

Course Handbook
BEng(Hons) Oil and Gas Safety Engineering
MEng(Hons) Oil and Gas Safety Engineering
2020-21
Course Leader: Dr Hamid Reza Nasriani
SCHOOL OF ENGINEERING



Please read this Handbook in conjunction with the University's Student Handbook.

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1. Welcome to the course

Firstly, congratulations in choosing Oil and Gas Safety Engineering at the University of Central Lancashire as your course and your career, you have now taken the first step along a challenging, interesting and rewarding career, both at a personal level and a financial level. The course is administered by the School of Engineering.

Oil and Gas Safety Engineering is an exciting and technically challenging programme that will equip you for a range of careers in the oil & gas industry. Ongoing growth in worldwide energy consumption means demand for oil and gas engineers is high. Oil companies and service providers are dynamically recruiting graduates in this area, which remains buoyant despite the economic climate.

We hope to provide you with an interesting and challenging education, and to develop competences appropriate to Oil and Gas Safety Engineering.

What do you expect from the next few years? Presumably you hope to graduate with a degree and you hope that this will lead to related employment. You expect to get high quality teaching from staff with experience in their own discipline; you expect to gain 'hands-on' experience of a range of equipment and experimental techniques; you expect to receive guidance and support from staff and you will expect to have the opportunity to take part in a range of social activities and to develop as an individual.

All the staff involved in this course are committed to meeting these expectations. However, in turn there are certain expectations of you. Firstly, it is important that you develop the capacity for independent learning. The overall teaching strategy within the School is one of 'Dependence to Independence', and therefore this will be expected increasingly as you progress through your course. Secondly, you are expected to develop, or improve, key skills such as numeracy, writing, self-organisation, working in a team, etc. Employers will certainly be looking for evidence of such skills! Finally, you are expected to take a responsible approach and an active role in your study, following the School and University policies and regulations.

This handbook tells you about some of these regulations and gives details about staff, assessments, handing in work, attendance requirements, safety procedures and guidance on communication and IT skills etc. In your induction file there is also further information about your role in the development of your Personal Development Portfolio which will form a central part of your personal development plan.

You will receive separate module booklets for each module you are studying. These will give detailed timetables and details of assessments. It is your responsibility to ensure that you receive these documents, are familiar with their contents and use them.

Please read the handbook carefully as it is a source of information on the academic, administrative and operational aspects of your course and it is intended to explain what is required of you. Feel free to discuss any aspects with myself or any member of the course team.

Enjoy your time studying with us!

Dr Hamid Reza Nasriani –
Course Leader for MEng/BEng(Hons) Oil and Gas Safety Engineering (OGSE)

1.1 Rationale, aims and learning outcomes of the course



The MEng/BEng (Hons) Oil and Gas Safety Engineering course aim is to develop graduates with a broad understanding of current technology and practice in OGSE engineering, covering the relevant aspects of safety in oil and gas industry.

The course is three years (BEng) or four years (MEng) in duration, plus an extra year if an industrial placement is included. Satisfactory completion of an industrial placement leads to the award: MEng/BEng(Hons) OGSE with

Industrial Placement.

- To provide a focused education at an academic level appropriate for the target awards: MEng/BEng(Hons) OGSE & MEng/BEng(Hons) OGSE with Placement, as well as the exit awards.
- To meet the requirements for accreditation of the programme by the Energy Institute.
- To provide an extended, enhanced, and industrially relevant Integrated Master's programme of study in preparation for professional practice. (MEng only)
- To produce resourceful, competent, clear-thinking professional engineers with a range of skills and experience relevant to today's engineering industry.
- To equip graduates of the programme with knowledge, skills, experience, and understanding which underpin a professional career in engineering.

Specifically, the Oil and Gas Safety Engineering courses aim to provide graduates with a broad understanding of current technology and practice in OGSE, covering the relevant aspects of safety concept applied in oil and gas industries.

The discipline of OGSE encompasses a wide skills base and the emphasis of this course is placed on safety system design rather than that of individual component devices. By concentrating on the principles fundamental to system level design, the course equips graduates with the knowledge, skills and confidence to thrive in the rapidly evolving field of oil and gas engineering, produce designs suitable for a variety of applications and the transferrable skills to find employment in a diverse set of industrial and commercial sectors.

The full program specifications, including learning outcomes, are provided as appendices.

1.2 Course Team

You will mainly be taught by staff from the School of Engineering at the University. This list represents those who have particular roles in the delivery of the Course. We have included their qualifications so that you can see where their expertise lies.

Jonathan Francis PhD

Academic Lead Energy, Fire and Sustainability

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Andrei Chamchine MSc, MA, PhD (Engineering), CEng, MEI, MIFireE

Principal Lecturer and Academic Lead for International and

Business Development, **Course Leader** for MSc Oil and Gas Safety Engineering

E-mail: achamchine@uclan.ac.uk Ext 3207 Room JBF104

Dr Hamid Reza Nasriani BSc (Hons), MEng, PhD Petroleum Engineering

Course Leader for MEng/BEng(Hons) Oil and Gas Safety Engineering

Senior Lecturer

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Course Leader, Senior Lecturer (Engineering Mathematics),

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Tracy Bradford BSc, MSc (Fire Safety Engineering)

Retention Tutor/Senior Lecturer (Fire Safety Engineering)

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Simon Cable MA (Professional Training and Development) BSc (Hons) (Fire Engineering Management)

Senior Lecturer (Fire Safety and Fire Protection)

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Tony Graham BSc (Hons), PhD, CPhys, MInstP, MIFireE, CEng, MEI

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Senior Lecturer (Fire Safety Engineering)

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Senior Lecturer (Fire Engineering)

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Senior Lecturer (Fire Safety Engineering)

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Dr Kathryn O'Brien

Lecturer (Fire Studies)

E-mail: kawoolhamobrien@uclan.ac.uk Ext 3557 Room JBF007

Year Tutor for First Year CEPS Engineering students

Muqi Wulan

Computing & Technology Building, room CM037

☎ 01772 893247 (ext. 3247), ✉ mwulan@uclan.ac.uk

Retention Co-ordinator

Patrick Ryan
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☎ 01772 893273 (ext. 3273), ✉ pryan1@uclan.ac.uk

Industrial Placements Tutor
Joel Allison
Computing & Technology Building, room CM131
☎ 01772 893251 (ext.3251), ✉ jallison@uclan.ac.uk

Campus Admin Services provides academic administration support for students and staff and are located in C and T Hub and are open from 8:45am until 5:15pm Monday to Thursday and until 4:00pm on Fridays. The hub can provide general assistance and advice regarding specific processes such as extenuating circumstances, extensions and appeals. Course specific information is also available via the school Blackboard site.

The hub telephone number is: 01772 89 1994/1995

The hub email contact is CandTHub@uclan.ac.uk

1.3 Expertise of staff

Teaching methods include lectures, seminars, workshops, laboratory work, project work, case studies, site visits. The mix of teaching methods is designed to motivate and challenge you, considering different learning styles to maximize your potential. Personal study also forms an integral part of the course. You will learn by a variety of methods including innovative information and communication technologies and practical case studies based on research outcomes achieved by the School staff.

The teaching staff comprises of a mixture of academics, oil and gas professionals, industrial consultants and safety professional with a vast number of years of experience in their field of expertise. There is a range of research expertise within the team ranging from different modelling approaches to unconventional oil & gas formations.

1.4 Academic Advisor

You will be assigned an Academic Advisor who will provide additional academic advice and support during the year. They will be the first point of call for many of the questions that you might have during the year. Your Academic Advisor will be able to help you with personal development, providing insight and direction to enable you to realise your potential.



1.5 Administration details

Campus Admin Services provides academic administration support for students and staff and are located in the following hubs which open from 8.45am until 5.15pm Monday to Thursday and until 4.00pm on Fridays. The hub can provide general assistance and advice regarding specific processes such as extenuating circumstances, extensions and appeals.

Computing and Technology Building

Art, Design and Fashion

Computing

Physical Sciences and Computing

Film, Media and Performance

Engineering

Journalism, Languages and Communication

telephone: 01772 89 1994/1995

email: CandTHub@uclan.ac.uk

1.6 Communication



The University expects you to use your UCLan email address and check regularly for messages from staff. If you send us email messages from other addresses they risk being filtered out as potential spam and discarded unread.

The School and course team use a wide variety of Student Communication Channels. UCLan staff will use all means of communication that enable them to contact the students.

The Administrative Hub (see section 1.5 for contact details)

- will use both email and official letters to communicate

The Course Team

- will normally communicate with you through Outlook using your UCLan email address. When emailing, include the module code in the subject field and/or any other relevant information to allow staff to help you. You should aim to check your email DAILY. (Staff will attempt to reply to your email within 48 hours).
- will use eLearn to make module and course level information available to you
 - ✚ has a physical notice board on the second floor of the Leighton Building outside the Physics Laboratories where the following information may be seen
 - ✚ Students Timetables
 - ✚ Student Assignment Calendar
 - ✚ Student Academic Calendar
 - ✚ Student list
 - ✚ Laboratory Rotas
 - ✚ News and events that are relevant to the course
- may contact you by phone (land line or mobile) or text your mobile, when it has not been possible to communicate with you via other routes. It is therefore essential that you ensure that ALL your details are up to date. You can check and change this via MyUCLan (https://my.uclan.ac.uk/BANP/twbkwbis.P_WWWLogin)
- may communicate with you by letter to request that you make an appointment to see an academic staff member (e.g. to discuss attendance issues).

1.7 External Examiner

The University has appointed an External Examiner to your course who helps to ensure that the standards of your course are comparable to those provided at other higher education institutions in the UK. The name of this person, their position and home institution can be found below. If you wish to make contact with your External Examiner, you should do this through your Course Leader and not directly.

The External Examiner for this course is Dr P Rubini, Department of Engineering, University of Hull, UK.

External Examiner reports for the Engineering courses can be accessed electronically via the Engineering@UCLan Blackboard pages



2. Structure of the course

2.1 Overall structure

Table 1 and Table 2 illustrate the programme structure for BEng (Hons) and MEng (Hons) Oil and Gas Safety Engineering courses respectively. These courses exist as part of the Modular Credit Accumulation and Transfer Scheme (MODCATS). The award requires that a student pass 360 credits total for BEng (Hons), or 480 credits for MEng (Hons).

Each full-time year of study requires you to pass modules to the value of 120 credits. Most modules on the programmes are standard sized and worth 20 credits, although there are examples of modules worth 10, 30 and 40 credits. Students wishing to follow part time study are counselled by a member of staff and a suitable programme of study developed.

Specific credit requirements for the target awards:

MEng(Hons) Oil and Gas Safety Engineering requires 480 credits with a minimum of 360 at level 5 or above, 200 at level 6 or above, 100 at level 7 and a minimum of 360 credits studied at this University.

