Geologic licensure in Alabama

Information for students and faculty

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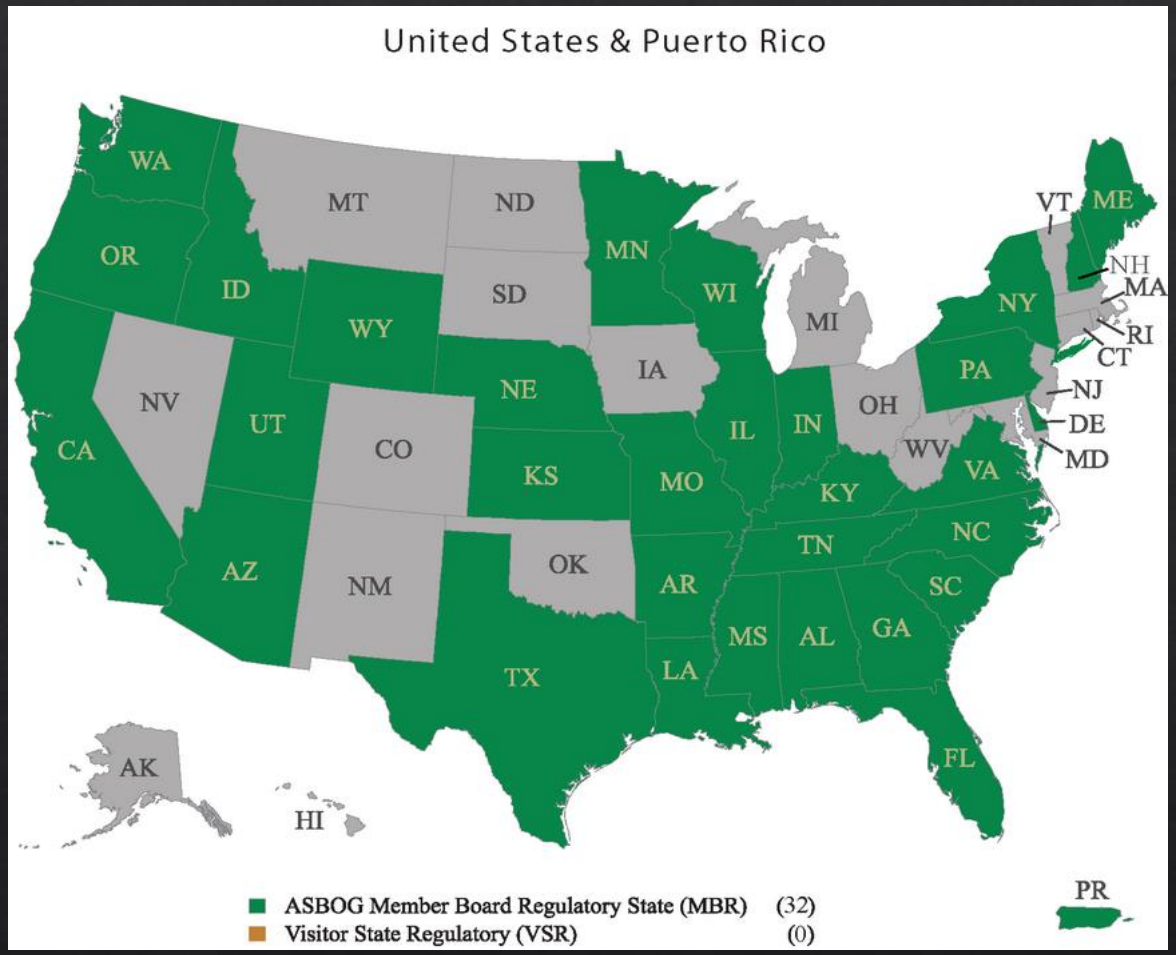
Geosciences, Auburn University, Auburn, Alabama 36849

Status of states regarding geologic licensure as of March 2025



http://asbog.org/

Association of State Boards of Geology

Why geologic licensure?

‘Public Protection Through Licensure’

Much of today’s geological practice affects the health, safety, and welfare of the public, the environment, and the economy and feasibility of engineered works.

Unqualified geologists, who are employed in jobs that affect the public, place an undue risk on the health, safety, and welfare of that public.

The risks include:

1. *The possibility of an error that will cause a loss of life or property*
2. The higher costs of supervision and project completion
3. The costs of repeating incorrect and incomplete work
4. Lower cost/benefit ratios brought about by an inability to do efficient work

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Licensure helps assure that qualified reputable individuals provide accurate geologic information to the public in such areas as the following:

- geologic mapping
- groundwater resource and development protection
- mineral-resource evaluation
- oil and gas development
- safe oil, gas, water, or mineral drilling
- accurate and reliable information to government agencies for public use
- environmental geology issues
- land surface stability
- sanitary landfill site selection
- toxic, nuclear, and hazardous waste disposal site selection
- contaminated soil and groundwater investigations
- mined-land reclamation
- acid mine drainage
- dam and impoundment construction
- highway construction

http://asbog.org/

Why not hire engineers to certify geologists' work or to do geologic work?

For public protection, persons can only certify work for which they were trained in the fundamental geologic principles and have the necessary experience.

Geologists are trained and have experience in geologic interpretation of Earth materials; *engineers are trained and have experience in designing and building*.

Engineering and geology are two distinctly different professions.

However, because of the close relations between those who interpret and those who design and build, geologists and engineers must work together and in a supportive fashion.

