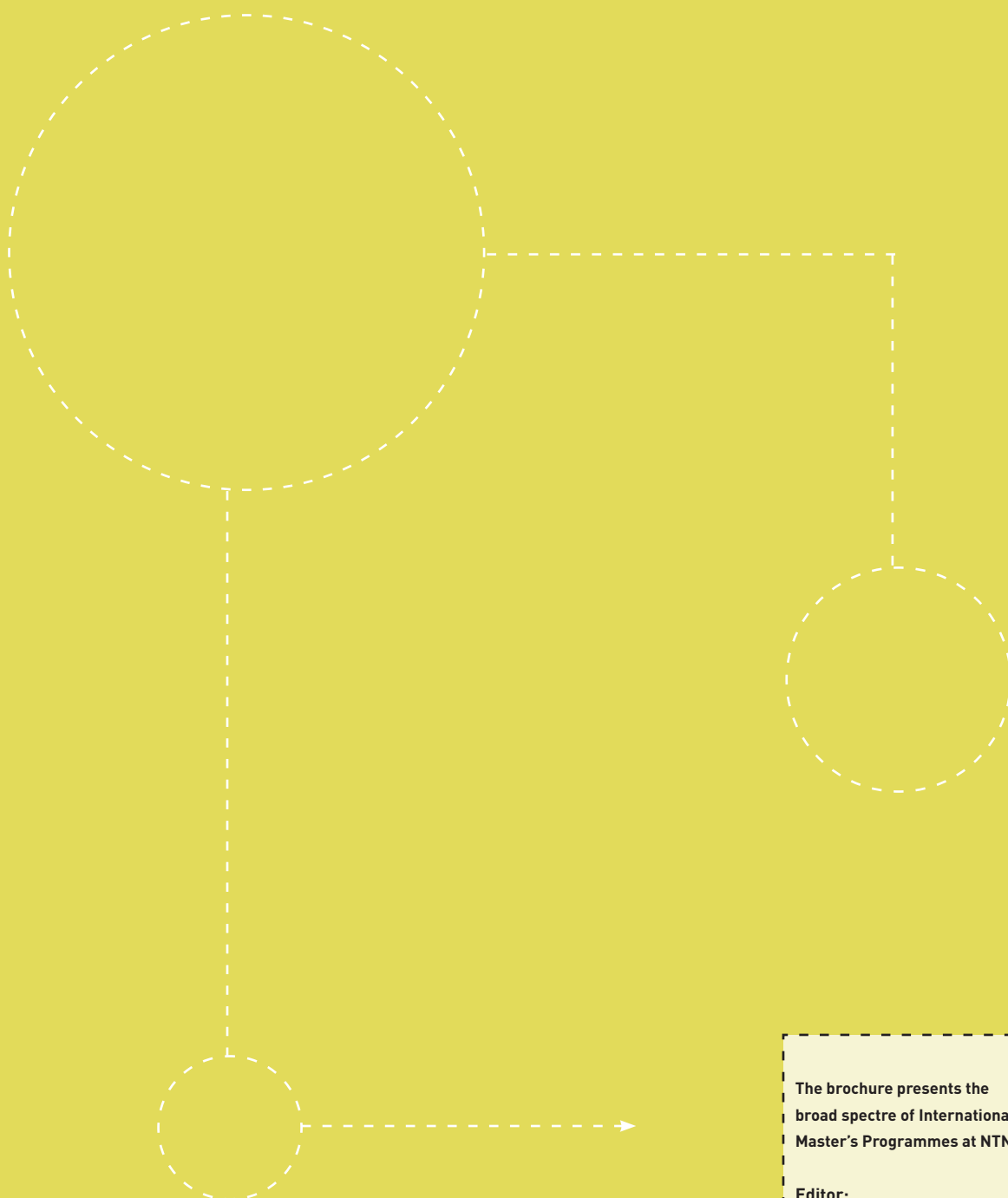




Photo: Kim Nygård



**The brochure presents the
broad spectre of International
Master's Programmes at NTNU.**

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Faculty of Natural Sciences and Technology: +47 73 59 41 97

Faculty of Information Technology, Mathematics and Electrical Engineering: +47 73 59 42 02

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Faculty of Social Sciences and Technology Management : +47 73 59 19 00

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APPLICATION PROCEDURES

The Office of International Relations is responsible for admission. The Faculties are responsible for academic guidance. The preliminary application deadline for Quota-programme applicants is 1 January in the year of admission. The final application deadline for Quota-programme applicants is 1 March. For students with individual funding the application deadline is 1 March. There is no preliminary application for applicants with individual funding. The application deadline for applicants with a Norwegian/Nordic higher education is 15 May in the year of admission. These applicants do not have to fill the application form for international applicants, but should apply via NTNU's "studentweb": <http://www.ntnu.no/studentservice>



ENGLISH LANGUAGE REQUIREMENTS

International applicants should document either a TOEFL test with a minimum paper score of 500/550 (170/213 computerbased test) or an IELTS test score of minimum 5.0/6.0, depending on the programme of study. For updated and detailed information about admission requirements/procedures, and the possibilities for exemption from the English language requirement for certain categories of applicants, please visit our website.

www.ntnu.no/international/student_exchange
www.studynorway.no





Master of Philosophy in English Language and Linguistics

Photo: Arild Juul



This Master's programme gives you the opportunity to specialize in English language and linguistics in an international environment while living in one of the northernmost countries in the world.

ABOUT THE PROGRAMME

The aim of the programme is to give you a deeper insight into issues such as modern English grammar and syntax, first and second language acquisition and translation theories.

The first year students may choose from the courses offered at the Department of Modern Foreign Languages or from courses offered by the Department of Language and Communication Studies, and approved by the Department of Modern Foreign Languages. A course introducing academic theory and method prepares you for your work with your Master's thesis. The second year is devoted to writing the Master's

thesis (60 credits). This is an academic study of a particular topic within English language and linguistics. You will get supervision throughout the year. In the summer period between the first and second years the candidates are given the opportunity to return to their home countries to do fieldwork if this is necessary for the completion of their theses.

STUDY ENVIRONMENT

As a student on the international Master's programme in English Language and Linguistics you will be part of a small group at the department. You will get close follow up from the academic staff.

The programme gives you the opportunity to specialize within your favourite field. In this international environment contrastive and cross-cultural approaches to the study of language are especially fruitful.

CAREER PROSPECTS

Some of our earlier international students now work as lecturers at universities in their home countries. This programme is especially suitable for those who want to become teachers or researchers in the field of language and linguistics.

Formal prerequisites:

Applicants should hold a BA or equivalent degree in English, or a BA or equivalent degree in Linguistics with a sufficient emphasis on topics related to the English language or linguistics. Only candidates with a minimum of three English language/linguistics courses will be considered.

Recommended prerequisites:

The MPhil programme in English Language and Linguistics focuses on language issues and applicants should preferably have completed courses within Syntax, Morphology, Linguistics and Phonology within their BA degree. Applicants with a BA focusing on English Literature will therefore not be admitted.

English language requirements:

TOEFL-score: 550/230

IELTS mark: 6.0

Language of teaching:

English

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Master of Philosophy in Linguistics

Photo: Arne Asphjell

In order to understand what language is one must know something about its construction and how it gives meaning. In the MPhil programme in Linguistics we go deeper into linguistic problems to understand more about language. This degree is also known as the International MPhil in Linguistics.

ABOUT THE PROGRAMME OF STUDY

The aim of the programme is to develop your skills as a scholar. The topics given at the department focus on academic theory and method. The programme of study in Linguistics is based on your specialization at Bachelor's level. The main areas of study are syntax, phonology, semantics, pragmatics, and computational linguistics. Depending on your previous specialization you will be given the opportunity to combine topics from these areas in order to complement or enrich the topic of your thesis.

The MPhil Programme requires two years of full-time study. The second semester of the second year is expected to be devoted fully to the Master's thesis. The Master's thesis (45 credits) is preferably written within the scope of specialization determined by your combination of topics. The thesis is an independent piece of scientific work performed under supervision. In the summer period between the first and second years the candidates are given the opportunity to return to their home countries to do fieldwork if this is necessary for the completion

of their theses.

STUDY ENVIRONMENT

As a student on the international Master's programme in Linguistics you will be part of a small group at the department and you will get close follow up from the academic staff. You will also be part of an international environment meeting international students as well as Norwegian students on the same programme of study.

CAREER PROSPECTS

Linguistics is used for research, both related to language in itself and to technological development. Linguistic knowledge is also widely used in teaching. An MPhil in Linguistics may form a basis for many work activities, such as in ICT emphasizing different aspects of language analysis, Internet search, translation – both manual and automatic. Companies dealing with language technology, dictionaries, and the formulation of texts with high demands for linguistic accuracy may offer a range of careers for a linguist.



Formal prerequisites:

Applicants should hold a BA or equivalent degree in Linguistics or an equivalent degree with sufficient emphasis on topics related to Linguistics. Only candidates with a minimum of three Linguistics courses will be considered.

English language requirements:

TOEFL score: 550/213

IELTS mark: 6.0

Language of teaching: English

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Language Requirements:** Page 5



Master of Philosophy in Maritime Archaeology

Norwegian history is strongly associated with the ocean and the coast. For thousands of years, our ancestors have exploited natural resources in the ocean, and since prehistoric times, a large part of the population has settled along the coast and established local maritime societies.

Throughout the ages maritime activities have left traces along the coastlines of the world, both on land and under the sea in the form of shipwrecks, harbour constructions, fishing and whaling stations, boathouses, mooring systems, navigation marks, place names, oral tradition, as well as maritime symbolical expressions. All of these elements comprise parts of a maritime cultural landscape that we can explore and aim to protect for future generations.