MEng(Hons) Oil and Gas Safety Engineering with Industrial Placement requires 480 credits with a minimum of 360 at level 5 or above, 200 at level 6 or above, 100 at level 7 and a minimum of 360 credits studied at this University, plus satisfactory completion of the Placement module FV2800.

BEng (Hons) Oil and Gas Safety Engineering requires 360 credits including a minimum of 220 at level 5 or above and a minimum of 100 at level 6.

BEng (Hons) Oil and Gas Safety Engineering with Industrial Placement requires 360 credits including a minimum of 220 at level 5 or above and a minimum of 100 at level 6, plus satisfactory completion of the Placement module FV2800.

BEng(Hons) Oil and Gas Safety Engineering

Year 1	Level Four		
	Module code	Module title	Credit value
	FV1701	Introduction to Oil and Gas Engineering	20
	FV1001	Introduction to Combustion and Fire	20
	FV1101	Safety and Fire Law	10
	FV1201	Energy Transfer and Thermodynamics	20
	FV1202	Engineering Design Practice	20

	FV1302	Engineering Analysis 1	20
	FV1502	Skills for Science and Engineering	10

Year 2	Level Five		
	Module code	Module title	Credit value
	Compulsory modules		
	FV2701	Oil and Gas Engineering Operations	20
	FV2402	Reliability Engineering in Complex Systems	20
	FV2101	Accidents and Catastrophes	10
	FV2102	Safety, Health and Environment	20
	FV2103	Project Management	10
	FV2204	Computational Engineering	20
FV2301	Engineering Analysis 2	20	

	Option		
	FV2800	Industrial Experience	120

Year 3	Level Six		
	Module code	Module title	Credit value
	Compulsory modules		
	FV3701	Reservoir Engineering and Well testing	20
	FV3401	Safety Case Development and Management	20
	FV3002	Fire Protection Engineering	20
	FV3102	Probabilistic Risk Analysis	20
	FV3201	Engineering Design Project	20
FV3900	Engineering Dissertation	20	

Table 1 BEng OGSE Programme Structure

MEng(Hons) Oil and Gas Safety Engineering

Year 1	Level Four		
	Module code	Module title	Credit value
	FV1701	Introduction to Oil and Gas Engineering	20
	FV1001	Introduction to Combustion and Fire	20
	FV1101	Safety and Fire Law	10
	FV1201	Energy Transfer and Thermodynamics	20
	FV1202	Engineering Design Practice	20
	FV1302	Engineering Analysis 1	20
FV1502	Skills for Science and Engineering	10	

Year 2	Level Five		
	Module code	Module title	Credit value
	Compulsory modules		
	FV2701	Oil and Gas Engineering Operations	20
	FV2402	Reliability Engineering in Complex Systems	20
	FV2101	Accidents and Catastrophes	10
	FV2102	Safety, Health and Environment	20
	FV2103	Project Management	10
	FV2204	Computational Engineering	20
	FV2301	Engineering Analysis 2	20
Option			
FV2800	Industrial Experience	120	

Year 3	Level Six		
	Module code	Module title	Credit value
	Compulsory modules		
	FV3701	Reservoir Engineering and Well testing	20
	FV3401	Safety Case Development and Management	20
	FV3002	Fire Protection Engineering	20
	FV3102	Probabilistic Risk Analysis	20
	FV3201	Engineering Design Project	20
	FV3900	Engineering Dissertation	20

Year 4	Level Six		
	Module code	Module title	Credit value
	Compulsory modules		
	FV4701	Geology and Formation Evaluation	20
	FV4003	Computational Fluid Dynamics	20
	FV4202	Energy and Sustainability	20
	FV4201	Advanced Engineering Design Project	20
FV4900	Advanced Engineering Dissertation	40	

Table 2 MEng OGSE Programme Structure

Specific credit requirements for the exit awards:

BEng Oil and Gas Safety Engineering requires 320 credits including a minimum of 180 at level 5 or above and a minimum of 40 at level 6.

Diploma of Higher Education in Oil and Gas Safety Engineering requires 240 credits including a minimum of 100 at Level 5 or above.

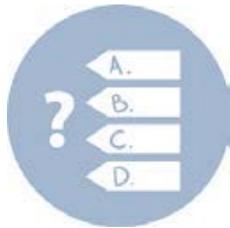
Certificate of Higher Education in Oil and Gas Safety Engineering requires 120 credits including a minimum of 100 at Level 4 or above

2.2 Modules available

Each module is a self-contained block of learning with defined aims, learning outcomes and assessment. A standard module is worth 20 credits. It equates to the learning activity expected from one sixth of a full-time undergraduate year. Modules may be developed as half or double modules with credit allocated up to a maximum of 120 credits per module.

Table 1 and Table 2 represent available modules for MEng/BEng(Hons) Oil and Safety Engineering. There are no optional modules for this course with exception of placement module FV2800 Industrial Experience, as it was explained in 2.1.

Please note that the above may be subject to minor modifications to reflect improvements/developments in the course or within industry. If this is the case your current year of study will not be affected and you will be notified of the changes.



2.3 Course requirements

The tables in section 2.1 list the modules that form your course. The (C) denotes that a particular module is a core module that cannot be compensated. You need to pass these modules to achieve an award. You also need to pass the majority of modules within the course as they are normally the pre-requisites to qualify you for progression to the following

year.

A student who has not passed any modules or has an average mark below 40% is normally recommended as fail/withdraw from programme.

Where a core module has not been passed after referral and repeat study then a student will either receive an exit award or counselling on the options to achieving an exit award.

The part time mode of study can be used to work alongside your studies or to repeat a module or modules. Changing to part study involves only a meeting with the course leader or academic advisor. It is the stage requirements that become more relevant during periods of part time study.

A request from a student to transfer between courses would result in a meeting with a member of the course team and a subsequent discussion with the course leader and then a decision on the transfer. The Engineering Council Institutions require that at least two years of study are completed at the Institution that awards a degree for IEng and CEng exemption. In addition entry to the course is usually from appropriate courses that are accredited by institutions within the Engineering Council.

Courses that are accredited by the EI satisfy the requirements of the UK Standard for Professional Engineering Competence (UK-SPEC), published by the Engineering Council on behalf of the UK engineering profession. The original document defining the requirements of UK-SPEC is available from the Engineering Council:

<http://www.engc.org.uk/professional-qualifications/standards/uk-spec>

2.3.1 Module Registration Options

Discussions about your progression through the course normally take place in February each year. It is an opportunity for you to make plans for your study over the next academic year. The course team will tell you about the various modules / combinations available and you will both agree on the most appropriate (and legal) course of study for you.

Changes would also be possible following the second year, but these would be more restricted and dependent on the particular modules studied. If you do not feel capable of completing your chosen course of study then advice may be given on alternative routes or exit awards. However, it is not usually prudent to make decisions about this until results are known in June. Most likely you will be advised to finish all your modules to the best of your abilities and to seek advice once results are available. If you wish to discuss your progression, or discuss a change

of programme (e.g. from BEng to MEng) you should speak to your course leader or another member of the course team.

2.4 Study Time

2.4.1 Weekly timetable

A timetable will be available once you have enrolled on the programme, through the student portal.

2.4.2 Expected hours of study



20 credits is a standard module size and equals 200 notional learning hours. As outlined in the school handbook the normal amount of work involved in achieving a successful outcome to your studies is to study for 10 hours per each credit you need to achieve – this includes attendance at UCLan and time spent in private study.

This translates to a total of 6 hours per 20 credit module per week. We expect that you commit 36 hours study per week (pro-rata for part-time students and/or semester-based modules), inclusive of your contact hours. So for a typical module you may have a 2 hour lecture, and a 1 hour tutorial, leaving you approximately 3 hours for self-directed study (further reading, tutorial questions, assignments, revision).

Often you will be working in groups for practical work and you should try and arrange to meet up outside the scheduled class times. You will also need to use equipment such as computer and laboratory facilities for practical work, again sometimes outside the scheduled class times.

2.5.3 Attendance Requirements

You are required to attend all timetabled learning activities for each module. Notification of illness or exceptional requests for leave of absence must be made to:

C & T Hub (Admin) by telephone or by email.

The hub telephone number is: 01772 89 1994/1995

The hub email contact is CandTHub@uclan.ac.uk

Exceptional requests for leave must be made to the Programme Coordinator or nominee (usually the Course Leader). You should contact CAS as above and your request will be forwarded to the appropriate person.

For International Students under the Visas and Immigration (UKVI) Points Based System (PBS) - you MUST attend your course of study regularly; under PBS, UCLan is obliged to tell UKVI if you withdraw from a course, defer or suspend your studies, or if you fail to attend the course regularly.

Unauthorised absence is not acceptable and may attract academic penalties and/or other penalties. Some practical sessions may involve assessed work, so if you miss the practical without good reason you will attract a score of 0% in that assessment. In the event of absence due to illness, a medical certificate must be produced.

If you have not gained the required authorisation for leave of absence, do not respond to communications from the University and if you are absent for four weeks or more, you may be deemed to have withdrawn from the course. If this is the case, then the date of withdrawal will be recorded as the last day of attendance.

Your attendance at classes will be monitored using the Student Attendance Monitoring system (SAM), and you can check your attendance record through MyUCLan.

Each time you are asked to enter your details on SAM you must remember that the University has a responsibility to keep information up to date and that you only enter your own details on the system. To enter any other names would result in inaccurate records and be dishonest. Any student who is found to make false entries can be disciplined under the student guide to regulations.

3. Approaches to teaching and learning

3.1 Learning and teaching methods

OGSE engineering programmes use a number of different assessment techniques that will allow you to demonstrate your understanding of concepts and issues covered. These may be broadly categorised as 'examination' and 'coursework', but several different types are used, e.g. open-book exams, closed-book exams, laboratory reports, practical assessments in the laboratory, computer simulation and analysis, written reports etc.

Evidence of achievement, upon which assessment will be based, will be gained through a programme of practical exercises, assignments and exams. Each week you may be involved in some practical work such as a laboratory exercise, a computer-based assignment, group or individual project work etc. You will often work in groups and make group presentations but you will write up and submit work individually so that you gain credit for your contribution, not that of somebody else.

It should be emphasised that the purpose of assessment is to not only grade you, and provide information to facilitate management of the course, but also to provide feedback to you. In this way you can monitor your own progress, refine your own judgement of your abilities and regulate it accordingly.

You should keep all the returned work in a file and you may have to submit this at the end of the year for the external examiners to assess. Individual module leaders will distribute information on the methods of assessment used, and their weighting, at the start of each module.

3.2 Study skills

In addition to the skills that you will gain on your course the university offers a variety of services designed to aid you in developing study skills. Details of these can be found on the following:

WISER https://portal.uclan.ac.uk/webapps/portal/frameset.jsp?tab_tab_group_id= 33 1

LIS https://portal.uclan.ac.uk/webapps/portal/frameset.jsp?tab_tab_group_id= 25 1

Study Skills - 'Ask Your Librarian'

https://www.uclan.ac.uk/students/support/study/it_library_trainer.php

You can book a one to one session with a subject Librarian via Starfish. These sessions will help with questions such as "My lecturer says I need a wider variety of sources in my references, what do I do?"

