AALBORG UNIVERSITET

MASTER OF SCIENCE (MSC) IN ENGINEERING (OIL AND GAS TECHNOLOGY)

MASTER OF SCIENCE (MSC) IN ENGINEERING
ESBJERG

MODULES INCLUDED IN THE CURRICULUM

TABLE OF CONTENTS

OIL AND GAS SEPARATION

2018/2019

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

Students who have passed the module should be able to

- Account for general process engineering
- Explain the fundamentals of oil and gas production units, with special regard to offshore systems
- Explain the nature of reservoir fluids
- Account for environmental aspects regarding oil and gas production
- Explain basic operations of oil and gas separation units, with special regard to offshore systems
- Account for basic operations of gas treatment
- Account for basic operations of produced water treatment

SKILLS

- Work out mass and energy balances to oil and gas separation units
- Prepare process flow diagrams (PFD) of oil and gas separation units
- Design horizontal and vertical 2-phase and 3-phase separators
- Design relevant equipment pertaining to oil and gas separation
- Write a project report following the standards of the field of study, include relevant original scientific literature, use the correct terminology and communicate the research-based foundation, problem and results of the project in writing, graphically and orally in a coherent way
- Assess and select relevant original scientific literature and current scientific methods, models and other tools used in the project and asses the problem of the project and results in relevant scientific contexts and social conditions

COMPETENCES

- Design and optimise the overall separation train
- Select appropriate units for treatment of gas and water streams
- Evaluate process synthesis of the overall oil and gas separation systems
- Handle the planning, implementation and management of complex and unpredictable research and/or developmental tasks and take professional responsibility for implementing academic assignments and interdisciplinary collaborations
- Take responsibility for own professional development and specialization

TYPE OF INSTRUCTION

- Project work

EXTENT AND EXPECTED WORKLOAD

450 hours

EXAM

EXAMS

Name of exam	Oil and Gas Separation
Type of exam	Oral exam based on a project

ECTS	15
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	As stated in the Joint Programme Regulations

FACTS ABOUT THE MODULE

Danish title	Olie og gas separation
Module code	K-KT-K1-25
Module type	Project
Duration	1 semester
Semester	Autumn
ECTS	15
Language of instruction	English
Empty-place Scheme	Yes
Location of the lecture	Campus Esbjerg
Responsible for the module	Marco Maschietti

ORGANISATION

Study Board	Study Board of Biotechnology, Chemistry and Environmental Engineering
Department	Department of Chemistry and Bioscience
Faculty	Faculty of Engineering and Science

FLUID MECHANICS

2018/2019

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

Students who have passed the module should be able to

- Explain fundamental basis for the formulation and analysis of the statics and dynamics of the flow of viscous fluids
- Account for fluid kinematics
- Explain stresses in fluids, equation of motion, constitutive models and Navier-Stokes equations
- Account for Reynolds averaging and turbulence models
- Describe turbulent and laminar boundary layers including understanding of momentum equation for boundary layers
- Explain the basic phenomena involved in multiphase flows

SKILLS

- Plan, design and make experiments and choose measurements methods suitable to the characteristics of the fluid
- Determine and apply appropriate experimental methods to fluid flows
- Apply appropriate analytical, semi-empirical and numerical methods for mathematical description of fluid dynamic problems
- Use multiphase flow models

COMPETENCES

- Independently define and analyse scientific problems within the area of fluid dynamics
- Independently be a part of professional and interdisciplinary development work within the area of fluid dynamics

TYPE OF INSTRUCTION

- Lectures, workshops, exercises, mini-projects and self-studies

EXTENT AND EXPECTED WORKLOAD

150 hours

EXAM

EXAMS

Name of exam	Fluid Mechanics
Type of exam	Written or oral exam
ECTS	5
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	As stated in the Joint Programme Regulations

FACTS ABOUT THE MODULE

Danish title	Strømningslære
Module code	K-KT-K1-7
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Empty-place Scheme	Yes
Location of the lecture	Campus Esbjerg
Responsible for the module	Matthias Mandø