ABOUT THE PROGRAMME

Maritime Archaeology concentrates on the following aspects:

- Maritime Aspects of Culture
- Maritime Cultural Landscape in Comparative Perspectives
- Boat and Ship-building Technologies
- Ship Science in Archaeology
- Seafaring in the World
- Marine Natural Resources
- Underwater Cultural Heritage Management
- Archaeological Oceanography.
- Underwater Archaeology
- Deep Water Archaeology
- Conservation of Underwater Archaeological sites.

The Department of Archaeology and Religious Studies is one of the leading education and

research institutions for Maritime Archaeology in the world. Our MPhil programme focuses strongly on international cooperation, comparative perspectives, and the interdisciplinary approach.

CAREER PROSPECTS

With a Master's degree in Maritime Archaeology you will be able to work both national and international in education and research, at maritime and archaeological museums, and within the media, as well as with local and national heritage management authorities.

STUDY ENVIRONMENT

As a student at the international Master's programme in Maritime Archaeology you will be part of a small group at the department and you will get close follow-up from the academic staff.



Formal prerequisites:

Applicants should hold a BA or an equivalent degree in Archaeology or equivalent degree with a sufficient emphasis on topics related to Archaeology. Candidates with an equivalent BA degree in the Arts/Social Sciences and other relevant subjects (e.g. geology, geophysics, marine technology or oceanography) or other subjects relevant for maritime studies can also apply, if the candidate has completed a satisfactory number of courses in Archaeology. The candidate must have completed at least 20 ECTS credits basic courses in Archaeology from NTNU, or equivalent courses (at least 1/3 of one year full-time studies).

English language requirements:

TOEFL score: 550/230

IELTS mark: 6.0

Language of teaching:

English

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Master of Science in Globalization

Photo: Arild Juul



Are you interested in gaining a profound understanding of the dynamics and effects of globalization within an interdisciplinary framework? Would you like to study global value chains and manufacturing processes? And understand the political and cultural consequences of increasing global inter-connectedness?

During this two-year Master's programme in Globalization, you will explore the interrelations between the economic, technological, cultural, social and political dimensions of globalization and choose between two specializations: Global Technology Management and Global Politics and Culture. You will also gain practical experience in a global corporation or institution. The aim of the programme is to provide you with a general understanding of the form and consequences of the processes of globalization, combined with an in-depth knowledge of one of the two fields of specialization. The course will investigate globalization as a multi-dimensional phenomenon with a focus on its implications for civil society, state power, changing patterns of national culture and global markets and technologies.

ABOUT THE PROGRAMME

In Semesters 1 and 2, two core courses will be offered to students within both specializations: Knowledge Management in a Global Economy and Contemporary International Economic History, in addition to a choice of modules from a more specialized selection of courses. In Semester 2, you will also work on an interdisciplinary group project within the Experts in Teams scheme. During Semester 3, you will take up a work placement in an international institution or company abroad, during which you will complete a related project assignment and a distance learning module on Global Culture. The last semester is to be devoted to the writing of your Master's thesis. Throughout the programme, you will benefit from the resources of NTNU's Globalization Programme and from contributions from international guest lecturers.

WORK PLACEMENT

The work placement component of this Master's programme provides a unique opportunity for students to gain practical knowledge of the workings of a global corporation or organization.

CAREER PROSPECTS

This Master's programme is designed to provide its students

with the requisite knowledge and transferable skills to pursue careers in the private corporate or governmental sectors, with international non-governmental organizations or with campaigning groups. By the end of your degree, you will have proved your capacity to engage in team work, gained relevant work experience and demonstrated your ability to employ interdisciplinary approaches.

Formal prerequisites:

Technology Master's students (who have completed the first three years) BSc in Technology or Engineering BA in Humanities or Social Sciences

English language requirements:

TOEFL score: 550/230
IELTS mark: 6.0

Language of teaching: English

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Language Requirements: Page 5



Master of Philosophy in Childhood Studies

Photo: Kim Nygård



Are you interested in children's everyday lives and in childhood as a social and cultural phenomenon? Would you like to know about children's lives in different parts of the world? What about the changing conditions of childhood in the era of globalization? If so, the international master's programme in Childhood Studies might be perfect for you.

ABOUT THE PROGRAMME

The MPhil in Childhood Studies aims to provide students with an understanding of the relationship between childhood and culture as well as the dynamics between economic, social and political conditions and children's livelihoods and welfare in different contexts (family-life, day-care and schools, local communities etc). The programme covers the state of childhood in the western world and in countries in the South. The approach is multidisciplinary, with particular emphasis on perspectives drawn from anthropology, sociology, geography, and history. The Norwegian Centre for Child Research (NOSEB) has

a strong international orientation. The centre hosts national and international guest researchers and adjunct professors (5 non-Norwegian professors from 2005). NOSEB is a key institution within the international research network Childwatch International, Oslo, as well as the responsible research unit for the EU research network COST Action 19 Children's Welfare. The students on this programme will benefit from being a part of our strong international research milieu.

CAREER PROSPECTS

The master's programme will be relevant for building a career related to children and childhood in different public sectors in governmental organizations. This may include policy and planning for children's living conditions in ministries and institutions which concern children, both locally and internationally. Another important area is Non-Governmental Organizations (NGOs), such as Save the Children and the Red Cross. In addition, the master's programme qualifies for work

related to research, consultancy, teaching and supervision in the field of children, welfare and development.

Formal prerequisites

Admission to the programme requires an approved BA in Social Science or Humanities/arts or an equivalent university/college degree.

English language requirements

TOEFL score: 550/213

IELTS mark: 6.0

Language of teaching

English

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Application Procedures and

Language Requirements: Page 5



Master of Philosophy in Development Studies, specializing in Geography

Photo: Kim Nygård

Are you interested in development issues, developing countries, North-South relations? Would you like to study together with students from all over the world? Then the MPhil in Development Studies might be a perfect programme for you.

ABOUT THE PROGRAMME

Development Studies provides students with an understanding of the relationship between growth and poverty, globalization and the processes of marginalization. Who wins and who loses in the developing process? What is the significance of the social changes occurring in poor and developing countries today?

Some students on the programme come from developing countries in Asia and Africa. There are also students from the industrialized countries including Norway. The elective courses in the programme are run jointly with students on the Master's Geography programme.

The aim is to provide students from the South with expertise that can be used in the development process in their home countries and give students from the North knowledge that will make them capable of engagement in development processes, either through work in Norway or abroad.

Professors and specialists from different countries in Africa and Asia are involved as lecturers on a number of the courses. The Norwegian professors involved in the programme have long and varied working experience from research and teaching in the South.

CAREER PROSPECTS

The MPhil in Development Studies gives you a unique opportunity to learn about other cultures and the complex issues of social change, making you well-equipped to work in other countries after your studies. The programme provides you with an opportunity to work in areas related to development issues. The programme is relevant for careers in

research, planning, resource management and teaching. In Norway relevant careers are for instance found in NORAD, Non-Governmental Organizations (NGOs) and various Ministries (Foreign Affairs etc).



Formal prerequisites:

BA in Social Science. At least one year of studies within geography, planning and/or development studies. Long, relevant work experience might compensate for a lack of specialization in geography, planning and/or development studies.

English language requirements:

TOEFL score: 500/ 170
IELTS mark: 5.0

Language of teaching: English

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Master of Philosophy in Human Development

Photo: Rune Petter Ness

Do you want to work with health and comfort issues for a specific population? Are you interested in working conditions and retirement issues? Do you want to work on improving traffic safety? Do you want to understand the mind of a terrorist? Are you interested in the helping the learning conditions of disadvantaged children? Do you wonder what psychotherapy is all about?

ABOUT THE PROGRAMME

The Human Development programme offers a curriculum aimed at an understanding of the complexity of human functioning, recognizing the importance of individual differences, as well as the importance of changes within the individual, between individuals and in groups.

To our knowledge this programme is the first attempt to provide an integrated view of

human development, including biological, physiological and neurological aspects on development, as well as interpersonal, social and cultural aspects.

In the first semester, theoretical approaches to processes in human change at the biological and social levels will give the student a basis for choosing two biological and two social subjects of application in the second semester. These will also be linked to training in quantitative and qualitative research methods. The second year will be devoted to individual specializations.

CAREER PROSPECTS

The programme will provide competence for investigatory work in school, family, and counselling for the disabled, care for the elderly, and health related issues with special emphasis on the integration of physical and psychological health issues. The programme

is especially relevant for these fields in multiethnic environments. Particular attention to perceptual and motor development will be valuable for work in the integration of people of all ages with different physical impairments into society. Integration of physical and social aspects of human change processes is also important for work environment issues, such as man-machine interaction and age-related issues of work integration. The programme will also prepare for theoretical and applied research in these fields.

Formal prerequisites:

BA degree in Psychology or an equivalent degree with a major in Psychology. Approximately 1.5 years of university studies within Psychology, and courses in Statistics, Research Methods and Theory of Science must be covered in the first degree.

English language requirements:

TOEFL-score: 550/213

IELTS mark: 6.0

Language of teaching: English

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**Application Procedures and
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Master of Science in Project Management

Photo: Cathrine Dillner Hagen

Project Management is a type of competence which is in great demand in private companies, as well as in public administration. Most firms and public sector organizations today choose to perform most of their non-standard tasks in projects, and people who can manage this flora of large and small projects are in great demand. The Master of Science in Project Management will educate managers who can be part of such projects, and with more experience run them.

