



Photo: Cathrine Dillner Hagen

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

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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 international applicants is 1 December in the year before admission. The final application deadline for international applicants who have successfully passed through the preliminary screening is 1 February in the year of the admission. The application deadline for applicants with Norwegian /Nordic higher education is 15 May in the year of admission. These applicants do not have to fill the preliminary application form for international applicants, but should download the application form from NTNU's «studentweb»: <http://www.ntnu.no/studentervice/>.

For admission for the academic year 2006/2007 the applicatin deadline has been extended to 15 may.

A limited number of places are also available on the following programmes under the NORAD fellowship programme: Master of Engineering in Electrical Power Engineering, Master of Philosophy in Development Studies, Master of Science in Hydropower Development and Master of Science in Petroleum Engineering/Petroleum Geosciences. For further information: www.siu.no/norad

ENGLISH LANGUAGE REQUIREMENTS

International applicants should document either a TOEFL test with a minimum paper score of 500/550 (170/213 computerbased test) or better or an IELTS test score of minimum 5.0/6.0 or better, 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/intersek/internationalmaster.htm
www.studynorway.no





Master of Philosophy in English Language and Linguistics

Photo: Arild Juut



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, ENG001, 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 at 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.

This 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: 550/213
IELTS mark: 6.0

Language of teaching:

English

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internationalmaster.htm

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Master of Philosophy in Linguistics

Photo: Arne Asphjell



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.

ABOUT THE PROGRAMME

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 at 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.s

CAREER PROSPECTS

Linguistics is used for research, both related to language in itself and to technological development. Another area linguistic knowledge is widely used is in teaching. An mphil in Linguistics provides a basis for many work activities, such as within IT 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 offer interesting work for a linguist.

Formal prerequisites:

Applicants should hold a B.A. or equivalent degree in Linguistics or an equivalent degree with a 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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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 a maritime cultural landscape that we can explore and try to protect for future generations.

ABOUT THE PROGRAMME

Maritime Archaeology concentrates on the following aspects:

- Maritime Aspects of Culture deals with the development and scope of the subject, current research, theoretical perspectives and central issues.
- Maritime Cultural Landscape in Comparative Perspectives considers the interaction between land and sea in the cultural development of the world.
- Boat and Ship-building Technologies - materials and procedures for construction, and the major building traditions of the world, with focus on certain periods. Our main focus will be based on ongoing

research projects.

- Ship Science in Archaeology is the recording, reconstruction and analysis of ancient hulls.
- Seafaring in the World - covers seafaring, navigation, anchorages, harbours, trade and exchange.
- Marine Natural Resources in cultural development gives a world comparative perspective.
- Underwater Cultural Heritage Management deals with the priorities of assessing, protecting and managing underwater archaeological resources.
- Archaeological Oceanography.
- Underwater Archaeology considers the application of archaeological principles in underwater environments and associated skills - including marine archaeological field methods.
- Deep Water Archaeology is a programme of study in deep water archaeology including the use of technology and methods developed at NTNU.
- 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 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 nationally and internationally in education and research, at maritime and archaeological museums, the media, as well as local and national heritage management authorities.



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: 550/213

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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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?

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 of 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 to give students from the North knowledge that will make them capable of assisting the development process, 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:

Applicants should preferably hold a Bachelor's degree in Geography. A Bachelor's degree in other Social Sciences may also be considered for admission if at least 1.5 years of university studies in Geography or Development Studies has been completed as a part of the first degree.

English language requirements:

TOEFL-score: 550/213
IELTS mark: 6.0

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 given 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 promotion of disadvantaged children's learning conditions? Do you wonder what psychotherapy is good for?

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 for 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 handicap counselling, care for the elderly, and on 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 a broader 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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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 companies 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 is an attempt by NTNU to educate managers who can be part of, and with more experience, run such projects.

ABOUT THE STUDY PROGRAM

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

STUDY ENVIRONMENT

We want this study to be truly international, and the students in the program are therefore a mix of international and national students. To this body

of students are added exchange students from our co-operating 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 the students use of English as a language to discuss academic subjects.

THE STUDY IS SUITED FOR

The Masters program is well suited for students with a bachelor degree of engineering and some job experience, and



who wants to expand their skills to include project management. Since the study program is developed in co-operation with Norwegian companies who demand such project management competence, there are also ample possibilities for contact with companies. In particular, companies often suggest projects and problem areas for the third semester project and the Master Thesis.