ORGANISATION

Study Board	Study Board of Biotechnology, Chemistry and Environmental Engineering
Department	Department of Chemistry and Bioscience
Faculty	Faculty of Engineering and Science

COLLOID AND INTERFACE SCIENCE

2018/2019

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

Students who have passed the module should be able to

- Account for different types of colloids and their stability
- Acount for adsorption at interfaces
- Account for surfactants, wettability and emulsions
- Account for different scattering techniques, X-ray methods and electron microscopy
- Account for different disciplines in which the theory of colloid and interface science are beneficial for understanding details of products or processes
- Explain the importance of size and interparticle forces that result in macroscopic properties of substances
- Explain models of colloids and interfaces that can be used for the description and understanding of different colloid systems. This involves physical equations, diagrams, drawings and images

SKILLS

- Apply general theory of colloid science in combination with experimental tools
- Evaluate which kinds of experimental tools that preferable can be used to enhance the physico-chemical understanding of a given process or product

COMPETENCES

- Select and apply models to describe different colloidal systems and interfaces

TYPE OF INSTRUCTION

- Lectures laboratory problems and theoretical exercises

EXTENT AND EXPECTED WORKLOAD

150 hours

EXAM

EXAMS

Name of exam	Colloid and Interface Science
Type of exam	Oral exam
ECTS	5
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	As stated in the Joint Programme Regulations

FACTS ABOUT THE MODULE

Danish title	Kolloid- og grænsefladekemi
Module code	K-KT-K1-8
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Empty-place Scheme	Yes
Location of the lecture	Campus Esbjerg
Responsible for the module	Erik Gydesen Søgaard

ORGANISATION

Study Board	Study Board of Biotechnology, Chemistry and Environmental Engineering
Department	Department of Chemistry and Bioscience
Faculty	Faculty of Engineering and Science

THERMODYNAMICS AND SEPARATION

2018/2019

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

Students who have passed the module should be able to

- Explain the concept of thermodynamic state and of state variable
- Explain subcritical and supercritical states
- Describe the concept of degree of freedom of a thermodynamic system and the Gibbs phase rule
- Explain the concept of volumetric equations of state (EOS)
- Account for ideal gas EOS, virial EOS, correlations based on the corresponding state theorem, cubic EOS (van der Waals, Redlich-Kwong, Soave-Redlich-Kwong, Peng-Robinson)
- Describe application of EOS to pure components and to mixtures
- Explain first and second law of thermodynamics
- Explain thermodynamic potentials (U, H, A, G)
- Account for the concept of sensible and latent heat
- Explain expressions for the dependency of the vapour pressure of a pure liquid on temperature
- Describe heat exchangers
- Explain isenthalpic valve expansions
- Account for compressors and turbines
- Account for vapour (gas) - liquid equilibrium (VLE) for mixtures
- Explain diagrams for representing VLE for binary mixtures
- Explain phase envelopes
- Account for vapour (gas) – liquid 2-phase separators
- Explain liquid – liquid equilibria (LLE)
- Explain vapour (gas) – liquid – liquid (VLLE) equilibria
- Explain diagrams for representing LLE and VLLE for binary mixtures
- Account for vapour (gas) – liquid – liquid 3-phase separators

SKILLS

- Calculate mass balances for steady and unsteady systems
- Apply PV and PT state diagrams for pure fluids
- Calculate volumetric properties of pure fluids and fluid mixtures
- Calculate thermodynamic properties for pure fluids and fluid mixtures on the basis of the thermodynamic potentials
- Calculate vapour pressure for pure liquids
- Calculate energy balances for closed and open systems
- Apply energy balances on the basic design of heat exchangers, expansion valves, compressors and turbines
- Calculate bubble/dew point pressures and bubble/dew point temperatures for mixtures
- Calculate PT-Flash, αP-Flash, αT-Flash and PH-Flash for mixtures
- Apply flash calculations to the basic design of vapour (gas) – liquid separators
- Calculate azeotropes and heteroazeotropes
- Apply flash calculations to the basic design of vapour (gas) – liquid – liquid separators
- Determine the thermodynamic state of a system of given composition at given pressure and temperature