ABOUT THE PROGRAMME

Applicants to the programme must have a technical background. A minimum requirement is a Bachelor of Engineering degree, preferably in civil, mechanical or industrial engineering. A number of project management courses are added to this solid technological background in the first year of the programme. The third semester is used to specialize in a certain field of project management, and the fourth semester adds a Master's thesis. Students from the five-year Master of Science in engineering programmes may also take these courses as a specialization in their individual education programme.



STUDY ENVIRONMENT

We want this study to be truly international, and the students on the programme are therefore a mix of international and domestic students. To this body of students are added exchange students from our cooperating universities in Germany, France, Slovenia and Spain. All in all, a mix of students which help to open up perspectives, increase the level and quality of discussions and improve students use of English as a language to discuss academic subjects. For domestic students who want to broaden their horizons, we have exchange programmes which allow them to take one semester abroad.

THE DEGREE IS SUITABLE FOR

The Master's programme is suitable for students with a Bachelor's degree in Engineering and some work experience who want to expand their skills to include project management. Since the programme of study is developed in cooperation with Norwegian companies who demand such project management competence, there are also ample possibilities for contact with industry. In particular, companies often suggest projects and problem areas for the third semester projects and the Master's theses.

ADVANTAGES

The Master of Science in Project Management is part of a European cooperation programme to develop the European Master of Project Management. All project management programmes at the participating seven universities are fully compatible with each other, something which facilitates exchange and double-degree programs.

Formal prerequisites:

The MSc in Project Management requires applicants to have at least a Bachelor of Engineering degree, preferably in civil, mechanical or industrial engineering.

English language requirements:

TOEFL: 500/170
YELTS: 5.0

Language of teaching: English

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Master of Science in Condensed Matter Physics

Photo: Marianne Sjøholtstrand

We are surrounded with materials as a natural ingredient of our everyday life. Do you know that condensed matter physics is an important incubator for technological development in many different fields? Examples can be nanotechnology, renewable energy production and microelectronics. Nano-scale studies are necessary to understand materials' macroscopic behaviour.

ABOUT THE STUDY PROGRAMME

The master's programme consists of one compulsory and seven elective courses comprising a total of 60 credits and a thesis of 60 credits. 60 credits indicate the normal workload for a full-time student for one academic year. The language of instruction is English. Assignments are solved in research groups at the Department of Physics. Student advisers will be available for consultancy and advice on recommended courses.

You can choose a specialization within condensed matter physics which is experimental or theoretical. It is also possible to base your specialization on other courses with significant relevance such as energy and environmental physics or optics.

The contents of the master's programme are based on the expertise and research work done at NTNU. The teaching staff and researchers work both practically and theoretically within various subjects in physics. The master's programme

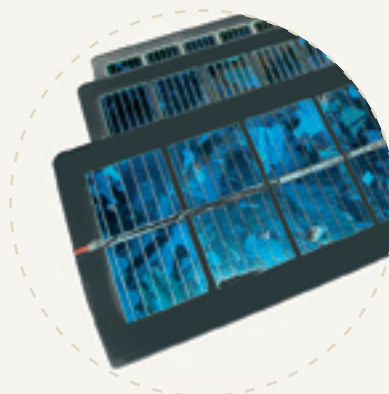
is suitable for those who want to work with future challenges in condensed matter physics, energy and environmental physics as well as optics. If you are fascinated by physical phenomena and want to learn about relations in nature this is a programme for you. In physics we concern ourselves with the development of theories and models that can describe what we observe.

STUDY ENVIRONMENT

The Faculty of Natural Sciences and Technology is situated in the Natural Science building at NTNU, with excellent working conditions, modern lecture halls, laboratories, study rooms, and computer labs. The work is organized in research groups, the courses are taught by professors and assistants. The courses are equal for international master's programme students and Norwegian engineering students, which provides a multicultural student environment.

CAREER PROSPECTS

An education within physics will give you a unique background in basic subjects regardless of time or place, and is relevant for a number of subject areas. You can choose between professions in research, business and management. Specialization in condensed matter physics is of interest for materials manufacturing industry, the oil industry and industries within energy resources in general.



Formal prerequisites:

BSc degree in Physics, consisting of a minimum of 1.5 years of Physics, and one year of Mathematics and Statistics

English language requirements:

TOEFL score: 500/170
IELTS mark: 5.0

Language of teaching:

English

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Master of Science in Mathematics

Photo: Arild Juul



The Department of Mathematical Sciences started the master of science degree programme for international students in 1997. This master's programme in pure mathematics offers three directions of study: algebra, analysis and topology.

ABOUT THE PROGRAMME

The MSc in Mathematics at the Department of Mathematical Sciences is a two year international programme, where students can choose between three specializations: Algebra, Analysis (Functional Analysis, and Complex and Harmonic Analysis), and Topology. The

MSc programme consists of course work of 82.5 credits, and a master's thesis of 37.5 credits. All students should take at least 30 credits among these courses: Rings and Modules, Galois Theory, Linear Methods, Foundations of Analysis, Manifolds, and Analysis of Manifolds.

Students who choose to specialize in Algebra, should take the courses: Ring Theory and Homological Algebra. Relevant topics for thesis work within Algebra: Representation Theory of Finite Dimensional Algebra, Lie-Algebra, Homological Algebra, and Higher Dimensional Rings and Orders.

Students who choose to specialize in Analysis, should take these courses: Functional Analysis and Complex Analysis. Relevant topics for thesis work within Analysis: geometric function theory, function spaces, harmonic analysis, continued fractions, dynamics systems, operator theory, topological measure theory, and partial differential equations.

Students who choose to specialize in Topology, should take: Algebraic Topology, and at least one more course within Topology. Relevant topics for thesis work within Topology: Homotopy Theory, K-Theory, Generalized Cohomology Theories, Category Theory, Nonlinear Dynamics, Lie-Groups, and Differential Geometry. Students might also be required to follow relevant seminars for the master's thesis.

CAREER PROSPECTS

Competence in Mathematics is still much needed in teaching and research. It is a basic requirement for a broad variety of careers both nationally and internationally.

Formal prerequisites:

BSc degree in Mathematics, consisting of a minimum of 1.5 years of university studies in Mathematics.

English language requirements:

TOEFL score: 500/170

IELTS mark: 5.0

Language of teaching: English

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Master of Science in Natural Resources Management

Photo: Hydro/Solberg Produksjon

The natural resources oil, gas, water, wind, sun energy, minerals and the biological resources within land and water ecosystems are the basis for our survival and development both on national and global scales. Sustainable use of natural resources demands an interdisciplinary approach encompassing sound in-depth knowledge about each specific resource and as well as a holistic perspective.

Management for sustainable use of natural resources requires knowledge and awareness of prerequisites, understanding connections and the ability to communicate between different disciplines and actors.

The increasing need and demand for natural resources along with the continuous decrease of finite resources places increasingly stronger demands for sustainable management regimes. This involves ecological, economic and social perspectives and an interdisciplinary knowledge base. Competence in communication across disciplines is a compulsory skill. The global aspect of the use of natural resources calls for insights, knowledge and sustainable management at an increasing pace.

Examples of issues to be addressed in the programme for Management of Natural Resources Management:

How can our natural resources be sustainably managed so they will remain accessible for future

generations? How can the increasing energy demand in our planet be met in a sustainable and fair way? What kind of technology is needed and what kind of institutions? How can everyone get access to clean water? How can the water resources in the world be sustainably used? The use of biological resources for food production by livestock grazing in mountains and different outlands and by hunting and fishing.

The MSc program in NRM is unique in Scandinavia due to its combination of disciplines from the fields of technology, natural sciences and biology to social sciences. The MSc programme in NRM takes 2 years of full-time studies. In order to be admitted to the programme a bachelors degree or an equivalent Civil Engineering degree is required. The bachelors degree could be in either Biology, Chemistry, Geography, Geology or Physics. The bachelors degree must contain subjects in resources management, planning and interdisciplinary project management equivalent to one term full time study.

CAREER PROSPECTS

This programme will give you a unique education and competence for solving a number of interdisciplinary challenges related to management of natural resources. This is valid for positions in management authorities and organizations on all levels from regional, national and global. Along with the development of both



national and international laws and regulations on sustainable resource use, the demand for professionals with this competence is growing in all kinds of enterprises.

Formal prerequisites:

BSc in Biology, Chemistry, Geography, Geology or Physics containing a minimum of 1,5 years of Biology, Chemistry, Geography, Geology or Physics, respectively, 0.5 years in relevant subjects from the Social Sciences and introductory courses in Calculus and Statistics

English language requirements:

TOEFL score: 500/170
IELTS mark: 5.0
Language of teaching: English

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Master of Science in Coastal and Marine Civil Engineering

Photo: Arild Juul



The world's future development will be highly dependent on the coastal zone. Do you want to develop important knowledge to build the infrastructure, safeguard the environment, develop sustainable and added value activities and make use of the available resources in the coastal zone safely and efficiently?

ABOUT THE PROGRAMME

The Master of Science in Coastal and Marine Civil Engineering will provide a good workable basis for developing knowledge and skills on an international level to meet future challenges. The programme concentrates on the following areas:

- Description of the marine physical environment (wind, waves, currents and ice)
- Impact from the environmental loads, and load effects on the coast and on related and affected structures
- Development of infrastructure along the coast and in ports
- Arctic marine civil engineering

The MSc programme in Coastal and Marine Civil Engineering takes 2 years of full-time study. The first year consists of compulsory and elective courses providing the basis for the specialization project, and subjects in the second year related to Coastal and Marine Civil Engineering or Arctic Marine Civil Engineering. The last semester is spent on the Master's thesis (30 credits).

