Geologist Licensing in Washington State



http://www.dol.wa.gov/business/geologist/

Bob Mitchell – <u>rjmitch@wwu.edu</u>

Robert Mitchell, PhD

He/Him/His, Professor

Educational & Professional Experience:

Ph.D. - Michigan Technological University (Environmental Engineering)

M.S. - University of Minnesota - Duluth (Physics)

M.S. - Michigan Technological University (Geophysics)

B.S. - University of Wisconsin - River Falls (Earth Science)



https://geology.wwu.edu/people/rjmitch

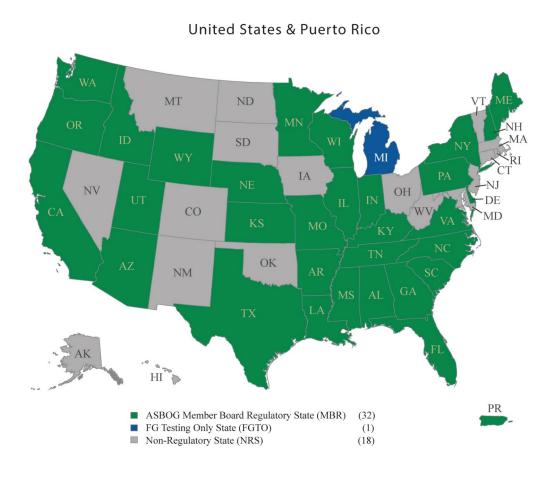
Areas of Expertise

Hydrogeology, watershed hydrology, engineering geology, and numerical modeling

Courses Taught

- Physical Geology
- GIS in Geology
- Environmental Geology
- Engineering Geology
- Surface Water Hydrology
- Hydrogeology
- Groundwater Contamination
- Landslides and Slope Stability
- Introduction to Graduate Research

32 States Require Geologist Licensure





Washington State Legislature

Since 2001, Washington State requires that all practicing geologists have a professional license.

18.220 RCW & 308-15 WAC

<u>WAC</u> = Washington Administrative Code (policy interpretations of the law)

<u>RCW</u> = Revised Code of Washington (laws)

Why is licensure necessary in WA?

To ensure the protection of the environment and the public's health, safety, and welfare.



Landslide: Kelso, WA



Rock Fall: Hwy 2, WA



Liquefaction: 2001 Nisqually Earthquake



Groundwater Contamination Yakima Valley

Who needs to be licensed?

Anybody who practices geology or represents that they can perform the work of a geologist (e.g., uses verbal claim, sign, advertisement, letterhead, business card)







WA Geologist Licensing Exemptions

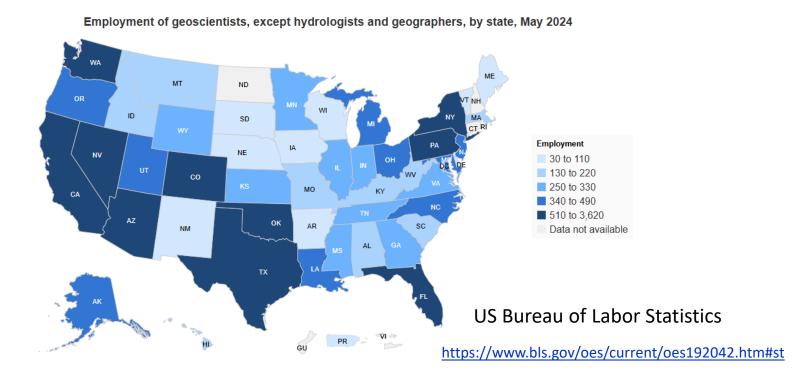
- Working under a licensed geologist's supervision (e.g., your first job)
- US Federal Government (e.g., USGS, EPA, US Forest Service)
- Energy & minerals exploration
- Academics (research and teaching)

Why pursue licensure?