ADVANTAGES

The Master of Science in Project Management is part of a European cooperation program to develop the European Master of Project Management. All project management programs 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, preferably in civil, mechanical or industrial engineering as their academic background.

English language requirements:

TOEFL: 500/170
YELTS: 5.0

Language of teaching:

English

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<http://websterii.iot.ntnu.no/prosjektledelse/studieretningny.asp>

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Master of Science in Condensed Matter Physics and Biophysics

Photo: Marianne Sjøholtstrand

We surround ourselves with materials as a natural ingredient in our workday and we take our health for granted. Did you know that matter physics is an important incubator for technological development and that our future health depends on progress within physics? Nano-scale studies are necessary to adjust materials and heal cancer patients.

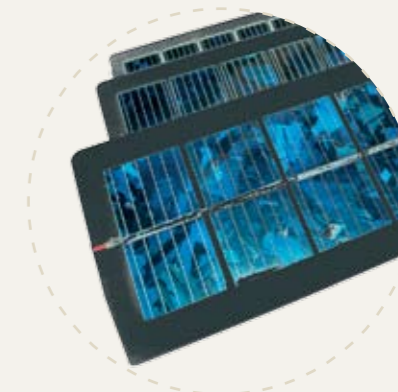
ABOUT THE PROGRAMME

The master's programme consists of eight elective courses comprising a total of 60 credits and a thesis of 60 credits. 60 credits indicates 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 either within Condensed Matter Physics or Biophysics. 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 and biophysics. The master's programme is suitable for those who want to work with

future challenges in condensed matter physics or biophysics, 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 elective 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 the oil industry and industries within energy resources in general. Specialization in Biophysics will provide competence to work in health-related industries.

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, Non-linear 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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internationalmaster.htm

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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 studies. The first year consists of compulsory and elective courses providing the basis for the specialization project and subjects in the second year within areas of Coastal Engineering, Power Engineering, Marine and Arctic Civil Engineering or Marine Geotechnics. 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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internationalmaster.htm

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Master of Science in Electric Power Engineering

Photo: Ole D. Hesledalen



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.

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 is therefore natural for the department to

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:

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internationalmaster.htm

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Master of Engineering in Electrical Power Engineering

(at Kathmandu University, Dhulikhel, Nepal)

Photo: Rune Petter Ness

Academic work of teaching and research at Kathmandu University, covers Energy Planning, Electrical Power Systems, High Voltage and Materials Technology, Energy Conversion, Electrical Plants.

This programme started as collaboration between the Norwegian University of Science and Technology (NTNU) and Kathmandu University (KU).

The programme is financed under the NORAD fellowship programme [Norwegian Agency for Development Cooperation]. Candidates from eligible countries can apply. This means that in addition to participants from Nepal, it is possible to send participants to this programme from NTNU's partner institutions in Africa, Asia and the Middle East. For further information: www.siu.no/norad.

NTNU provides the teaching and transfer of knowledge and expertise in particular areas of electric power engineering. Gradually, the complete responsibility for the programme is being transferred to KU. Locating the education in a developing country will stimulate indigenous graduate education and the development of competence in that country at the university, in the electric power industry and electricity supply companies. This is a keystone to sustainable development.



Formal prerequisites:

Candidates should have a BSc in Electrical Power Engineering, preferably Power Engineering and 2-5 years of experience within relevant areas. Location: Kathmandu University, Dhulikhel, Nepal.

English language requirements:

TOEFL score: 500/170
IELTS mark: 5.0

Language of teaching:

English

Academic/Administrative

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dean_sci@ku.edu.np

URL:

www.ntnu.no/intersek/
internationalmaster.htm

Application Procedures and Language Requirements: Page 5



Master of Science in Geotechnics and Geohazards



Why do avalanches happen? Where is it hazardous to build, where is it safe, and when? How can the stability of a slope be evaluated, independent of its location in Norway...or in Las Colinas, El Salvador. In fact, the challenges with respect to slide prevention and the consequences of geo-related disasters are even larger internationally than in Norway.

The problem definitions and the need for proper evaluation require competence in many scientific fields: Geology, hydrogeology, geotechnics, mechanics, numerical modelling, risk analyses and earthquakes.