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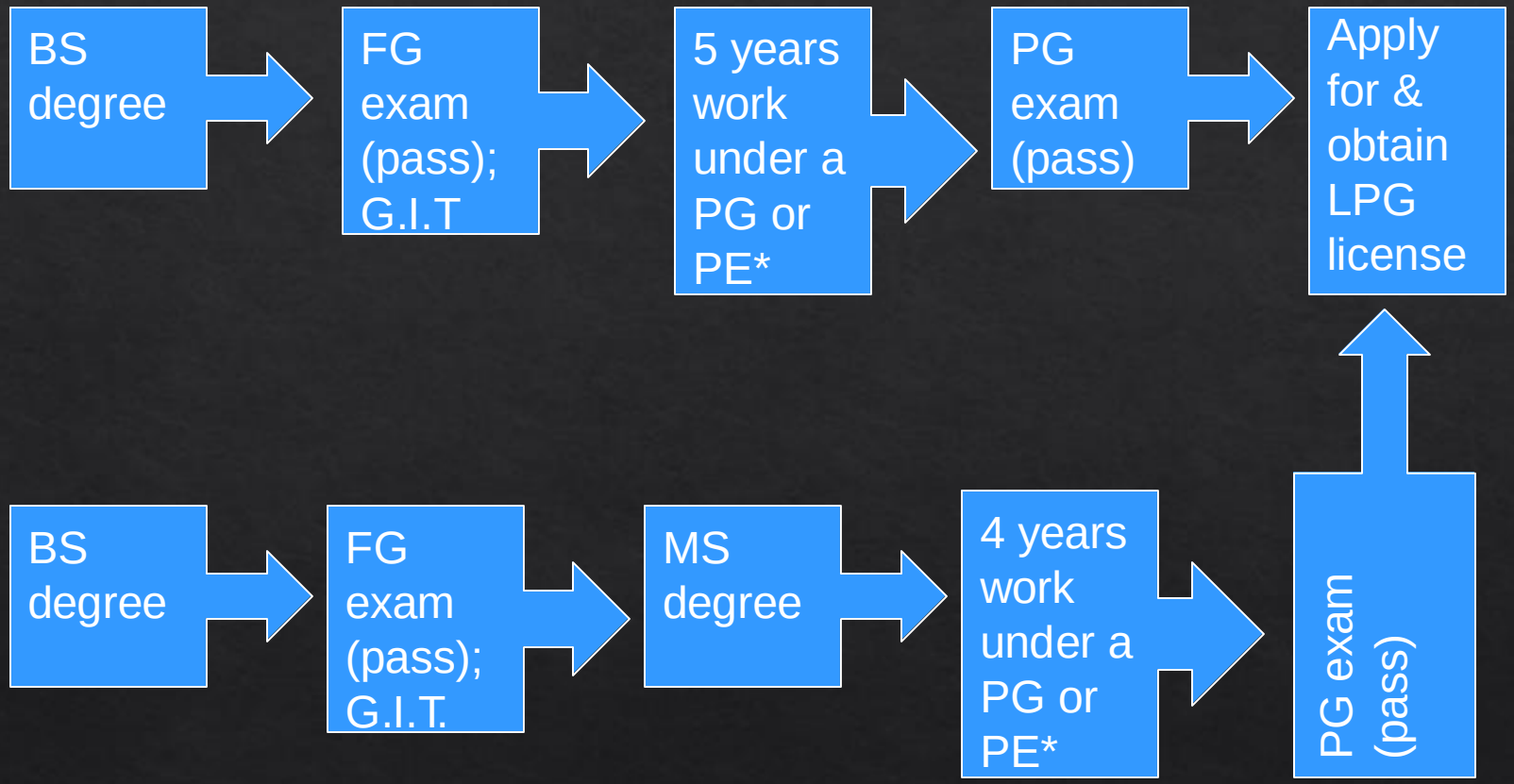
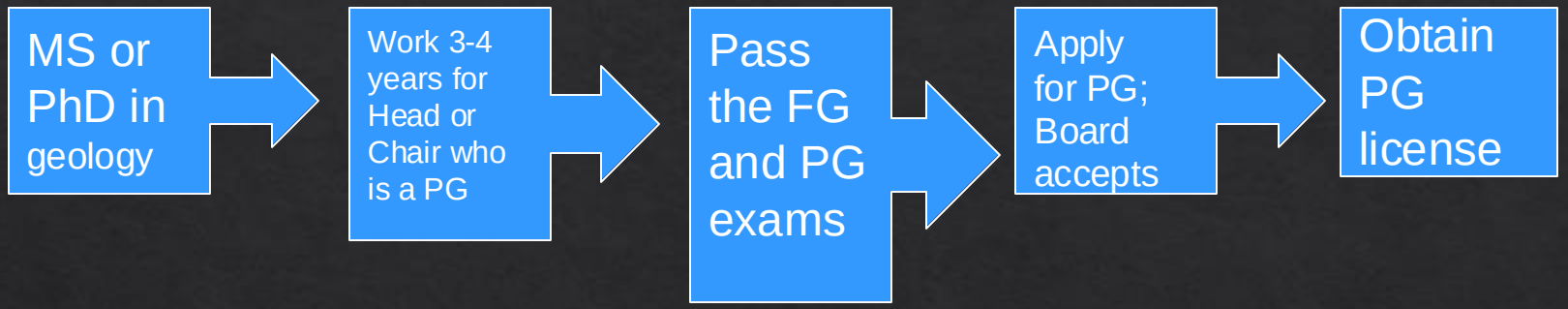
Typical path to licensure for a geologist …



* True in Alabama; some states vary.

The above is based on the “Alabama model.”

Hypothetical path* to licensure for an Alabama college faculty member …



* Based on ABLPG discussions and board attorney's advice.

Three years work experience under PG Head or Chair assumes one year credit for two graduate degrees.

To date, no one has attempted this path.