- Because it is the law! <u>18.220 RCW</u> & <u>308-15 WAC</u>
- More job opportunities and professional growth potential.
- Portable to 32 states + Puerto Rico (it is the law in most western states, e.g.,
 California, Idaho, Oregon and there are reciprocity agreements between states).

A better question is why not pursue licensure?

Where are geologists working?



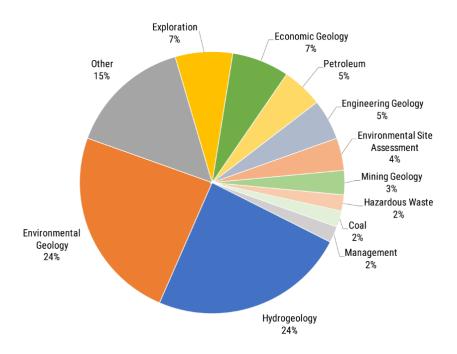
May 2024
States with the highest employment for geoscientists, except hydrologists and geographers

State	Employment	Relative Standard Error (RSE)	
Texas	3,620	7.5	
California	3,150	11.8	
Colorado	1,420	13.6	
Oklahoma	910	10.2	
Washington	840	14.9	

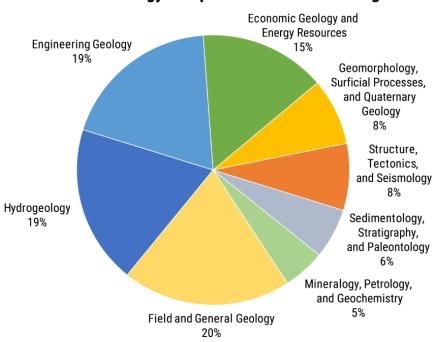


In what discipline areas are geologists working?

Areas of expertise for geologists who are members of the American Institute of Professional Geologists

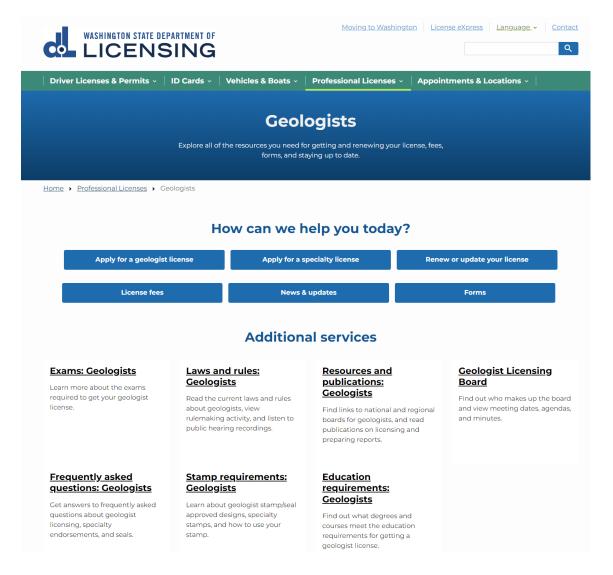


ASBOG® Task Analysis Survey Practice of Geology Blueprint - Domain Percentages



See the WWU Geology Department's Careers page.

Visit the WA State Geologist Licensing web site for information.



Steps to Geologist Licensure

Meet Washington State's educational requirements and pass the ASBOG Fundamentals of Geology Exam (FG)

Geologist in Training (GIT)

Have a GIT and geoscience degree and document 5-years of working experience and pass the ASBOG Practice of Geology Exam

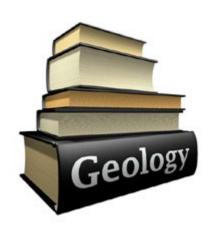
Professional Geologist (PG)

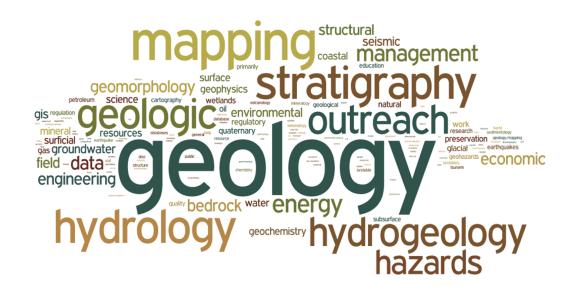
Have a PG and document 5 years of working experience in a specialty and pass the Specialty Exam