"I need to find research articles, where do I start?"

"How do I find the Journal of ...?"

"How do I use RefWorks?"



3.3 Learning resources

The university provides various resources to support your learning. These include general computing facilities, the library, and study areas to name a few. In addition to the general resources available you also have access to specialist facilities that are specific to the School of Engineering.

3.3.1 Learning and Information Services (LIS)

The best place to start when exploring the Library resources available to you is;

- Your 'Subject Guide' can be found in the [Library Resources](#)
- Your 'My Library' tab in the [Student Portal](#)
- [Library search](#)

Extensive [resources](#) are available to support your studies provided by LIS – library and IT staff. Take advantage of the free training sessions designed to enable you to gain all the skills you need for your research and study. Library opening times can be found at the following link: https://www.uclan.ac.uk/students/study/library/opening_hours.php

3.3.2 Electronic Resources

LIS provide access to a huge range of electronic resources – e-journals and databases, ebooks, images and texts.

Blackboard (our virtual learning environment) will be used on this course, here you will find notes and other important resources for your course. It is important that you check your blackboard areas on a regular basis for updates.

Course and module materials are **not** provided in 'hard copy' format, however, wherever practicable, lecture notes and/or presentations, seminar materials, assignment briefs and materials and other relevant information and resources are made available in electronic form via **BlackBoard**. This is the brand name for the on-line Virtual Learning Environment (VLE) that the University uses to support and enhance teaching and learning.

All students can access the BlackBoard spaces for the course and modules that they are registered for. Once logged into your BlackBoard area you can access material from the course and all of the modules you are studying without having to log in to each module separately.

You can expect that, on the Course page, you will be able to access:

1. Course Handbook
2. Student Guide to Assessment
3. Timetables
4. Minutes of SSLC Meetings
5. External Examiners report

You can expect that, on each module space, you will be able to access:

1. Module Description
2. Module Booklet
3. Assignment briefs (including a marking scheme), if not included in the module booklet
4. Generic feedback on coursework assignments
5. Handouts for tutorials and practicals

6. Lecture notes (no later than 48hrs **after** the date of the lecture).
7. A past exam paper (if there is an exam in the module)
8. Generic feedback on the examination paper

3.4 Personal development planning

Within your course you will develop skills outside of the core technical skills. These include personal development where you will reflect on your performance and actively engage to improve your skills.

While you are at university, you will learn many things. You already expect to learn lots of facts and techniques to do with oil & gas engineering, but you will also learn other things that you might not be aware of. You will learn how to study, how to work with other people, how to manage your time to meet deadlines, and so on. If you are to be an employable graduate it is vital that you can list the skills employers value in your CV.

Employers are looking for skills such as:

- Self-organisation
- Team work
- Good written communication
- Good oral communication
- Problem solving

So, we have introduced a system that aims to:

- Help you to identify the skills you should be developing,
- Help you to identify the ones you are weak in, and
- To take action to improve those skills.

This approach can broadly be described as Personal Development Planning and can be defined as:

A structured and supported process undertaken by an individual to reflect upon their own learning, performance and/or achievement and to plan for their personal, educational and career development.

The University puts a high priority on your personal development, and so keeping a record of your achievements is encouraged and will help when you are applying for jobs. When you ask staff for a reference, they could use this information to help them provide more rounded detail.



3.5 Preparing for your career

Your future is important to us, so to make sure that you achieve your full potential whilst at university and beyond, your course has been designed with employability learning integrated into it. This is not extra to your degree, but an important part of it which will help you to show future employers just how valuable your degree is. These “Employability Essentials” take you on a journey of development that will help you to write your own personal story of your time at university:

- To begin with, you will explore your identity, your likes and dislikes, the things that are important to you and what you want to get out of life.
- Later, you will investigate a range of options including jobs and work experience, postgraduate study and self-employment,
- You will then be ready to learn how to successfully tackle the recruitment process. You will be able to record your journey using Pebblepad, the university's e-portfolio system, which will leave you with a permanent record of all the fantastic things you have achieved during your time at UCLan.

It's your future: take charge of it!

[Careers](#) offers a range of support for you including:

- career and employability advice and guidance appointments
- support to find work placements, internships, voluntary opportunities, part-time employment and live projects
- workshops, seminars, modules, certificates and events to develop your skills Daily drop in service available from 09:00-17:00 for CV checks and initial careers information. For more information, come along and visit the team (in Foster building near the main entrance) or access our careers and employability resources via the Student Portal.

4. Student Support

Information on the support available is at: <https://www.uclan.ac.uk/students/>

Support is available within your course of study from your personal tutor and course leader. It is also important to discuss your progress or any issues that you may be having with your teaching team within the modules that you study.

Additional support can be found at the student support website on the following link:

http://www.uclan.ac.uk/study_here/student_support.php

Perhaps the most important thing that the School of Engineering will give you is support. We will guide you through the subject and instil in you the critical and enquiring characteristics required of an investigator.

In your course you will be presented with a vast amount of information and knowledge. Equally important, though, is the manner in which you develop as an individual over that period, and the skills you acquire which can be used other than in investigative work. Employers are looking for skills such as:

- Self-organisation
- Assertiveness
- Good communication skills
- Team work
- Problem solving



4.1 Academic Advisors

An Academic advisor is allocated to each student in their first year. You will retain the same academic advisor for the duration of your study at UCLan. Your academic advisor is your first point of contact if you have any questions or problems while studying at UCLan. You should meet with your Academic

advisor at least once every semester, but they are also available to help with any problems you may have during the year. Feel free to see them at other times should you want to. Your Academic advisor is there to provide you with support and guidance during your course. They will be unable to do so if you do not take the time and effort to meet with them and discuss your progress.

What will your Academic advisor do?

- offer academic advice throughout the year;
- monitor your progress and attainment through the year;
- advise you on your progress and issues such as option choices;
- in some instances, your academic advisor may refer you to the course leader or module leader for clarification of detailed academic problems;
- offer personal support, referring you to relevant University support services where appropriate;
- support you in the context of any disciplinary matters.

What are you expected to do?

- make use of your academic advisor;
- make sure you know where their office is and how to contact them;
- make sure they know you and have your current email address;
- watch out for emails, notices and memos asking you to make appointments or attend meetings with them;
- turn up for meetings and/or respond to requests for information.

4.2 Students with disabilities

If you have a disability that may affect your studies, please either contact the Disability Advisory Service - disability@uclan.ac.uk - or let one of the course team know as soon as possible. With your agreement information will be passed on to the Disability Advisory Service. The University will make reasonable adjustments to accommodate your needs and to provide appropriate support for you to complete your study successfully. Where necessary, you will be asked for evidence to help identify appropriate adjustments.

Assessment arrangements for students with a disability

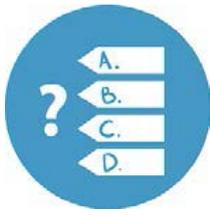
Arrangements are made for students who have a disability/learning difficulty for which valid supporting evidence can be made available. Contact the Disability Adviser for advice and information, disability@uclan.ac.uk

4.3 Students' Union

The Students' Union offers thousands of volunteering opportunities ranging from representative to other leadership roles. We also advertise paid work and employ student staff on a variety of roles. You can find out more information on our website: <http://www.uclansu.co.uk/>

5. Assessment

Please note that all modules will be assessed. You are expected to attempt all required assessments for each module for which you are registered, and to do so at the times scheduled unless authorised extensions, special arrangements for disability, or extenuating circumstances allow you to defer your assessment.



5.1 Assessment Strategy

The assessment strategy for each module will be outlined within the module. The modules will be assessed either as coursework or by a combination of coursework and examinations with the weightings reflecting the course content (theory/practical). Each of the assessments that you complete will assess a series of learning outcomes defined in the modules. Note that within some modules you may complete assessments that do not carry marks, these are termed formative and are an opportunity for you to gain feedback on your progress that will help you in your summative (mark carrying) assessments.

Please note that all modules will be assessed. You are expected to attempt all required assessments for each module for which you are registered, and to do so at the times scheduled unless authorised extensions, special arrangements for disability, or extenuating circumstances allow you to defer your assessment.

The Course Team recognise the main purpose of assessment as:

- * the diagnosis of strengths and weaknesses of individual students
- * encouragement to students to be involved in determining their own performance
- * evaluation as to whether or not the student has met the learning outcomes of the module and programme in order to progress to the next level or achieve an exit award

Assessment is continuous and uses both formative and summative methods.

Formative assessment relates to the continuing and systematic appraisal of the degree of learning. This helps you by providing feedback on the appropriateness of your study skills in meeting the learning objectives. It also assists the academic staff by providing information as to the appropriateness of the learning environment in facilitating student learning. Formative assessment includes assessment strategies that encourage the student and tutor to build on the student's strengths and to plan remedial help to correct identified weaknesses. Formative assessment encourages the development of personal self-awareness and self-evaluation such that corrective change can be instigated by the individual.

The nature of formative assessment varies between modules. In some there are short tests or essays, while in others there is informal feedback via activities such as tutorials or discussion of experiment results during laboratory sessions.

It is important that we try to match assessment to the learning outcomes of each module. Sometimes we need to assess how well you have assimilated facts, sometimes we need to assess your understanding, and at other times your application of the facts. Often we need to test all of these learning outcomes at once. In addition, we need to assess skills, such as your ability to communicate your ideas.

The assessment methods and what we are trying to assess by the particular method are shown below:

Examinations: Problems, Short answer questions and Essays. Short answer questions are usually looking for how well you have learned factual information. Essay questions are looking for your understanding and critical analysis skills.

Presentations: Your presentational skills under pressure are being assessed here, as is the ability to think on your feet using the facts that you have learned.

Essays: Non-examination situation essays assess your understanding of the subject and ability to do research, as well as your written communication and critical analysis skills.

Case studies: These assess the application of theory to practical situations. They also assess either your written or oral presentation skills when communicating your deliberations to the class or marker.

Projects: These assess the application of the information that you have gained, and assesses your skills in bringing a large body of work together in a concise coherent report.

You will find a detailed breakdown of the assessments in the individual module booklets.

Presentation of Written Work

The way in which you present your work will be taken into account when arriving at the final grade for the assessment. To assist you in this regard, refer to the Student Guide to Assessment, produced by the School, that accompanies this handbook.

5.2 Notification of assignments and examination arrangements

The course team, through the retention tutors, try to spread the assessment load. Nevertheless, it is important that you plan your work carefully in order to meet assessment deadlines. You may have more than one deadline at the same time, and you are expected to manage your time sufficiently well to meet all deadlines whilst continuing with your attendance at classes.

Assessment arrangements for students with a disability

Arrangements are made for students who have a disability/learning difficulty for which valid supporting evidence can be made available. Contact the Disability Adviser for advice and information: disability@uclan.ac.uk.

