MSc Petrophysics and Formation Evaluation
Why you should consider this course

Oil companies have an insatiable demand for well-qualified staff across many disciplines. This is particularly true in the area of formation evaluation and petrophysics, where these skills are very much in demand. Individuals wishing to become petrophysicists and companies looking to recruit them, will be interested to hear of a new development route for potential petrophysicists, designed by Senergy in response to client demand.

As a company, Senergy currently provides advanced courses in a range of technical disciplines using its highly skilled consultants. These technical experts have designed and produced a new programme comprising the essential building blocks for early career petrophysicists to complement and enrich their job experience.
What is offered?

Petrophysics and formation evaluation in its wider sense is often offered only as part of Postgraduate University courses; meaning that the full depth of the subject is not explored. Senergy, in conjunction with the University of Aberdeen, offers a full masters programme dedicated to petrophysics.

This modular programme, lasting for approximately 18 months to two years, sees topics introduced sequentially aimed at building knowledge and understanding under the tutelage of industry experts. One key point of importance is the fact that the programme is delivered in a flexible way by industry experts, not by theorists, but by people who have been out there and “done it”.

Benefits

• gain knowledge and understanding
• gain confidence in your skills of interpretation and analysis
• enhance your career
• improve your contribution to your company’s decision making and strategic direction
• improve your team working and project management skills
• learn from experts in their discipline
• guided application of new skills and knowledge
• achieve a Masters degree on successful completion of all the assessments
Who should attend?

Aimed at ambitious individuals with backgrounds in, for example, geosciences, physical sciences, mathematics or engineering subjects. You will be a graduate or equivalent with an existing position in the oil and gas industry looking for a challenging, interesting and thought-provoking programme to develop your knowledge and your career.
Duration

Modules are offered in key subject areas requiring attendance approximately every 6 weeks. This 6 weekly cycle is specially designed to provide maximum flexibility allowing individuals who may be working to continue their respective jobs whilst working towards a Masters degree from a leading University.

Over the 18 – 24 month programme concepts are explored and developed. Assessment, as part of the masters programme, is varied in form and is designed to test knowledge and understanding whilst at the same time addressing the need for individuals to work together as a team and to be able to demonstrate understanding, articulate detail, effectively summarise and present findings.

Course instructors

Our team of programme lecturers is hand-picked for their knowledge and experience so providing a powerful teaching force to help you as an individual (or as a company) achieve your goals. All are expert practitioners in their respective fields and this is what makes the programme stand out as an important development route for formation evaluation and petrophysics professionals.
Modules
There are 14 separate modules comprising the whole programme. Modules are grouped together where possible to minimise the time away from work and each one or two week period you attend builds on the previous one. Each module is a package of face to face input, course work, group work, sometimes project work and of course assessment to monitor progress and comply with the rigorous academic standards of the University of Aberdeen. A list of the topics covered is provided on page 13.

Assessment
The intention of the programme is for candidates to work towards the award of Postgraduate Certificate, Postgraduate Diploma or after submission of a major project, a Masters degree from the University of Aberdeen. There are strict rules applied to the issue of academic quality and the programme will be offered under the academic strictures of the university.
Study routes

Your attendance at regular intervals over a period of time of approximately 18 months to 2 years will allow you to complete the taught part of the MSc programme and you will need to satisfactorily complete each module in turn before proceeding to the next one.

During the periods of time back at work you will be busy doing any individual or project work in connection with your course, submitting assignments; doing any formal assessments and catching up on course reading. Assessments are designed to test knowledge and understanding.

In-house programme enquiries are welcome from national and international energy companies. We would be happy to explore with IOCs and NOCs for example how we can contribute to the development of your petrophysicists through completion of the whole programme with assessment or without if that is preferred.

Topics covered

1. petrophysics - the integration of reservoir geosciences
2. deterministic petrophysics
3. advanced petrophysical interpretation methods
4. coring and core analysis
5. application of core analysis data in petrophysics
6. seismic rock properties
7. reservoir surveillance
8. operational petrophysics
9. integrated petrophysics and uncertainty management
10. advanced clastics
11. in-depth carbonates
12. unconventional reservoirs

Plus any two specialist modules including borehole acoustics, borehole image log analysis, and geomechanics.
Course progression

MSc Petrophysics

120 Points

60 points

assessments, online written, project work, group work, private study

dissertation responsibility of the University of Aberdeen

final project

specialist modules 2
electives from 7

advanced modules
3 compulsory

foundation modules
9 compulsory

approx. 6 - 12 months to complete Advanced, Specialist and Final project

approx. 12 months to complete lectures and assessment
About Senergy

Established in 2005, 700 experts work for Senergy worldwide across its Aberdeen headquarters and through a network of offices in the UK, Scandinavia, the Middle East, Australia, South East Asia and the Americas.

Senergy delivers world-class technical solutions, addressing challenges from large scale integrated developments to smaller, stand-alone projects. The company’s Energy Services division has end-to-end expertise in hydrocarbon development from exploration, through appraisal, site survey, drilling, facilities engineering, field development planning, commercial services and enhanced recovery through to field abandonment.

Senergy’s services encompass alternative energy solutions, geosciences, reservoir engineering, geohazard assessment, marine site surveys, rig positioning, wells engineering and operations, production optimisation, reserve and asset evaluation, facilities engineering and project management. Senergy also develops and supports innovative software technologies including Interactive Petrophysics™ and Oilfield Data Manager™.

About The University of Aberdeen

Founded in 1495, the University of Aberdeen is the fifth oldest University in UK. Through the years, the University has never deviated from its core ideals on teaching, learning and discovery. Ambitious and research-driven, the University provides students with an inspiring, encouraging and supportive learning experience, with an emphasis on personal and professional growth. Being an internationally distinguished institution, the University represents a large international community of students and academic staff from over 120 countries.

Today the University of Aberdeen is a partner of choice for the energy industry, providing world-leading research, talented graduates, and highly skilled professionals well equipped to tackle the challenges and unlock the opportunities that lie ahead.
For more information call us, e-mail, visit - wherever you are in the world, we’d like to hear from you...

Ternan House,
North Deeside Road,
Banchory
AB31 5YR
United Kingdom

Tel: +44 1330 826673
Fax: +44 1330 825206
Email: Vivien.MacKinlay@senergyworld.com