



**UNIVERSITY
OF OSLO**

Centre for Entrepreneurship

**MASTER OF SCIENCE IN
INNOVATION AND
ENTREPRENEURSHIP**

**GRADUATE
PROSPECTUS**



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WELCOME

The University of Oslo

Founded in 1811, the University of Oslo is Norway's largest and oldest institution of higher education.

Today the University of Oslo has approximately 30,000 students and 4,600 employees. Four Nobel Prize winners indicate the quality of the research at the University.



INTRODUCTION

We strive hard to be a centre of excellence in entrepreneurship education. We therefore take pride in presenting a technology management program that emphasises innovation and entrepreneurship.

The two-year Master of Science program is open to candidates with a bachelor degree in any discipline within natural sciences or engineering.

The program offers several opportunities to work with real life technology projects and also includes several opportunities for internships in companies. If you are looking for a program that combines academic life with practice - this is it.

MASTER OF SCIENCE IN INNOVATION AND ENTREPRENEURSHIP

Innovation may be seen as a process which involves discovering or creating a new idea - finding the right and most useful way of solving a problem - creating or allocating resources to develop this idea, producing a product or a service, and successfully taking this to the market to achieve value. The role of the innovator or the entrepreneur is vital in this process.

This two-year Master of Science program facilitates knowledge of how this process works in different industries; through hands-on experience and through the study of cutting edge research. Students from engineering and natural sciences are given a good platform in industrial economics and technology management, which gives them an excellent starting point to pursue a career within technology management or as project leaders of new technology based ventures.



There is an emphasis on real life cases, group work, discussion and independent analysis



A key aim is to allow students to apply knowledge to real world cases

RESEARCH BASED STUDY

During the program, participants will be involved in developing academic and/or corporate project ideas into technology ventures based on discoveries and new insights from business or science.

The program aims to qualify participants as managers in new technology ventures, or as project leaders in existing firms. The program provides several opportunities for working on real projects while studying for a degree.

PhD Programme

The centre also offers a three-year PhD programme in Innovation and Entrepreneurship.

METHODS OF LEARNING

Instruction is both theoretical and practical. Part of the programme is based on modules where case studies are used; which involves internship abroad (Gründerskolen) and includes supervised case work in Norway and abroad. There is an emphasis on group work, discussion, and independent analysis.

A key aim is to allow students to apply knowledge to real world cases, in interaction with inventors and entrepreneurs, during the course of the programme.

The programme is taught in English.

THE STUDY ENVIRONMENT:

The Centre for Entrepreneurship is located within Oslo Innovation Park (Forskningsparken).

This is a dynamic environment where university and business meet under the same roof.





Boston, USA



The aim of the programme is to provide a toolbox of theoretical and practical knowledge

AIM OF THE PROGRAMME

The aim of the programme is to provide a toolbox of theoretical and practical knowledge in innovation and entrepreneurship, in order to prepare you for:

- Developing innovation and work with new product management in large or small firms
- Creating innovation strategy for large or small firms
- Working with innovation support in public or private organizations, in government and international policy
- Working as an independent consultant
- Conducting doctoral research in innovation and entrepreneurship.

Students can choose from any of the following tracks:

GRÜNDERSKOLEN

The Master of Science in Innovation and Entrepreneurship contains Gründerskolen, an interdisciplinary, national programme in business creation.

Gründerskolen combines international entrepreneurship studies with a three month high-tech start-up internship either in San Francisco, Boston, Singapore, Shanghai, Cape Town, Houston and Monterrey. For more information on Gründerskolen see www.grunderskolen.no.

GRÜNDERSKOLEN:

You will be exposed to entrepreneurship in practice in an international context.

Choices include -
 SAN FRANCISCO
 BOSTON
 SINGAPORE
 SHANGHAI
 CAPE TOWN
 HOUSTON
 MONTERREY





Laboratory research on human cells



Participants will be involved in developing ideas into new business ventures

THE LIFE SCIENCES TRACK

The University of Oslo has Life Sciences as one of the six strategic milestones. The Life Science track is a two-year new venture management programme in cooperation with MedCoast Skandinavia/Oslo Cancer Cluster and Gothenburg International Bioscience Business School (GIBBS). The first semester takes place in Gothenburg.