COMPETENCES

- Select and use of appropriate diagrams and EOS to describe the volumetric behaviour of fluids, with specific regard to reservoir fluids
- Formulate separation problems in terms of thermodynamic equations

TYPE OF INSTRUCTION

- Lectures, practical exercises, group and individual instructions

EXTENT AND EXPECTED WORKLOAD

150 hours

EXAM

EXAMS

Name of exam	Thermodynamics and Separation
Type of exam	Written exam
ECTS	5
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	As stated in the Joint Programme Regulations

FACTS ABOUT THE MODULE

Danish title	Termodynamik og separation
Module code	K-KT-K1-10
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Empty-place Scheme	Yes
Location of the lecture	Campus Esbjerg
Responsible for the module	Rudi Pankratz Nielsen, Marco Maschietti

ORGANISATION

Study Board	Study Board of Biotechnology, Chemistry and Environmental Engineering
Department	Department of Chemistry and Bioscience
Faculty	Faculty of Engineering and Science

MODELING OF OIL AND GAS PRODUCTION

2018/2019

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

Students who have passed the module should be able to

- Account for oil and gas production from reservoir to refinery
- Account for oil reservoirs and their petro-physical characteristics
- Account for relevant simulation tools for modelling processes in the oil and gas industry
- Account for instrumentation and technical safety related to oil and gas production

SKILLS

- Create a computational model of a given case in the oil and gas industry
- Investigate a given case using modelling tools
- Evaluate the impact of assumptions made, in a model, on the results
- Write a project report following the standards of the field of study, include relevant original scientific literature, use the correct terminology and communicate the research-based foundation, problem and results of the project in writing, graphically and orally in a coherent way
- Assess and select relevant original scientific literature and current scientific methods, models and other tools used in the project and asses the problem of the project and results in relevant scientific contexts and social conditions

COMPETENCES

- Evaluate the quality of the results obtained when using modelling tools
- Propose a course of action in a given case based on modelling results
- Handle the planning, implementation and management of complex and unpredictable research and/or developmental tasks and take professional responsibility for implementing academic assignments and interdisciplinary collaborations
- Take responsibility for own professional development and specialization

TYPE OF INSTRUCTION

Project work

EXTENT AND EXPECTED WORKLOAD

450 hours

EXAM

EXAMS

Name of exam	Modeling of Oil and Gas Production
Type of exam	Oral exam based on a project
ECTS	15
Assessment	7-point grading scale
Type of grading	External examination

Criteria of assessment	As stated in the Joint Programme Regulations

FACTS ABOUT THE MODULE

Danish title	Modellering af olie og gas produktion
Module code	K-KT-K2-16
Module type	Project
Duration	1 semester
Semester	Spring
ECTS	15
Language of instruction	English
Empty-place Scheme	Yes
Location of the lecture	Campus Esbjerg
Responsible for the module	Marco Maschietti
Time allocation for external examiners	B

ORGANISATION

Study Board	Study Board of Biotechnology, Chemistry and Environmental Engineering
Department	Department of Chemistry and Bioscience
Faculty	Faculty of Engineering and Science

PROCESS SIMULATION AND INSTRUMENTATION

2018/2019

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

Students who have passed the module should be able to

- Account for the principles of process simulation
- Explain process optimization using process simulation
- Account for computational aspects of phase equilibria
- Account for instrumentation and PFD & PID's
- Describe commercial process simulators

SKILLS

- Illustrate an actual process in a PFD
- Convert a PFD into a working process simulation
- Perform both steady-state and dynamic simulations

COMPETENCES

- Investigate a given case using simulation tools
- Select an appropriate thermodynamic model for a given case

TYPE OF INSTRUCTION

Lectures, practical exercises, group and individual instructions

EXTENT AND EXPECTED WORKLOAD

150 hours

EXAM

EXAMS

Name of exam	Process Simulation and Instrumentation
Type of exam	Written or oral exam
ECTS	5
Assessment	Passed/Not Passed
Type of grading	Internal examination
Criteria of assessment	As stated in the Joint Programme Regulations

