PETROLEUM ENGINEERING INVOLVES THE PRODUCTION OF OIL AND GAS (HYDROCARBONS) FROM SUB-SURFACE RESERVOIRS WHICH REQUIRES ENGINEERING TO BRING IT TO THE SURFACE, ESTIMATE ITS VALUE AND EXTRACT IT; IN OTHER WORDS, FINDING OIL AND GAS, DRILLING AND PRODUCING IT. THIS PROCESS IS KNOWN AS THE ‘UPSTREAM’ SECTOR OF THE OIL AND GAS INDUSTRY (‘DOWNSTREAM’ IS CHEMICAL ENGINEERING SUCH AS REFINERIES).

The focus for a petroleum engineer is on the economic recovery of oil and gas while bringing it to market by optimised engineering.

A petroleum engineering’s job is to understand the geology of oil and gas reservoirs and then to develop engineering methods to extract the maximum amount of hydrocarbons from them for the benefit of his/her company and mankind.

THERE ARE THREE TYPES OF PETROLEUM ENGINEER BUT THIS QUALIFICATION CAN LEAD TO MANY OTHER CAREER OPTIONS WITHIN THE OIL AND GAS INDUSTRY:

• A Reservoir Engineer works on oil well placement, maximises oil and gas production improves the flow of oil and gas.

• A Production/Operations Engineer works on the economic and efficient extraction of oil and gas from each well in a field.

• A Drilling Engineer optimises drilling methods in complex reservoirs and develops the best methods to extract oil and gas from them.
BE A PETROLEUM ENGINEER!

WHAT WILL I LEARN?
A petroleum engineer needs to know about 3-D geology of reservoirs, thermodynamics, pressure/volume/temperature relationships, geochemistry, well engineering, production economics, long-term environmental issues, exploration and production risk.

EMPLOYMENT CHOICES
• World-wide - countries such as:
  USA, Norway, UK, Spain, Brazil, Venezuela, Mexico,
  Australia, Italy, Africa, Middle East, China, Philippines.
• Schlumberger, Chevron, Woodside, Shell, BHP, Apache,
  Exxon Mobil, Saudi Aramco, Petrobras and numerous
  other companies.

THE REWARDS
As a qualified petroleum engineer you will be rewarded financially in one of highest paid engineering jobs, enjoy extensive travel opportunities and as one of the most technically-challenging jobs, benefit from being part of a pioneering world-wide community of professionals.

ENTRY REQUIREMENTS
TISC Code: CUBEC
From 2011 at least 3 of the following: Mathematics 3C/3D, Mathematics: Specialist 3C/3D, Physics 3A/3B and Chemistry 3A/3B.
Applications for recognition of prior learning are assessed on an individual basis.

DURATION AND AVAILABILITY
This course is 4 years full time or equivalent part time study. Provided that the stipulated prerequisites and co-
requisites are fulfilled, enrolment on a part time basis is permitted. Please note that there is no mid year entry.

THE DEPARTMENT IS LOCATED ON TECHNOLOGY PARK IN KENSINGTON WHERE RESEARCH IS CONDUCTED IN THE FOLLOWING AREAS:
Drilling and Well Control
Formation Evaluation
Hydrocarbon Phase Behaviour
Petroleum Geomechanics
Production Technology
PVT Analysis
Reservoir Characterisation
Reservoir Engineering
Unconventional Gas
We work closely with industry with individual companies as well as consortium driven work.

DID YOU KNOW THAT?
• Petroleum is the raw material for many chemical products, including pharmaceuticals, solvents, fertilizers, pesticides, and plastics.
• 87 million barrels of oil are consumed each day in the world
• An early petroleum industry was established as far back as the 8th century, (when the streets of Baghdad were sealed with tar, derived from petroleum through destructive distillation)
• Deepwater oil & gas production operations have been compared to space travel in terms of technical challenges
• Petroleum Engineers have to be savvy in topics as wide ranging as thermohydraulics, geomechanics and intelligent systems
• The word petroleum comes from petra meaning “rock” and oleum meaning “oil”
• Drilling for oil was carried out in the 4th century by the Chinese using a bit and a bamboo pole

BENG(PETENG)
(CRICOS 068751K)
COUSE ORGANISATION
First year is comprised of the Engineering Foundation Year (Pre-Major). Second and third years focus on Chemical and Petroleum aspects.
Final year is completed with an extensive design project in Petroleum Engineering.
For more detailed information go to: www.petroleum.curtin.edu.au/courses/

For more information:
Department of Petroleum Engineering
Curtin University
GPO Box U1987
Perth Western Australia 6845
T: +61 8 9266 7857
F: +61 8 9266 7063
E: info@peteng.curtin.edu.au
W: petroleum.curtin.edu.au

INTERNATIONAL ENQUIRIES:
Tel: +61 8 9266 7331
Fax: +61 8 9266 2605
E: international@curtin.edu.au
W: international.curtin.edu.au

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