Geologist Licensing in Washington State



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

32 States Require Geologist Licensure



United States & Puerto Rico



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

<u>18.220 RCW</u> & <u>308-15 WAC</u>

<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

Who needs to be licensed?

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

Licensing Exemptions

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

Why get a license?

- 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).



How do geologists make a living in 2019?

https://www.americangeosciences.org/geosciencecurrents/how-do-geologists-make-living-2019

US Bureau of Labor Statistics

Employment of geoscientists, except hydrologists and geographers, by state, May 2017



https://www.bls.gov/oes/current/oes192042.htm#st

States with the highest geoscientist employment level:

- 1. Texas
- 2. California
- 3. Colorado
- 4. Washington

How do I get a Geologist License?





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

Geologist Licensing is managed by a Board

Board members

Member	Role	Term expires
Tom Tebb	Geologist/Engineering Geologist/Hydrogeologist - Chair	May 1, 2024
Eileen Webb	Geologist - Vice Chair	May 1, 2024
James Struthers	Geologist/Engineering Geologist - Secretary	May 1, 2023
Carla Brock	Geologist and Hydrogeologist	May 1, 2021
Kathy Troost	Geologist	May 1, 2022
Casey Hanell	State Geologist/Engineering Geologist	Ex-officio
Vacant	Public Member	

Steps to Licensure

Meet the educational requirements and pass ASBOG's Fundamentals of Geology Exam



How do I get a Geologist License?

1. Meet the educational requirements



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) Twenty-four semester or thirty-six 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

Or

(ii) 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.

How do I get a Geologist License?

1. Meet the educational requirements

You meet the education requirements if you receive a <u>B.S. Degree</u> in Geology WWU.



WWU's B.S. Upper Division Core		credits	
306 310 318 352 406	Mineralogy Geomorphology Structural Geology Geophysics Petrology	4 5 4 21 cred 4 4	its
409	Field Methods and Theory	6	
410	Field Mapping	6	
415	Stratigraphy and Sedimentation	4	
		37	

If you choose the <u>B.S. in Geophysics</u> 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 <u>B.A. in Geology</u> 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.

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



How do I get a Geologist License?

2. Apply to take the ASBOG Fundamentals Exam

The State has adopted the national Association of State Boards of Geology (<u>ASBOG</u>) standardized exam as the Fundamentals Exam (140 multiple choice questions)



Education Requirements

You can <u>take the ASBOG</u> Fundamentals Exam <u>without a degree</u> if you have accumulated 36 quarter credits of upper division courses (300 or above) and 21 of those credits are from this list.

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

Fundamentals Exam application procedures

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

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 90-day processing period.

For example, the spring ASBOG Fundamentals Exam is **March 19, 2021**, but the application deadline is December 31, 2022.

Make sure your fall-quarter grades are recorded on your transcript before you have WWU send it the DOL.

The Fundamentals Exam has 140 multiple choice questions in the categories below.



GEOLOGY STUDY MANUAL

Review for

the National (ASBOG) Geology Licensing Exam

Published by

REG REVIEW, Inc.

37 Rosewell Road Bedford, NH 03110

http://regreveiw.com

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



CANDIDATE RESOURCES



LICENSEE RESOURCES

Examination Score Request Tasks of a Geologist Academic Assessment CPAT Universities

MEMBER RESOURCES

ASBOG[®] RESOURCES

Past Executive Committees

Previous Meeting Locations

ByLaws

Service Awards

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

Code of Conduct/Harassment

Last Updated: September 12, 2020

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

ASBOG[®] Home » AGI » AIPG » GSA » National Map

How do I get a Geologist License?

3. Pass the Fundamentals of Geology Exam



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.

How do I get a Geologist License?

4. Gain five years of work experience as a geologist



Experience Requirements

You must accumulate 5 years of professional geological practice <u>after receipt</u> <u>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

Experience Requirements

Alternative experience credit

- A <u>graduate degree</u> can be counted as a maximum of <u>two</u> 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.

How do I get a Geologist License?

5. Pass the ASBOG Professional Geology Exam



Specialty Professional License Options



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

Specialty Experience 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

Specialty Experience Requirements

WAC 308-15-055

Alternative experience credit

- Each year of graduate study counts as one year of training up to a maximum of <u>two</u> 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

Active Licensee Counts	Undeclared	Male	Female	Total
Geologist	6	856	281	1143
HG Only	2	516	118	636
EG Only	5	278	37	320
EG & HG	0	160	10	170
Pending	12	359	216	587
Pending in WA	12	316	196	524
GEO Population	25	2169	662	2856

Geologists - Licensee Demographics and Trends

*Pending counts are for pending initial and reciprocity licenses, not pending endorsements.



Geologist In Training (passed FG)				
Age - Mode vs. Average **		Male	Female	Total
28 - 32.4	0	258	155	413

**most frequent value vs average value





Run Date: 5/9/2019

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Digges Professor of Engineering Geology

Robert J. Mitchell, Ph.D., L.HG.

Professor, <u>Geology Department</u> 516 High Street Bellingham, WA 98225-9080 360-650-3591; FAX 360-650-7302 <u>robert.mitchell@wwu.edu</u>

Graduate Student Information

Teaching

Transfer Student Information

Geologists Licensing Information <

Google

For future reference see my web site

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

How we can help!

Join the WWU AEG Student Chapter





GEOLOGY DEPARTMENT

Established November 2011

What is AEG?



Association of Environmental & Engineering Geologists

Professional organization of geology practitioners, academic geologists, geology teachers, and students.

Membership is FREE to students!

Why Join the WWU AEG Student Chapter?

Professional Development

- Geologist Licensing Resources
- Scholarship Applications
- Resumes
- AEG Meetings in Seattle
- Internships
- Field Trips
- Guest Speakers