Oil and gas are expected to remain the dominant source of energy for decades to come, with the emergence of unconventional hydrocarbon reserves an important trend. Geoscience plays a pivotal role in guiding exploration for new hydrocarbon reserves and in managing efficient production from existing ones.

The MSc in Petroleum Geoscience was set up in 2013 as a direct result of a collaborative initiative between Tullow Oil plc and the UCD School of Earth Sciences. The course, the only one of its kind in Ireland, covers all aspects of exploration, appraisal and development geoscience, and includes relevant geophysical and reservoir engineering topics integrated around a geological core. Lectures are complemented by significant components of fieldwork, industry-standard software training and practical experience of industry-style work. The course is taught by staff from the UCD School of Earth Sciences who are international research leaders in a range of complementary petroleum geoscience disciplines, including basin studies, deep water sedimentology, geophysics, structural geology, reservoir modelling and geoengineering. Co-opted industry instructors will contribute to some modules.

The UCD School of Earth Sciences has research funding that typically exceeds €2 million per year, with research projects currently supported by more than 13 international petroleum companies, and has a vibrant international community comprising researchers from over 15 countries.

**Key Fact**

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**Why study at UCD?**

**Tradition**

Established 1854, with 160 years of teaching & research excellence

**Global profile**

UCD is ranked in the top 1% of higher education institutions worldwide

**Global community**

Over 6,000 international students from over 120 countries study at UCD

**Global careers**

Degrees with high employability; dedicated careers support; 1 year stay-back visa

**Safety**

Modern parkland campus with 24 hour security, minutes from Dublin city centre

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**Course Content and Structure**

**Samples of course modules comprise:**

- Petroleum systems
- Introduction to seismic techniques
- Petrophysics
- Basin analysis and modelling
- Depositional systems and sequence stratigraphy
- Structural geology
- Fieldwork
- Exploration and prospect evaluation
- Production geoscience and field management
- Individual research project chosen in consultation with staff

The research project is a 12-week independent project providing an opportunity to work with active research groups within the School or directly with industry in the form of a work placement.

Modules and topics shown are subject to change and are not guaranteed by UCD.
Career Opportunities

Petroleum geoscientists are much in demand and find employment in a wide range of companies, consultancies, regulatory agencies, governmental organisations and academia. Petroleum products are important for power generation, transport and as a chemical feedstock and are likely to remain so for decades despite emerging new technologies. It is also essential for understanding and confronting many of the associated risks, safety issues and environmental concerns facing the industry.

Facilities and Resources

• The course is housed in a purpose-built teaching lab in the UCD School of Earth Sciences, with individual twin-headed workstations running the leading petroleum industry geoscience software.

Apply Now

This programme receives significant interest so please apply early online at www.ucd.ie/apply

Entry Requirements

• This programme is intended for applicants with a degree in Geology, Geoscience, Earth Science, Geophysics or a cognate discipline. An upper second class honours or international equivalent is required.
• In exceptional circumstances, credit will be given for those with a lower second class honours degree with relevant work experience.
• Applicants whose first language is not English must also demonstrate English language proficiency of IELTS 6.5 (no band less than 6.0 in each element), or equivalent.

Graduate Profile

Myles Watson, Ireland, Junior Geologist with Providence Resources

I have been a Junior Geologist with Irish oil company Providence Resources for 15 months and they supported my enrolment in the UCD Petroleum Geoscience MSc in 2013. I will return to Providence upon graduation, where I will put into practice my learnings from the course, which are wholly compatible with the aims of Providence: to find, appraise and successfully develop hydrocarbon reservoirs.

Tuition fee information is available on www.ucd.ie/fees. Please note that UCD offers a number of postgraduate scholarships for full-time, self-funding international students, holding an offer of a place on masters programmes. Please visit www.ucd.ie/international/scholarships for further information.

UCD has accommodation for over 2,500 students across five locations. Places are limited and more information is available at www.ucd.ie/residences/

For information and advice on living off campus, please contact the UCD Residences Off-Campus Office or the UCD Student Union Accommodation Services. Please visit www.ucd.ie/residences/accommodation-booking-support/ for further details.

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