



Course Code GEOL-210	Course Title Petroleum Geology	ECTS Credits 6
Department Engineering	Semester Fall, Spring	Prerequisites GEOL-110
Type of Course Required	Field Geology	Language of Instruction English
Level of Course 1 st Cycle	Year of Study 1 st	Lecturer(s) Dr Ernestos Sarris
Mode of Delivery Face-to-face	Work Placement N/A	Co-requisites None

Objectives of the Course:

The main objectives of the course are to:

- Provide the students with knowledge of the origin of petroleum (organic/inorganic).
- Physical and chemical properties of petroleum.
- Generation and migration of oil and gas
- Provide the necessary geological knowledge for understanding the traps and seals of the formations.
- Familiarize the students with the importance of petroleum engineer and geologist in the petroleum exploration and production

Learning Outcomes:

After completion of the course, students are expected to:

- Understand the origins of oil and gas.
- Describe the physical and chemical properties of oil and natural gas and discuss the factors which control the composition, productivity and preservation of sedimentary organic matter.
- Describe in detail and critically assess the various geological components that contribute to successful accumulation of oil and gas.
- Understanding fundamentals geophysics with regard to reflection seismology and applications in oil and gas reservoir discovery and recovery

Course Contents:

- Introduction to petroleum geology
- Physical and chemical properties of petroleum
- Basic methods of exploration
- Generation and Migration of Petroleum
- Reservoir Traps and Seals

Learning Activities and Teaching Methods:

Lectures, in-class examples, projects, discussion

Assessment Methods:

Homework assignments, project, mid-term, final exam.

Required Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Gluyas Jon and Richard Swarbrick	Petroleum Geoscience	Blackwell Publishing	2004	ISBN-10: 0632037679 ISBN-13: 978- 0632037674

Recommended Textbooks/Reading:

Authors	Title	Publisher	Year	ISBN
Selley R.C.	Elements of Petroleum Geology	Academic Press	1997	9780126363708
Knut Bjorlykke	Petroleum Geoscience: from sedimentary environments to rock physics	Springer	2010	978-3-642- 02331-6