During the course of study, participants will be involved in developing academic or corporate project ideas into new business ventures based on discoveries and new insights from our research partners.

This new venture programme aims to qualify participants for a significant management position in new ventures, or as leaders of new initiatives in existing firms. The programme is largely an "on-the-job" training program with hands-on venture projects. Some of these projects may become viable corporate or academic spin-offs, yet others may be independent start-ups or end up as commercial licences.

OSLO CANCER CLUSTER



MEMBERS:

Oslo Cancer Cluster has over 50 members, including industrial companies, academic research institutions, health initiatives and support groups in the field of biotechnology with the main focus on cancer.





The vision of this track is to develop a new generation of green innovators

THE ENVIRONMENTAL SCIENCES TRACK

Oslo University has Environmental Sciences as one of the six strategic milestones. The vision is to develop a new generation of green innovators and entrepreneurs that build new companies that meet the environmental challenges of tomorrow.

The Environmental Sciences track encourages science and engineering students to challenge existing solutions and bring to market environmental sound ventures built on green technology.

The Centre for Entrepreneurship is co-located with CIENS (www.ciens.no) which is a strategic environmental research collaboration between independent institutes and the University of Oslo.

The Faculty of Mathematics and Natural Sciences also has renewable energy as a major research area.

Regional Tracks:

THE SYSTEMS ENGINEERING TRACK

In co-operation with Buskerud University College, and the affiliated industry cluster on Systems Engineering (www.nce.no), we offer a separate track in Kongsberg. The core competence for the companies within the Kongsberg cluster is Systems Engineering. Systems engineering is an interdisciplinary approach and aims to enable the successful realization of complex systems.

The Systems Engineering track includes two three-month internships. One of these internships takes place in Houston, USA.

(This track is subject to approval).

THE SUBSEA TRACK

In co-operation with Bergen University College, and the affiliated Subsea industry cluster (www.nce.no), we offer a Subsea track in Bergen. The core competence for the companies within the Bergen cluster is Subsea technology. The entire program is delivered in Bergen.

The Subsea technology track includes two three-month internships, one in a regional company, the other takes place in Houston, USA.

(This track is subject to approval).

PROGRAMME STRUCTURE

1ST SEMESTER

The autumn semester is built around a set of core technology management subjects. During the first semester, you will be acquainted with how to: build and lead high impact technology teams, read and develop feasible financial, marketing as well as business plans. You will also be adept in negotiating viable and lasting business agreements.

Life Sciences students follow a different track. See the section under “The Life Sciences Track” for more information.

2ND SEMESTER

The second semester is built around two schedules. It starts with an intensive six weeks session in Norway. Thereafter students typically have a 12 weeks internship in a start-up company. This could be at one of Gründerskolen’s destinations, or students may opt to take the 2nd semester in Norway.

See www.gründerskolen.no for more information about the international destinations available.

3RD SEMESTER

The third semester is devoted to your specialization, a theory theme and a field project. This semester also has 12 weeks practical innovation management internship.

4TH SEMESTER

The master program concludes with a 17 week thesis within a chosen field of study. Upon the successful accomplishment of the program, the candidate is awarded the degree: **Master of Science in Innovation and Entrepreneurship**.



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ADMISSION AND APPLICATION

How to Apply:

The master's degree is based on a successfully completed bachelor's degree of at least 3 years' duration beyond the minimum requirements for matriculation at a Norwegian institution of higher education. In addition applicants may need to document their proficiency in the English language. For more information please see our web pages about how to apply (www.sfe.uio.no).

For general information about admission requirements and admission procedures for international applicants, please see our web pages about admission to the University of Oslo.

An information meeting will be held prior to each application deadline. Please contact the Centre for Entrepreneurship, UiO for the schedule and venue details of these meetings.

ADMISSION CRITERIA

Admission to the programme is based on the following criteria:

- Due to the programme's highly specialised nature only students with a Bachelor's Degree within Engineering or Natural Sciences may be considered for admission.
- At least 80 ECTS credits of the applicant's degree must be within Natural science and engineering.
- Applicants must have a minimum grade point average (GPA) of C.
- Previous training and experience within the fields of innovation and entrepreneurship is not required.

