or advanced technical work in the natural resources industry.