In the second year of study there will be ample possibilities for contact and cooperation with research organizations or industries in the specialization project and in the thesis work.

CAREER PROSPECTS

The coastal zone is an international growth area in terms of work prospects. The programme will provide you with a sound basis for a versatile, challenging and exciting professional career with a broad range of career opportunities within



areas such as the oil and gas industry, aquaculture, renewable energy resources, marine infrastructure, sea and coastal transport. Career opportunities can be found in industry, consulting and construction activities, in public and technical services, and education and research. You will also get a good background for international work and opportunities. In your working life you will often be working in interdisciplinary teams, cooperating and integrating professionals from various fields and background.

Formal prerequisites:

BSc/BEng degree in Civil Engineering, Coastal Engineering or Harbour Engineering. Applicants with an equivalent BSc/BEng degree in Engineering may also be considered if they have 2-3 years of relevant work experience within port and coastal works.

English language requirements

TOEFL score: 500/170

IELTS mark: 5.0

Language of teaching: English

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Master of Science in Electric Power Engineering

Photo: Ole D. Hesledalen



Norway has a unique position in terms of energy resources. This has resulted in Norway gaining a leading position within certain fields of electric power engineering, such as the utilization of hydro power and other renewable energy sources, deregulated power markets, and offshore and maritime electrical installations. Electric Power Engineering is important for industrialized as well as developing countries.

The Department of Electrical Power Engineering at NTNU is Norway's main supplier of education within this field. Together with SINTEF Energy Research it is also a major research unit. It was therefore natural for the department to launch an international

master's programme in electric power engineering with strong emphasis on sustainability in the energy field.

This master's programme will provide candidates with the knowledge and skills for planning, design and operation of electrical power systems.

Furthermore, the programme aims to develop knowledge about new methods and components for effective, reliable and sustainable systems and industrial products. The master students take part in research activities and have access to advanced laboratories and experienced researchers.

The department enjoys a leading position among European universities in the power engineering sector.

Formal prerequisites:

BSc/BEng degree in Electrical Engineering or Electric Power Engineering. Candidates with a BSc/BEng in Electronics, Automation, Cybernetics or Applied Physics may also be considered.

English language requirements:

TOEFL score: 500/170

IELTS mark: 5.0

Language of teaching: English

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Master of Science in Geotechnics and Geohazards



Each year, natural catastrophes due to geological hazards cause countless deaths and extensive damage to the environment and infrastructure worldwide. Geohazards include landslides, rockslides, avalanches, earthquakes and tsunamis. Many lives could be saved and enormous destruction avoided if people knew more about geohazards forecasting and prevention. The problem definition and proper evaluation require competence in many scientific fields - geology, hydrogeology, geotechnics, mechanics, numerical modelling, risk analyses and earthquakes.

Geotechnics represent the science needed to build safely on, in or of soil. The challenges are numerous, and are often related to optimal utilisation of limited space in the urban environment; i.e. deep excavations and creative use of the underground in cities, to obtain more space on the surface; and the foundations of large bridges and multi-storey buildings on soft subsoils.

ABOUT THE PROGRAMME

The MSc programme in Geotechnics and Geohazards focuses on properties of soils

and geological materials, field exploration, field measurements, laboratory testing, computer simulations, risk evaluations and practical design skills needed for engineering solutions to Geohazards challenges.

In the first two semesters, students complete courses in Continuum Mechanics, Soil Investigations, Theoretical Soil Mechanics, Geohazards and Risk Analysis, Mechanics of Materials, FEM in Geotechnical Engineering, Landslides and Slope Stability, and Structural Dynamics. In the third semester, students complete one course in Rock Engineering, some advanced short courses, and a project work. Both the project work and the master's thesis in the last semester are focusing on topics related to geohazards (can be linked to ongoing ICG projects).

ADVANTAGES

NTNU is one of the partner institutions in the International Centre for Geohazards (ICG), together with the Norwegian Geotechnical Institute (NGI), the Geological Survey of Norway (NGU), the Norwegian Seismic Array (NORSAR), and the University of Oslo. The programme is offered in close cooperation with these partners and partners in this centre of excellence. Researchers and professors in these institutions offer specially adapted education, including project - and master's theses with guidance.

CAREER PROSPECTS

ICG's partners in Norway are now building their business on geohazards and are therefore seeking to increase their number of graduates in the years to come. Within geotechnics, there has been a shortage of new candidates on the market for several years now. Both consulting companies and entrepreneurs are looking for more people with this type of competence. Internationally, the job market is fairly similar to Norway, with a pressing demand from the non-industrialized countries.

Formal prerequisites:

BSc./BEng. in Civil Engineering, Geotechnical Engineering, Structural Engineering or Engineering Geology.

English language requirements

TOEFL score: 500/170

IELTS mark: 5.0

Language of teaching:

English

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Master of Science in Hydropower Development

Photo: Mentz Indergaard



Hydropower is one of the cleanest renewable sources of energy. When properly planned and managed, these resources will be of increasing importance in the future.

ABOUT THE PROGRAMME

The MSc in Hydropower Development is a two-year international Master of Science study in water resources with focus on planning and implementation of hydropower projects. The two first semesters contain six courses and one project. The knowledge gained through courses in hydrology, hydraulics, dam engineering, the planning process of hydropower projects, geology and tunneling and finally economic and environmental assessment is applied in the project where a pre-feasibility study of hydropower development of a Norwegian river basin is carried out. There are four advanced courses in the third semester while the entire fourth semester is used for the Master's thesis.

20% of the electricity worldwide is generated by hydropower. Hydropower is the leading

renewable energy source. Norway is the largest hydropower producer in Europe and number six worldwide. It exports hydropower technology to all corners of the world. Norway has developed world class technology and competence within environmentally sound planning, design, construction and operation of hydropower plants.

A large number of old power plants and dams will be refurbished and upgraded for improved performance and increased safety during the next 20-30 years. A construction boom of small hydropower plants has just started and several hundred plants will be built within a decade.

The programme is consistently referring to international experience and practice in hydropower development, not only that in Norway. The teaching staff includes professors from NTNU as well as experts from the hydropower industry, all with relevant international experience.

CAREER PROSPECTS

With a Master's degree in Hydropower Development you will have interesting engineering career prospects both in Norway and abroad with consulting firms, contactors, water and energy authorities, developers, power companies and utilities or institutions in development cooperation. The hydropower industry and the authorities in Norway have an active recruitment policy towards new hydropower engineers as it is predicted that there will be a deficit of qualified engineers.

Formal prerequisites:

BSc/BEng degree in Civil Engineering, And 2 to 5 years of work experience in planning, design and/or construction of hydraulic works.

English language requirements

TOEFL score: 500/170

IELTS mark: 5.0

Language of teaching: English

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Master of Science in Industrial Ecology

Photo: Carl Andre Nørstebø



Industry can no longer think about profit only. Consequently the theory and practice of Industrial Ecology developed as an answer to industry's search for environmental solutions. Industrial Ecology is an emerging field that is relevant to both industry and governments in industrialized and rapidly industrializing countries.

ABOUT THE PROGRAMME

The programme is NTNU's answer to the fundamental challenge posed by sustainable development. The MSc programme offers you a comprehensive understanding of the relationships between the technological, financial, and societal aspects of industrial environmental problems. You get practical training in meth-

ods for evaluating the environmental quality of different products, systems, and their life cycles. Working with students of different backgrounds teaches you to communicate and collaborate in interdisciplinary teams. Beginning with your second semester, you choose a specialization in either environmental systems analysis, or environmental policy and management.

The programme addresses environmental issues in cooperation with industry, government, and civic organizations. You can engage in challenging and interesting projects in collaboration with our partners and involve yourself in our research projects. Current research and education is oriented towards energy, buildings and infrastructure, manufacturing, materials, and marine systems. IndEcol is well recognized internationally for its strong research-based education.

CAREER PROSPECTS

The comprehensive approach of the industrial ecology training covers technical developments and policy implementations to evaluating the environmental consequences for different levels of society. This makes Industrial Ecology graduates attractive for a wide range of employers. Former students have found employment with consultancies, research institutions, energy companies, government agencies, environmental organizations, news media, and technology companies.

EXAMPLE STUDENT PROJECTS

- Life cycle cost assessment of fuel cells onboard a passenger ferry (Det Norske Veritas)
- The Mongstad Industrial Park (Statoil)
- Image, organizational identity and environmental efforts (HÅG)
- Environmental aspects of carbon capture and storage (Shell)
- Assessment of marine Ecotoxic impacts from offshore discharges (Statoil)
- Life cycle analysis of hydrogen from nuclear energy (Bellona)

Formal prerequisites:

BSc/BEng/BA degree within Engineering, Industrial Design, Architecture, Natural or Social Sciences.

English language requirements:

TOEFL 550/230 or
IELTS 6.0

Language of teaching: English

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Master of Science in Information Systems

Photo: Kim Nygård



The MSc programme in Information Systems focuses on technical areas of Information Systems design and engineering, providing a broad overview of the basic methods and specialized education in selected cutting edge technologies.

The pervasive nature of modern digitized information technology has created the need to conceive of products, solutions and services in terms that reach far beyond consideration of software and hardware design. Information Systems addresses the complete life cycle of IT adoption including software conception, design and adoption; organizational IT culture and change management; knowledge engineering and management; and social

and cultural aspects of IT. In addition there is the relatively recent set of issues created by the proliferation of distributed knowledge and services on the Internet, as well as the development of intelligent adaptive technologies for dealing with them.