Association of State Boards of Geology

ASBOG – Main advocacy group for licensure … and they are the licensure exam writers

http://.asbog.org/

Contact Information:
ASBOG
P.O. Box 11591
Columbia, SC 29211-1591
803 739-5676

ASBOG®

Association of State Boards of Geology

http://.asbog.org/

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LINKS TO ALL 31 STATE LICENSURE BOARDS, plus Puerto Rico →

State		State	
Alabama	MBR	Nebraska	MBR
Alaska	VSNR	Nevada	VSNR
Arizona	MBR	New Hampshire	MBR
Arkansas	MBR	New Jersey	VSNR
California	MBR	New Mexico	VSNR
Colorado	VSNR	New York	VSNR
Delaware	MBR	North Dakota	VSNR
Florida	MBR	Ohio	VSNR
Georgia	MBR	Oklahoma	VSNR
Hawaii	VSNR	Oregon	MBR
Idaho	MBR	Pennsylvania	MBR
Illinois	MBR	Rhode Island	VSNR
Indiana	MBR	South Carolina	MBR
Iowa	VSNR	South Dakota	VSNR
Kansas	MBR	Tennessee	MBR
Kentucky	MBR	Texas	MBR
Louisiana	VSNR	Utah	MBR
Maine	MBR	Vermont	VSNR
Maryland	VSNR	Virginia	MBR
Massachusetts	VSNR	Washington	MBR
Michigan	VSNR	West Virginia	VSNR
Minnesota	MBR	Wisconsin	MBR
Mississippi	MBR	Wyoming	MBR
Missouri	MBR	Puerto Rico	MBR
Montana	VSNR		

Typical ASBOG examination schedule …

SPRING – March each year
FALL – October each year

Exam is computer-based.

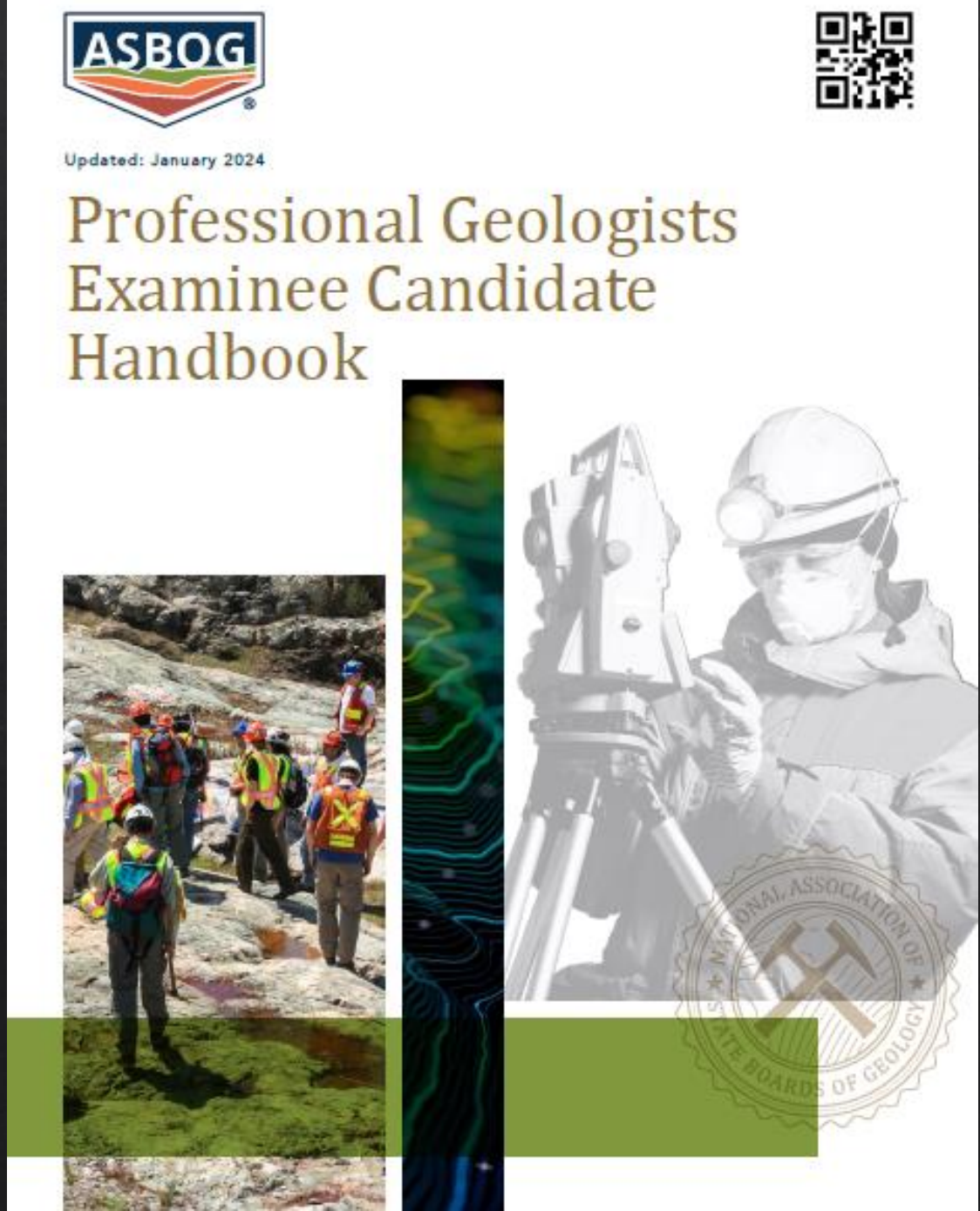
Dates and instructions to register for exams can be found on state board web pages,

e.g., ABLPG (https://www.algeobd.alabama.gov/)

or at ASBOG's web page (http://.asbog.org/).