Licensed Engineering Geologist (LEG) or Hydrogeologist (LHG)

Steps to Geologist Licensure

Meet Washington's geology educational requirements





- (2) Education. You have graduated from an accredited college or university with:
- (a) A degree in the geological sciences, or a related degree approved by the board, <u>and</u> have either:
- (i) 24-semester or 36-quarter hours of upper division geology courses that includes 14 semester or 21 quarter credits (nonrepeatable) from the following list:
 - Earth Materials (combination of mineralogy and petrology)
 - Economic Geology
 - Engineering Geology
 - Field Camp
 - Geochemistry
 - Geomorphology
 - Geophysics
 - Hydrogeology
 - Mineralogy
 - Petrology
 - Sedimentology
 - Stratigraphy
 - Structural Geology

WAC 308-15-050

(a)(i) Apply to sit for the Fundamentals of Geology examination once you meet the minimum educational requirements...

(ii) Or

Successfully completed coursework that is determined by the board to be educationally equivalent in content and rigor to the classes listed above. You must submit documentation that demonstrates your coursework is equivalent to the requirements in (a)(i) of this subsection acceptable to the board. Examples of documentation include course syllabi, copies of study materials, and the tables of contents of books used in the course.

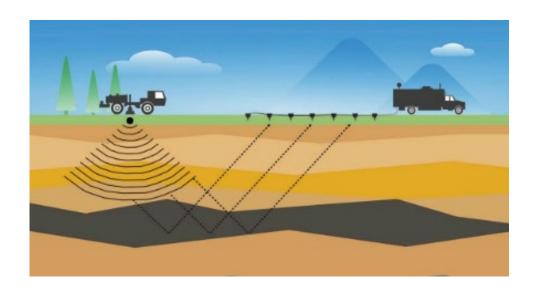
You meet the education requirements if you receive a **B.S. Degree** in Geology at WWU.

	B.S. Upper Division Core	Credits	
306	Mineralogy	4	
310	Geomorphology	5	
318	Structural Geology	4	
352	Geophysics	4	redits
406	Petrology	4	reuits
409	Field Methods and Theory	6	
410	Field Mapping	6	
415	Stratigraphy and Sedimentation	4 —	
		37	

If you choose the **B.S. in Geophysics** degree plan, make sure you take enough upper division geology courses (300 and above) to accumulate 36 credits and 21 of the credits must be from the requirement list.

21 quarter credits (nonrepeatable) from the following list:

- Earth Materials (combination of mineralogy and petrology)
- Economic Geology
- Engineering Geology
- Field Camp
- Geochemistry
- Geomorphology
- Geophysics
- Hydrogeology
- Mineralogy
- Petrology
- Sedimentology
- Stratigraphy
- Structural Geology



If you choose the **B.S. in Geophysics** degree plan, make sure you take enough upper division geology courses (300 and above) to accumulate 36 credits and 21 of the credits must be from the requirement list.

Required and recommended courses for geophysics majors that would satisfy the ASBOG educational requirements and **best prepare for passing the exam**.

Coures from the 21-credit list

```
GEOL 311 5 required for geophysics degree
GEOL 318 5 required for geophysics degree
GEOL 352 5 required for geophysics degree
GEOL 314 4 recommended
GEOL 473 4 recommended
credit sum = 23
```

Upper division electives >300

```
GEOL 452 5 required for geophysics degree
GEOL 310 5 recommended
GEOL 415 4 recommended
total credits = 37
```

If you choose the **old B.A. in Geology** degree plan, make sure you take enough upper division geology courses (300 and above) to accumulate 36 credits and 21 of the credits must be from the list

The course requirements for the **new B.A. that started AY24-25** ensure that you meet the educational requirements.