Submission of Assessments

Normally all work should be submitted through BlackBoard and Turnitin. Information about the requirements for individual assessments and their respective deadlines for submission/examination arrangements will be provided in the assignment brief or in the module booklet that will be posted on BlackBoard.

All work should be submitted with a completed assessed work cover sheet with the declaration signed. These assessed work cover sheets can be obtained on the module and course pages on BlackBoard.

Once the work has a FULLY completed and signed cover sheet attached, it should be submitted through the assignment drop-box on BlackBoard or at the Foster Hub.

Deadlines for Assessments

In the workplace you will be faced with many deadlines. Assessment deadlines will help you to develop a personal ethos which will enable you to cope with tight work schedules. We expect work to be handed in on time.

A deadline is set at a particular time on a particular day and work submitted after this time without an extension granted by the relevant retention tutor will be penalised.

If you submit work late and unauthorised, a universal penalty will be applied in relation to your work:

- If you submit work within 5 working days following the published submission date you will obtain the minimum pass mark for that element of assessment.

- Work submitted later than 5 working days after the published submission date will be awarded a mark of 0% for that element of assessment.
- Unauthorised late submission at resubmission will automatically be awarded a mark of 0% for that element of assessment.

Extenuating Circumstances

Some students face significant events in their personal life that occur after their course has started, which have a greater impact on their students than can be solved by the use of an extension. If this applies to you, the University is ready to support you both with regard to your course and your personal wellbeing through a process called Extenuating Circumstances (see Academic Regulations and Assessment Handbook).

Normally extenuating circumstances will relate to a change in your circumstances since you commenced your course, which have had a significant, adverse effect on your studies. Everyday occurrences such as colds or known conditions such as hay-fever will not qualify unless the effects are unusually severe and this is corroborated by a medical note. The University does not look sympathetically on absences or delays caused by holiday commitments or by work commitments in the case of full-time students. The normal work commitments of part-time students would not constitute an extenuating circumstance. A disability or learning difficulty does not constitute an extenuating circumstance (see [Academic Regulations](#)).

Further information is available on the Student Portal at: https://www.uclan.ac.uk/students/study/examinations_and_awards/extenuating_circumstances.php

You can apply for extenuating circumstances online via myUCLan. You must apply no later than 3 days after any examination or assessment submission date. Do not wait until you receive your assessment results to submit a claim. It is in your own interests to submit the claim as soon as possible.

You will be expected to re-submit claims for extenuating circumstances for each semester

Further information about the submission process is available at: https://www.uclan.ac.uk/students/study/examinations_and_awards/extenuating_circumstances_submission.php

In determining assessment recommendations, Assessment Boards will consider properly submitted claims from students who believe their performance has been adversely affected by extenuating circumstances. N.B. Assessment Boards are not permitted to alter individual assessment marks to take account of extenuating circumstances ([Academic Regulations](#) and [Assessment Handbook](#)).

Feedback

UCLan is committed to giving you clear, legible and informative feedback for all your assessments ([Academic Regulations](#)). You are expected to review and reflect on your feedback and learn from each experience to improve your performance as you progress through the course.

You will be provided with generic feedback for in-module formative and summative elements of assessment which contribute to a module within 15 working days of the scheduled submission or examination date. Generic feedback on end of module assessment and dissertations will be made available within 15 days of publication of results. Feedback may be oral, written, posted on a website or other.

5.3 Referencing

There are two ways of referring to a source: by using direct quotations, or by paraphrasing the author's words. Each of these is exemplified below.

Using direct quotations

A quotation integrated with the text, eg:

'The coal reserves,' said Thomas J. Johnson (1982, p.21) 'will not deplete as rapidly as oil reserves', and this claim is already being borne out by experience.

A quotation presented as an indented paragraph, eg:

Conflict within the marketing channel required its own definitions and one of the first of these was established by Stern and Gorman (1969, p.58). Their view was that a conflict was a process of system changes:

'... a change occurs in the task environment or within a channel member's organisation that eventually has implications for the channel members ... when the other affected members perceive the change as cause of frustration, a conflict situation emerges.'

Note the use of the three-full-stop device (...), separated by one space from the preceding and/or following words, to indicate a word or words have been omitted from the original. (The assumption is, of course, that the omission has *not* changed the sense of the author's words.)

Secondly, note the use of square brackets, [], to indicate that a word has been added or replaced to clarify (but not of course to alter) the author's original meaning, eg:

Original Registers are, then, types of text, not types of discourse, since they are not defined in terms of what kind of communication they represent.

Quotation '... [registers] are not defined in terms of what kind of communication they represent' (H.G. Widdowson, 1973).

Thirdly, note that where the original itself includes a word or words between inverted commas or quotation marks, a quotation should reproduce this by using double inverted commas between single ones, or vice-versa, eg:

Original One obvious development within a pedagogical grammar would be to use Searle's illocutionary acts to fill in Halliday's 'relevant models of language'.

Quotation As Widdowson (1973) points out: 'One obvious development within a pedagogical grammar would be to use Searle's illocutionary acts to fill in Halliday's "relevant models of language"', but this suggestion has yet to be followed up. (Alternatively: "...Halliday's 'relevant models of language'").

Fourthly, note that italics in the original may be reproduced by underlining in a quotation. If the underlining is not the original, then this should be made clear. The usual method is to add a note in brackets after the quotation: (my emphasis), (my underlining) or (emphasis added). If one wants to make it quite clear that the emphasis is the original's, one can add: (emphasis as in the original).

Paraphrasing the author's words

Paraphrasing is not simply altering a word here and there, but rather rewording the original - either to shorten/summarise or to expand/clarify. Paraphrasing often leads into 'grey areas' where one may be unsure of whether or not plagiarism could be alleged, so remember the golden rule: 'if in doubt, acknowledge'. In particular, in a lengthy piece of paraphrasing (say, several paragraphs) you should remind the reader at frequent intervals - at least once per paragraph - of the source.

Paraphrasing which shortens/summarises, eg:

Original 'There are many abusive parents for whom [therapy] groups may be the only answer, not only because of the quality of services offered, or the potential benefits they promise, but chiefly for the fact that a group of this type is the only service that some abusive parents will attend and participate in.' Blizinsky, M. (1982, p.311)

Paraphrase Blizinsky (1982:311) believes that therapy-group sessions may be the only answer for some abusive parents, being the only programme in which they will participate.

Or

Martin Blizinsky (1982:311) believes that therapy-group sessions may be the only answer for some abusive parents, being the only programme in which they will participate.

Paraphrasing which expands/clarifies, eg:

Original 'although photosynthesis is the principal autotrophic process, chemosynthesis also occurs'. (I. Pearson, 1978:135)

Paraphrase As Pearson points out (*English in Biological Sciences*, 1978, p.135) although photosynthesis - the process by which plants make their own food with the help of sunlight - is the major self-feeding process, synthesis involving chemical reactions also takes place.

How to cite bibliographic references

The following guidance notes, which aim to help students with bibliographic referencing, address the question of how, rather than whether, to acknowledge the sources.

Bibliographic references identify the work in question (usually either a book or an article) and give sufficient information on the author, title, publisher and date of publication for this identification to be quite clear and unambiguous.

Such references are normally written according to fixed conventions, which it is sensible to follow; one set of these conventions is outlined below.

For books: author's surname first, followed by the initials of his/her other name(s), then by the full title of the book *in italics* (these italics will be replaced by underlining in typescript or handwriting). There then follows the place of publication - usually a city - then the name of the publisher, and lastly the date of publication, e.g. Crane, D., *Invisible Colleges*. Chicago: University of Chicago Press, 1912.

Where there is more than one author, the examples are:

· Crystal, D. & Dour, D., *Advanced Conversational English*. Harlow: Longman, 1975.

or

· Crystal, D. and Dour, D. *Advanced Conversational English*. Harlow: Longman, 1975.

· Brazil, D., Coulthard, M. & Johns, C., *Discourse Intonation and Language Teaching*. Harlow: Longman, 1980.

or

· Brazil, D., Coulthard, M. and Johns, C., *Discourse Intonation and Language Teaching*. Harlow: Longman, 1980.

Where the book is a collection (of articles or monographs) rather than a single text, the examples are:

· Pride, J.B. ed. *Socio-linguistic Aspects of Language Learning and Teaching*. Oxford: Oxford University Press, 1979.

· Richards, J.C. and Nunan, D. eds. *Second Language Teacher Education*. Cambridge: Cambridge University Press, 1990.

For articles in a collection: similar to book references, but the author and title of the article come first, e.g. Pennington, M.C., A professional development focus for the language teaching practicum. In Richards, J.C. and Nunan, D. eds., *Second Language Teacher Education*. Cambridge: Cambridge University Press, 1990.

For articles in a journal (serial): much as above, except that information on the journal replaces that on the book (collection), e.g. Stieg, M.F., The information needs of historians. *College and Research Libraries*, 1981, 42(6), 549-560.

The figures '42(6)' mean 'volume 42, no. 6'; the figures '549-560' mean 'pages 549 to 560'. Note also that capital letters are not usual in the titles of articles (though in those of books, of course, they are).

Bibliographic (or general) references can be placed as footnotes to the text or, far better, listed alphabetically (by author) in a 'bibliography' at the end of the text. If a bibliography is used, references in the text need only state the author(s) and the publication date, e.g. Conflict within the marketing channel required its own definitions, and one of the first of these was established by Stern and Gorman (1969).

If the bibliography contains two or more publications by the same author(s) in the same year, identify them as 1969a, 1969b, etc.

If the text does make references to books/articles in this way, then the bibliography should put the publication date after the author's name, rather than at the end, e.g. Crane, D., 1972. *Invisible Colleges*. Chicago: University of Chicago Press.

Finally, minor differences from the above conventions may be found, as between one published bibliography and another, but these are unimportant; what does matter is that consistency in following one set of conventions is ensured. Not only should the information in the bibliography be correct in every detail (author's name and initials, publisher's name, etc.), but complete typographical accuracy - spacing, punctuation, etc. is also very important. Thorough proof-reading is essential here, as in the rest of the text, and is a measure of the care that has been taken; conversely, a text full of 'typos' (typographical errors), misspellings, inconsistencies, etc. is not only evidence of carelessness but also very irritating for the audience - the reader - and thus obviously counter-productive.

5.4 Confidential material

Any work carried out involving other individuals or organisations will usually require ethical approval before work is undertaken.

Students must be aware of their ethical and legal responsibilities to respect confidentiality and maintain the anonymity of individuals and organisations within their assignments.

5.5 Cheating, plagiarism, collusion or re-presentation

Please refer to the information included in section 6.6 of the University Student Handbook for full definitions. The University uses an online Assessment Tool called Turnitin. A pseudo-Turnitin assignment will be set up using the School space on Blackboard to allow students to check as many drafts as the system allows before their final submission to the 'official' Turnitin assignment. Students are required to self-submit their own assignment on Turnitin and will be given access to the Originality Reports arising from each submission. In operating Turnitin, Schools must take steps to ensure that the University's requirement for all summative

assessment to be marked anonymously is not undermined and therefore Turnitin reports should either be anonymised or considered separately from marking. Turnitin may also be used to assist with plagiarism detection and collusion, where there is suspicion about individual piece(s) of work.