Candidate Handbook

http://asbog.org/



Candidate Handbook

PROFESSIONAL GEOLOGISTS
EXAMINEE CANDIDATE HANDBOOK

Table of Contents

http://asbog.org/

Candidate Handbook

Professional Exam

Fundamentals Exam

Appendix 2:
FG and PG Test Blueprints

Content Domains	FG %	PG %
A. General and Field Geology	17	17
B. Mineralogy, Petrology, and Geochemistry	12	5
C. Sedimentology, Stratigraphy, and Paleontology	11	5
D. Geomorphology, Surficial Processes, and Quaternary Geology	14	8
E. Structure, Tectonics, and Seismology	12	9
F. Hydrogeology	13	22
G. Engineering Geology	12	18
H. Economic Geology and Energy Resources	9	16
TOTALS	**100**	**100**

This ASBOG® Fundamentals of Geology (FG) and Practice of Geology (PG) Examination Knowledge Base consists of eight domains which collectively encompass the scientific and practical knowledge needed to become a licensed professional geologist. The Knowledge Base for Domain A encapsulates the general principles and knowledge of general geology and field methods which provide the foundation for the other seven domains; i.e., the other seven domains implicitly include the Knowledge Base for Domain A. Within each domain, the order in which the items are listed does not reflect their relative importance.

Candidate Handbook

Fundamentals Exam

Appendix 3:
FG Sample Questions and Answer Key

1.
When water contacts pyrite at the earth's surface, the runoff is commonly:

A) acidic
B) basic
C) oxygenated
D) nitrogen-rich

2.
What is the correct order of the ages of the units from the oldest to the youngest on the geologic map in Figure 13?

A. Aa, Fo, Mo, Di, Pm
B. Di, Mo, Fo, Aa, Pm
C. Pm, Di, Mo, Fo, Aa
D. Aa, Fo, Di, Mo, Pm

Map View

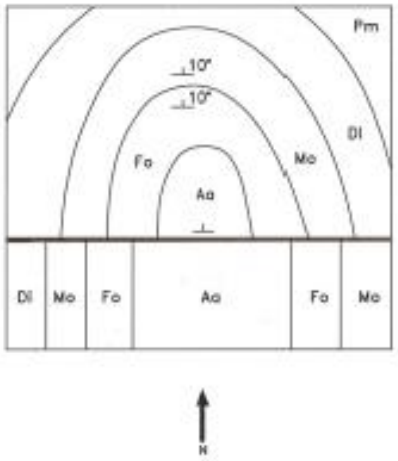


Figure 13

3.
In an eolian sand aquifer, hydraulic conductivity would be expected to generally:

A. increase upward
B. increase downward
C. be uniform
D. be lowest in the middle of the unit

4.
Which of the following pairs likely would be composed of sediments with DIFFERENT grain size and sorting characteristics?

A. outwash plain–end moraine
B. esker–kame
C. tuff–tephra
D. barchan dune–parabolic dune

5.
It has been determined that a prospective strippable reserve contains 1000 acres (1 acre = 43,560 sq. ft.) of lignite in beds averaging 20 feet in thickness. Assume specific gravity of 1.28 (80 lbs/ft3). What is the reserve in tons?

A. 362,880,000
B. 3,484,800
C. 6,696,600,000
D. 34,848,000

6.
The scale for describing the effects or damage caused by an earthquake at a given geographic location is called the:

A. Bernoulli scale
B. Richter scale
C. Modified Mercalli scale
D. Moment Magnitude scale

Candidate Handbook

Fundamentals Exam

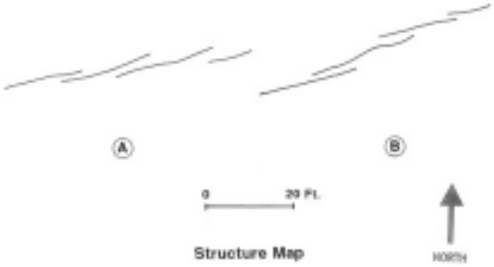
Appendix 3:
FG Sample Questions and Answer Key

7.
Which statement best describes the effect of diagenesis on the overall quality of an oil/gas reservoir?

A. Diagenesis enhances reservoir quality.
B. Diagenesis diminishes reservoir quality.
C. Diagenesis may enhance or diminish reservoir quality.
D. Diagenesis has little or no effect on reservoir quality.

8.
Incipient lateral displacement across a narrow zone is often defined by the appearance of Riedel fractures on the ground. Two typical patterns of Riedel fractures are shown in Figure 24. With respect to the patterns shown:

A. A is right-stepping and indicates right lateral movement
B. B is left-stepping and indicates vertical movement
C. A is right-stepping and indicates left lateral movement
D. A and B are both right-stepping



Structure Map

Figure 24

9.
The rate of production from a subsurface reservoir is most directly related to:

A. porosity
B. permeability
C. compactness
D. grain size

10.
What is the best radiometric dating technique to determine the age difference between two Miocene-age volcanic ash deposits separated by 500 feet vertically?