21 quarter credits (nonrepeatable) from the following list:

- Earth Materials (combination of mineralogy and petrology)
- Economic Geology
- Engineering Geology
- Field Camp
- Geochemistry
- Geomorphology
- Geophysics
- Hydrogeology
- Mineralogy
- Petrology
- Sedimentology
- Stratigraphy
- Structural Geology



If you enter the **MS graduate program** without a geology degree, make sure you take enough upper division geology courses (300 and above) to satisfy the educational requirements.



MS GEOLOGY PROGRAM GOALS

Western Washington University offers a Masters program in Geology that aims to prepare students for professional employment in geoscience careers in the Pacific Northwest and beyond or for continuing graduate studies at the doctoral level. We specialize in structure/tectonics, petrology, volcanology, geomorphology, geophysics, hydrogeology and environmental/engineering geology, geothermal energy, sedimentology, planetary geology, and geoscience education.

WAC 308-15-050

(a)(i) Apply to sit for the Fundamentals of Geology examination once you meet the minimum educational requirements...

The State has adopted the National Association of State Boards of Geology (ASBOG) standardized exam as the Fundamentals of Geology Exam (FG)



Association of State Boards of Geology

ASBOG FG Exam Application Procedures

If you want to take the ASBOG Fundamentals Exam before graduating, you must meet the educational requirements about three months in advance, because there is a 60-day administrative processing period.

For example, the spring ASBOG FG Exam is March 19 & 20, 2026, but the application deadline is January 19, 2026.

The application requires an official university transcript. Make sure your fallquarter grades are recorded on your transcript before you have WWU send it the WA DOL.

https://www.dol.wa.gov/professional-licenses/geologists/exams-geologists

https://asbog.org/examination.html

ASBOG FG Exam Application Procedures

The exam application procedures, due dates and exam dates can be found here. Complete the **Geologist-in-Training Certificate Application**. You can mail your application or apply online.

It **costs \$135 to apply to the WA State DOL**, the \$135 application fee covers one attempt at the FG, one attempt at the PG and the first issuance of a license.

Once your application is approved, the Licensing Board will send you application materials for the ASBOG Fundamental Exam (it will **cost another fee \$275 to ASBOG** for the exam and fee for the computer-based testing site). Note, the application will come by email, so if you are out of town (e.g., field camp), make the proper arrangements because if you do not pay ASBOG you cannot take the exam. After payment has been received by ASBOG, you will receive an exam admission letter by email about one month before the exam date.

If you pass the FG exam, you will be a Geologist in Training (GIT). If you fail the FG Exam, you will be required to pay a reexam fee to DOL of \$88 and the exam fee to ASBOG.

New Geologist Licensing Fund!

Your fees will be subsidized if you are an enrolled undergraduate or graduate student at WWU when you apply. Due to the generosity of a donor, the Department has set up a Geologist Licensing Exam Fund.

- If you PASS the ASBOG FG exam, 100% of your application fees will be reimbursed.
- If you FAIL the ASBOG FG exam, 50% of your application fees will be reimbursed.

So, there are no excuses for not taking the ASBOG FG Exam as an enrolled student:

- 1. your course work understanding is fresh,
- 2. there are study materials in the department,
- 3. the testing location is convenient (WWU Testing Center),
- 4. your fees will be subsidized, and
- 5. passing the FG exam will improve your job marketability because Washington State requires that practicing geologists be licensed.



Fundamentals of Geology Exam

Computer-based testing as of 2023



140 multiple choice questions



The **ASBOG Fundamentals of Geology Exam** has 140 multiple choice questions in the categories below.

