

How can we help your business?

Heriot-Watt has an established record of addressing the needs of industry through:

- collaborations
- joint industry projects
- strategic alliances
- knowledge transfer partnerships
- continuing professional development
- licensing
- consultancy
- joint funding applications
- provision of university facilities
- bespoke staff training programmes.

Facilities and equipment

IPE utilises a range of leading-edge facilities including:

- Advanced PVT equipment
- Study of fluid flow at reservoir conditions
- Core flooding and chemical analytical facilities
- Environmental Scanning Electron Microscopy (ESEM)
- Magnetic characterisation of petrophysical parameters
- Hydrate formation, wax and asphaltene flow measurements
- High pressure micro-model visualisation facilities
- True tri-axial rock mechanics cells
- The Centre for Flow Assurance Research (C-FAR) flow loop comprising a 2.5 cm diameter 40 m length flow loop operable up to 200 bar and from -15 to +20 °C. The loop provides an up-scaling link between laboratory studies and field implementation
- Bespoke manufacture of specialist equipment such as pressure vessels and systems
- High-performance computing facilities
- Significant software donations from major service companies
- In-house software developments based on state-of-the-art open source code
- 3D Visualisation Centre for subsurface imaging.

To find out more about working with us, contact:

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The Institute of Petroleum Engineering

The Institute of Petroleum Engineering (IPE) at Heriot-Watt University delivers world-leading education and research.

IPE's MSc programmes provide students with knowledge which will allow them to excel in the upstream oil and gas industry. Many of our graduates have become leaders in NOCs and IOCs internationally.

Our research has helped our industrial partners to maximise the potential of their assets.

IPE's programmes are delivered on our international campuses in Edinburgh, Dubai and Malaysia, in partnership with other world leading universities internationally and by distance learning.



THE QUEEN'S
ANNIVERSARY PRIZES
FOR HIGHER AND FURTHER EDUCATION
2015

*40 years of sustained
and successful
oil and gas research*

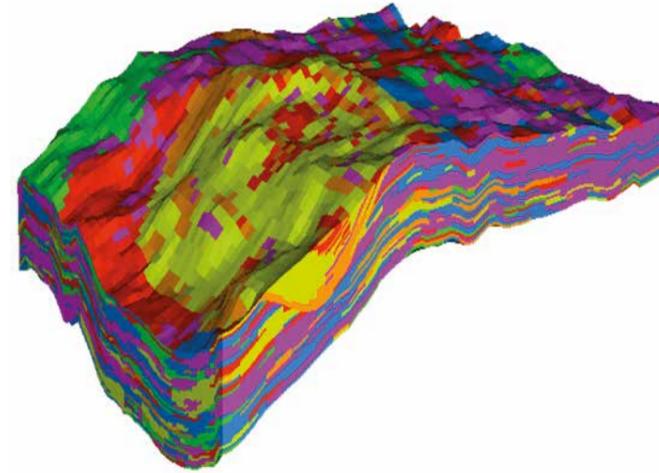
Delivering MScs in upstream oil and gas for over 40 years

Our classes are multinational

We deliver our courses worldwide via our partner network and also by distance learning

All our courses are industry focused and student centred

IPE



Award-winning research

Massive international research impact

Industrial focus

World-leading oil and gas innovation

We deliver four Master of Science programmes in the Institute of Petroleum Engineering:

Petroleum Engineering

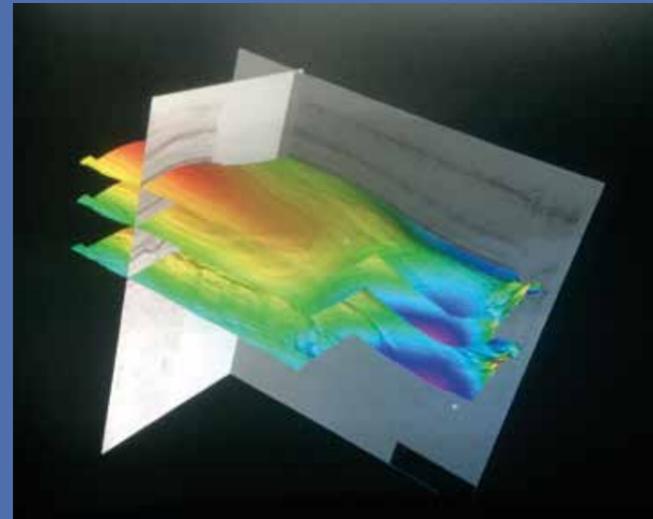
Petroleum Geoscience

Reservoir Evaluation and Management

Integrated Mature Field Management

with courses covering exploration, development, production, and management

- Each course in the programmes has a dedicated course leader who is there to ensure that you have the best possible experience while studying at Heriot-Watt.
- IPE gives our students outstanding support and invaluable experience using a large suite of industry standard software tools.
- As Scotland's most international university, Heriot-Watt boasts the largest international student cohort in Scotland, two international campuses, and a network of partner universities and colleges in over 30 countries worldwide.
- IPE has international reach and prospective students can choose to study full time (1 year) in Scotland, at our campuses in Dubai and Malaysia, with our partner institutions globally, or part time by Distance Learning.
- Our graduates are sought by globally renowned oil and gas companies with many going on to hold senior positions.



Research activity within IPE spans the upstream spectrum:

Exploration Geoscience

Reservoir appraisal and development

Production technology

- IPE recognises the need to transition to low carbon energy, so our research includes focus beyond petroleum.
- IPE's researchers study the breadth of the energy sector and its environmental issues.
- IPE has distinct research themes, each progressed by academic/research staff and postgraduate research students.
- Our workshop technicians design and manufacture laboratory equipment used to study extreme reservoir conditions.
- We are truly inter-disciplinary - IPE capitalises on the wide industrial and academic expertise among its staff.
- Our researchers bridge gaps between exploration, development and production, integrating and amplifying their combined knowledge.

Our thematic research areas are:

- Applied Geoscience
- Carbonate Reservoirs
- Centre for Enhanced Hydrocarbon Recovery and CO₂ Solutions
- Flow Assurance and Scale Team (FAST)
- Geomaterials
- Hydrates and PVT
- Pore-Scale Modelling
- Production Engineering and Technology
- Reservoir Geophysics including 4D Time-Lapse
- Uncertainty Quantification, Optimisation, and Geo-Data Science
- Carbon Capture and Storage
- Geoenery
- Energy Economics
- Sedimentary Basin Analysis
- Mature Field Management.

In each of these areas, IPE activity is driven by the needs of the oil and gas industry. We have very strong links with our network of sponsors, which in turn benefits researchers who come to work at IPE, ensuring they are working on current industry challenges.

Our research delivers benefits to industry while maintaining academic rigour and independence.