ABOUT THE PROGRAMME
Geotechnics represents the science needed to build safely on, in or of soil. The challenges are numerous, and often related to optimal utilization of limited space in an urban environment, i.e. deep excavations and creative use of the underground in cities to obtain more space on the surface. The foundations of large bridges and multi-storey buildings on soft subsoils is another challenge.

In the two first semesters of the MSc programme, students complete courses within 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 within Rock Engineering, 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). 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.

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

Address

NTNU,
Department of Civil and Transport Engineering (Geotechnical Division),
NO-7491 Trondheim, Norway

Phone: +47 73 59 46 40

Fax: +47 73 59 70 21

Academic/Administrative contact persons:

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Application Procedures and

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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

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 & tunnelling and finally economic & 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 ten years.

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 may have an interesting engineering career with consulting firms, contactors, water and energy authorities, developers, power companies and utilities or institutions in development cooperation. All of this is demanded in Norway and abroad. The hydropower industry and the authorities in Norway have an active recruitment policy towards new hydropower engineers as a deficit of qualified engineers is predicted.

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

Address:

NTNU,
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NO-7491 Trondheim, Norway

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haakon.stole@ntnu.no

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internationalmaster.htm

Application Procedures and

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Master of Science in Industrial Ecology

Photo: Carl Andre Nørstebø



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 to specialize in either environmental systems analysis, strategic design of product systems 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, ranging from technical developments and policy implementations to evaluating the environmental consequences for different levels of society, makes graduates attractive for a wide range of employers. Former Industrial Ecology students have found employment with consultancies, research institutions, energy companies, government agencies, environmental organizations, news media, and technology companies.

Industry can no longer think about profits only. This is how 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

It 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, economical, and societal aspects of industrial environmental problems. You get practical training in methods for evaluating the

Formal prerequisites:

BSc/BEng/BA degree within Engineering, Industrial Design, Architecture, Natural or Social Sciences. The first degree must include a minimum of 7.5 ECTS credits (1/8 year) each of Mathematics and Statistics.

English language requirements:

TOEFL 550/230 or
IELTS 6.0

Language of teaching:

English

Address:

NTNU,
Faculty of Engineering Science
and Technology, Industrial Ecology
Programme
NO-7491 Trondheim
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E-mail: msc@indecoll.ntnu.no

Academic/Administrative

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Master of Science in Information Systems

Photo: Kim Nygård



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.

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

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

Address:

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Information Science,
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E-mail: idi@idi.ntnu.no

Academic/Administrative

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Master of Science in Light Metals Production

Photo: Atle Johnsen, Hydro



NTNU has close contact with the light metals industry at home 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, and 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, Applied Thermodynamics, Carbon Materials Technology, Refractories, High Temperature Chem. Proj., Refining and Recycling of Metals, and Electrolysis of Light Metals. In the 3rd semester students complete an advanced course in Electrolytic Process (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 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

Address:

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NO-7491 Trondheim, Norway

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internationalmaster.htm

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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, and computed technology. This MSc programme is aimed at candidates with a background in natural sciences and technology who want to further their specialization in technology towards applications in medicine.

ABOUT THE PROGRAMME

The programme specializes 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 five specializations in medical technology are:

- **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. Focus on skills to design methods and procedures for analysing complex data sets from research in medicine and molecular biology.

- **Biophysics and Medical Physics** — qualifies for a career as medical physicist in health care, or for applying physics in health-related industries or research. Focus is on advanced imaging methods by magnetic resonance, ultrasound or the 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.

STUDY ENVIRONMENT

You will enjoy working with other international students, as well as with Norwegian students in the field of specialization you have chosen. NTNU offers high quality course work, projects, and study facilities.

CAREER PROSPECTS

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

Formal prerequisites:

Applicants for the Master of Science in Medical Technology should hold a Bachelor's degree or equivalent with an academic profile of relevance to the specialization of interest. Please note that each specialization 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

Address:

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internationalmaster.htm

Application Procedures and

Language Requirements: Page 5



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 education in marine technology.

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

- Ship technology. Advanced Knowledge is a necessity to develop new, costeffective ship design, based on design by first principle.
- 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

- Structural mechanics
- Hydrodynamics

(It is also possible to choose a topic for the project and the Master 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 study and study programmes see:
<http://www.marin.ntnu.no/msc/>

THE STUDY

The international students study in integrated classes with the Norwegian students in the 4th and 5th year 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 spectre 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 world wide. 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)

Applicants with similar educations in other fields may also be considered for admission if they have relevant work experience from the marine sector.