You are required to sign a declaration indicating that individual work submitted for an assessment is your own.

If you attempt to influence the standard of the award you obtain through cheating, plagiarism or collusion, it will be considered as a serious academic and disciplinary offence as described within the [Academic Regulations](#) and the [Student Handbook](#) .

- Cheating is any deliberate attempt to deceive and covers a range of offences described in the [Student Handbook](#).
- Plagiarism describes copying from the works of another person without suitably attributing the published or unpublished works of others. This means that all quotes, ideas, opinions, music and images should be acknowledged and referenced within your assignments.
- Collusion is an attempt to deceive the examiners by disguising the true authorship of an assignment by copying, or imitating in close detail another student's work - this includes with the other student's consent and also when 2 or more students divide the elements of an assignment amongst themselves and copy one another's answers. It does not include the normal situation in which you learn from your peers and share ideas, as this generates the knowledge and understanding necessary for each individual to independently undertake an assignment; nor should it be confused with group work on an assignment which is specifically authorised in the assignment brief.
- Re-presentation is an attempt to gain credit twice for the same piece of work.

You may wish to alert students to specific resources available at UCLan or within your School designed to help students to understand the meaning of plagiarism and how to avoid it e.g. by cross referencing to guidelines on referencing assignments effectively – School or University materials.

Do you use Turnitin? If so, explain how it works and how your students should use it. Schools may require first year students to complete a formative essay which is fed through Turnitin and discussed within seminars with relevant academic staff to help students to learn more about referencing their work.

The process of investigation and penalties which will be applied can be reviewed in the [Student Handbook](#). If an allegation is found to be proven then the appropriate penalty will be implemented:

In the case of a single offence of cheating, plagiarism, collusion or re-presentation:

- the penalty will be 0% for the element of assessment, and an overall fail for the module.
- the plagiarised element of assessment must be resubmitted to the required standard and the mark for the module following resubmission will be restricted to the minimum pass mark.
- when it is detected for the first time on a resubmission for an already failed module, no further resubmission for the module will be permitted, and the appropriate fail grade will be awarded.

In the event of a repeat offence of cheating, plagiarism, collusion or re-presentation (irrespective of whether the repeat offence involves the same form of unfair means) on the same or any other module within the course:

- the appropriate penalty will be 0% for the module with no opportunity for re-assessment. This penalty does not preclude you being able to retake the module in a subsequent year.

The penalties will apply if you transfer from one UCLan course to another during your period of study and module credits gained on the former course are transferred to the current course.

Contact the [Students' Union Advice and Representation Centre](mailto:suadvice@uclan.ac.uk) by emailing: suadvice@uclan.ac.uk for support and guidance.

5.6 How do I know that my assessed work had been marked fairly?

Assessment is an integral part of the course. Module staff work closely together to design assessments, agree the marking criteria and approve final versions of assessments to ensure that these are appropriate. The criteria for assessment will be communicated to you clearly during the module teaching.

All module staff engage in development and training in assessment, marking and feedback. Once the assessments have been completed the module team will discuss the assessment methods and marking criteria, prior to starting to mark, so that there is a common understanding of what is expected of students. All assessed modules have moderation built into the marking process. Moderation involves sampling students' assessed work to make sure that the learning outcomes and agreed marking criteria have been interpreted and applied in the same way. This ensures that you and your fellow students are treated equitably and that the academic standards are applied consistently. During the marking process the module leader will co-ordinate moderation to ensure that at least 10% of assessed work (or a minimum of three pieces) has been reviewed by other markers and any concerns about consistency or accuracy addressed with the whole module team. Your work may or may not be part of this sample, but the processes for developing assessments and marking criteria as well as moderation mean that you can be confident that teaching staff are marking assessments to the same criteria. Module teams may then use feedback from moderation to improve clarity about the nature and purpose of future assessment, or to make changes if required.

Modules are also moderated externally. The module leader will arrange for the external examiner to receive a sample of work for review and comment. External examiners cannot change individual grades but can act as 'critical friends' and confirm that marking standards are in line with other, similar courses in the sector. If, on reviewing the sample, external examiners feel that the marking criteria have not been applied consistently the work of the whole cohort will be reviewed.

6. Classification of Awards

The University publishes the principles underpinning the way in which awards and results are decided in [Academic Regulations](#). Decisions about the overall classification of awards are made by Assessment Boards through the application of the academic and relevant course regulations.



7. Student Feedback

You can play an important part in the process of improving the quality of this course through the feedback you give.

.In addition to the on-going discussion with the course team throughout the year, there are a range of mechanisms for you to feedback about your

experience of teaching and learning. We aim to respond to your feedback and let you know of our plans for improvement.

The Students Union can support you in voicing your opinion, provide on-going advice and support, and encourage your involvement in all feedback opportunities. They will be requesting that you complete the National Student Survey (during semester 2 for students in their final year of study) or the UCLan Student Survey (all other students).

The Students' Union and University work closely together to ensure that the student voice is heard in all matters of student-life. We encourage students to provide constructive feedback throughout their time at university, through course reps, surveys and any other appropriate means,

The Union's Student Affairs Committee (SAC), members of Students' Council and School Presidents each have particular representative responsibilities, and are involved with decision making committees as high as the University Board. Therefore it is very important students engage with the democratic processes of the Students' Union and elect the students they see as most able to represent them.

The SEA and the Students Union can support you in voicing your opinion, provide on-going advice and support, and encourage your involvement in all feedback opportunities. They will be requesting that you complete the National Student Survey (during semester 2 for students in their final year of study). Other feedback mechanism exist, such as the SSLCs, which are mentioned below, and staff are encouraged to get module feedback either through feedback sessions or MEQ's (Module Evaluation Questionnaires

7.1 Student Staff Liaison Committee meetings (SSLCs)

Details of the Protocol for the operation of SSLCs is included in section 8.2 of the University Student Handbook.

The purpose of a SSLC meeting is to provide the opportunity for course representatives to feedback to staff about the course, the overall student experience and to inform developments which will improve future courses. These meetings are normally scheduled once per semester.

Meetings will be facilitated using guidelines and a record of the meeting will be provided with any decisions and / or responses made and / or actions taken as a result of the discussions held. The meetings include discussion of items forwarded by course representatives, normally related to the following agenda items (dependent on time of year).

The course team encourage student feedback in all areas and recognise that additional items for discussion may also be raised at the meeting

- Update on actions completed since the last meeting
- Feedback about the previous year – discussion of external examiner's report; outcomes of National /UCLan student surveys.
- Review of enrolment / induction experience;
- Course organisation and management (from each individual year group, and the course overall);
- Experience of modules - teaching, assessment, feedback;
- Experience of academic support which may include e.g. Personal Development Planning, academic advisor arrangements;
- Other aspects of University life relevant to student experience e.g. learning resources, IT, library;
- Any other issues raised by students or staff.

8. Appendices

8.1 Programme Specification(s)

Appendix A Programme Specification

UNIVERSITY OF CENTRAL LANCASHIRE

Programme Specification

This Programme Specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided.

- Sources of information on the programme can be found in Section 17

1. Awarding Institution / Body	University of Central Lancashire
2. Teaching Institution and Location of Delivery	University of Central Lancashire (Preston Campus)
3. University School/Centre	School of Engineering
4. External Accreditation	
5. Title of Final Award	BEng (Hons) Oil and Gas Safety Engineering
6. Modes of Attendance offered	Full-time, Part-time and Sandwich
7. a) UCAS Code	
7. b) JACS and HECOS Code	H840 and H120 (50% each) 100176 and 100185 (50% each)
8. Relevant Subject Benchmarking Group(s)	Engineering
9. Other external influences	Accreditation requirements of EI. Institute of Chemical Engineers (IChemE) Chartered Institution of Building Services Engineers (CIBSE) Institution of Fire Engineers (IFE)
10. Date of production/revision of this form	June 2019
11. Aims of the Programme	

- Prepare students with the necessary scientific, engineering and technological principles and tools to resolve complex design problems in oil and gas safety applications individually and as part of a team.
- Develop understanding and application of management skills, including team working, leadership and organisation to implement engineering design strategies.
- Develop an expertise in the application of safety, health and environmental management to resolve problems, implement safe design solutions and to ensure safe working environments.

- Develop the use of appropriate analytical and computational methods in the study of oil and gas safety engineering and the resolution of safety engineering problems for the built environment and related infrastructure.
- Provide understanding and application of the legal principles as they impact upon the study of oil and gas safety engineering, including design, project control and implementation.
- Develop safe engineering designs, individually and as part of a team, taking account of the influences and implications of reliability engineering.

12. Learning Outcomes, Teaching, Learning and Assessment Methods

A. Knowledge and Understanding

- A1. Describe the key principles of all relevant scientific and engineering aspects relating to oil and gas engineering and their applications to the study of safety engineering for the built environment using simulated scenarios and actual case studies onshore and offshore.
- A2. Explain the design, operation and performance of technological design solutions to achieve safety in oil and gas infrastructure.
- A3. Demonstrate and critically evaluate the use of appropriate strategies for hazard identifications in different industries and application of integrated engineering solutions.
- A4. Describe the interrelationships between the professional inputs into oil and gas engineering and safety engineering solutions with respect to applicable economic, legal, social, ethical and environmental parameters.
- A5. Apply economic, legal, social, ethical and environmental principles of solution of safety engineering problems.

Teaching and Learning Methods

Formal lectures, group discussion and project simulation when studying the compulsory modules. Project management is embedded within the simulation by organising team approach to task from briefing to design solution, including analysis and synthesis of technical issues and evaluation of economic, legal, social, ethical and environmental issues.

Assessment methods

A variety of assessment methods including individual written assignments (including in the dissertation module where students submit project proposals and reflect on the process that allowed them to do so), and other project submissions and presentations (e.g. dissertation in which a reflection upon the methodology is part of the analysis expected), portfolio and viva.

B. Subject-specific skills

- B1. Generate ideas, proposals and solutions or arguments independently and/or collaboratively in response to set scenarios and/or self initiated activity.
- B2. Evaluate whether design solutions integrate economic, legal, social, ethical and environmental requirements.
- B3. Identify appropriate design and governance problems and formulate clear objectives using analytical data and I&CT software as appropriate.
- B4. Develop design briefs with clarity graphically and/or in written specifications.
- B5. Demonstrate ability in independent planning and execution of a research project in oil and gas safety engineering in onshore and offshore applications.

Teaching and Learning Methods

Lectures, tutorials and seminars, laboratory classes with workbook or practical manuals; safe working practices described. Preparation of laboratory reports and interpretation of other data. The most appropriate methods will be used dependent on module.

