The professional master’s degree in Energy Geoscience (formerly Subsurface Geoscience) is geared for students who have a geoscience background and would like to become proficient in their area of interest. Students can choose from four areas of specialization that will prepare them to apply geological knowledge and geophysical methods to find and develop reserves of oil and natural gas; or to hone their skills in manipulating and managing energy-related data, or to refit/expand their skill-set to the new areas of the on-going energy transition.

The core requirements for the degree are strong technical courses, management and policy courses, with communication skills training, and include an industrial internship or work experience. Students select a group of elective courses from an area of specialization (see below), or from a variety of other courses related to their interest.

The MSEG degree program offers four areas of specialization:

- **Energy Data Management**: prepares students to understand exploration and production as a data-driven business, to become data enabled geoscientists to match demands in the energy industry, or
- **Energy Transition and Sustainability**: addresses geoscience methods that are going to be needed in a successful energy transition, such as geo-thermal, carbon sequestration and storage, minerals, etc., or
- **Geology**: prepares students with strong skills in using seismic and other geophysical methods along with geological principles to find oil and natural gas, including topics addressing the ongoing energy industry transition, or
- **Geophysics**: prepares students to become technical experts in aspects of seismology.

The MS in Energy Geoscience (MSEG) degree is part of the professional science master’s (PSM) program at Rice housed in the Wiess School of Natural Sciences. These master’s degrees are designed for students seeking to gain further scientific core expertise coupled with enhanced management and communication skills. They instill a level of scholastic proficiency that exceeds that of the bachelor’s level, and create the cross-functional aptitudes needed in modern industry. This program will allow students to move more easily into careers related to energy data management, geology, and/or geophysics and new energy exploration.

A coordinated MBA/MSEG degrees program is also offered in conjunction with the Jesse H. Jones Graduate School of Business.

Energy Geoscience does not currently offer an academic program at the undergraduate level.

**Master’s Program**


**Coordinated Program**


**Director**

Colin A. Zelt

**Professors**

Jonathan Ajo-Franklin
Richard G. Gordon
Alan R. Levander
Julia K. Morgan
Fenglin Niu

**Associate Professor**

Helge Gonnerman

**Assistant Professor**

Melodie E. French

**Adjunct Faculty**

Kenneth Abdullah
Omer Alpak
Mauricio Araya
Kevin Biddle
Oner Celepckiy
Detlef Hohl
Jeffrey Nunn
Malcolm Ross
Kurt Rudolph
Eric Scott

For Rice University degree-granting programs:

To view the list of official course offerings, please see Rice’s Course Catalog ([https://courses.rice.edu/admweb/ISWKSCAT.cat?p_action=cata](https://courses.rice.edu/admweb/ISWKSCAT.cat?p_action=cata))

To view the most recent semester’s course schedule, please see Rice’s Course Schedule ([https://courses.rice.edu/admweb/ISWKSCAT.cat](https://courses.rice.edu/admweb/ISWKSCAT.cat))

**Description and Code Legend**

*Note: Internally the university uses the following descriptions, codes, and abbreviations for this academic program. The following is a quick reference:*

**Course Catalog/Schedule**

- Course offerings/subject codes: Courses from various subjects may apply towards this program
Department Description and Code

- Earth, Environmental, and Planetary Sciences: EEPS

Graduate Degree Description and Code

- Master of Science in Energy Geoscience degree: MSEG

Graduate Degree Program Description and Code

- Degree Program in Energy Geoscience: EGEO

CIP Code and Description

- EGEO Major/Program: CIP Code/Title: 40.0601 - Geology/Earth Science, General

Classification of Instructional Programs (CIP) 2020 Codes and Descriptions from the National Center for Education Statistics: https://nces.ed.gov/ipeds/cipcode/