The skills required for adequate use of Information Technology in the wider context are in great demand in commercial and academic settings. This programme responds to this demand by providing training in the principles and practice of Information Systems engineering. We achieve this by presenting students with up-to-date knowledge in our areas of specialty. These include model-driven development, collaborative technologies, intelligent systems, knowledge engineering and web-based services, and health informatics.

CAREER PROSPECTS

As an MSc graduate you will have the knowledge needed to assemble requirements and solutions with sensitivity about the broad set of consequences your decisions may have. During the programme students will gain a working knowledge of theoretical and technical issues in a range of domains, and will learn to make decisions about the applicability of various possible solutions.

Formal prerequisites:

BSc/BEng in Computer Science, Software Engineering, Information Systems, or equivalent degree.

English language requirements:

TOEFL score: 500/170
IELTS mark: 5.0

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Master of Science in Light Metals Production

Photo: Atle Johnsen, Hydro



NTNU has close contact with the light metals industry in Norway and abroad and is the main supplier of graduate engineers to the Norwegian aluminium industry. Master's degree graduates from NTNU are likely to establish important contacts that will enhance their future career prospects through our industry seminars and participation in the «International Course on Process Metallurgy of Aluminium».

ABOUT THE PROGRAMME

The production of aluminium has long traditions in Norway and one of the world's leading research and development environments in the field can be found at NTNU. Significant contributions to advanced reduction cell and metals treatment technology, and their operational basis, have originated from this interdisciplinary research and development environment. The MSc programme in Light Metals Production at NTNU will qualify engineers for a career in the

challenging fields of reduction, carbon and cast house plant operation, as well as research and technology administration in the area of light metals production.

In the two first semesters, students complete courses within Heterogeneous Equilibria and Phase Diagrams, Materials Science and Engineering, Electrolytic Processes, Carbon Materials Technology, Refractories, Materials and Electrochemistry Project, Refining and Recycling of Metals, and Electrolysis of Light Metals. In the 3rd semester, students complete a course in Mechanical Properties of Engineering Materials (7.5 credits), and a project (22.5 credits). The final semester consists of a Master's thesis (30 credits).

STUDY ENVIRONMENT

We teach our courses through lectures, exercises and project assignments. However, as only a few students are selected for the Light Metals Production

programme, teaching will be more of a continuous conversation with your teachers, both when theory is presented and during exercises and laboratory courses. Project assignments are closely connected to current research projects and are performed in well-equipped laboratories guided by the scientific staff and the technical personnel at the Department. Many project and Master's thesis assignments are carried out in cooperation with leading industrial companies in Norway.

Formal prerequisites:

BSc/BEng degree or equivalent in Materials Science, Metallurgy, Chemical Engineering or Chemistry. Relevant work experience is also considered important for admission

English language requirements:

TOEFL score: 500/170

IELTS mark: 5.0

Language of teaching:

English

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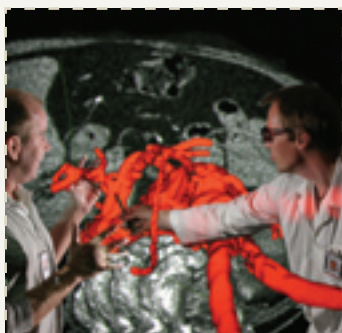
E-mail: international@adm.ntnu.no

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Master of Science in Medical Technology

Photo: Sintef Health



Progress in medicine and healthcare is closely linked to new developments in technology. A striking example of this is the development of imaging technologies such as ultrasound, computed tomography (Nobel Prize in 1979, Cormack and Hounsfield), and magnetic resonance imaging (Nobel Prize in 2003, Lauterbur and Mansfield). This MSc programme is aimed at candidates with a background in natural sciences and technology who want to further their specialisation in technology towards applications in medicine.

The programme is based on the two last years of well-established five-year master programmes for Norwegian students in Medical Technology at NTNU. Specialisations are offered in fields of medical technology where NTNU has significant research activity and a long track record of training university-level technologists for the health service sector as well as for industry and research in medical technology.

The programme comprises five specialisations in medical technology, which are as follows:

Medical Imaging - theory and

technology for imaging of the human body, with focus on the physics and mathematics of image formation, the different technologies for imaging and estimation of physical quantities from the image data.

Healthcare Informatics - theory, technology, methods, processes and models for computer-supported sharing, storing, production and use of information and knowledge in healthcare.

Bioinformatics - informatics, mathematics, statistics and molecular biology, with main focus on informatics. Design methods and procedures for analysing complex data sets from research in medicine and molecular biology are emphasised.

Biophysics and Medical Physics - qualifies for a career as medical physicist in health care, or for applying physics in health-related industries or research. The focus is on advanced imaging methods by magnetic resonance, ultrasound or use of ionizing radiation, as well as on the use of ionizing radiation for radiotherapy.

Medical Biotechnology - biochemistry, microbiology and molecular genetics, with emphasis on molecular biology. Students will acquire skills in planning and performing biotechnological experiments involving recombinant DNA techniques, manipulation of suitable model systems for production of recombinant proteins, as well as performing functional analyses on these products.

CAREER PROSPECTS

The International MSc programme in Medical Technology at NTNU offers training in important subject areas where medical technology is essential for the practice of medicine. These are areas where university-trained personnel at the MSc level are needed in the health services to ensure optimal and high quality performance of medical technology. MSc candidates from this programme will also be qualified for jobs in industry. There is also the possibility of research related to medical technology and doctoral studies.

Formal prerequisites:

Applicants for the Master of Science in Medical Technology should hold a Bachelor Degree or equivalent, with an academic profile of relevance to the specialisation at interest. Please note that each specialisation has specific admission requirements, for details see www.ntnu.no/studies/msc-medical-technology

English language requirements:

TOEFL score: 500/170
IELTS mark: 5.0

Language of teaching:

English

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Master of Science in Petroleum Engineering/Petroleum Geosciences

Photo: Kim Nygård

Are you interested in the search for and the exploitation of oil and gas? Would you like to develop the knowledge necessary for value creation in the exploitation of the natural resources on the continental shelf in a safe and effective way?

ABOUT THE PROGRAMME

We offer a two year international MSc programme with full integration of Norwegian and international students. All courses are 7.5 credits and are adjusted to the programme of study in geosciences and petroleum engineering.

The programme focuses on the following areas of activity:

- Exploration and production oil and gas on the Norwegian continental shelf
- Methods for enhanced recovery of oil
- Platform solutions and subsea production equipment at great water depths
- Environment issues in northern areas

STUDY ENVIRONMENT

As a student on the MSc programme you have access

to excellent study facilities and modern computer equipment. There is a comprehensive professional environment that includes field courses in Norway, on Svalbard and abroad. You will be part of an international student environment with a limited number of students in each class. This gives a feeling of group affiliation which is an important dimension for learning and personal development.

ADVANTAGES

This MSc will give you special advantages if you are planning an international career. Your specialization and master's thesis may link up to relevant problems abroad in cooperation with the oil industry. Problem solution and the ability to cooperate are important keywords. If you are thinking about working internationally the degree will give you training in the use of English in this sector. You will develop cultural understanding and establish networks during your studies.

CAREER PROSPECTS

The petroleum industry is still in a development- and growth phase, both nationally and,

not least internationally. This MSc will give you a basis for a comprehensive, challenging and exciting career with a broad spectrum of job possibilities within the petroleum industry, consulting companies, exploration companies (geological and geophysical mapping), private and public administration, and within research and teaching.

Formal prerequisites:

The MSc in Petroleum Engineering requires that the candidates have a BSc/BEng in Petroleum Engineering. Applicants with a BSc/BEng degree in Mechanical or Chemical Engineering may also be considered for admission if they have relevant work experience from the petroleum sector. For the MSc in Petroleum Geoscience a first degree in Applied Geosciences or Geology is required.

English language requirements:

TOEFL score: 500/170

IELTS mark: 5.0

Language of teaching: English

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Master of Science in Marine Technology



Norway has long traditions in using the sea: for fishing and survival, for commerce, transport and shipping and for the last thirty years, also for oil- and gas exploitation. The Department of Marine Technology at NTNU is internationally oriented and offers one of the world's leading educations in marine technology.

ABOUT THE PROGRAMME
The Master of Science in Marine

Technology offers three areas of specialization:

- Marine Structures
- Marine Systems Engineering
- Nautical Science

Marine Structures

- is designed to develop skills and competence especially in structural mechanics and hydrodynamics at international master's level in fields where NTNU has significant research

activity. This will be suitable for an engineering or research career in:

- a) Ship technology. Advanced knowledge is a necessity to develop new, cost-effective ship design, based on design by first principle.
- b) Offshore technology and marine operations. Deep-water applications and design of floating platforms, risers and pipeline systems.

Other marine technologies such as development of fish farms, floating bridges and airports and devices for generating energy from waves, currents or the wind. In the last part of the programme students can specialize in:

- a) Structural mechanics or
- b) Hydrodynamics

(It is also possible to choose a topic for the project and the Master's thesis where knowledge in both of these disciplines is combined to solve a problem.)

Marine Systems Engineering

- lays emphasis on developing understanding of the technical marine system as a whole and solving technical problems related to the design and operation of such a system. In the last part of the programme students can specialize in one of these areas:

- Design of marine systems
- Marine engineering
- Technical operations of marine systems



Norwegian naval architects and marine engineers are in the forefront of the technical development of shipping and global trade and of development and exploitation of offshore resources.