Assessment methods

Practical reports, laboratory notebooks, data interpretation, and report writing, portfolio and a viva. Details dependent on module.

C. Thinking Skills

- C1. Evaluate the concepts, values and debates which inform study and practice in safety engineering;
- C2. Employ appropriate problem solution skills, as appropriate, in the processes of analysis, synthesis, evaluation and summarisation of ideas and information and the proposal of solutions.
- C3. Debate, in a rational manner, future strategies and proposals for the resolution of oil and gas safety problems, hazard identifications, design and project management solutions in a changing social environment.
- C4. Critically evaluate solutions to problems provided by others.
- C5. Appraise and employ appropriate economic, legal, social, ethical and environmental issues for safety engineering.

Teaching and Learning Methods

Skills developed through lectures, data interpretation, case studies, practical work, research project, presentations, problem solving. The most appropriate methods will be used dependent on module.

Assessment methods

Workbooks, preparation of short notes, essays, reports, practical reports, group and individual presentations, a viva voce and end of module seen and unseen examinations. Details dependent on module.

D. Other skills relevant to employability and personal development

- D1. Prepare and present arguments and illustrative materials in a variety of formats.
- D2. Demonstrate literacy and information sourcing and retrieval skills.
- D3. Use CAE literacy including CFD modelling.
- D4. Demonstrate communication skills in a variety of formats.
- D5. Demonstrate self reliance, commercial time management, the capacity for independent learning and the ability to work effectively with others in the context of a team.
- D6. Demonstrate negotiation skills and skills in listening and evaluating the opinions and values of others.

Teaching and Learning Methods

Discussions and presentations; numeracy and statistics in association with practical work; IT through coursework; teamwork through class work in tutorials, case studies and problem solving. The most appropriate methods will be used dependent on module.

Assessment methods

Written reports, oral presentations, word processed documents, PowerPoint presentations, data analysis and presentation, collating information from various sources, group projects and presentations; individual presentations, portfolio and a viva. Details dependent on module.

13. Programme Structures*				14. Awards and Credits*
Level	Module Code	Module Title	Credit rating	
Level 6	FV3701	Reservoir Engineering and Well testing	20	BEng (Hons) Oil and Gas Safety Engineering Requires 360 credits including a minimum of 120 at Level 6 and 220 at Level 5 or above
	FV3401	Safety Case Development and Management	20	
	FV3002	Fire Protection Engineering	20	
	FV3102	Probabilistic Risk Analysis	20	

	FV3201 FV3900	Engineering Design Project Engineering Dissertation		<p>BEng (Hons) Oil and Gas Safety Engineering (Sandwich) Requires 480 credits including a minimum of 120 at level 6 and 240 at level 5 or above.</p> <p>BSc Oil and Gas Safety Engineering Requires 320 credits including a minimum of 60 at Level 6 and 180 at Level 5 or above.</p> <p>Note that the professional body requires that the APM for the Beng (Hons) is based on all 6 level 6 modules.</p>
Level 5	FV2701 FV2402 FV2101 FV2102 FV2103 FV2204 FV2301 FV2800	Oil and Gas Engineering Operations Reliability Engineering in Complex Systems Accidents and Catastrophes Safety, Health and Environment Project Management Computational Engineering Engineering Analysis 2 Industrial Experience	20 20 10 20 20 20 120	<p>Diploma of Higher Education in Oil and Gas Safety Engineering Requires 240 credits including a minimum of 120 at Level 5 or above</p>
Level 4	FV1701 FV1001 FV1101 FV1201 FV1202 FV1302 FV1502	Introduction to Oil and Gas Engineering Introduction to Combustion and Fire Safety and Fire Law Energy Transfer and Thermodynamics Engineering Design Practice Engineering Analysis 1 Skills for Science and Engineering	20 20 10 20 20 20 10	<p>Certificate of Higher Education in Oil and Gas Science Requires 120 credits at Level 4 or above</p>
Level 3 (FE)	ERC001 ERC002 ERC003 ERC004 ERC005 ERC006	Study Skills Basic Mathematics Information and Communications Technology Practical Skills Design Studies Analytical Studies	20 20 20 20 20 20	Students who exit at level 3 will receive a transcript of their modules and grades.

15. Personal Development Planning

The modules at each level provide students with the opportunity to engage with their own personal development planning and to recognise that learning is a lifelong process.

Following appropriate introduction and induction, the Course Team will support students in reflecting on their learning, performance and achievement, and in their planning for personal, educational, and career development.

Skills in PDP such as self-reflection, recording, target setting, action planning and monitoring will be highlighted as key lead indicators of success in securing and successfully completing the Industrial Experience Period and in securing employment in the industry on graduation.

Over the duration of the course, and including reference to extra-curricular student activities, Module Tutors for Communications and Personal Tutors will take formal responsibility for supporting students through their personal development in the following areas:

- Self Awareness
- Study Skills
- Reviewing Progress
- Career Plans
- Making Applications

For students who undertake the Industrial Experience module, the tutors for this module will also focus attention on PDP.

Web based resource materials to be used include:

Personal Development Planning www.uclan.ac.uk/ldu/resources/pdp/intro1.htm
Skills Learning Resources www.uclan.ac.uk/lskills/TLTP3/entersite.html

The work in PDP will not be assessed.

16. Admissions criteria

Programme Specifications include minimum entry requirements, including academic qualifications, together with appropriate experience and skills required for entry to study. These criteria may be expressed as a range rather than a specific grade. Amendments to entry requirements may have been made after these documents were published and you should consult the University's website for the most up to date information.

Students will be informed of their personal minimum entry criteria in their offer letter.

Applicants will normally be required to have, one of:

BCC at A2, including Mathematics OR Science subject, Relevant ND DMM. IB – 24P including Maths or Science at grade 5.

In addition applicants will be required to have Maths and English GCSE at Grade C or equivalent.

Applicants will be required to have a minimum level of proficiency in English Language equivalent to IELTS grade 6 with no subscore lower than 5.5

Applications from individuals with non-standard qualifications, relevant work or life experience and who can demonstrate the ability to cope with and benefit from degree-level studies are welcome. If candidates have not studied recently they may be required to undertake an Access programme. APL/APEL will be assessed through standard University procedures.

Please consult the UCLAN admissions department for the most up to date requirements.

17. Key sources of information about the programme

- University web site (www.uclan.ac.uk)
- UCAS web site (www.ucas.ac.uk)
- School website (www.uclan.ac.uk/forensic)
- UCLan Fire Team web site (www.uclan.ac.uk/fire)
- Course Leader
- Admissions tutor

18. Curriculum Skills Map																	
Module Code	Module Title	Core (C), Compulsory (COMP) or Option (O)	Programme Learning Outcomes														
			Knowledge & Understanding					Subject-specific Skills					Thinking Skills				
			A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	C1	C2	C3	C4	C5
LEVEL 6	FV3701	Reservoir Engineering and Well testing	COMP	✓			✓							✓			
	FV3002	Fire Protection Engineering	COMP	✓	✓				✓	✓				✓		✓	
	FV3401	Safety Case Development and Management	COMP	✓										✓	✓		
	FV3102	Probabilistic Risk Analysis	COMP	✓						✓					✓		
	FV3201	Engineering Design Project	COMP		✓	✓	✓		✓	✓		✓		✓			✓
	FV3900	Engineering Dissertation	COMP			✓	✓		✓		✓		✓	✓	✓	✓	✓
	FV2701	Oil and Gas Engineering Operations	COMP	✓										✓			

- A5.** Apply economic, legal, social, ethical and environmental principles of solution of safety engineering problems.
- B1.** Generate ideas, proposals and solutions or arguments independently and/or collaboratively in response to set scenarios and/or self initiated activity.
- B2.** Evaluate whether design solutions integrate economic, legal, social, ethical and environmental requirements.
- B3.** Understand appropriate design and governance problems and formulate clear objectives using analytical data and I&CT software as appropriate.
- B4.** Develop design briefs with clarity graphically and/or in written specifications.
- B5.** Demonstrate ability in independent planning and execution of a research project in oil and gas safety engineering in onshore and offshore applications.
- C1.** Understand the concepts, values and debates which inform study and practice in safety engineering;
- C2.** Employ appropriate problem solution skills, as appropriate, in the processes of analysis, synthesis, evaluation and summarisation of ideas and information and the proposal of solutions.
- C3.** Debate, in a rational manner, future strategies and proposals for the resolution of oil and gas safety problems, hazard identifications, design and project management solutions in a changing social environment.
- C4.** Evaluate solutions to problems provided by others.
- C5.** Estimate appropriate economic, legal, social, ethical and environmental issues for safety engineering.
- D1.** Prepare and present arguments and illustrative materials in a variety of formats.
- D2.** Demonstrate literacy and information sourcing and retrieval skills.
- D3.** Use CAE literacy including CFD modelling.
- D4.** Demonstrate communication skills in a variety of formats.
- D5.** Demonstrate self-reliance, commercial time management, the capacity for independent learning and the ability to work effectively with others in the context of a team.
- D6.** Demonstrate negotiation skills and skills in listening and evaluating the opinions and values of others.

Learning Outcomes for the award of: DipHE Oil and Gas Safety Engineering:

- A1.** Describe the key principles of all relevant scientific and engineering aspects relating to oil and gas engineering and their applications to the study of safety engineering for the built environment using simulated scenarios and actual case studies onshore and offshore.
- A2.** Explain the design, operation and performance of technological design solutions to achieve safety in oil and gas infrastructure.
- A3.** Evaluate the use of appropriate strategies for hazard identifications in different industries and application of integrated engineering solutions.
- B1.** Generate ideas, proposals and solutions or arguments independently and/or collaboratively in response to set scenarios and/or self initiated activity.
- B2.** Evaluate whether design solutions integrate economic, legal, social, ethical and environmental requirements.
- B3.** Understand appropriate design and governance problems and formulate clear objectives using analytical data and I&CT software as appropriate.
- B4.** Develop design briefs with clarity graphically and/or in written specifications.
- C1.** Understand the concepts, values and debates which inform study and practice in safety engineering;
- C2.** Employ appropriate problem solution skills, as appropriate, in the processes of analysis, synthesis, evaluation and summarisation of ideas and information and the proposal of solutions.
- D1.** Prepare and present arguments and illustrative materials in a variety of formats.
- D2.** Demonstrate literacy and information sourcing and retrieval skills.
- D4.** Demonstrate communication skills in a variety of formats.
- D5.** Demonstrate self-reliance, commercial time management, the capacity for independent learning and the ability to work effectively with others in the context of a team.
- D6.** Demonstrate negotiation skills and skills in listening and evaluating the opinions and values of others.

Learning Outcomes for the award of: CertHE Oil and Gas Safety Engineering:

- A1.** Describe the key principles of all relevant scientific and engineering aspects relating to oil and gas engineering and their applications to the study of safety engineering for the built environment using simulated scenarios and actual case studies onshore and offshore.