A. Potassium-Argon
B. Carbon-Carbon
C. Uranium-Lead
D. Uranium-Thorium

11.
What geophysical method would generally be most effective to map deeply buried (1500' deep) bedrock pediments?

A. ground penetrating radar
B. electrical resistivity
C. seismic refraction
D. seismic reflection

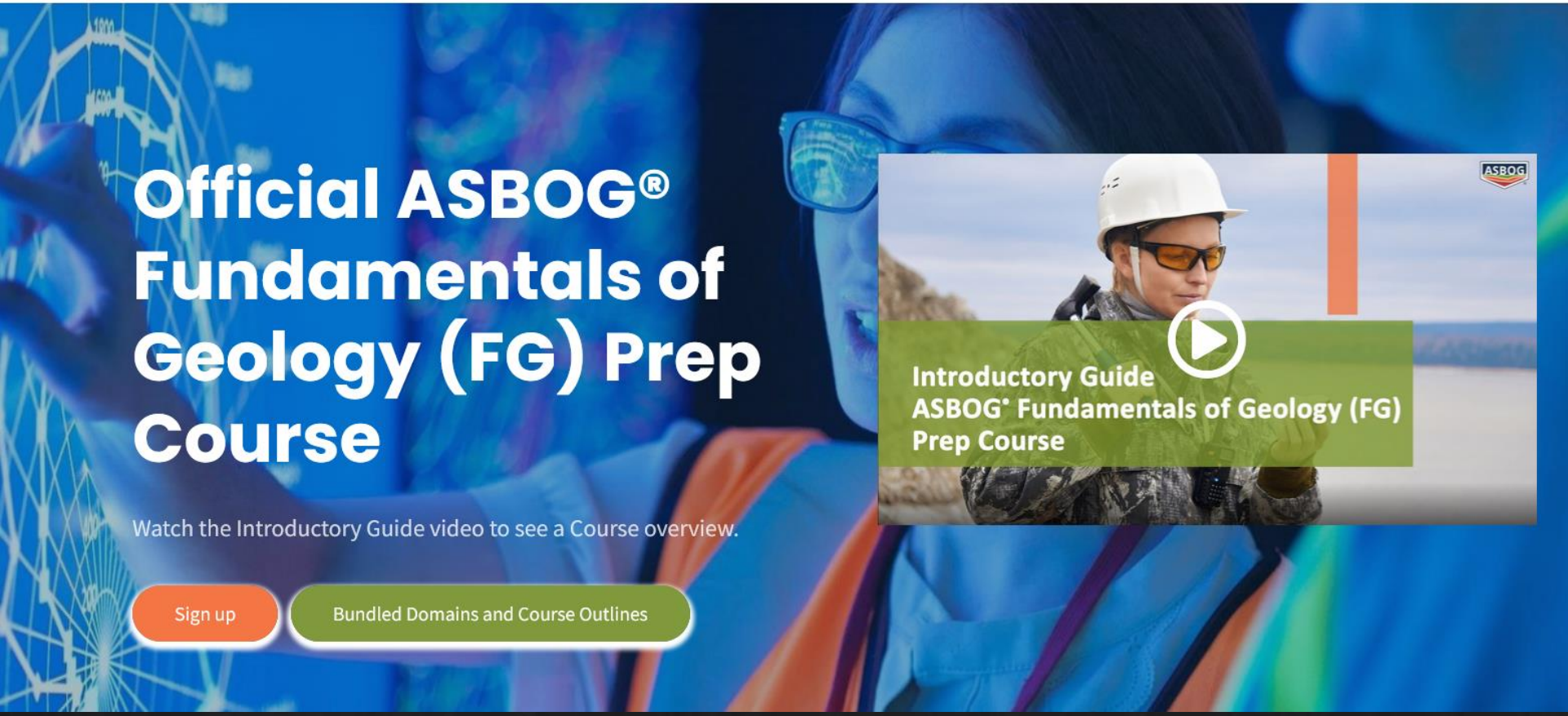
12.
A groundwater model is considered calibrated when:

A. the model grid and layers match the constructed conceptual model
B. the groundwater flux into the model equals the groundwater flux out of the model
C. hydraulic heads and fluxes reproduce the system modeled within an acceptable tolerance
D. the chosen model boundaries express the nature of the physical boundaries

13.
A rock described as argillaceous:

A. contains flattened pebbles
B. contains abundant clay
C. contains abundant K-feldspar
D. Contains abundant muscovite

ASBOG Study Guide



https://asbogprep.getlearnworlds.com/

Alabama Board of Licensure for
Professional Geologists

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SOURCE FOR INFORMATION ON ALL THINGS PG LICENSURE IN ALABAMA

http://www.algeobd.alabama.gov/

Alabama Board of Licensure for Professional Geologists
2777 Zelda Road
Montgomery, AL 36106

Phone: 334-420-7236 or 866-873-4664
Email: **geology @ alstateboard.com**

LICENSING ACT - GEOLOGIC LICENSURE IN ALABAMA

http://www.algeobd.alabama.gov

Definitions.

(1) BOARD. The Alabama Board of Licensure for Professional Geologists.

(2)) GEOLOGIST. A person who holds a degree in the geological sciences from an accredited college or university.

(3)) GEOLOGIST-IN-TRAINING. A person who holds a degree in the geological sciences from an accredited college or university and who has successfully passed the part of the professional examination covering fundamental or academic geological subjects. (Alabama: 70% or higher on ASBOG FG exam.)

(4)) GEOLOGY. The science dealing with the Earth and its history; its constituent rocks, minerals, liquids, gases, and other materials of which it is composed, and the study of the processes responsible for the development and change in the component parts of the Earth, for the benefit of mankind.

Code of Ala. Acts 1995, No. 95-399, p. 820, §1. Section 34-41-3

(5) GOOD MORAL CHARACTER. Character that tends to ensure the faithful discharge of the professional duties of the licensed professional geologist based on truth and adherence to ethical principles. (No felonies; misdemeanors are fully explained to the satisfaction of the Board.)

(6) LICENSE. A certificate issued by the board recognizing the individual named in this certificate as meeting the requirements for licensing under this chapter.

(7) LICENSED PROFESSIONAL GEOLOGIST. A person who holds a license as a professional geologist under this chapter. (Was a Geologist-in-training for 4/5 years *total* under PGs or equivalent and has passed ASBOG PG exam with 70% or more … or has a "grandfathered license" (no longer available).)

