



UNIVERSITY OF
ABERDEEN

EST. → 1495

GO BEYOND BOUNDARIES



School of Engineering Petroleum Engineering

UNDERGRADUATE GUIDE



→ **1ST IN SCOTLAND
FOR GENERAL
ENGINEERING**

Complete University Guide 2024

Why Study Petroleum Engineering?

Petroleum engineers are concerned with the design and development of front-end engineering technologies required in the exploration and extraction of oil and gas reservoirs.

By studying petroleum engineering at the University of Aberdeen you will also develop skills in project management and gain the engineering, economic and scientific skills needed to enhance recovery, improve safety and minimise the environmental impact of hydrocarbon extraction.

Aberdeen is internationally recognised as a major international energy city and is leading the way in applying world-class technical expertise to the energy transition challenge. While oil and gas will continue to play an important role in meeting our energy needs for years to come, the knowledge and skills you will acquire as a petroleum engineer are also in high demand in the renewable energy sector, for example in geothermal energy and carbon capture and storage.



Accreditation

Our degrees are accredited by the Energy Institute (EI) and by the Institution of Mechanical Engineers (IMechE).

Petroleum Engineering Degree Programmes

BEng Programme (4 Years)

- BEng Petroleum Engineering

MEng Programme (5 Years)

- MEng Petroleum Engineering

Find out more at www.abdn.ac.uk/study

Industry Links and Employability

According to the Royal Academy of Engineering, Aberdeen is one of 13 engineering hot spots in the UK with over 8,000 engineering

businesses across the city and surrounding region. The School of Engineering has strong links with industry, including local, national and international organisations, who support our teaching through guest lectures and seminars, placement opportunities, site visits and scholarships.

SPE Student Chapter

The Aberdeen University chapter of the Society of Petroleum Engineers is one of the largest in the world. With more than 360 student chapters across the globe, the SPE make it easy for you to network with industry professionals and employers, benefit from technology discussions at SPE meetings and events, and receive society-sponsored scholarships.

You can learn more about the SPE Student Chapter at facebook.com/Aberdeen.SPE.SC/



What You'll Study

This is an example course list for the four-year BEng and five-year MEng degrees in Petroleum Engineering. For full details of our various degree programmes, please refer to the relevant pages on our online prospectus at www.abdn.ac.uk/study

Year 1

- Principles of Electronics
- CAD and Communication in Engineering Practice
- Circuit Analysis and Design
- Engineering Mathematics 1
- Fundamentals of Engineering Materials
- Fundamental Engineering Mechanics

Year 2

- Introduction to Geology for Petroleum Engineers
- Fluid Mechanics and Thermodynamics
- Design and Computing in Engineering Practice
- Process Engineering
- Engineering Mathematics 2
- Electrical and Mechanical Systems
- Electronic Systems

Year 3

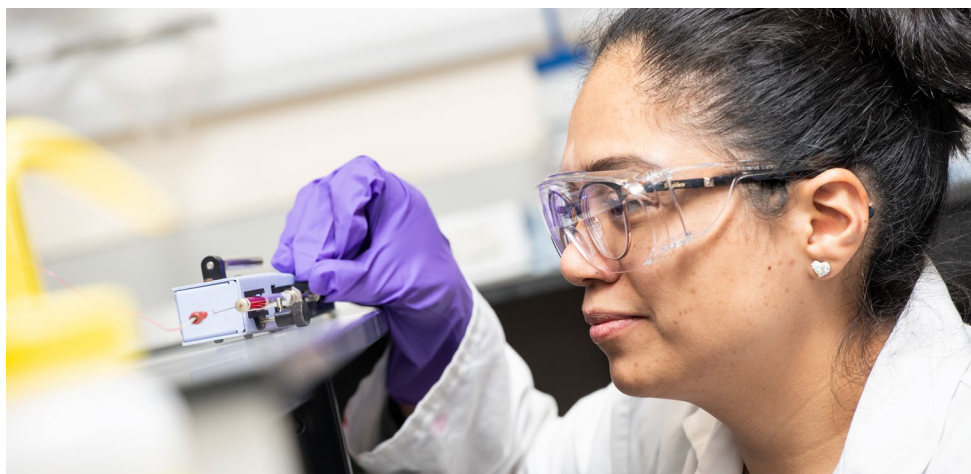
- Fluid Mechanics
- Heat, Mass and Momentum Transfer
- Petroleum Geology and Reservoir Characterisation
- Drilling and Well Engineering
- Reservoir Engineering I: Fundamentals
- Well Testing
- Petroleum Engineering Design
- Engineering Analysis and Methods 1A
- The Engineer in Society

