**B.S. GEOLOGY – 57 TO 59 CREDIT HOURS**

***Required Core Courses***

ENVI 170/170L Earth Science with Lab 4 credit hours

ENVI 270 Earth History 3 credit hours

ENVI 380 Mineralogy 3 credit hours

ENVI 382 Igneous and Metamorphic Petrology 3 credit hours

ENVI 385 Structural Geology 3 credit hours

ENVI 389 Intro Field Methods 1 credit hour

ENVI 389L Intro Field Methods Lab 0 credit hours

ENVI 475 Stratigraphy and Sedimentation 3 credit hours

 **TOTAL HOURS 20 credit hours**

***Required Cognate Science Courses***

MATH 131 Calculus I 4 credit hours

MATH 132 Calculus II 4 credit hours

CHEM 105/105L Chemistry I 4 credit hours

CHEM 106/106L Chemistry II or ENVI 481 Geochemistry 3 – 4 credit hours

PHYS 105/105L Physics I 4 credit hours

PHYS 106/106L Physics II or ENVI 486 Geophysics 3 – 4 credit hours **TOTAL HOURS 22 – 24 credit hours**

***Directed Electives – 15 credit hours***

Students have the option of diversifying their electives to cover a broad spectrum of geologic topics, or they may tailor their electives to focus on such discipline-related topics as environmental geosciences, water resources, geochemistry, geoarchaeology, and physical geology. See advisor for list of discipline related topics. Up to 3 credits of other related science courses may be completed in consultation with the major advisor.

ENVI 101 – Geoscience Topics (up to 3 credits)

ENVI 260 – Archaeology Laboratory Practicum

ENVI 342 – Introduction to Geographic Information Systems

ENVI 350 – Geomorphic Processes

ENVI 351 – Regional Geomorphology

ENVI 356 – Water and Environmental Health

ENVI 360 – General Astronomy

ENVI 361 – Oceanography

ENVI 376 – Dinosaurs, Earthquakes and Volcanoes

ENVI 376L – Dinosaurs, Earthquakes and Volcanoes Lab

ENVI 401 – Geographic Information Systems: Applications

ENVI 402 - Geoprocessing

ENVI 405 – Fundamentals of Remote Sensing

ENVI 406 – Remote Sensing – Image Development and Interpretation

ENVI 407 – Remote Sensing: Digital Analysis of Spectral Data

ENVI 408 – Remote Sensing: Digital Analysis

ENVI 436 – Environmental Archaeology

ENVI 445 – Archaeological Methods

ENVI 446 – Midwestern Archaeology

ENVI 447 – Current Issues in Archaeology

ENVI 450 – Environmental Modeling and Mapping

ENVI 452 – Quaternary Environments

ENVI 454 – Introduction to Hydrology

ENVI 455 – Groundwater Hydrology

ENVI 456 – Lakes and Wetlands

ENVI 457 – Environmental Geology

ENVI 458 – Medical Geology

ENVI 460 – Conservation and Sustainability of Natural Resources

ENVI 461 – Environmental Justice: law, Policy, and Social Change

ENVI 462 – Ethics and the Environment

ENVI 463 – Soil Genesis and Classification

ENVI 465 – Fundamentals of Tree Ring Research

ENVI 470 – Paleontology and Geobiology

ENVI 471 – Quaternary Paleoecology

ENVI 479 – Global Biogeochemical Cycles

ENVI 481 – Geochemistry

ENVI 482 – Volcanic Processes and hazards

EVNI 483 – Mineral Resources

ENVI 484 – Energy Resources

ENVI 486 – Geophysics

ENVI 489 – Field Geology

ENVI 491 – Archaeological Field School

ENVI 492 – Internship

ENVI 496 – Advanced Research

ENVI 497 – Seminar in Advanced Topics

ENVI 499 – Senior Seminar and Research