- A2.** Explain the design, operation and performance of technological design solutions to achieve safety in oil and gas infrastructure.
- B1.** Generate ideas, proposals and solutions or arguments independently and/or collaboratively in response to set scenarios and/or self initiated activity.
- B2.** Evaluate whether design solutions integrate economic, legal, social, ethical and environmental requirements.
- C1.** Understand the concepts, values and debates which inform study and practice in safety engineering;
- D1.** Prepare and present arguments and illustrative materials in a variety of formats.
- D4.** Demonstrate communication skills in a variety of formats.
- D6.** Demonstrate negotiation skills and skills in listening and evaluating the opinions and values of others.

UNIVERSITY OF CENTRAL LANCASHIRE

Programme Specification

This Programme Specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided.

- Sources of information on the programme can be found in Section 17

13. Awarding Institution / Body	University of Central Lancashire
14. Teaching Institution and Location of Delivery	University of Central Lancashire (Preston Campus)
15. University School/Centre	School of Engineering
16. External Accreditation	
17. Title of Final Award	MEng (Hons) Oil and Gas Safety Engineering
18. Modes of Attendance offered	Full-time, Part-time and Sandwich
19. a) UCAS Code	
7. b) JACS and HECOS Code	H840 and H120 (50% each) 100176 and 100185 (50% each)
20. Relevant Subject Benchmarking Group(s)	Engineering
21. Other external influences	Accreditation requirements of EI. Institute of Chemical Engineers (IChemE) Chartered Institution of Building Services Engineers (CIBSE) Institution of Fire Engineers (IFE)
22. Date of production/revision of this form	June 2019
23. Aims of the Programme	
<ul style="list-style-type: none"> • Prepare students with the necessary scientific, engineering and technological principles and tools to resolve complex design problems in oil and gas safety applications individually and as part of a team. 	
<ul style="list-style-type: none"> • Develop an in-depth understanding and application of management skills, including team working, leadership and organisation to implement engineering design strategies. 	
<ul style="list-style-type: none"> • Develop an expertise in the application of safety, health and environmental management to resolve problems, implement safe design solutions and to ensure safe working environments. 	

- Develop the use of appropriate analytical and computational methods in the study of oil and gas safety engineering and the resolution of safety engineering problems for the built environment and related infrastructure.
- Provide an in-depth understanding and application of the legal principles as they impact upon the study of oil and gas safety engineering, including design, project control and implementation.
- Develop safe engineering designs, individually and as part of a team, taking account of the influences and implications of reliability engineering.

24. Learning Outcomes, Teaching, Learning and Assessment Methods

A. Knowledge and Understanding

- A6. Describe the key principles of all relevant scientific and engineering aspects relating to oil and gas engineering and their applications to the study of safety engineering for the built environment using simulated scenarios and actual case studies onshore and offshore.
- A7. Explain the design, operation and performance of technological design solutions to achieve safety in oil and gas infrastructure.
- A8. Comprehensively demonstrate and critically evaluate the use of appropriate strategies for hazard identifications in different industries and application of integrated engineering solutions.
- A9. Describe the interrelationships between the professional inputs into oil and gas engineering and safety engineering solutions with respect to applicable technical, economic, legal, social, ethical and environmental parameters.
- A10. Comprehensively explore theories, concepts, principles and methodologies in different situations and apply economic, legal, social, ethical and environmental principles of solution of safety engineering problems.

Teaching and Learning Methods

Formal lectures, group discussion and project simulation when studying the compulsory modules. Project management is embedded within the simulation by organising team approach to task from briefing to design solution, including analysis and synthesis of technical issues and evaluation of economic, legal, social, ethical and environmental issues.

Assessment methods

A variety of assessment methods including individual written assignments (including in the dissertation module where students submit project proposals and reflect on the process that allowed them to do so), and other project submissions and presentations (e.g. dissertation in which a reflection upon the methodology is part of the analysis expected), portfolio and viva.

B. Subject-specific skills

- B6. Generate ideas, proposals and solutions or arguments independently and/or collaboratively in response to set scenarios and/or self-initiated activity.
- B7. Evaluate whether design solutions integrate economic, legal, social, ethical and environmental requirements.
- B8. Comprehensively identify and apply appropriate design and governance problems and formulate clear objectives using analytical data and I&CT software as appropriate.
- B9. Creative use of engineering principles in problem solving, design, explanation and diagnosis and develop design briefs with clarity graphically and/or in written specifications.
- B10. Demonstrate ability in independent planning and execution of a research project in oil and gas safety engineering in onshore and offshore applications.
- B11. Identify appropriate design and governance problems and formulate clear objectives using CFD and other oil and gas engineering software.
- B12. Implement proposals and solutions, independently and/or collaboratively in response to set scenarios and/or self-initiated activity involving safety engineering solutions.

Teaching and Learning Methods

Lectures, tutorials and seminars, laboratory classes with workbook or practical manuals; safe working practices described. Preparation of laboratory reports and interpretation of other data. The most appropriate methods will be used dependent on module.

Assessment methods

Practical reports, laboratory notebooks, data interpretation, and report writing, portfolio and a viva. Details dependent on module.

C. Thinking Skills

- C6. Creative evaluation of the concepts, values and debates which inform study and practice in oil & gas and safety engineering;
- C7. Employ applicable problem solution skills, as appropriate, in the processes of analysis, synthesis, evaluation and summarisation of ideas and information and the proposal of solutions.
- C8. Debate, in a rational manner, future strategies and proposals for the resolution of oil and gas safety problems, hazard identifications, design and project management solutions in a changing social environment.
- C9. Critically evaluate solutions to problems provided by others.
- C10. Comprehensively appraise and employ appropriate economic, legal, social, ethical and environmental issues for safety engineering.

Teaching and Learning Methods

Skills developed through lectures, data interpretation, case studies, practical work, research project, presentations, problem solving. The most appropriate methods will be used dependent on module.

Assessment methods

Workbooks, preparation of short notes, essays, reports, practical reports, group and individual presentations, a viva voce and end of module seen and unseen examinations. Details dependent on module.

D. Other skills relevant to employability and personal development

- D7. Develop transferable skills that will be of value in a wide range of situations, including Problem solving; Communication; and Working with others and prepare and present arguments and illustrative materials in a variety of formats.
- D8. Planning self-learning and improving performance and demonstrate literacy and information sourcing and retrieval skills.
- D9. Use CAE literacy including CFD modelling.
- D10. Demonstrate communication skills in a variety of formats.
- D11. Establish self-reliance, commercial time management, the capacity for independent learning and the ability to work effectively with others in the context of a team.
- D12. Demonstrate negotiation skills and skills in listening and evaluating the opinions and values of others.
- D13. Demonstrate the ability to communicate and present critical arguments to a range of audiences.

Teaching and Learning Methods

Discussions and presentations; numeracy and statistics in association with practical work; IT through coursework; teamwork through class work in tutorials, case studies and problem solving. The most appropriate methods will be used dependent on module.

Assessment methods

Written reports, oral presentations, word processed documents, PowerPoint presentations, data analysis and presentation, collating information from various sources, group projects and presentations; individual presentations, portfolio and a viva. Details dependent on module.

13. Programme Structures*

Level	Module Code	Module Title	Credit rating
Level 7	FV4701	Geology and Formation Evaluation	20
	FV4003	Computational Fluid Dynamics	20
	FV4202	Energy and Sustainability	20
	FV4201	Advanced Engineering Design Project	20

14. Awards and Credits*

MEng (Hons) Oil and Gas Safety Engineering
Requires 480 credits including a minimum of 120 at Level 7 or above and 200 at Level 6 or

	FV4900	Advanced Engineering Dissertation	40	above and 360 at level 5 or above. MEng (Hons) Oil and Gas Safety Engineering (Sandwich) Requires 600 credits including a minimum of 120 at level 6 and 240 at level 5.
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Level 6	FV3701 FV3401 FV3002 FV3102 FV3201 FV3900	Reservoir Engineering and Well testing Safety Case Development and Management Fire Protection Engineering Probabilistic Risk Analysis Engineering Design Project Engineering Dissertation	20 20 20 20 20	BEng (Hons) Oil and Gas Safety Engineering Requires 360 credits including a minimum of 120 at Level 6 and 220 at Level 5 or above BEng (Hons) Oil and Gas Safety Engineering (Sandwich) Requires 480 credits including a minimum of 120 at level 6 and 240 at level 5 or above. BSc Oil and Gas Safety Engineering Requires 320 credits including a minimum of 60 at Level 6 and 180 at Level 5 or above. Note that the professional body requires that the APM for the Beng (Hons) is based on all 6 level 6 modules.
Level 5	FV2701 FV2402 FV2101 FV2102 FV2103 FV2204 FV2301 FV2800	Oil and Gas Engineering Operations Reliability Engineering in Complex Systems Accidents and Catastrophes Safety, Health and Environment Project Management Computational Engineering Engineering Analysis 2 Industrial Experience	20 20 10 20 10 20 20 120	Diploma of Higher Education in Oil and Gas Safety Engineering Requires 240 credits including a minimum of 120 at Level 5 or above
Level 4	FV1701 FV1001 FV1101 FV1201 FV1202 FV1302 FV1502	Introduction to Oil and Gas Engineering Introduction to Combustion and Fire Safety and Fire Law Energy Transfer and Thermodynamics Engineering Design Practice Engineering Analysis 1 Skills for Science and Engineering	20 20 10 20 20 20 10	Certificate of Higher Education in Oil and Gas Science Requires 120 credits at Level 4 or above

Level 3 (FE)	ERC001	Study Skills	20	Students who exit at level 3 will receive a transcript of their modules and grades.
	ERC002	Basic Mathematics	20	
	ERC003	Information and Communications Technology	20	
	ERC004	Practical Skills	20	
	ERC005	Design Studies	20	
	ERC006	Analytical Studies	20	

15. Personal Development Planning

The modules at each level provide students with the opportunity to engage with their own personal development planning and to recognise that learning is a lifelong process.

Following appropriate introduction and induction, the Course Team will support students in reflecting on their learning, performance and achievement, and in their planning for personal, educational, and career development.

Skills in PDP such as self-reflection, recording, target setting, action planning and monitoring will be highlighted as key lead indicators of success in securing and successfully completing the Industrial Experience Period and in securing employment in the industry on graduation.

Over the duration of the course, and including reference to extra-curricular student activities, Module Tutors for Communications and Personal Tutors will take formal responsibility for supporting students through their personal development in the following areas:

- Self Awareness
- Study Skills
- Reviewing Progress
- Career Plans
- Making Applications

For students who undertake the Industrial Experience module, the tutors for this module will also focus attention on PDP.

Web based resource materials to be used include:

Personal Development Planning www.uclan.ac.uk/ldu/resources/pdp/intro1.htm
Skills Learning Resources www.uclan.ac.uk/lskills/TLTP3/entersite.html

The work in PDP will not be assessed.