English language requirements:

TOEFL score: 500/170
IELTS mark: 5.0

Language of teaching:

English

Address:

NTNU,
Faculty of Engineering Science and Technology,
Department of Marine Technology,
NO-7491 Trondheim

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mscadm@ivt.ntnu.no

URL:

www.ntnu.no/intersek/internationalmaster.htm

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FACTS



Master of Science in Petroleum Engineering/Petroleum Geosciences

Photo: Kim Nygård

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 sub-sea production equipment at great water depths
- Environment issues in northern areas

STUDY ENVIRONMENT

As a student on the MSc programme you have access to good study facilities and

modern computer equipment. There is a comprehensive professional environment that includes field courses in Norway, on Svalbard, and abroad are included. 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 actual problems abroad in cooperation with the oil industry. Problem solution and the ability to cooperate are important key-words. If you are thinking about working internationally the studies give you training in the use of English. 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:

BSc/BEng degree or equivalent in Petroleum Engineering or Applied Geosciences. 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. The MSc in Petroleum Engineering, requires that the candidates have engineering disciplines such as Petroleum Engineering, Chemical Engineering or Mechanical Engineering, while candidates with a first degree in Applied Geosciences or Geology, primarily will be considered for admission to the MSc programme in Petroleum Geosciences.

English language requirements:

TOEFL score: 500/170

IELTS mark: 5.0

Language of teaching:

English

Address

NTNU,
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Academic/Administrative

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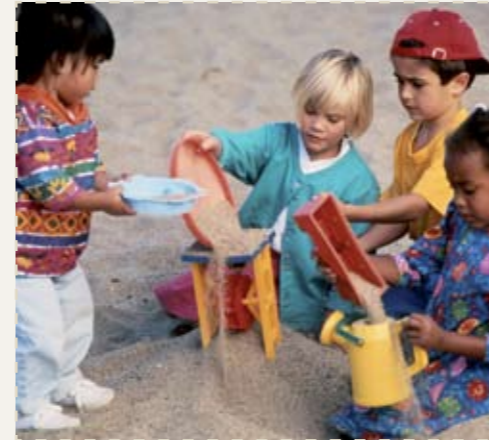
Application Procedures and

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Master of Science in Reliability, Availability, Maintainability and Safety

Photo: Statoil KDA/ESA Harald M. Valderhaug



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

ABOUT THE PROGRAMME

The objective of the master's program 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 humans and the environment, thus contributing to a more sustainable future. Use your expertise to optimize maintenance and minimize the economic losses caused by inadequate RAMS characteristics and warranty claims.

The RAMS master's degree program 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, but are also 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 categories evaluated:

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

The group, together with scientists from the research foundation SINTEF, represent 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 job 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 og Electric Power Engineering. Applicants with a BSc/BEng in other engineering disciplines may also be considered for admission courses within 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

Address:

NTNU
Faculty of Engineering Science and
Technology
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www.ntnu.no/intersek/internationalmaster.htm

Application Procedures and

Language Requirements: Page 5



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

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Academic/Administrative

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www.ntnu.no/intersek/
internationalmaster.htm

Application Procedures and

Language Requirements: Page 5



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 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 supply and demand of oxygen transport, and to identify training responses. Similarly to examine mechanisms for muscular and neural limitations to strength and coordination and prescription of effective endurance and strength training and effects on top sport 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 several students continue with a PhD and research. Students with a background in health professions seek leading professional positions. Students with a university degree frequently go to teaching positions at College level both in health and teacher training, but also to gymnasiums, recreational clinics, coaching positions and 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: 6.0

Language of teaching:

English

Address:

NTNU,
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E-mail: dmf-post@medisin.ntnu.no

Academic/Administrative

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internationalmaster.htm

Application Procedures and

Language Requirements: Page 5



Master's Programme in Applied Ethics

Photo: Arild Juul

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).