Nautical Science

- represents a broad area that combines multidisciplinary science and practical issues. Primarily it is concerned with the safe navigation and safe handling and operation of ships, including the protection of life and the environment. Other key elements of this science are shipboard administration and the handling, loading and care of cargoes. The fundamental aim of nautical activities is navigate a vessel from one place to another, safely and efficiently, without causing any accidents. The Master's study in Nautical Science provides an advanced education tailored to provide students with the basic skills and knowledge required to cope with the technological and operational challenges at sea or in the international maritime industries.

For closer and updated description of the degree and programmes of study see: <http://www.marin.ntnu.no/msc/>

The international students study in integrated classes with Norwegian students in the 4th and 5th years of the regular Norwegian master's programmes. The MSc programme starts in mid-August and consists of course and project work of 90 credits in the first three semesters

and a Master's thesis of 30 credits in the last semester.

CAREER PROSPECTS

Marine technology is truly international and offers a broad range of careers. A Master's degree from the Department of Marine Technology at NTNU is recognized and accepted by the maritime and shipping industries and academic institutions worldwide. Typical businesses and industries in the market for this kind of competence are oil and offshore companies, ship building- and ship companies, suppliers, consultancy agencies and research companies. Well motivated and excellent students are also encouraged to continue their work with a PhD at NTNU.



Formal prerequisites:

BSc/BEng degree or equivalent in areas related to marine technology, such as:

- Marine Technology
- Ocean Engineering
- Offshore Engineering
- Coastal or Harbour Engineering
- Naval Architecture
- Maritime transport (Nautical Science programme)
- Nautical/Naval Science (Nautical Science programme)

English language requirements:

TOEFL score: 500/170

IELTS mark: 5.0

Language of teaching:

English

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Master of Science in Reliability, Availability, Maintainability and Safety

Photo: Statoil KDA/ESA Harald M. Valderhaug



How can we avoid damage to people and the environment and important assets like property, caused by failures and the malfunctioning of technological systems?

ABOUT THE PROGRAMME

The objective of the Master's programme in Reliability, Availability, Maintainability, and Safety (RAMS) is to provide you with the knowledge and skills to design, produce, and operate safe and reliable systems. Your knowledge can be applied to reducing risks to people and the environment, thus contributing to a more sustainable future. You can use your expertise from this programme to optimize maintenance and minimize the economic losses caused by inadequate RAMS characteristics and warranty claims.

The RAMS Master's degree programme focuses on safety and the reliability assessment of safety-critical systems like emergency shutdown systems and automatic train-stop systems. Further, you will learn how to conduct risk analysis

and assess whether or not the risk is acceptable. You will also learn how maintenance can be safely planned and carried out. The project assignment and Master's thesis offer you an opportunity to specialize, as well as opportunities to establish industry contacts.

ADVANTAGES

The Master's programme builds on many years of experience from industry-related projects and research. In an evaluation of all engineering programmes in Norway, conducted by an international expert panel, the group responsible for this Master's programme was given the grade excellent in all the categories that were evaluated:

- 1) scientific quality and productivity,
- 2) relevance and impact, and
- 3) strategy, organization and research cooperation.

Together with scientists from the research foundation SINTEF, this group represents the largest research organization in Europe within RAMS.

STUDY ENVIRONMENT

As a RAMS Master's degree student, you will be offered your own individual work-space in a new and modern building, access to modern facilities for seminars, lectures, and relaxation, as well as a modern computer lab. As one of maximum 30 students (from different countries and cultures), you will soon become acquainted with your fellow students.

CAREER PROSPECTS

Since project assignments regularly are attached to practical problems within business and industry, this often provides students with contacts that result in job offers. Candidates within RAMS field are attractive to the market and have had no problems finding good jobs. The type of work varies a lot, since the competence is of great use to all kinds of industry that rely on reliability, availability, maintainability and safety.

Formal prerequisites:

BSc/BEng preferably within Mechanical Engineering, Hydraulic Engineering, Electronic Engineering or Electric Power Engineering. Applicants with a BSc/BEng in other engineering disciplines may also be considered for admission to courses in mathematics - Probability Theory and Statistics must be covered within the BSc/BEng degree.

English language requirements:

TOEFL score: 500/170

IELTS mark: 5.0

Language of teaching: English

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Master of Science in Urban Ecological Planning

Urban Ecological Planning addresses the real, on the ground, urban issues in the developing and industrial world. What is our planning ideology? How to understand and build local knowledge? And how to link knowledge with real action in planning practice to create positive change?

ABOUT THE PROGRAMME

In the developing countries, where the urban development is extremely fast and often out of control, planning efforts are at best fragmented and incremental. A sustainable approach concentrates on building local responsibility and capacities for action planning. Our programme starts in the field in a developing country context. Here the challenge is to understand the strengths of the neighbourhood of dense cities, and how to create opportunities for spatial, environmental and livelihood improvements.

ADVANTAGES

This MSc programme is, to our knowledge, the only course in Nordic Universities addressing interdisciplinary urban studies within an urban ecological framework.

STUDY ENVIRONMENT

The programme of study is intense through its initial fieldwork based course. The students form a «real team» in addressing on local issues and opportunities. The international students from developing countries are resource persons with rich cultural backgrounds and experience from overpopulated



urban environments. The Nordic and European students bring their societal context of the welfare state, local governance and environmental challenges of urban centres. Together this makes a «fertile» ground of exchange and learning. We have good experience with Nordic excursions in the first year of study.

CAREER PROSPECTS

Our international students have been successful in getting jobs on their return to their home country. The teaching of both theory and experience of working methods in the field is useful for their practice. Many are university teachers and researchers, and development workers both in NGOs and government service. The attitude we want to imply is that general urban improvement is possible through «small changes». In Norway, students get motivated to work for the local government to find integrated, cross-sector solutions to urban problems.

Formal prerequisites:

BSc/BEng/BA degree preferably in Urban Planning, Architecture or Civil Engineering. Relevant work experience is also considered important for admission. Applicants with a BA degree in Social Sciences (e.g. Planning) may be considered if the candidate has 2-5 years of relevant work experience in Urban Planning.

English language requirements:

TOEFL score: 500/170

IELTS mark: 5.0

Language of teaching: English

Address:

NTNU,
Faculty of Architecture and Fine Art,
Department of Urban Design
and Planning,
NO-7491 Trondheim, Norway

Phone: +47 73 59 50 20

Fax: +47 73 59 50 18

Academic contact person:

hans.c.bjonness@ark.ntnu.no

URL: www.ntnu.no/international/internationalmaster.htm

E-mail: international@adm.ntnu.no

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Master of Science in Exercise Physiology/Sports Sciences

Photo: NTNU SA/GT Nergård

The MSc is a research and thesis-based integrated graduate degree programme in Exercise Physiology at the Faculty of Medicine. It is exclusively concerned with basic research training and comprises compulsory courses together with optional courses dependent upon the research specialization of students.

ABOUT THE PROGRAMME

One of the goals for the research group is to examine basic mechanisms for central and peripheral limitations for the supply and demand of oxygen transport, and identify training responses. It will also examine the mechanisms for muscular and neural limitations to strength and coordination, the prescription of effective endurance and strength training and the effects on top sports performance.

The second aspect is based upon the fact that the fastest developing diseases within the population such as obesity, atherosclerosis, diabetes II, osteoporosis and COPD are related to inactivity. Effective new training interventions based on basic biological adaptations have positive effects and are effective treatments with a high socio

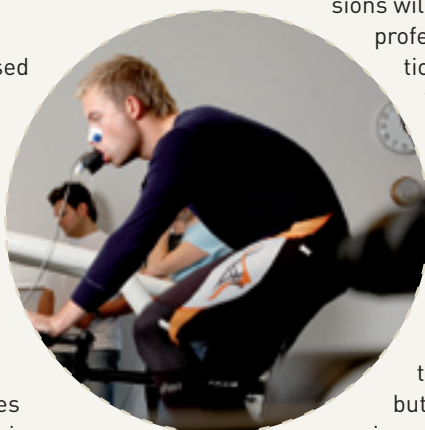
economic as well as quality of life outcomes.

STUDY ENVIRONMENT

The MSc is designed for students that are curious, independent and have an interest in human biological function and an active approach to health. Also students that have an interest in sports, and international level top sports will find a challenging and highly representative working environment. The contact with top sports as well as University hospital cooperation creates a challenging environment for use of knowledge and competence within human physiology and training interventions.

CAREER PROSPECTS

After the MSc some graduates will continue to take a PhD and research work. Students with a background in health professions will seek leading professional positions. Students with a university degree frequently go to teaching positions at college level both in the health sciences and teacher training, but also to gymnasiums, recreational clinics, coaching positions and the health and training industry.



Formal prerequisites:

Candidates should hold a BSc/BA degree or equivalent university education preferably within Exercise Physiology/Sport Sciences, Exercise Sciences, Biology, Physiotherapy, Nursing, Biochemistry, Occupational Therapy or similar fields. A firm foundation in Human Biology is required within the Bachelor's degree

English language requirements:

TOEFL score: 500/170
IELTS mark: 5.0

Language of teaching: English

Address:

NTNU,
Faculty of Medicine,
NO-7491 Trondheim,
Norway

Phone: +47 73 59 88 59

E-mail: veileder@medisin.ntnu.no

Academic contact person:

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Erasmus Mundus Master in Applied Ethics



This one-year Master's programme gives you the opportunity to study within an interdisciplinary field dealing with ethical problems in different areas of society. Focusing on ethical aspects of medicine, technology, politics and business the aim of the programme is to improve the quality of these practises on a European level.