(8) PUBLIC PRACTICE OF GEOLOGY. The performance of geological service or work, including, but not limited to, consultation, geological investigation, surveys, evaluations, planning, mapping, or review of geological work related to the public practice of geology, or both, in which the performance is related to the public welfare or safeguarding of life, health, property, and the environment except as otherwise specifically provided by this chapter. A person publicly practices or offers to publicly practice geology if the person does any of the following:

https://www.algeobd.alabama.gov/

a. Offers to or provides geological work or services to the public in any branch of the profession of geology.

b. Represents himself or herself to be a licensed professional geologist by verbal claim, sign, advertisement, letterhead, card, or in another way.

c. Implies that he or she is a licensed professional geologist or that he or she is registered under this chapter through the use of some other title.

d. Holds himself or herself out as one who performs or is able to perform any geological services or work recognized by the board as the public practice of geology.

https://www.algeobd.alabama.gov/

Code of Ala. Acts 1995, No. 95-399, p. 820, §1. Section 34-41-3

Minimum requirements to be eligible for license. (Code of Acts Ala. 1995)

(a) An applicant is eligible for a license as a professional geologist in the State of Alabama if the applicant meets *all* of the following minimum requirements:

(1) Is of good moral character.

(2) Has graduated from an accredited college or university with a degree in geology, engineering geology, or one of the related geological sciences if the applicant has completed a minimum of 30 semester hours or their equivalent of course work in geological science. The appropriate college or university shall document educational experience by submitting a certified written reference or certified transcript directly to the board. (NOTE – See Board policy on courses.)

(3) Have at least five years (total) of full-time professional geological work after receipt of a bachelor's degree, either as a geologist-in-training or in geologic work related to the public practice of geology, which is satisfactory to the board. The following criteria of education and experience qualify toward accumulation of the required years of professional work:

https://www.algeobd.alabama.gov/

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NOTE – Requires ASBOG Fundamentals (FG) exam score over 70%.

https://www.algeobd.alabama.gov/

a. The board, at its discretion, may give a maximum of one year's credit for each graduate degree in geology, engineering geology, or one of the related geological sciences.

b. The board may consider work in related fields as acceptable work experience.

c. In all cases, the board shall determine if the applicant has demonstrated his or her ability by having gained experience by performing work in a responsible position. The adequacy of the required supervision and experience shall be documented to the board.

d. Professional geologic research of applicants either teaching at the college or university level or in research agencies of state or federal government shall be credited and applied toward the professional requirements herein, provided the work or research in the geological sciences can be documented in writing and is demonstrated to be of a sufficiently responsible nature to be equivalent to the professional requirements as set forth above.

e. The professional geologic work experience of the applicant shall be documented in writing. Except as otherwise provided, work experience obtained before receipt of a bachelor's degree shall not be accepted as credit toward professional geologic work experience.

(4) Passes an examination, which is designed to demonstrate that the applicant has the necessary knowledge and requisite skill to exercise the responsibilities of the public practice of geology. (NOTE – ABLPG requires the ASBOG PG exam; score must be over 70%.)

(Code of Ala. Acts 1995, No. 95-399, p. 820, §10.)

https://www.algeobd.alabama.gov/

NOTE on EXAMS

In some other states, examinations other than ASBOG's are used including exams that are written by the geology boards in those states.

ABLPG Policy on COURSES FOR A DEGREE IN GEOLOGICAL SCIENCES

The Alabama Board of Licensure for Professional Geologists recognizes that a core of required geology courses common to curricula in most degree-granting geology departments is essential to the training of geologists. The following or equivalent courses in geology are "*strongly suggested*" for licensure. Originally, these were listed as *mandatory*.

- Physical Geology - 4 semester hours or equivalent
- Historical Geology - 4 semester hours
- Mineralogy - 4 semester hours
- Structural Geology - 3 semester hours
- Stratigraphy - 3 semester hours
- Field Geology - 6 semester hours

https://www.algeobd.alabama.gov/

Some curricula may reflect regional differences or require other similar or additional courses. Courses may be presented with slightly different or variations in name. It is the scientific content that is important. The following courses are also *desirable* for licensure and *may be necessary* for the FG and PG exams:

- Applied Geophysics Economic Geology
- Environmental/Engineering Geology
- Geomorphology
- Groundwater Hydrology, Hydrology, or Hydrogeochemistry
- Invertebrate Paleontology
- Petroleum Geology Petrology, Petrography, or Sedimentary Petrology
- Igneous and Metamorphic Petrology
- Optical Mineralogy
- Sedimentology

"Other geologically-related courses may be considered by the Board. In no case will course work which is not specifically focused toward the geological sciences be considered toward meeting the basic education requirements."