ABOUT THE PROGRAMME

The Master's Programme of Applied Ethics (MAE) is a merger of two existent high-quality master's programmes of applied ethics: the Nordic Master's Programme in Applied Ethics which started in 2001, and the Master's Programme of Applied Ethics at Utrecht University, which started in 2003. 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 analysing 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 practices 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 Economical 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: 500/170
IELTS mark: 5.0

Language of teaching:

English

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internationalmaster.htm

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Master's Programme in Security and Mobile Computing

Photo: Arild Juul

The NordSecMob - Master's Programme in Security and Mobile Computing is a full-time 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 NordSecMob - 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 differ-

ent 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

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internationalmaster.htm

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

NTNU

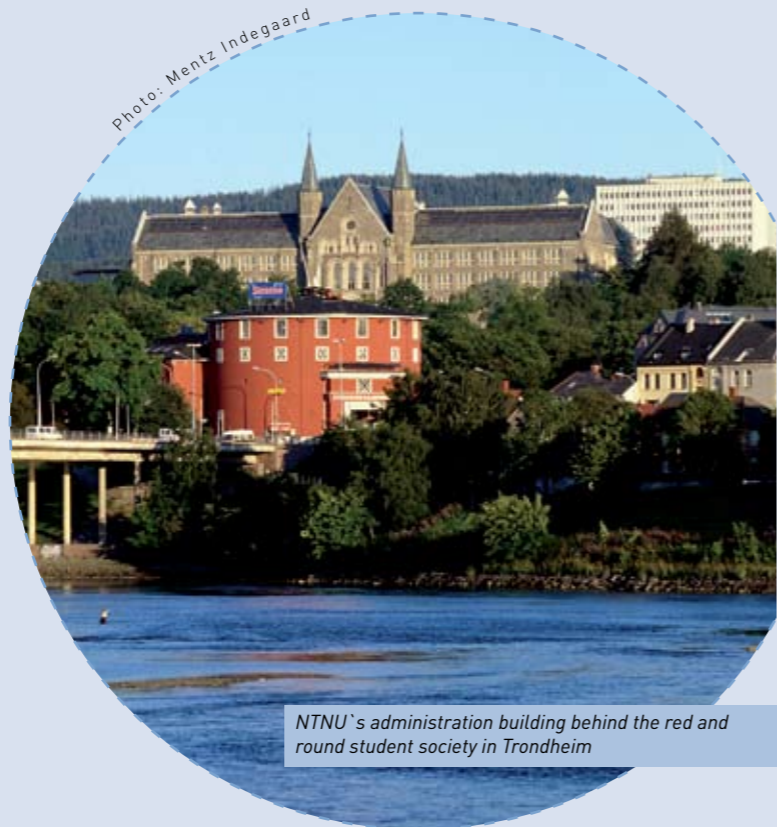


Photo: Mentz Indegaard

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 and 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 interdisciplinary 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

The Strategic Areas at NTNU

One of the main goals of NTNU is to provide Norway with an internationally competitive level of technological know-how. The University has given priority to six research areas where NTNU is to be among the internationally leading universities.

- **ENERGY AND PETROLEUM - RESOURCES AND ENVIRONMENT:** «Technology for a cleaner future» - NTNU is engaged in improving knowledge about sustainable production and the consumption of energy. Knowledge about new sources of renewable energy and energy carriers is particularly important.
- **GLOBALIZATION:** Our emphasis on globalization is profiled through two focus research areas: «Production systems in a globalized world» and «The cultural and social expression of globalization».
- **INFORMATION AND COMMUNICATION TECHNOLOGY:** «NTNU's research within ICT must hold both national and international significance» - Our strategy within ICT is organised according to methods for advanced and creative research. Researchers should have the freedom to do in-depth studies of their research fields. At the same time, NTNU can utilize a wide range of academic and scientific expertise – from physics to philosophy – to develop interdisciplinary products.

• **MARINE AND MARITIME TECHNOLOGY:**

The strategic area seeks to strengthen the knowledge required to maintain competitive and sustainable marine and maritime industries. During the last 30 years, aquaculture and the offshore development of petroleum resources have been added as significant activities at NTNU. Almost 250 man-years are devoted to such research at this university.

• **MATERIALS:** «Materials - basis of all new technology» - Norway is one of the world's largest exporters of many vital materials. An example is that 25 % of the silicon for PCs all over the world is from Norway. Over the years, Materials science at NTNU has developed strong research groups covering a wide variety of disciplines, from geomaterials to semi conductors.

• **MEDICAL TECHNOLOGY:** We believe that strategic cooperation between different disciplines will generate innovative ideas and solutions. Hence, there is a close collaboration between researchers working in technology and medicine. The objective of this research is the provision of optimized individual treatment and medication for our patients.



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)
- NTNU, 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.



Kristiansten Fortress was built after the great city fire in 1681, and has played an important part in the history of Trondheim. Today it offers a spectacular view over the city's surroundings and buildings, the fjord and the mountains.



