

Bachelor of Science in GEOSCIENCES
GEOPHYSICS Concentration: Math Minor Required
2018-2019 Catalog Year

Students must maintain a 2.5 TTU GPA to remain in the BS in Geosciences.

A grade of C- or better must be earned to meet prerequisite requirements and to apply to major, minor or adjunct.

FIRST YEAR Fall -13 hours _____ GEOL 1303 Physical Geology _____ GEOL 1101 Physical Geology Lab _____ MATH 1451 Calculus I (minor) <i>(MPE code 7 or higher, SATM 660, MATH 1321- B, MATH 1550-C)</i> _____ CHEM 1307 Principles of Chemistry I <i>CHEM Placement Exam score of 60% or higher</i> _____ CHEM 1107 Principles of Chemistry lab <i>CHEM Placement Score of 60% or higher</i> _____ Personal Fitness and Wellness + + PFW only required for students under 25 years of age	Spring-15 hours _____ GEOL 2401 Historical Geology <i>(GEOL 1303 +1101, C or better)</i> _____ PHYS 1408 Principles of Physics I <i>(MATH 1451)</i> _____ MATH 1452 Calculus II (minor) <i>(MATH 1451)</i> _____ ENGL 1301 Essentials of Col. Rhetoric
SECOND YEAR Fall-16 hours _____ GEOL 3401 Mineralogy (CL) (2.5 GPA)# <i>(GEOL 1303 +1101, 2401, CHEM 1307 +1107)</i> _____ GPH 3300 Geophysics (2.5 GPA)# <i>(GEOL 1303 +1101, MATH 1451 C or better)</i> _____ GEOL 2101 Seminar (CL) <i>(GEOL 3401 co-req)</i> _____ MATH 2450 Calculus III (minor) <i>(MATH 1452)</i> _____ PHYS 2401 Principles of Physics II <i>(PHYS 1408)</i> # Cumulative GPA all college credits	Spring-15 hours _____ GCH 3303 Introduction to Geochemistry <i>(Math 1452, CHEM 1308 +1108, GEOL 3401 C- or better)</i> _____ GEOL 3321 Igneous + Metamorphic Petrology <i>(GEOL 3401 C- or better)</i> _____ STEM Elective (3 hrs)(CS 1303 recommended) _____ MATH 2360 Linear Algebra (Minor) <i>(MATH 2450)</i> _____ ENGL 1302 Advanced of Col. Rhetoric <i>(ENG 1301)</i>
THIRD YEAR Fall-16 hours _____ GEOL 3402 Structural Geology (CL) <i>(GEOL 3401 PHYS 1408 C- or better)</i> _____ GPH 4321 Seismic Exploration Methods <i>(GEOL 3401 PHYS 1408, MATH 1452 C- or better)</i> _____ GPH 3310 Geophysics Data Processing (CL) <i>(GEOL 3401 PHYS 1408, MATH 2450 C- or better, GPH 4321 (may be co-req))</i> _____ GEOL 3325 Sedimentary Petrology <i>(GEOL 3321 C- or better)</i> _____ Oral Com Elective	Spring- 15 hours _____ GEOL 4327 Depo Systems & Stratigraphy <i>(GEOL 3325 C- or better)</i> _____ GPH 4322 Solid Earth Geophysics <i>(GEOL 3402, GPH 3300, 4321, 3310 all with C- or better)</i> _____ MATH 3350 High Math for Sci + Eng (Minor) <i>(MATH 2450)</i> _____ POLS 1301 American Govt Org _____ English Lit 2000-level (NOT 2311 or 2371)
FOURTH YEAR Fall- 15 hours _____ GEOL 4340 Adv Historical Geology (CL) <i>(GEOL 4327, 3402 C- or better)</i> _____ Foreign Language _____ 2301 _____ HIST 2300 US History Pre 1877 _____ MATH elective 3 hours jr/sr (Minor) _____ POLS 2306 American Public Policy	Spring- 15 hours _____ GEOS or STEM elective _____ STEM Elective (3 hrs) _____ Social and Behavioral Sci Elective + Multicultural _____ HIST 2301 US History since 1877 _____ Creative Arts Elective

GEOS electives:

ATMO 3301 General Meteorology (F)
 GEOL 3301 Geomorphology (F)
 GEOL 3323 Environmental Geology (F)
 GEOL 4300 Petrophysics (F)
 GEOL 4306 Intro to Petroleum Systems (F)
 GEOL 4310 Planetary Geology (S)
 GEOL 4312 /ATMO 4312 UG research
 GEOL 4318 Geology of Texas (S)
 GEOL 4321 Igneous and Meta Petrography (S)
 GEOL 4331 Digital Imagery (S)
 GEOL 4351 Spectroscopy & Classification (S)
 GEOL 4361 Advanced Structural Geology (S)
 GEOL 4370 Hydrogeology (S)

GCH 4308 Mineral Sciences (S even)

GIST 3300 Geographic Info Systems (F & S)

STEM electives:

CS 1303 Programming & Data Analysis Matlab
 GPH 4323 Potential Field Methods (S)
 GPH 4300 Geophysics xlisted GR course
 GCH 4405 Inorganic Geochemistry (F)
 MATH 3351 Math for Sci and Engineers II
 MATH 3342 Statistics for Sci and Engineers I
 MATH 4310 Numerical Analysis I (S odd)
 MATH 4312 Numerical Analysis I (S even)
 MATH 4330 Mathematical Computing (Spring)
 MATH 4342 Mathematical Statistics (fall)

MATH 4343 Mathematical Statistics (Spring)

Subject to prerequisites

PHYS 2305 Computation for Phy Sciences (F)
 PHYS 3305 Electricity and Magnetism I (F)
 PHYS 3306 Electricity and Magnetism II (S)
 PHYS 3401 Optics (F)
 PHYS 4304 Mechanics (S)
Must have 3.5 GPA
 CE 2301 Statics (or ME 2301)
 CE 3303 Mechanics of Solids (or ME 3403)
 CE 3305 Mechanics of Fluids (or ME 3370)
 CE 3302 Dynamics