FACTS ABOUT THE MODULE

Danish title	Processimulering og instrumentering

Module code	K-KT-K2-8
Module type	Course
Duration	1 semester
Semester	Spring
ECTS	5
Language of instruction	English
Empty-place Scheme	Yes
Location of the lecture	Campus Esbjerg
Responsible for the module	Rudi Pankratz Nielsen

ORGANISATION

Study Board	Study Board of Biotechnology, Chemistry and Environmental Engineering
Department	Department of Chemistry and Bioscience
Faculty	Faculty of Engineering and Science

WATER TREATMENT

2018/2019

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

Students who have passed the module should be able to

- Describe different water bodies in the society and its surroundings and their interaction with atmosphere
- Describe natural and antropogenic pollutants, their origin and some ways to eliminate them
- Explain which chemical compounds are normally present in groundwater, surface water, sea water, brine and at which levels based on original water and weathering processes
- Describe a normal Danish drinking water treatment system and a Danish waste water treatment system

SKILLS

- Select a methodology from an array of advanced oxidative and reductive processes that separately or in common can solve a given recalcitrant water pollution problem
- Select unit operations and purification methods for produced water and other industrial water types

COMPETENCES

- Use proper terminology in oral, written and graphical communication and documentation within water treatment technology

TYPE OF INSTRUCTION

Lectures supplemented with project work, workshops, presentation seminars, laboratory tests and cases

EXTENT AND EXPECTED WORKLOAD

150 hours

EXAM

EXAMS

Name of exam	Water Treatment
Type of exam	Oral exam
ECTS	5
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	As stated in the Joint Programme Regulations

FACTS ABOUT THE MODULE

Danish title	Teknisk vandbehandling

Module code	K-KT-K2-9
Module type	Course
Duration	1 semester
Semester	Spring
ECTS	5
Language of instruction	English
Empty-place Scheme	Yes
Location of the lecture	Campus Esbjerg
Responsible for the module	Jens Muff

ORGANISATION

Study Board	Study Board of Biotechnology, Chemistry and Environmental Engineering
Department	Department of Chemistry and Bioscience
Faculty	Faculty of Engineering and Science

PETROLEOUM GEOLOGY AND RESERVOIR ENGINEERING

2018/2019

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

Students who have passed the module should be able to

- Describe structure and properties of oil fields, reservoir rocks and fluids
- Explain the mechanisms and stages of exploration, drilling, production and development
- Describe methods of enhanced oil recovery
- Explain multiphase flow and frontal displacement in oil reservoir

SKILLS

- Make vertical and horizontal models of the oil and gas field
- Evaluate reserves of oil depositions based on area-depth method
- Determine physical properties of rocks by simple methods and using log analysis
- Calculate volume of water injection based on material balance

COMPETENCES

- Evaluate oil and gas reserves using geophysical data

TYPE OF INSTRUCTION

Lectures, instructions and workshops

EXTENT AND EXPECTED WORKLOAD

150 hours

EXAM

EXAMS

Name of exam	Petroleoum Geology and Reservoir Engineering
Type of exam	Written exam
ECTS	5
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	As stated in the Joint Programme Regulations

FACTS ABOUT THE MODULE

Danish title	Petroleumsgeologi og reservoir engineering

Module code	K-KT-K2-11
Module type	Course
Duration	1 semester
Semester	Spring
ECTS	5
Language of instruction	English
Empty-place Scheme	Yes
Location of the lecture	Campus Esbjerg
Responsible for the module	Erik Gydesen Søgaard, Ismaila Adetunji Jimoh

ORGANISATION

Study Board	Study Board of Biotechnology, Chemistry and Environmental Engineering
Department	Department of Chemistry and Bioscience
Faculty	Faculty of Engineering and Science

SPECIALISATION IN OIL AND GAS PRODUCTION

2018/2019

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

Students who have passed the module should be able to

- Account for at least one of the following areas; enhanced oil recovery methods, petrophysical characterization of reservoirs or modelling and design of oil and gas related processes