https://www.algeobd.alabama.gov/

Alabama Board of Licensure for
Professional Geologists

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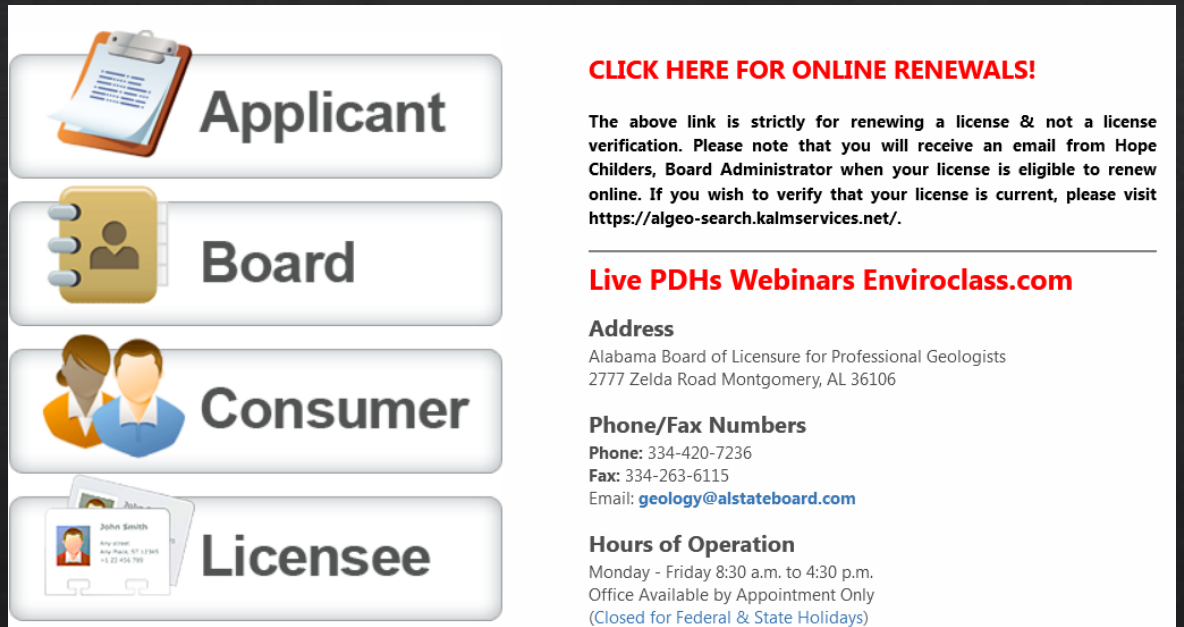

CLICK HERE FOR ONLINE RENEWALS!

The above link is strictly for renewing a license & not a license verification. Please note that you will receive an email from Hope Childers, Board Administrator when your license is eligible to renew online. If you wish to verify that your license is current, please visit https://algeo-search.kalmservices.net/.

Live PDHs Webinars Enviroclass.com

Address

Alabama Board of Licensure for Professional Geologists
2777 Zelda Road Montgomery, AL 36106

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Phone: 334-420-7236
Fax: 334-263-6115
Email: **geology@alstateboard.com**

Hours of Operation

Monday - Friday 8:30 a.m. to 4:30 p.m.
Office Available by Appointment Only
(Closed for Federal & State Holidays)

http://www.algeobd.alabama.gov/

Type of geologic work in Alabama wherein a geologic license is required:

The law says “any person who publicly practices, or offers or attempts to publicly practice, geology in the State of Alabama is subject to” licensure law.

http://www.algeobd.alabama.gov

EXEMPTIONS - The only persons practicing geology who are exempt from licensure in Alabama are:

(1) Persons engaged solely in teaching of geology

(2) Officers and employees of the United States of America and the State of Alabama

(3) Officers and employees of businesses and industries practicing solely as officers and employees and they do not offer geological services to the public

(4) Officers and employees of companies and corporations in mining and mineral exploration

(5)Officers and employees of companies and corporations in oil and/or gas exploration and development …

For full text of all parts, see Section 34-41-7.

http://www.algeobd.alabama.gov

Keeping your Alabama geologic license:

- ABLPG geologic licenses are valid for 2 years, and then must be renewed.

- Renewal requires payment of a fee and documentation of CONTINUING EDUCATION efforts in the amount of 30 professional development hours (PDHs) per biennium.

- There are rules on what is and is not considered acceptable for Continuing Education, and these efforts must be documented at each renewal. At random, the Board audits documentation for 1/3 of all LPGs renewing each quarter of the year.

- For more information on continuing education requirements, see the Board web page …

http://www.algeobd.alabama.gov

LICENSURE RELATIONS BETWEEN AND AMONG STATES

The P.G. license is usually only valid in the state of issue, but there is …

Comity – an agreement between states that expedites licensure in another state.

e.g. Alabama-Mississippi comity

https://www.algeobd.alabama.gov/PDF/ALandMSreciprocityagreeement.pdf?sm=b_b

e.g. Alabama-Texas comity

https://www.algeobd.alabama.gov/PDF/TX_ALAgreement.pdf?sm=b_c

Reciprocity – an arrangement between states that makes applying for a license easier if you have a license in another state already (hypothetically, all states have reciprocity with all other states; however, note that some states have *multiple types of geological licenses*)

