MSBRPG Administrative Guidelines for Course Evaluation

In order to be registered as a professional geologist in Mississippi, a candidate must have a BS/BA in Geology or subdiscipline which meets the coursework requirements included in this document (a MS/MA and/or a PhD may also be accepted with equivalent coursework). If a candidate's degree is not a traditional Geology major but does have the hours of coursework, they may ask the board to evaluate their transcript to determine eligibility.

Course Area Requirements:

In order to be considered a major in geology, an applicant must have completed at least 30 semester hours or 45 quarter hours of course credits in geology courses, which include credits in at least 4 of the following areas:

(a) Geochemistry or geophysics.

(b) Geologic field methods.

(c) Geomorphology.

(d) Hydrogeology or hydrology.

(e) Mineralogy.

(f) Petrology or petrography.

(g) Stratigraphy or sedimentology.

(h) Structural geology.

In addition to the coursework required above, other coursework that may be used to satisfy the 30 semester hour or 45 quarter hour requirement includes, but is not limited to, the following:

(a) Economic geology.

(b) Engineering geology.

(c) Environmental geology.

(d) Historical geology.

(e) Mississippi geology or Gulf Coastal Plain geology.

(f) Paleontology.

(g) Petroleum geology.

(h) Physical geology.

Course Area Definitions:

Geochemistry course
A course on the chemical composition of solid Earth materials and/or water and the cycling of elements, notably through the geosphere and hydrosphere. Courses in geochemistry commonly focus on solid Earth materials (high- and low-temperature geochemistry), water (aqueous geochemistry), and/or interactions with organisms (biogeochemistry).

Geophysics course
A course that applies physical principles to investigate composition, properties, and structure of the Earth's subsurface. Courses in geophysics commonly focus on shallow subsurface imaging, deep subsurface imaging, and interpretation of subsurface logs and profiles.

Geologic Field Methods course
A course that emphasizes the use of basic field equipment and learning how to create, read and interpret geologic maps. It involves mapping in the field, collection and interpretation of field data, and compilation and reporting of the data.

Geomorphology course
A course that encompasses the general configuration of the Earth's surface; specifically the study of the classification, description, nature, origin, and development of present landforms and their relationships to underlying structures, and of the history of geologic changes as recorded by these surface features.

Hydrogeology course
A course that focuses on the distribution, quality, and movement of water through porous media in the crustal subsurface. Hydrogeology courses commonly include application of physical principles to model groundwater movement, vadose zone processes, and surface-water interaction; and application of chemical principles to model groundwater contamination and hydrochemical reactions.

Hydrology course
A course that focuses on the hydrologic cycle, in particular the distribution, quality, movement, and exchange of water across terrestrial surfaces and through porous media. Hydrology courses commonly include application of physical principles to model infiltration, soil moisture, evapotranspiration, surface-water dynamics, and groundwater.

Mineralogy course
A course concerning the study of minerals: formation, occurrence, properties, composition, and classification.

Petrology course
A course that encompasses the origin, occurrence, structure, and history of rocks, especially igneous and metamorphic rocks.

Petrography Course
A course that focuses on the identification and classification of rocks according to mineral composition and texture. Petrography courses commonly utilize polarizing light microscopy and X-ray diffraction techniques to support mineral identification.

Stratigraphy course
A course on rock strata. It is concerned not only with the original succession and age relations of rock strata, but also with their form, distribution, lithologic composition, fossil content, geophysical, and geochemical properties. It involves all characteristics and attributes of rocks as strata; and their interpretation in terms of environment or mode of origin, and geologic history. All classes of rocks, consolidated or unconsolidated, fall within the general scope of stratigraphy.

Sedimentology course
A course that focuses on the classification, origin, and interpretation of sediment particles, deposits, and sedimentary rocks. Sedimentology courses commonly include scale-dependent approaches to investigate the formation of sediment, transport and depositional processes, sediment composition and texture, sedimentary structures, diagenetic processes, and facies associated with various depositional environments.

Structural Geology course
A course that deals with the form, arrangement, internal structure, and deformation of rocks, and especially with the description, representation, and analysis of structures, chiefly on a moderate to small scale.

Economic Geology course
A course that focuses on geological settings, formation, and composition of ores. Economic courses commonly include techniques for ore exploration and identification, mine operation, and estimation of ore reserves.

Engineering Geology course
A course that focuses on geotechnical and structural characteristics of rocks and soils that pertain to engineering applications. Courses commonly include geologic site characterization and testing of soil and rock properties relevant to engineering.

Environmental Geology course
A course that focuses on geological processes and Earth material properties as they pertain to human and ecological health. Courses commonly include geological hazards, soil and water pollution, and natural resources.

Historical Geology course
A course that focuses on Earth's evolution through geologic time. Courses commonly focus on the geologic time scale, environmental changes as interpreted from rocks, and the evolution of life as interpreted from fossils.

Mississippi Geology course
A course that focuses on the geological history, tectonics, structure, stratigraphy, and geological resources of Mississippi.

Gulf Coastal Plain Geology course
A course that focuses on the geological history, tectonics, structure, stratigraphy, and geological resources of the Gulf Coastal Plain.

Paleontology Course
A course concerning life in past geologic time, based on fossil plants and animals and including phylogeny, their relationship to existing plants, animals, and environments, and the chronology of the Earth's history.

Petroleum Geology course
A course that focuses on geological settings, formation, migration, and concentration of oil and natural gas in Earth's crust. Petroleum geology courses commonly include geophysical techniques for identification of petroleum reservoirs and geological considerations for production of oil and gas fields.

Physical Geology course
A course that focuses on composition and physical processes in Earth's interior and exterior. Courses commonly focus on the formation of common minerals and rocks, Earth's interior, plate tectonics, deformation, geological hazards, and external processes that modify the surface.

Additional Details:

WHERE QUESTIONS ARISE AS TO THE ACCEPTABILITY OF ANY COURSE LISTED ON THE APPLICANT'S TRANSCRIPTS, IT IS THE APPLICANT'S RESPONSIBILITY TO DEMONSTRATE COURSE EQUIVALENCY.

30 semester hours/45 quarter hours of geologic coursework may be combined hours from BS/BA, MS/MA, and PhD hours.

Courses not coded Geology or a sub-discipline thereof must be submitted with a waiver request letter and syllabus to determine eligibility.

Overall GPA must be a "C" or a 2.0 on a 4.0 scale for Geology course work. D's are counted in hours and GPA but F's and Withdrawals are not.

The following courses are NOT counted without a waiver request letter, syllabus, and description of work other than lecture and literature review included in the course:

Special Topics, Special Problems, Field Trips

The following courses are NOT counted:

Geowriting, Geography, GIS, Thesis work, Teaching, Seminars, Research, Independent Study