Undergraduate TA Opportunities – 2024-25
Department of Geological Sciences and Geological Engineering

Below are the courses for which roles may be available to undergraduate TAs. Graduate students are placed in priority, but we will consider undergraduate TAs especially for the 100-level courses. Please note that you had to achieve a minimum grade of B in a course to be considered as a TA for that particular course.

Fall 2024

Earth Systems Engineering - APSC 151

Role: TA

An introduction to the complex Earth System (the solid earth, hydrosphere, atmosphere, and biosphere) and our interactions with it. The science behind our exploration and understanding of our planet and its ongoing evolution is explored in combination with the engineering geology of geo-materials, geo-resources, geo-dynamics and geo-risk.

The Dynamic Earth - GEOL 104

Role: TA

Introduction to the internal structure of the Earth and the processes that have shaped its surface. Global tectonics and continental movement, rock genesis, mountain building, glaciations and geological time. Laboratories include rock and mineral identification, and problem solving in historical geology, earthquakes, groundwater flow and coastal erosion.

History of Life - GEOL 107 / GEOE 207

Role: TA

The history of life, from its inception four billion years ago to the present day, focusing on the inter-relationship between organic evolution and global change. Coevolution of early life and the atmosphere; development of marine animals and their ecosystems; invasion of the land; dinosaurs and their world; mass extinctions; the Age of Mammals; and hominid evolution.

Geological Field Methods – GEOL/E 221

Role: TA

The field study of surficial deposits, rock types, and geological processes, based on the geology of the Kingston area. Descriptions, samples and measurements acquired on several field trips will be analyzed, and the results recorded in maps, sections, and reports throughout the course.

Mineralogy - GEOL/E 232

Role: TA

Characterization of rock- and soil-forming silicate and non-silicate minerals (their crystallography, optical and physical behaviour, and crystal chemistry), viewed at both the macroscopic and microscopic scale. The structural, chemical and genetic aspects of the crystalline state as displayed by minerals are considered.

Winter 2025

Igneous and Metamorphic Petrology - GEOL/E 235
Role: TA
Introduction to the genesis and characterization of igneous and metamorphic rocks. Students will acquire skills to classify rocks and the theoretical background to place these rocks in the context of where, why, and how they form with implications for resource exploration and utilization. Macroscopic and microscopic properties will be studied.

Surficial Processes, Sedimentation and Stratigraphy - GEOL/E 238
Role: TA
An examination of the genetic link between surficial geological processes and the sedimentary record. Topics include origin of sedimentary rocks and sedimentary structures; depositional environments and stratigraphic successions; stratigraphic principles and their application to sedimentary basins.

Terrain Evaluation - GEOL/E 333
Role: TA
An introduction to the principles of geomorphology relevant to Geological Sciences and Geological Engineering.
Identification and evaluation of terrain features using analog and digital imagery via traditional and digital (GIS) methods. Digital terrain model acquisition and analysis. Introduction to digital terrain analysis.

Paleontology - GEOL/E 337
Role: TA
Review of the major groups of invertebrate fossils, emphasizing functional morphology, paleoecology, evolution, and geological significance.