ABOUT THE PROGRAMME

This Erasmus Mundus Master's programme is offered by Linköping University, The Centre for Applied Ethics (Sweden), Utrecht University, the Ethics Institute (the Netherlands), and the Norwegian University of Science and Technology (Trondheim, Norway).

The objective of the Master's programme is to create and develop ethical reflection and ethical competence on a European level, as a mix of relevant theoretical and practical knowledge, understanding, and evaluation. More specifically, the aim is to achieve competence in:

- Identifying and analyzing moral problems in different social and professional contexts



- Presenting sound input to public and professional debates on moral issues and being able to structure and evaluate those debates
- Formulating theory-based policy recommendations and assessments regarding moral issues in specific practices (e.g., health care, law, business, environmental affairs, ICT or journalism)
- Organizing constructive ethical deliberation in institutional and professional contexts

In this way, the programme enhances both the quality of applied ethics as an academic field and as professional practice. Furthermore, it is instrumental in focusing on ethical aspects of medicine, public health, technology, politics and business and, hence improves the quality of professions and practice on a European level. The programme runs over two semesters of full-time study (60 ECTS). The first semester comprises different courses in applied and theoretical ethics. The second semester comprises either courses in ethics and a Master's thesis or only a full-semester Master's thesis.

The thesis may be written in connection with an internship. Courses in different areas of Applied Ethics are offered by the institutions based on their expertise.

Applicants can choose between four routes of study:

1. Bioethics
2. Social and Political Ethics
3. Social and Financial Ethics
4. Applied Ethics and Ethical Theory.

Formal prerequisites:

The minimum formal requirements for admission to the programme are a Bachelor's degree, or equivalent, or a professional degree covering at least three years of study. You must submit a paper in which you demonstrate basic knowledge of and your affinity with ethical questions. The main selection criteria will be the quality of your previous work in ethics and previous professional experience.

English language requirements:

TOEFL score: 550/230

IELTS mark: 5.0

Language of teaching:

English

Address:

NTNU,
Department of Philosophy,
NO- 7491 Trondheim

Phone: +47 73 59 64 68

Academic contact person:

rune.kristian.hansen@hf.ntnu.no
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E-mail: international@adm.ntnu.no

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Erasmus Mundus Master in Coastal and Marine Engineering and Management

Photo: Arild Juul

Five high-rated universities in Europe offer a joint Erasmus Mundus Master Course programme in "Coastal and Marine Engineering and Management (CoMEM)".

The Erasmus Mundus programme promotes Europe as a centre of excellence and enhances the visibility and attractiveness of European education outside the borders of Europe. It also provides EU-funded scholarships for non-European participants entering this programme.

The partner universities for the CoMEM Master programme are:
 NL - *TECHNISCHE UNIVERSITEIT DELFT*
 ES - *UNIVERSITAT POLITECNICA DE CATALUNYA*
 NO - *NORGES TEKNISK-NATURVITENSKAPELIGE UNIVERSITET*
 UK - *CITY UNIVERSITY LONDON*
 UK - *UNIVERSITY OF SOUTHAMPTON*

The CoMEM programme is designed to train students within a broad curriculum that will allow them to contribute to solving challenges in the field of coastal and marine engineering and management. This requires a strong consortium with noted educational experience and proven research records in the field. The partner institutions offer this experience. In addition, all partners have long-standing links with private firms, public administrations and other institutes in the field of research and education, which will be available for students. These strong links

between education, research and other partners is a guarantee for keeping the content of the programme relevant and updated.

The programme will provide a broad European education that is relevant across the world. This includes the essential elements in Coastal and Marine Engineering and Management, which represent the geographical diversity of north to south coastal and marine systems, taught within a framework of sustainability, stressing ethical and long-term issues and responsibilities.

The duration of the master programme is two years (120 ECTS credits). The first year is common for all students; the first semester will be offered by NTNU in Trondheim, Norway, whereas the second semester will be organized at TU Delft in the Netherlands. Three main tracks are offered in the first semester of the second year (Barcelona, London or Southampton). The Master thesis will be done at one of the three universities, which were part of the individual track. Consequently a student will stay at three different universities and spend a maximum of one year at one of the partner institutions. All courses are taught in English.



Formal prerequisites:

Applicants must have a top-level bachelor degree (180 ECTS credits) in civil engineering, environmental engineering or an equivalent graduate degree in a subject which is relevant to the CoMEM programme. The students should have a thorough general knowledge about the fundamentals in engineering or numerate physical sciences.

English language requirements:

For TOEFL/IELTS score please consult our webpage

Language of teaching: English

Address:

NTNU
 Department of Civil and Transport Engineering
 NO - 7491 Trondheim

Phone: +47 73 59 46 40

Academic contact person:

eivind.bratteland@ntnu.no
 oivind.arntsen@ntnu.no

URL: www.ntnu.no/international/internationalmaster.htm

E-mail: international@adm.ntnu.no

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 (under the precondition of the formal approval by the board of NTNU)
<http://www.comem.tudelft.nl/>



Erasmus Mundus Master in Security and Mobile Computing

Photo: Arild Juul

The NordSecMob - Master's Programme in Security and Mobile Computing is a fulltime Master of Science Programme with duration of 2 years. During these two years, students will study at two of the five Nordic partner universities: Helsinki University of Technology (TKK) in Finland, Technical University of Denmark (DTU), The Royal Institute of Technology (KTH) in Sweden, the Norwegian University of Science and Technology (NTNU) and the University of Tartu (UT) in Estonia.

ABOUT THE PROGRAMME

This programme is one of the 21 selected master's courses by the European Commission-Erasmus Mundus programmes in 2005. The Erasmus Mundus programme is a cooperation and mobility programme in the field of higher education which promotes the European Union as a centre of excellence in learning around the world. It supports European top-quality master's courses and enhances the visibility and attractiveness of European higher education in third countries. It also provides EU-funded scholarships for third country nationals participating in these master's courses, as well as scholarships for EU-nationals studying in third countries. The NordSec-

Mob Master's Programme in Security and Mobile Computing will operate for at least five years beginning in September 2006. The NordSecMob-consortium and the development of a joint study programme are also supported by Nordic Council of Ministers in the framework of joint study programmes.

The objective of the programme is to enable students to acquire profound and wide knowledge in the field of computer science, data security and mobile computing, both in practice and in theory. The programme aims at developing the research skills of students towards studies at the PhD level, gaining international research experience in R&D environments and giving access to major international networks.

ADVANTAGES

The consortium consists of well known research and educational institutions in Europe and top-ranked Universities of Technology in the Nordic countries. A limited number of EU-funded scholarships are available for third country nationals.

CAREER PROSPECTS

Security in mobile systems is an area of rapidly increasing importance to society. Thus there are job opportunities in

many different areas both in the private and public sectors.

URL:

<http://www.tkk.fi/Units/CSE/>

Formal prerequisites:

Admission criteria to the programme is a high quality Bachelor's degree encompassing a minimum of 180 ECTS credits in Engineering (Computer Science or Information technology) or equivalent studies, i.e. must be a degree of at least three years of full-time studies.

The applicants should have solid knowledge of mathematics (discrete mathematics), programming skills, data structures and algorithms, computer architecture and basics of computer networks. In addition a basic knowledge of following subject areas will be an advantage: databases and database management, principles of theoretical computer science, logic in computer science, software engineering, operating systems, concurrent programming.

Language of teaching: English

Address:

Department of Telematics
O.S. Bragstads plass 2B
NO-7491 Trondheim
Norway

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Fax: +47 73 59 69 73

E-mail:

studieveileder@komtek.ntnu.no

Academic contact person:

mona.nordaune@item.ntnu.no

URL: www.ntnu.no/international/internationalmaster.htm

E-mail: international@adm.ntnu.no

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(<http://www.tkk.fi/Units/CSE/>)



NTNU



NTNU's administration building behind the red and round student society in Trondheim

The Norwegian University of Science and Technology in Trondheim represents academic eminence, innovation and creativity. NTNU is responsible for technological education nationwide and we also offer a wide selection of academic disciplines ranging from the social sciences, the arts, medicine, architecture to fine arts.

NTNU, the Norwegian University of Science and Technology, with some 20 000 students and an academic and administrative staff of nearly 4700, is now the second-largest university in Norway.

NTNU continues to evolve —as is evidenced by new buildings, expanding cooperation with universities abroad, and active participation in the European Commission's student exchange programmes, exchanges with developing countries, Central- and Eastern Europe/Central Asia, and joint R&D ventures with industry.

All of this means that NTNU is a dynamic educational and research community. With its

broad academic spectrum, the university is able to adopt a comprehensive approach to the challenges we face in the new millennium while continuing to build on Norway's reputation as a technological and cultural nation.

We place great importance on developing strong links with universities and research institutions abroad. At any given time there are approximately 1000 international students at NTNU. Most of these take full degrees or are exchange students.

NTNU cooperates closely with SINTEF (The Foundation for Scientific and Industrial Research at the Norwegian

Institute of Technology) and NTNU Social Research Ltd. As a result of sharing staff, laboratories and equipment with these organizations, our students reap the benefits of this cooperation.

This means that students at NTNU have access to a research and teaching environment that is unrivalled in Norway and has become a Scandinavian model of educational excellence.