Year 4

- Geomechanics
- Petroleum Production Engineering and Technology
- Reservoir Engineering II: Performance
- Field Development and Petroleum Economics
- Group Design Project (BEng)
- Individual Project (MEng/BEng)

Year 5 (MEng only)

- Offshore Process Engineering,
- Carbon Capture Utilisation and Storage
- Reservoir Simulation
- Enhanced Oil Recovery
- MEng Group Design
- Two elective courses from a range of options



Our Experts



Dr Hossein Hamidi

Programme Leader, Petroleum Engineering

I teach courses in Well and Production Engineering, as well as petroleum engineering design. These align closely with my research focus on utilizing ultrasound for downhole production tubing scale removal, bridging theory and practical applications in the field of petroleum engineering.

Studying engineering is about solving problems that matter. It's a chance to use creativity and science to make a real difference, shaping the world by finding practical solutions to everyday challenges.



Dr Kejian Wu

Senior Lecturer, Petroleum Engineering

Engineering offers a dynamic career path where innovation meets real-world challenges. From designing cutting-edge technology to solving complex problems, engineering equips you with the skills to shape the future.

Our Interdisciplinary Approach

Professional engineers in today's world are required to work with colleagues from a range of engineering disciplines. All engineering students at the University of Aberdeen undertake studies from electrical and electronic, civil, chemical, mechanical and petroleum engineering during their first two years.

This ensures our graduates are experienced and knowledgeable about the various skills and challenges each discipline would face, making them excellent choices for any engineering team.

This approach also gives students flexibility in their degree - rather than being locked into a specific programme when applying, our students can choose the path that they prefer once they have experienced all five disciplines.

Careers

Equipped with a balanced portfolio of knowledge on the full lifecycle of hydrocarbon production, graduates from this discipline are highly sought after by a range of companies; from major operators and multinational service providers to small and medium enterprise technology companies.

Recent graduate job roles have included:

- Wellsite Engineer
- Reservoir Engineer
- Petroleum Engineer
- Production Engineer
- Drilling Engineer
- Operations Engineer
- Rig Engineer
- Technical Assistant

Recent graduates work at companies such as:

- TOTAL
- BP
- Maersk Oil
- Weatherford
- Caspian Oil Services
- Shell
- ConocoPhillips
- Stena Drilling Ltd



Abdulsamia Aboud

BEng Petroleum Engineering




I wholeheartedly recommend this program to aspiring engineers. The curriculum is not only comprehensive but also tailored to the current demands of the industry. The professors are seasoned experts who go above and beyond to impart practical insights alongside theoretical knowledge.


The hands-on projects and assignments offered have been instrumental in honing my skills, and the collaborative atmosphere among students fosters a rich learning environment. I am confident that my education here has equipped me with the necessary tools to excel in the field of petroleum engineering and make meaningful contributions to the energy sector.



abdn.ac.uk/engineering

+44 (0)1224 272090
study@abdn.ac.uk

 [@abdnengineering](https://www.facebook.com/abdnengineering)

 [@aberdeenuni](https://twitter.com/aberdeenuni)

 [uniofaberdeen](https://www.youtube.com/uniofaberdeen)

 [uniofaberdeen](https://www.instagram.com/uniofaberdeen)