Figure 17 - ASBOG® 2023 Task Analysis Survey **FG Test Blueprint - Domain Percentages** (Effective - October 2023) A. General Geology and Geological Investigations, H. Mineral and Energy 17% Resources, 9% G. Engineering Geology, 12% B. Mineralogy, Petrology, and Geochemistry, 12% C. Sedimentology, Stratigraphy, and F. Hydrogeology, 13% Paleontology, 11% D. Geomorphology and E. Structure, Tectonics, and Surficial Processes, 14% Seismology, 12%

Washington State computer testing sites

✓ Bellingham

Camas

Fife

Liberty Lake

Mountlake Terrace

Olympia

Pasco

Seattle

Spokane

Yakima

https://www.isoqualitytesting.com/locations.aspx

Western's Testing Center



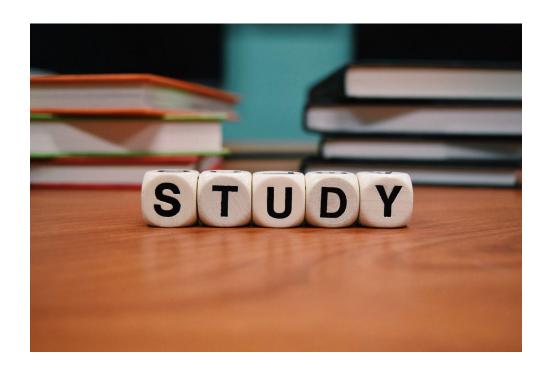
https://testingcenter.wwu.edu/

333 32nd Street – AC120 Bellingham, WA 98225

Note: Testing Center is located off-campus at 333 32nd Street - AC120

Parking Permits are required in the Testing Center parking lot (32G) from Monday through Friday.

How to prepare for the ASBOG FG Exam





National Association of State Boards of Geology

FAQs Why Licensure Organizational Info Contact Us Members Login SME Login Disciplinary Database

CANDIDATE RESOURCES

Examination Application Process

Examination Schedule

FAQs

Examination Blueprint

Candidate Study Material

Institution Codes 2020

Cross Section Documents

LICENSEE RESOURCES

Examination Score Request

Tasks of a Geologist

Academic Assessment

CPAT Universities

MEMBER RESOURCES

State Requirement Matrix

Member Boards (clickable map)

Affiliate Members

International Members

2015 Task Analysis Summary

Model Law (2017)

Model Rules and Regulations

Model Cooperative Agreement

ASBOG® RESOURCES

ByLaws

Past Executive Committees

Service Awards

Previous Meeting Locations

Code of Conduct/Harassment

Photo Policy





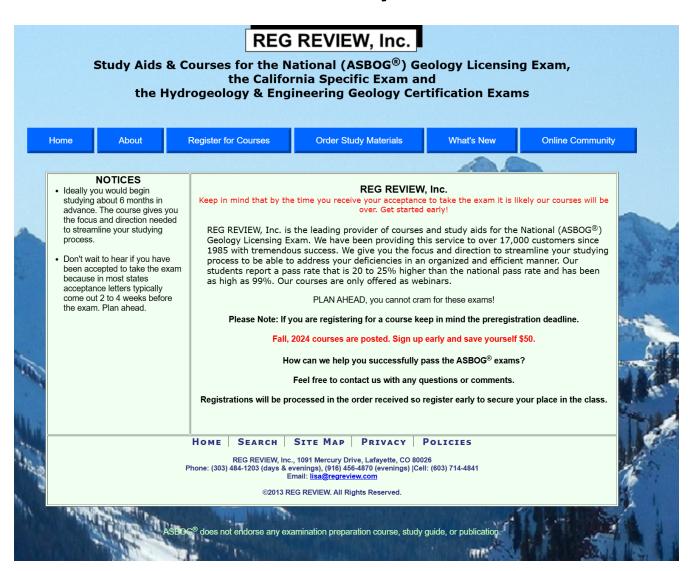
Examination Candidates... here are some useful resources for examination preparation (use Ctrl+f to search)

- I. ASBOG® Candidate Handbook ...click
- II. Physical Geology (Open Textbook Library) ...click
- III. MIT Open Courseware (Geology Topics)...click
- IV. Basic Groundwater Hydrology- USGS WRI 2220 ...click
- V. Engineering Geology Field Manual (Bureau of Reclamation) Volume I & II...click
- VI. Rock Mechanics (Rocscience (Evert Hoek, Ph.D.)) ...click
- VII. Visible Geology Web Site ... click
- VIII. Rock and Mineral Jeopardy ...click
- IX. AGI Data Sheets 5th Edition (\$for purchase)...click
- X. AGI GOLI Webinar's ...click

Last Updated: September 12, 2020

https://www.asbog.org/candidates/candidates.html

ASBOG Study Guide



https://regreview.com/

We have multiple hard copies of this in the Geology office.