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 world's 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 Nerdrum and

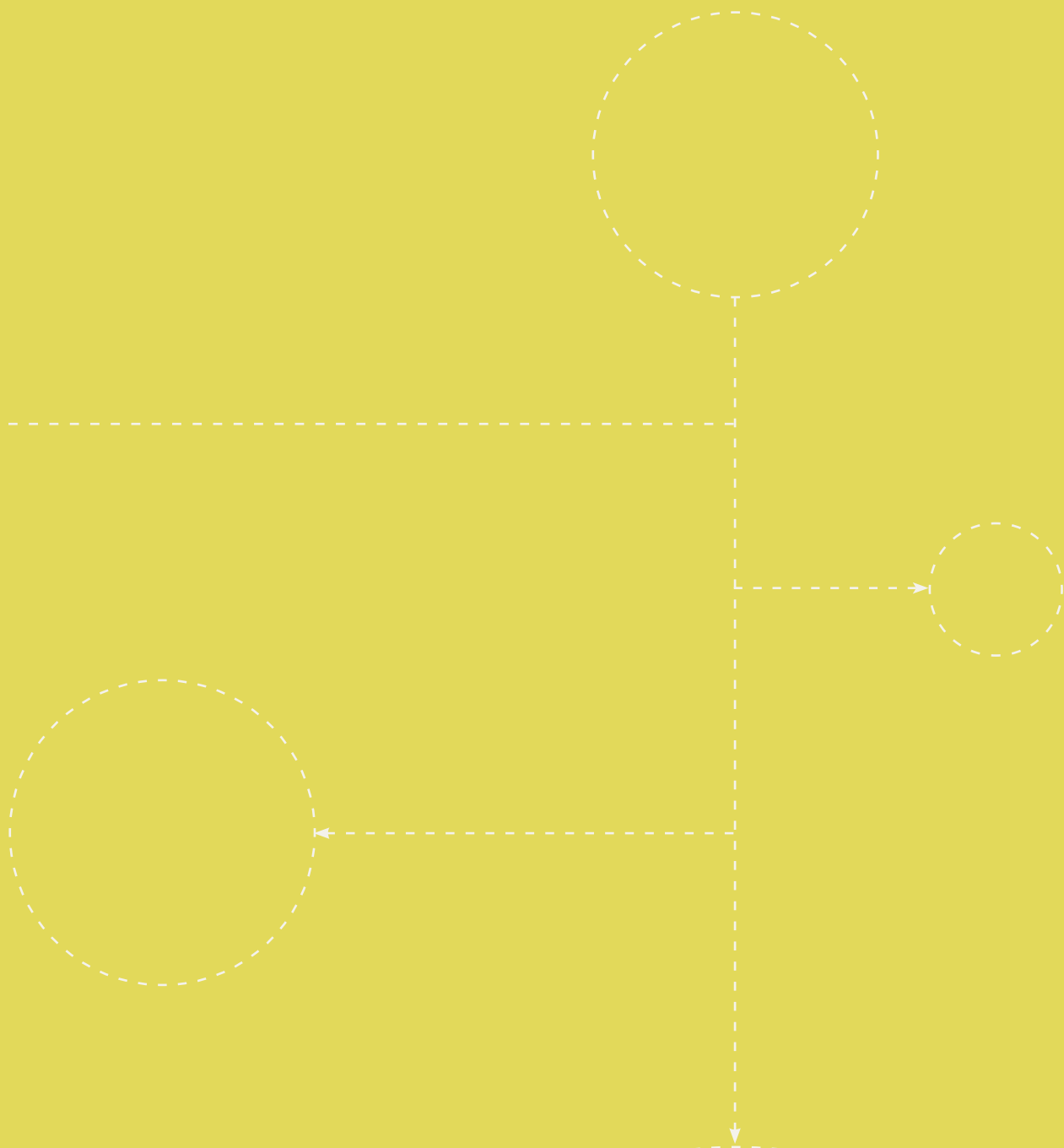
Vigeland, and no. 1 hit artists like A-HA and Røyksopp. With a profound interest in exploration, Norway has many internationally recognized scientists like Nansen, Amundsen and Heyerdahl, Norwegians have also demonstrated their mastery of the elements through technology. With its hydroelectric power, 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.



Grafikk: NTNU-trykk/Vigdis Tøndel



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.