SKILLS

- Demonstrate skills in at least one of the following areas; execution of laboratory experiments, application of physico-chemical models to oil and gas methods and to process units or application of process simulators to oil and gas related processes
- Analyze data from experimental work and simulations on oil and gas production
- Write a project report following the standards of the field of study, include relevant original scientific literature, use the correct terminology and communicate the research-based foundation, problem and results of the project in writing, graphically and orally in a coherent way
- Assess and select relevant original scientific literature and current scientific methods, models and other tools used in the project and asses the problem of the project and results in relevant scientific contexts and social conditions

COMPETENCES

- Identify key aspects of the problem/process under investigation
- Select and combine experimental and theoretical methods, as appropriate, in order to solve complex problems in oil and gas technology
- Critically review the methods used and the results obtained on the project work
- Handle the planning, implementation and management of complex and unpredictable research and/or developmental tasks and take professional responsibility for implementing academic assignments and interdisciplinary collaborations
- Take responsibility for own professional development and specialization

TYPE OF INSTRUCTION

- Project work

EXTENT AND EXPECTED WORKLOAD

900 hours

EXAM

EXAMS

Name of exam	Specialisation in Oil and Gas Production
Type of exam	Oral exam based on a project
ECTS	30
Assessment	7-point grading scale

Type of grading	External examination
Criteria of assessment	As stated in the Joint Programme Regulations

FACTS ABOUT THE MODULE

Danish title	Produktion af olie og gas
Module code	K-KT-K3-26
Module type	Project
Duration	1 semester
Semester	Autumn
ECTS	30
Language of instruction	English
Empty-place Scheme	Yes
Location of the lecture	Campus Esbjerg
Responsible for the module	Marco Maschietti
Time allocation for external examiners	B

ORGANISATION

Study Board	Study Board of Biotechnology, Chemistry and Environmental Engineering
Department	Department of Chemistry and Bioscience
Faculty	Faculty of Engineering and Science

PROJECT WORK IN AN EXTERNAL ORGANISATION

2018/2019

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

Students who have passed the module should be able to

- Explain the scientific basis of the work carried out by the external organisation

SKILLS

- Master the scientific methods and general skills related to the project work in the external organisation
- Write a report following the standards of the field of study, use the correct terminology and document extensive use of relevant and original scientific literature, communicate and discuss the project's foundation, problem and results in writing, graphically and verbally in a coherent way
- Critically assess and select relevant original scientific literature and current scientific methods, models and other tools used in the project and asses and discuss the problem of the project and results in relevant scientific contexts and social conditions
- Evaluate the potential of the project for further development, assessing and incorporating relevant economic, ethical, environmental and other socially relevant factors

COMPETENCES

- Participate in development, innovation and research and use scientific methods to solve complex tasks
- Take professional responsibility to implement independent assignments and interdisciplinary collaborations
- Independently take responsibility for own professional development and specialization

TYPE OF INSTRUCTION

- Project work, supervised by an external supervisor in collaboration with an internal supervisor at Aalborg University
- Project work in an external organisation must be in areas of relevance to the competence profile of the program

EXTENT AND EXPECTED WORKLOAD

900 hours

EXAM

EXAMS

Name of exam	Project Work in an External Organisation
Type of exam	Oral exam based on a project
ECTS	30
Assessment	Passed/Not Passed
Type of grading	Internal examination
Criteria of assessment	As stated in the Joint Programme Regulations

FACTS ABOUT THE MODULE

Danish title	Projektarbejde i en ekstern organisation
Module code	K-KT-K3-28
Module type	Project
Duration	1 semester
Semester	Autumn
ECTS	30
Language of instruction	English
Empty-place Scheme	Yes
Location of the lecture	Campus Esbjerg
Responsible for the module	Marco Maschietti

ORGANISATION

Study Board	Study Board of Biotechnology, Chemistry and Environmental Engineering
Department	Department of Chemistry and Bioscience
Faculty	Faculty of Engineering and Science

MASTER'S THESIS IN OIL AND GAS TECHNOLOGY 2018/2019

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

Students who have passed the module should be able to

- Explain the scientific basis and scientific issues in oil and gas technology
- Explain the highest international research within the thesis subject area