16. Admissions criteria

Programme Specifications include minimum entry requirements, including academic qualifications, together with appropriate experience and skills required for entry to study. These criteria may be expressed as a range rather than a specific grade. Amendments to entry requirements may have been made after these documents were published and you should consult the University's website for the most up to date information.

Students will be informed of their personal minimum entry criteria in their offer letter.

Applicants will normally be required to have, one of:

BCC at A2, including Mathematics OR Science subject, Relevant ND DMM. IB – 24P including Maths or Science at grade 5.

In addition applicants will be required to have Maths and English GCSE at Grade C or equivalent.

Applicants will be required to have a minimum level of proficiency in English Language equivalent to IELTS grade 6 with no subscore lower than 5.5

Applications from individuals with non-standard qualifications, relevant work or life experience and who can demonstrate the ability to cope with and benefit from degree-level studies are welcome. If candidates have not studied recently they may be required to undertake an Access programme. APL/APEL will be assessed through standard University procedures.

Foundation Entry:

Standard entrants will require 200 points at A-level (from two A-level passes), or 160 points (MPP) at BTEC, or equivalent. GCSE-level Mathematics and English at grade C or above are required. There are no other mandatory formal educational or specialist knowledge requirements for admission to this Foundation Year Entry programme.

Non-standard entrants will be considered on an individual basis, normally through interview, and are expected to be able to demonstrate personal reflection on their career to-date and show a strong desire and ability to study. They may be asked to produce a piece of written work to help assess their ability to benefit from the programme.

International applicants will have to demonstrate that they will benefit from the course and that they have a good grasp of the English language: English should be at the standard IELTS level required (or equivalent) by the University for admission to a Foundation Year Entry course at level 3, i.e. an overall IELTS score of 6.0 or higher with no subscore below 5.5.

Please consult the UCLAN admissions department for the most up to date requirements.

17. Key sources of information about the programme

- University web site (www.uclan.ac.uk)
- UCAS web site (www.ucas.ac.uk)
- School website (www.uclan.ac.uk/forensic)
- UCLan Fire Team web site (www.uclan.ac.uk/fire)
- Course Leader
- Admissions tutor

18. Curriculum Skills Map																										
Module Code	Module Title	Core (C), Compulsory (COMP) or Option (O)	Programme Learning Outcomes																							
			Knowledge & Understanding					Subject-specific Skills							Thinking Skills					Other skills relevant to employability and personal development						
			A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	C5	D1	D2	D3	D4	D5	D6	D7
LEVEL 7	FV4701	Geology and Formation Evaluation	COMP	✓			✓			✓							✓									
	FV4003	Computational Fluid Dynamics	COMP	✓			✓	✓						✓			✓						✓			
	FV4202	Energy and Sustainability	COMP		✓		✓			✓					✓			✓	✓	✓					✓	
	FV4201	Advanced Engineering Design Project	COMP		✓	✓	✓	✓	✓	✓		✓			✓	✓			✓	✓	✓	✓		✓	✓	✓
	FV4900	Advanced Engineering Dissertation	COMP	✓			✓	✓	✓		✓		✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
LEVEL 6	FV3701	Reservoir Engineering and Well testing	COMP	✓			✓										✓						✓			
	FV3002	Fire Protection Engineering	COMP	✓	✓				✓	✓						✓		✓							✓	
	FV3401	Safety Case Development and Management	COMP	✓												✓	✓					✓	✓		✓	✓
	FV3102	Probabilistic Risk Analysis	COMP	✓						✓							✓									
	FV3201	Engineering Design Project	COMP		✓	✓	✓		✓	✓		✓				✓			✓	✓	✓	✓	✓		✓	✓
	FV3900	Engineering Dissertation	COMP			✓	✓		✓		✓		✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	FV2701	Oil and Gas Engineering Operations	COMP	✓													✓						✓			

19. LEARNING OUTCOMES FOR EXIT AWARDS:

Learning Outcomes for the award of: BEng (Hons) Oil and Gas Safety Engineering:

- A1.** Describe the key principles of all relevant scientific and engineering aspects relating to oil and gas engineering and their applications to the study of safety engineering for the built environment using simulated scenarios and actual case studies onshore and offshore.
- A2.** Explain the design, operation and performance of technological design solutions to achieve safety in oil and gas infrastructure.
- A3.** Demonstrate and critically evaluate the use of appropriate strategies for hazard identifications in different industries and application of integrated engineering solutions.
- A4.** Describe the interrelationships between the professional inputs into oil and gas engineering and safety engineering solutions with respect to applicable economic, legal, social, ethical and environmental parameters.
- A5.** Apply economic, legal, social, ethical and environmental principles of solution of safety engineering problems.
- B1.** Generate ideas, proposals and solutions or arguments independently and/or collaboratively in response to set scenarios and/or self initiated activity.
- B2.** Evaluate whether design solutions integrate economic, legal, social, ethical and environmental requirements.
- B3.** Identify appropriate design and governance problems and formulate clear objectives using analytical data and I&CT software as appropriate.
- B4.** Develop design briefs with clarity graphically and/or in written specifications.
- B5.** Demonstrate ability in independent planning and execution of a research project in oil and gas safety engineering in onshore and offshore applications.
- C1.** Evaluate the concepts, values and debates which inform study and practice in safety engineering;
- C2.** Employ appropriate problem solution skills, as appropriate, in the processes of analysis, synthesis, evaluation and summarisation of ideas and information and the proposal of solutions.
- C3.** Debate, in a rational manner, future strategies and proposals for the resolution of oil and gas safety problems, hazard identifications, design and project management solutions in a changing social environment.
- C4.** Critically evaluate solutions to problems provided by others.
- C5.** Appraise and employ appropriate economic, legal, social, ethical and environmental issues for safety engineering.
- D1.** Prepare and present arguments and illustrative materials in a variety of formats.
- D2.** Demonstrate literacy and information sourcing and retrieval skills.
- D3.** Use CAE literacy including CFD modelling.
- D4.** Demonstrate communication skills in a variety of formats.
- D5.** Demonstrate self reliance, commercial time management, the capacity for independent learning and the ability to work effectively with others in the context of a team.
- D6.** Demonstrate negotiation skills and skills in listening and evaluating the opinions and values of others.

Learning Outcomes for the award of: BEng Oil and Gas Safety Engineering:

- A1.** Describe the key principles of all relevant scientific and engineering aspects relating to oil and gas engineering and their applications to the study of safety engineering for the built environment using simulated scenarios and actual case studies onshore and offshore.
- A2.** Explain the design, operation and performance of technological design solutions to achieve safety in oil and gas infrastructure.

- A3.** evaluate the use of appropriate strategies for hazard identifications in different industries and application of integrated engineering solutions.
- A4.** Describe the interrelationships between the professional inputs into oil and gas engineering and safety engineering solutions with respect to applicable economic, legal, social, ethical and environmental parameters.
- A5.** Apply economic, legal, social, ethical and environmental principles of solution of safety engineering problems.
- B1.** Generate ideas, proposals and solutions or arguments independently and/or collaboratively in response to set scenarios and/or self initiated activity.
- B2.** Evaluate whether design solutions integrate economic, legal, social, ethical and environmental requirements.
- B3.** Understand appropriate design and governance problems and formulate clear objectives using analytical data and I&CT software as appropriate.
- B4.** Develop design briefs with clarity graphically and/or in written specifications.
- B5.** Demonstrate ability in independent planning and execution of a research project in oil and gas safety engineering in onshore and offshore applications.
- C1.** Understand the concepts, values and debates which inform study and practice in safety engineering;
- C2.** Employ appropriate problem solution skills, as appropriate, in the processes of analysis, synthesis, evaluation and summarisation of ideas and information and the proposal of solutions.
- C3.** Debate, in a rational manner, future strategies and proposals for the resolution of oil and gas safety problems, hazard identifications, design and project management solutions in a changing social environment.
- C4.** Evaluate solutions to problems provided by others.
- C5.** Estimate appropriate economic, legal, social, ethical and environmental issues for safety engineering.
- D1.** Prepare and present arguments and illustrative materials in a variety of formats.
- D2.** Demonstrate literacy and information sourcing and retrieval skills.
- D3.** Use CAE literacy including CFD modelling.
- D4.** Demonstrate communication skills in a variety of formats.
- D5.** Demonstrate self-reliance, commercial time management, the capacity for independent learning and the ability to work effectively with others in the context of a team.
- D6.** Demonstrate negotiation skills and skills in listening and evaluating the opinions and values of others.

Learning Outcomes for the award of: DipHE Oil and Gas Safety Engineering:

- A1.** Describe the key principles of all relevant scientific and engineering aspects relating to oil and gas engineering and their applications to the study of safety engineering for the built environment using simulated scenarios and actual case studies onshore and offshore.
- A2.** Explain the design, operation and performance of technological design solutions to achieve safety in oil and gas infrastructure.
- A3.** Evaluate the use of appropriate strategies for hazard identifications in different industries and application of integrated engineering solutions.
- B1.** Generate ideas, proposals and solutions or arguments independently and/or collaboratively in response to set scenarios and/or self initiated activity.
- B2.** Evaluate whether design solutions integrate economic, legal, social, ethical and environmental requirements.
- B3.** Understand appropriate design and governance problems and formulate clear objectives using analytical data and I&CT software as appropriate.
- B4.** Develop design briefs with clarity graphically and/or in written specifications.
- C1.** Understand the concepts, values and debates which inform study and practice in safety engineering;
- C2.** Employ appropriate problem solution skills, as appropriate, in the processes of analysis, synthesis, evaluation and summarisation of ideas and information and the proposal of solutions.
- D1.** Prepare and present arguments and illustrative materials in a variety of formats.
- D2.** Demonstrate literacy and information sourcing and retrieval skills.
- D4.** Demonstrate communication skills in a variety of formats.

- D5.** Demonstrate self-reliance, commercial time management, the capacity for independent learning and the ability to work effectively with others in the context of a team.
- D6.** Demonstrate negotiation skills and skills in listening and evaluating the opinions and values of others.

Learning Outcomes for the award of: CertHE Oil and Gas Safety Engineering:

- A1.** Describe the key principles of all relevant scientific and engineering aspects relating to oil and gas engineering and their applications to the study of safety engineering for the built environment using simulated scenarios and actual case studies onshore and offshore.
- A2.** Explain the design, operation and performance of technological design solutions to achieve safety in oil and gas infrastructure.
- B1.** Generate ideas, proposals and solutions or arguments independently and/or collaboratively in response to set scenarios and/or self initiated activity.
- B2.** Evaluate whether design solutions integrate economic, legal, social, ethical and environmental requirements.
- C1.** Understand the concepts, values and debates which inform study and practice in safety engineering;
- D1.** Prepare and present arguments and illustrative materials in a variety of formats.
- D4.** Demonstrate communication skills in a variety of formats.
- D6.** Demonstrate negotiation skills and skills in listening and evaluating the opinions and values of others.