NTNU -facts and figures

- NTNU was established in 1996 as a result of merger between The Norwegian Institute of Technology (NTH), The College of Arts and Sciences (AVH) and the Museum of Natural History and Archaeology (VM).
- Professional degrees, university studies, interdisciplinary study programmes and Masters degrees in English.
- 7 faculties and 53 departments.
- 20 000 students, half of these studying technology or the natural sciences.
- 45 per cent of NTNU's students are female.
- 1000 students from abroad.
- 2250 professionals, masters-level or doctoral degrees, are awarded each year. A third of these are awarded to female students.
- 4700 staff. Over half in academic or scientific positions.
- Participates in the European Commission's research framework programmes, Socrates and Leonardo da Vinci; also in the Nordplus programme, Norad programme, and the Action Programme for Eastern Europe, the Quota Programme for students from developing countries, Central and Eastern Europe.
- Sponsorship and cooperation agreements with Norwegian and international business and industry.
- Annual budget NOK 2,8 billion (approx. USD 400 million)
- Owns/uses premises with a total area of 500 000 m².

NTNU Library has a collection of 2.7 million volumes, 15 000 journals and 350 000 photographs.



The campus at Dragvoll.

Photo: Arild Juul



New buildings and modern architecture at Gløshaugen Campus

Cross-disciplinary experts



Students playing a board game developed through Experts in Team

Photo: Kim Nygård

NTNU puts a premium on inter-disciplinary cooperation across academic disciplines and hopes to facilitate creative teamwork in all its subjects: Technology, the arts, the humanities, medicine, social science, architecture, and natural science. By mixing creativity and humour with anything from history to maths, NTNU creates Experts in Team (EiT).

Experts in Team is a compulsory subject in most Master's programmes at NTNU. Through cross-disciplinary challenges the students are trained in creative thinking and problem solving, and not least; they get a glimpse of how working life could be once their studies are finished. The experience from EiT is highly important as cross-disciplinarity spreads within

research, industry and the public. The cross-disciplinary sphere often produces new methods and ideas, and the students are taught how to take advantage of this. They are split into cross-disciplinary teams called «villages», and each village has its own team leader, or so-called «village chief». The groups deal with different themes and try to

solve different problems, which could be anything from finding new methods for teaching scientific subjects in primary school to constructing hover trains in Trondheim. EiT on the web: <http://www.eit.ntnu.no/>



Experts in Team cooperate with children from Singsaker School.

Photo: Rune Petter Ness



Photo: Maja V. Sterud

The oldest of the wharves along the River Nidelva date back to the 18th century. Today they remind us of the importance of Trondheim as a merchant city. Housing shops, offices, restaurants and cafes, they still hold a special charm.

Trondheim

Our city was the first Norwegian capital, founded by King Olav Tryggvason of Viking fame in 997. Today Trondheim is the third largest city in Norway with 160.000 inhabitants, 25.000 students and one of the largest high-technology centres in Europe. It is also one of Norway's most blooming cultural and innovative centres.

Trondheim is rated time and time again as Norway's best student town. Some reasons for this vote of confidence are:

- One in six residents is a student
- A vibrant Student Union offering concerts, dances, theatre, debates and more
- The biennial International Student Festival (ISFIT)
- The three-week long biennial Student Festival (UKA)
- NTNUI, Norway's largest sports club
- The Student Lodge, and over 20 cabins located all over central Norway, from the coast to high up in the mountains
- Student clubs spanning the entire range of academic disciplines and leisure activities

The natural beauty of Norway's fjords, mountains and coastline surround Trondheim and afford limitless opportunities for year-round enjoyment. The population of Trondheim is approximately 160 000 thus making it easy for new students to get the «lay of the land». Trondheim's climate, moderated by the warming effect of the Gulf Stream, allows residents to enjoy four distinct seasons and most types of outdoor activities. With travel discounts available to all students in Norway, there are excellent opportunities to explore the rest of Scandinavia and Europe.



The majestic Nidaros Cathedral in Trondheim is Norway's national sanctuary and was built over the grave of St. Olav. The construction started in 1070, but the oldest parts still in existence are from the mid-12th century.



Norway is internationally known as the land of the midnight sun; the sun never sets in northern Norway in the summer.

Photo: Christian Carlson and Office of International Relations, NTNU



Summer in Lofoten, a group of islands north of the Arctic Circle. Latitude from 67 to 68 degrees North.

Norway

Norwegian fjords have been rated as the world's leaders in geotourism by Traveler and National Geographic, and given their highest stewardship rating. Norway's Coastline is also picked to be one of the worlds 50 greatest places of a lifetime. Pristine and rugged landscapes combined with authentic culture, architecture, and resurgence in distinctive local cuisines are some of the reasons

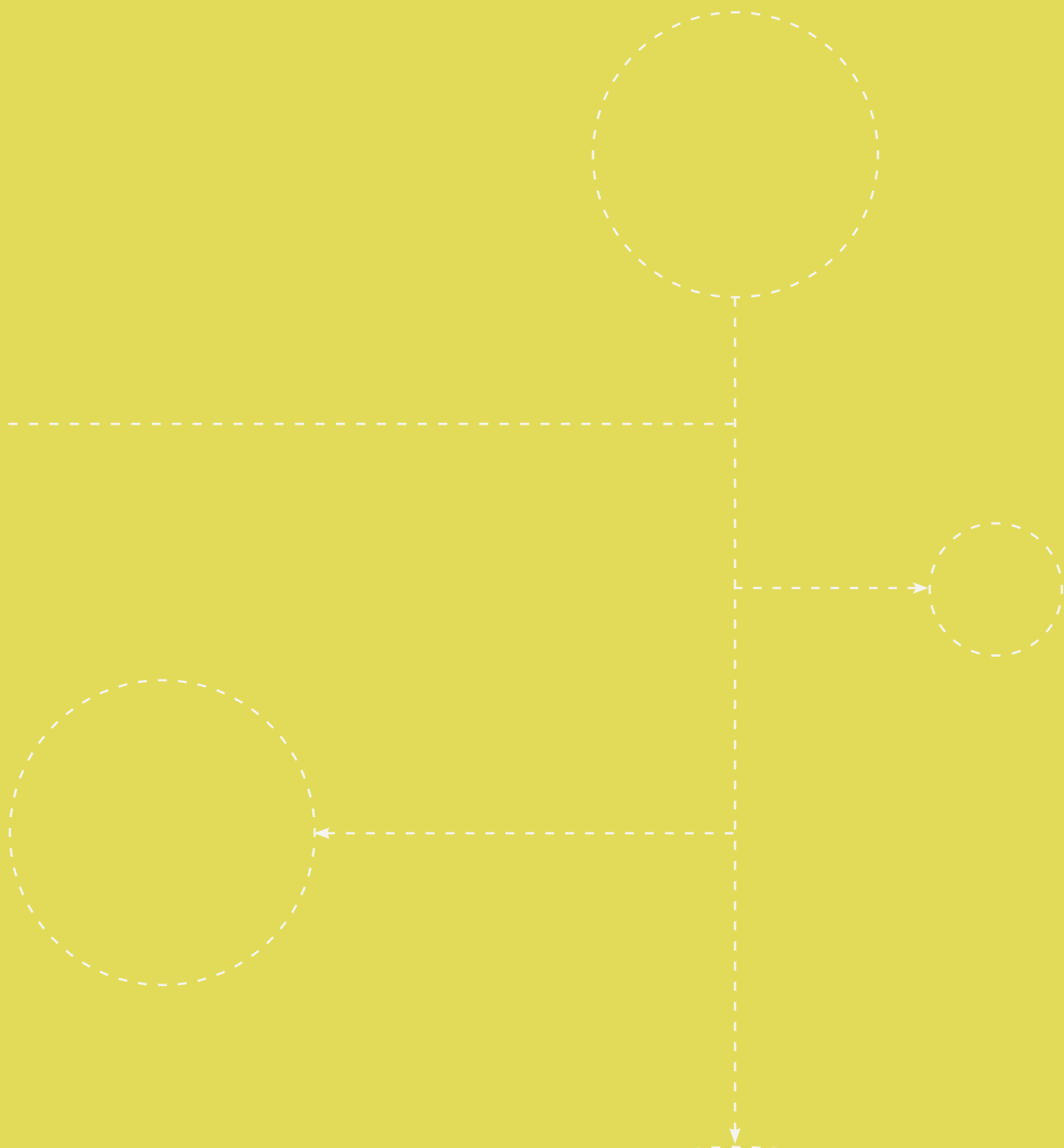
Norway is a rich industrial democracy with a population of approximately 4.6 million. The country stretches all along the western side of the Scandinavian peninsula. Our coastal regions have relatively mild winters and cool summers, while the inland regions have cold winters and warm summers. Norway's scenery is a mixture of fertile land, bare mountains, narrow fjords and a long open coastline. Though the landscape may appear wild, it is welcoming, just like the Norwegians. Our culture is recognized through the folk costumes like the «bunad» and folk instruments like the «Hardanger-fiddle», through celebrated classical artists such as Ibsen, Grieg, Undset and Munch, modern artists like Nerdum and

Vigeland, and no. 1 hit artists like A-HA and Røyksopp. With a profound interest in exploration, Norway has many internationally recognized scientists like Nansen, Amundsen and Heyerdahl, Norwegians have also demonstrated their mastery of the elements through technology. With its hydroelectric power, natural gas and oil, Norway is one of the world's leaders in terms of energy exports.



There is a saying that Norwegians are born with skis on their feet. If you visit Norway in the winter you should try cross-country skiing- one of our national sports.





NTNU - Innovation and Creativity

The Norwegian University of Science and Technology (NTNU) in Trondheim represents academic eminence in technology and the natural sciences as well as in other academic disciplines ranging from the social sciences, the arts, medicine, architecture to fine arts. Cross-disciplinary cooperation results in ideas no one else has thought of, and creative solutions that change our daily lives.