Join the WWU AEG Student Chapter

ASSOCIATION OF ENVIRONMENTAL & ENGINEERING GEOLOGISTS

WWU GEOLOGY DEPARTMENT - STUDENT CHAPTER





Join the WWU AEG Student Chapter

Professional Development (work on your exit strategy!)

- Free AEG Membership
- Access to AEG scholarships
- Networking at AEG Meetings in Seattle
- ASBOG FG Exam Study Groups
- Resume/Cover Letter Reviews
- Case study presentations from practicing professionals
- Internship/Scholarship Applications

ASSOCIATION OF ENVIRONMENTAL & ENGINEERING GEOLOGISTS

https://www.aegweb.org/students

WWU GEOLOGY DEPARTMENT - STUDENT CHAPTER





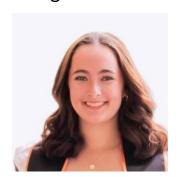
Join the WWU AEG Student Chapter

2024-2025 Leadership

Jake Peckenpaugh



Megan Wilson



ASSOCIATION OF ENVIRONMENTAL & ENGINEERING GEOLOGISTS

WWU GEOLOGY DEPARTMENT - STUDENT CHAPTER





About 6-weeks after you take the exam you will be notified by ASBOG



State Candidate ID:

Dear Your name,

Congratulations! You received a passing score on the ASBOG Fundamentals of Geology FG Examination that was administered on 03/21/2025.

Below you will find your recent examination results:

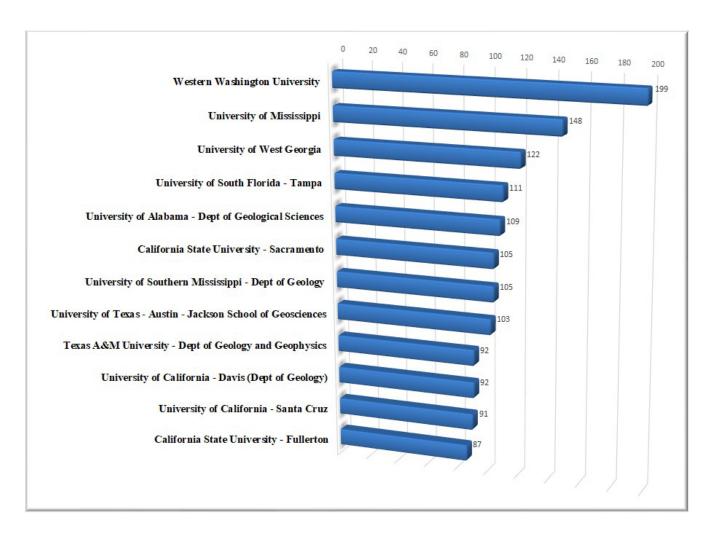
Status: PASS

Now that you have passed the ASBOG Fundamentals of Geology FG, if you have not received communication from your State Licensing Board within four weeks you will need to contact your Board to determine the necessary steps required to complete your application for your professional license/registration.

Again, congratulations on this exciting professional accomplishment!