Applications from holders of a Bachelor's Degree earned outside the University of Oslo (in any of the above mentioned disciplines) will be assessed individually by the Faculty of Mathematics and Natural Sciences and the Programme Board.

CAREER OPPORTUNITIES:

Our students have a variety of possibilities after they have completed their studies.

Typical career opportunities are as innovators, entrepreneurs or as managers of new ventures inside companies, consultancy or they may serve as product, project or business developers in larger organisations.



STUDENT PROFILE:

Miriam Meling,
24 years old from Stavanger

Educational background:
BSc in Physics NTNU

**Why did you apply for the programme?**

During my studies in France, a former colleague and I started to plan a project with the goal of elevating the interest in science among high school students. After having prepared a project plan, we convinced NTNU that this was a project the University should take part in. Simultaneously we convinced a production company, that this idea was worth joining in on. During August 2008 we developed the financial plan, which we presented to several institutions and organizations. The efforts resulted in a financed budget on NOK 1.7 mill. Working with this project has made me realize that I have a passion for working with novel ideas and the process of convincing others to join in on them. I applied to the Masters in Innovation and Entrepreneurship because of the interdisciplinary environment and due to my aspiration to work innovatively. A great idea is not necessary a great success. I wanted to participate in the process of making the great ideas come true.

How do you combine your knowledge from your bachelor degree with the MSc?

When studying mathematics and physics you get into the habit of processing complex and difficult information. After having studied these subjects I would say that I have acquired the necessary tools in order to systematically solve the diverse and interdisciplinary tasks this MSc is presenting.

Where do you want to work?

I would like to work with start-ups and help them grow into viable and successful businesses, preferably within the field of renewable energy sources.

What is special about this programme?

This program is very international - you meet people from all over the world. We also spend most of our time working in groups with real time cases, combining theory and practice. The lectures are given by University professors and people working in different industries.

Have you been in contact with any companies and/or other education institutions through the programme?

We have written an analysis of a start-up company in Stavanger, and some smaller analysis of novel ideas provided by Technology Transfer Offices.

STUDENT PROFILE:

Daniel Leunbach,
24 years old, Danish/Icelandic

Educational background:
BSc in Molecular Biology,
University of Bergen

**Why did you apply for the programme?**

I am genuinely excited about commercial innovation, more specifically how people create, identify and translate knowledge and ideas into viable business. The Msc program represented an opportunity and the support I needed to learn and acquire the tools necessary to translate this excitement into concrete results.

How do you combine your knowledge from your bachelor degree with the MSc?

An aspect of my previous studies that I find useful when communicating with various people from diverse backgrounds is the basic understanding of the scientific method and terminology. Combining a scientific approach to understanding the world with a more pragmatic business attitude has been a tough but extremely rewarding challenge that has truly forced me to become a better communicator.

Where do you want to work?

As businesses becomes exceedingly more knowledge-based I believe that the demand for expertise in the field of science-based innovation will continue to increase. I aim to be an asset in the exciting interface between new ideas and business creation.

What is special about this programme?

The interdisciplinary nature - it has given me a broad insight into different aspects of setting up and running a successful business. Not only has the unique interdisciplinary structure of the program exposed me to a lot of interesting, skilled people, their ideas and perspectives, it has also pushed me to critically reevaluate many of my own assumptions.

Have you been in contact with any companies and/or other education institutions through the programme?

I was lucky to spend my first semester at Göteborg International Bioscience Business School, GIBBS, where I got to work on projects with a lot of highly motivated individuals and I gained a deeper understanding of product development processes in the biotech and pharmaceutical industry. I have also had the privilege of continuously applying my knowledge to practical situations, for example when advising the small Stavanger-based technology start-up Davo AS on business strategy. Currently, we are also working closely with the local technology transfer offices Birkeland and Medinnova, essentially learning how to screen and assess the feasibility of real-life 'hands-on' venture projects. If you are highly motivated, if you have the desire and the need to try out new things and build something, then I strongly recommend that you do as I did when I was stuck in the lab - apply for this programme.