

Pandit Deendayal Energy University (PDEU), Gandhinagar

School of Petroleum Technology (SPT)

M.Tech. in Geotechnical and Geoenvironmental Energy

About the program

Geotechnical and Geoenvironmental Energy (G&GE) combines geology and engineering principles to solve practical problems in actual field conditions. It significantly differs from the existing engineering geology program, where engineering geology looks into specific aspects. The G&GE program applies knowledge to the design, construction, operation, and maintenance of various infrastructure facilities such as power, bridges, dams, roads, mining, tunneling, oil and gas, etc. It deals with the engineering safety of significant infrastructures such as dams, reservoirs, offshore drilling platforms, pipelines, roads, and railways. It also deals with the geoenvironmental aspects of waste disposal, such as nuclear and hazardous waste material. Besides, it assesses the geo-hazard risk from landslides, earthquakes, volcanoes, and dams' stability.

Proposal

- SPT-PDEU has envisioned the need for geological engineers in the current market and started a two-year PG program as M.Tech. in Geotechnical and Geoenvironmental Energy.
- This program aims to cater to the current demand for geological engineers' in massive engineering projects and numerous opportunities across the industrial sectors.
- This course orients on theoretical information along with hands-on experience with the design using advanced software tools.

Who is eligible to apply?

This program is expected to be of interest to students in petroleum engineering, mining engineering, civil engineering, and physical sciences, particularly geology and geophysics background with a minimum 60 % or CGPA of 6.5 on a 10-point scale are eligible to apply.

Pre-requisite

- Students are expected to have a good background in engineering geology.
- Any experience with underground structures, soil, and rock mechanics would be an added advantage.

About Curriculum

The curriculum for the course has been designed by referring to the curriculum of reputed Universities in India and abroad. However, it is further fine-tuned in view of the future perspectives and industry requirements.

The curriculum has been structured in three phases:

- 1. Core Courses:** The core courses are essential to provide a critical understanding of theoretical and practical aspects of geology, geotechnical and geoenvironmental aspects.
- 2. Elective Courses:** While the core courses cater to the upshot of this program, the elective courses would provide in-depth knowledge by carrying the weight of the core courses.
- 3. Project Work:** This course aims to affiliate the students towards the geological engineering aspects and prepare the final thesis.

Financial Assistance

The University offers financial assistance (scholarship) as per its availability from its resources, and it is as follows:

- a) For candidates having qualified and valid GATE score admitted in Phase-I will be entitled to a monthly stipend of INR 12,400/-
- b) For candidates admitted under Phase-II Non-GATE category admission process: INR 8000/- per month, subject to the following conditions
 - i. The number of such candidates-beneficiaries will be limited to the number of GATE category seats in the respective branch if they remain unfilled.
 - ii. The selection of candidates and the scholarship will be as per the admission merit.