Association of State Boards of Geology

Western is top in the nation for number of people taking the FG Exam



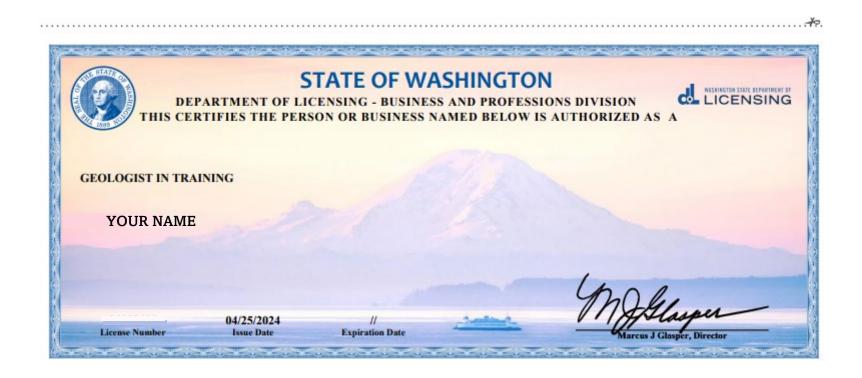
Number of people that have taken the ASBOG between 1992 and 2017. Note Washington started administering the exam in 2002.

WWU ASBOG FG Statistics

Since 2008 about 41% of WWU students and alums have taken the ASBOG FG exam and the passing rate is about 78% (about 10% greater than the national average).

	Fundamentals	All Jurisdictions	WA
J Yes D Pass DFail	Fall 2020 Spring 2021 Fall 2021	67.4% 65.2% 65.0%	87.2% 82.3% 79.2%
Pass	Spring 2022	68.8%	76.4%
	Fall 2022	65.7%	79.7%
	Spring 2023	65.7%	74.5%
	Fall 2023	65.1%	76.2%
	Spring 2024	66.3%	69.0%
	Fall 2024	60.9%	72.5%

Upon passing the ASBOG FG exam, the WA DOL will email you a Geologist in Training (GIT) Certificate.



Steps to Geologist Licensure

Meet Washington State's educational requirements and pass the ASBOG Fundamentals of Geology Exam (FG)

Geologist in Training (GIT)

Have a GIT and geoscience degree and document 5-years of working experience and pass the ASBOG Practice of Geology Exam

Professional Geologist (PG)

Have a PG and document 5 years of working experience in a specialty and pass the Specialty Exam

Licensed Engineering Geologist (LEG) or Hydrogeologist (LHG)

WA Geology Experience Requirements

You must accumulate 5 years of professional geological practice <u>after receipt of a geoscience degree</u> and meet the educational requirements.

- experience earned prior to receiving a degree will not be considered (e.g., summer internships)
- at least 3-years of the 5 must be under the supervision of licensed geologist or others who, in the opinion of the board, are qualified to be in responsible charge
- part-time experience will be prorated



WA Geology Experience Requirements

You must accumulate 5 years of professional geological practice <u>after receipt of a geoscience degree</u> and meet the educational requirements.

- experience earned prior to receiving a degree will not be considered (e.g., summer internships)
- at least 3-years of the 5 must be under the supervision of licensed geologist or others who, in the opinion of the board, are qualified to be in responsible charge
- part-time experience will be prorated
- A graduate degree can be counted as a maximum of two years of practicing experience.
- Geological research or teaching at the university or college level is credited year for year if, in the judgment of the board, it is comparable to experience obtained in the practice of geology.

Steps to Geologist Licensure

Meet Washington State's educational requirements and pass the ASBOG Fundamentals of Geology Exam (FG)

Geologist in Training (GIT)

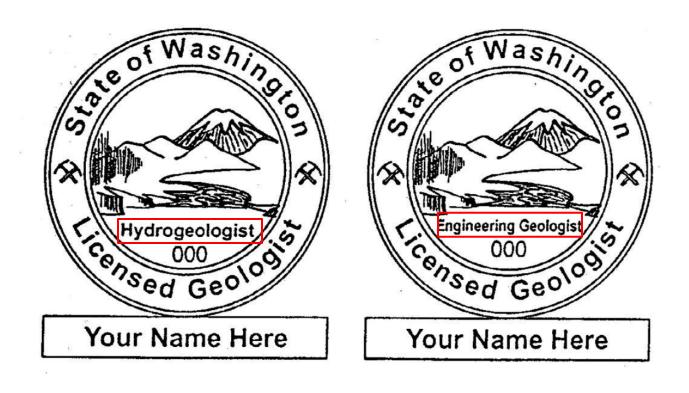
Have a GIT and geoscience degree and document 5-years of working experience and pass the ASBOG Practice of Geology Exam