e.g. Alabama-Louisiana reciprocity

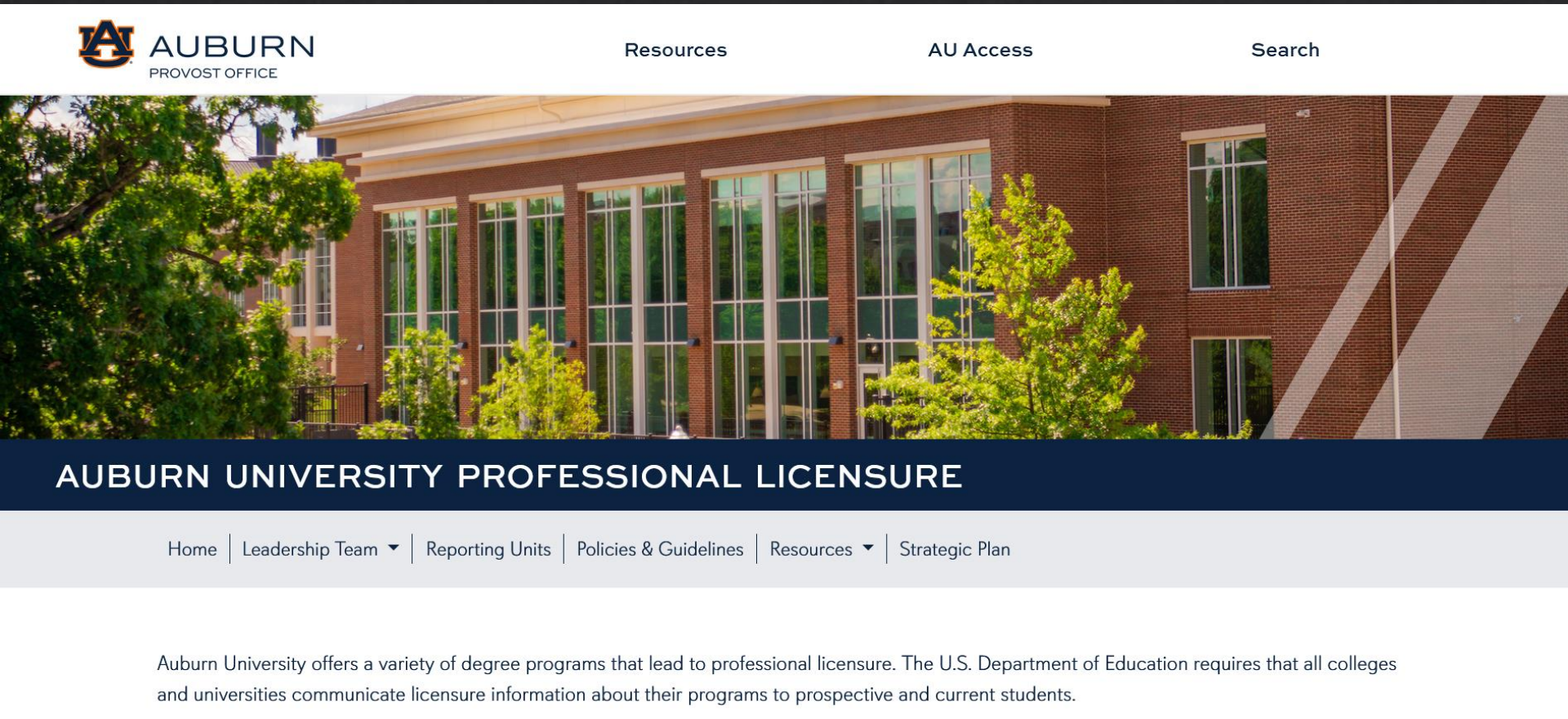
https://www.algeobd.alabama.gov/PDF/2016/Alabama-LouisianaReciprocityAgreement.pdf?sm=b_d

FEDERAL REPORTING REQUIREMENTS

U.S. Dept. of Education requires all university degree programs that "lead to licensure" to notify all students and their parents about licensure in writing.

At Auburn, this federal requirement is managed by the Provost's office.

https://www.auburn.edu/academic/provost/resources/student/professional-licensure/



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If you click on the Provost's office web page link for COSAM/Geology licensure …

Geology (BS)

Professional Licensure: Meets	Disclosure Statement
AL, AZ, AR, CA, DC, DE, FL, GA, IA, ID, IL, IN, KS, KY, LA, ME, MI, MN, MS, MO, NC, NE, NH, NY, OR, PA, PR, SC, TN, TX, UT, VA, WA, WI, WY May not be correct; Requirements are complex and vary from state to state.	The Bachelor of Science in Geology at Auburn University prepare students to meet the educational requirements for the National Association of State Boards of Geology (ASBOG) licensure examinations. Each state licensure board has sole authority in determining whether credits earned are acceptable for examination and licensure. Additionally, states might have more specific requirements that must be met to obtain licensure. For detailed licensure requirements for each state, visit their licensure website for more information.

Professional Licensure: Not Required	Disclosure Statement
AK, CO, CT, HI, MA, MD, MT, ND, NJ, NM, NV, OH, OK, RI, SD, VT, WV	There are no pertinent geological licensure laws.

https://www.auburn.edu/academic/provost/resources/student/professional-licensure/

FEDERAL REPORTING REQUIREMENTS

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In the opinion of the 'designated contact person' in Geosciences, this is what the term "lead to licensure" means …

The required geology courses in the degree program probably provide sufficient background so that a student graduating in that degree program would have a reasonable chance to pass the Fundamentals of Geology exam after review and study of materials from those required classes, and also engaging in all other reasonable preparation for the exam."*

*B.S. Geology – yes
B.S. Geography – no
B.S. Earth Systems Science – no
M.S. in geology or geography – no
Ph.D. in Earth Systems Science – no

https://www.auburn.edu/academic/provost/resources/student/professional-licensure/

LICENSURE AND ACCREDITATION

An important item to note about geological licensure and academic curricula:

Geology has no accreditation agency.

When cuts are proposed to geology curricula, geological licensure requirements can and have been used as important points of argument to university administrators who would terminate some classes or cut back on some types of equipment or instructional methods that are important to producing the best geology graduates.

Geology faculty are urged not to forget this important point!

CAVEAT ABOUT 'COURSE SUBSTITUTIONS'

Dean's offices, including ours at AU, assert that they have the right to enforce course substitutions for geology major classes if the enrollment is too low. This is dangerous to our degree.

Example: If structural geology enrollment is too low, the Dean's office could place geology majors in "another class" and substitute that class for structural geology and we have no control over this.

The following are geology major classes at risk of this fate:

- Field geology
- Sedimentary petrology and stratigraphy
- Structural geology
- Mineralogy and petrology

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Reminder about ASBOG' FG exam topics →

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F. Hydrogeology	13
G. Engineering Geology ← need to add	12
H. Economic Geology and Energy Resources	9
TOTALS	100

Questions on geologic licensure?

http://www.algeobd.alabama.gov/

http://asbog.org/

Disclaimer: Viewing this presentation is not a substitute for your reading and studying all ABLPG and ASBOG materials.