SKILLS

- Master the scientific methods and general skills related to the thesis subject area
- Write a project report following the standards of the field of study, use the correct terminology and document extensive use of relevant and original scientific literature and communicate and discuss the project's research-based foundation, problem and results in writing, graphically and verbally in a coherent way
- Critically assess and select relevant original scientific literature and current scientific methods, models and other tools used in the project and asses and discuss the problem of the project and results in relevant scientific contexts and social conditions
- Evaluate the potential of the project for further development, assessing and incorporating relevant economic, ethical, environmental and other socially relevant factors

COMPETENCES

- Participate in and independently implement technological and scientific development and research, develop and implement experimental work and solve complex tasks using scientific methods
- Handle the planning, implementation and management of complex and unpredictable research and/or developmental tasks and take professional responsibility to implement independent academic assignments and interdisciplinary collaborations
- Independently take responsibility for own professional development and specialization

TYPE OF INSTRUCTION

Project work

EXTENT AND EXPECTED WORKLOAD

900 hours

EXAM

EXAMS

Name of exam	Master's Thesis in Oil and Gas Technology
Type of exam	Oral exam based on a project
ECTS	30
Assessment	7-point grading scale
Type of grading	External examination

Criteria of assessment	As stated in the Joint Programme Regulations

FACTS ABOUT THE MODULE

Danish title	Kandidatspeciale i olie og gasteknologi
Module code	K-KT-K4-17
Module type	Project
Duration	1 semester
Semester	Spring
ECTS	30
Language of instruction	English
Location of the lecture	Campus Esbjerg
Responsible for the module	Marco Maschietti
Time allocation for external examiners	D

ORGANISATION

Study Board	Study Board of Biotechnology, Chemistry and Environmental Engineering
Department	Department of Chemistry and Bioscience
Faculty	Faculty of Engineering and Science

MASTER'S THESIS IN OIL AND GAS TECHNOLOGY 2018/2019

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

Students who have passed the module should be able to

- Explain the scientific basis and scientific issues in oil and gas technology
- Explain the highest international research within the thesis subject area

SKILLS

- Master the scientific methods and general skills related to the thesis subject area
- Write a project report following the standards of the field of study, use the correct terminology and document extensive use of relevant and original scientific literature and communicate and discuss the project's research-based foundation, problem and results in writing, graphically and verbally in a coherent way
- Critically assess and select relevant original scientific literature and current scientific methods, models and other tools used in the project and asses and discuss the problem of the project and results in relevant scientific contexts and social conditions
- Evaluate the potential of the project for further development, assessing and incorporating relevant economic, ethical, environmental and other socially relevant factors

COMPETENCES

- Participate in and independently implement technological and scientific development and research, develop and implement experimental work and solve complex tasks using scientific methods
- Handle the planning, implementation and management of complex and unpredictable research and/or developmental tasks and take professional responsibility to implement independent academic assignments and interdisciplinary collaborations
- Independently take responsibility for own professional development and specialization

TYPE OF INSTRUCTION

- Project work
- A long Master's thesis of more than 30 ECTS must include work of experimental nature to an extend that corresponds to the ECTS load of the thesis

EXTENT AND EXPECTED WORKLOAD

1800 hours

EXAM

EXAMS

Name of exam	Master's Thesis in Oil and Gas Technology
Type of exam	Master's thesis/final project
ECTS	60
Assessment	7-point grading scale

Type of grading	External examination
Criteria of assessment	As stated in the Joint Programme Regulations

FACTS ABOUT THE MODULE

Danish title	Kandidatspeciale i olie og gasteknologi
Module code	K-KT-K3-29
Module type	Project
Duration	2 semesters
Semester	Autumn
ECTS	60
Language of instruction	English
Location of the lecture	Campus Esbjerg
Responsible for the module	Marco Maschietti
Time allocation for external examiners	D

ORGANISATION

Study Board	Study Board of Biotechnology, Chemistry and Environmental Engineering
Department	Department of Chemistry and Bioscience
Faculty	Faculty of Engineering and Science