Professional Geologist (PG)

Have a PG and document 5 years of working experience in a specialty and pass the Specialty Exam

Licensed Engineering Geologist (LEG) or Hydrogeologist (LHG)

WA Specialty Professional License Options



Geologist Licensee Counts by Age & Status current through November 6, 2024

Count w/ Age		Age Classification						
License Type	Status	Less than 25	Between 25 and 34	Between 35 and 44	Between 45 and 54	Between 55 and 64	65 and Above	Grand Total
Geologist	Active		177	333	371	485	448	1814
	Expired		4	11	35	33	40	123
	Inactive			3	1	1	3	8
	Inactive-Retired					1	42	43
Geologist in Training	Active	24	205	42	6	1		278
	Inactive		1					1
Grand Total		24	387	389	413	521	533	2267

Active Specialty Endorsements

Status Active

Count w/Age		Age Classification					
License Type	Endorsement Text	Between 25 and 34	Between 35 and 44	Between 45 and 54	Between 55 and 64	65 and Above	Grand Total
Geologist	Engineering Geologist	20	35	54	7 3	72	254
	Engineering Geologist, Hydrogeologist	1	2	1	31	42	77
	Hydrogeologist	8	53	7 3	144	1 50	428
Grand Total		29	90	128	248	264	759

....

WA Specialty Education Requirements

WAC 308-15-055

Completed advanced study in the specialty

- 18 semester/27 quarter hours of specialty course work, OR
- 270 hours of seminars or workshops, OR
- 540 hours of on-the-job training under the supervision of a licensed specialist or others who in the opinion of the board, are qualified to be in responsible charge of specialty work, OR
- or a combination of the above

WA Specialty Education Requirements

WAC 308-15-055

Complete 5 years of professional specialty practice after completing the advanced education requirements

- 3 years under the supervision of licensed specialist or others who in the opinion of the board are qualified to be in responsible charge
- Part-time experience will be prorated

Alternative experience credit

- Each year of graduate study counts as one year of training up to a maximum of two years
- Geological research or teaching at the university or college level is credited year for year if, in the judgment of the board, it is comparable to experience obtained in the practice of a specialty

How to take the ASBOG FG Exam for FREE!

Washington State and 31 other states require licensing to practice as a professional geologist. The first step toward licensure is passing the ASBOG Fundamentals of Geology (FG) exam. You can take the exam as a student if you meet the educational requirements.

Due to the generosity of a donor, the department has set up a Geologist Licensing Exam Fund to subsidize the ASBOG FG exam fees for enrolled students.

- 100% of your application fees (\$410) will be reimbursed if you PASS the ASBOG FG exam.
- 50% of your application fees (\$205) will be reimbursed if you FAIL the ASBOG FG exam.

Enrolled students, there are no excuses for not taking the ASBOG FG Exam if you meet the educational requirements:

- · your exam application fees will be subsidized,
- · your geology course-work comprehension is fresh,
- · there are exam study materials in the department,
- the AEG Student Chapter organizes study sessions,
- · you can take the computer-based exam locally at the WWU Testing Center,
- passing the ASBOG FG exam will improve your job marketability because Washington
 State requires that practicing geologists be licensed, and
- passing the ASBOG FG exam is good for life and valid in all the states having licensure.

The next ASBOG FG Exam is March 19 & 20, 2026, but the application deadline is January 19, 2026.

Visit the site below for Geologist Licensing information and the application procedures.

http://kula.geol.wwu.edu/rjmitch/geolicense.html



Contact Bob Mitchell if you have questions.

rjmitch@wwu.edu