

THE HANDBOOK OF STUDY
For the study programmes at
SCHOOL OF ECONOMICS AND BUSINESS
NORWEGIAN UNIVERSITY OF LIFE
SCIENCES



2015/2016

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1 STUDIES AT NORWEGIAN UNIVERSITY OF LIFE SCIENCES

Norwegian University of Life Sciences (NMBU) at Aas south of Oslo was founded in 1859 as a pure educational institution. Research was introduced as a primary function in the reorganization of 1897, and currently accounts approximately 50 percent of the activities at the university.

NMBU is recognised as a leading international centre of knowledge, focused on higher education and research within environmental- and biosciences. The university's main specialisation areas are:

- Biology
- Environment
- Food
- Land Use and Natural Resource Management

And in addition

- School of Economics and Business

Together with other research institutes established at Aas, NMBU provides state-of-the-art knowledge based on a broad range of disciplines. A broad range of study programmes are offered at Bachelor, Master and PhD level.

These include:

- Animal Science
- Applied Mathematics and Statistics
- Aquaculture
- Biotechnology
- **Business Administration**
- Chemistry
- Ecology and Natural Resource Management
- **Economics**
- **Entrepreneurship and Innovation**
- Environment and Natural Resources
- Food Science
- Forestry
- Landscape Architecture
- Physics
- Plant Science
- Spatial Planning

About 210 of the 660 courses at the Bachelor and Master level are taught in English, as well as many PhD level courses.

12 Master level programmes are conducted fully in English, and one Bachelor programme is fully conducted in English every other year. Besides theoretical and scientific education, emphasis is placed on practical training. Around 20% of NMBU students conduct part of their studies abroad.

1.1 MEETING TOMORROW'S CHALLENGES

In January 2005 the institution received the Norwegian university status. NMBU, under Norwegian law and in follow-up to the European Bologna Declaration, is implementing a quality reform and has restructured the courses, credits and degrees to meet European standards.

In total, NMBU has some 5 000 students of which about 550 are PhD students. Annually, the University confers about 60 to 70 PhD degrees upon successful candidates. There are many different nationalities at NMBU; the international students make up over 17% of all students at the University. Of the 1700 University staff including the farming part, more than half hold scientific positions.

The NMBU is built up of 3 faculties and 8 departments, and each department offers a major in the following areas.

1.2 NMBU'S FACULTIES AND DEPARTMENTS

- **Faculty of Environmental Science and Technology**
 - Departments
 - Ecology and Natural Resource Management
 - Environmental Sciences
 - Mathematical Sciences and Technology
- **Faculty of Social Sciences**
 - Departments
 - International Environment and Development Studies
 - Landscape Architecture and Spatial Planning
 - School of Economics and Business
- **Faculty of Veterinary Medicine and Biosciences**
 - Departments
 - Animal and Aquaculture Sciences
 - Basic Sciences and Aquatic Medicine
 - Chemistry, Biotechnology and Food Science
 - Companion Animal Clinical Sciences
 - Food Safety and Infection Biology
 - Plant Sciences
 - Production Animal Clinical Sciences

SCHOOL OF ECONOMICS AND BUSINESS

School of Economics and Business is known to be one of the leading university Schools specializing in areas mixing economics and business with natural sciences and technology. School of Economics and Business has a significant portfolio of projects financed by EU, the Nordic Council, the Research Council of Norway various Norwegian government ministries and private companies.

School of Economics and Business was the first at NMBU to introduce Bachelor's and Master's degrees as an integrated part of the study programs.

The department offers the following study programs:

- Bachelor in Business Administration
- Bachelor in Economics
- Master in Business Administration
- Master in Economics (English)
- Master in Entrepreneurship and Innovation

1.3 THE PURPOSE OF THE STUDY

1. The purpose of the 3-year study is to reach a degree: Bachelor of Science, and with additional two years of study the candidates may reach the Master of Science degree.
2. The curriculum is designed to enhance students creativity and educate students in their analytical skills, critical thinking as well as in the ability to cooperate in problem-solving tasks.
2. The bulk of the required curriculum is designed to develop an understanding of the economic and social systems. In addition encourage t
3. The students to gain acknowledge in biological and technological systems and processes to understand the relationship between them.
4. The particular objective of the program is to enable the student to apply business administration, economics and social sciences in the context of concrete situations.
5. We focus particularly on training the students for managerial and technical specialist positions in industry and public service.

The areas of specialization have some common core courses. These courses are based on a required knowledge of economic theory, quantitative and qualitative methods, and applied sciences. The courses are at four levels. The code numbers describe the level in the following fashion:

100 – 199	Introductory courses – Bachelor-courses
200 - 299	Intermediate courses – Can be both bachelor and master level
300 - 399	Graduate courses – MSc courses
400 - 499	Ph.D. courses

The student makes the main profile of her/his study when determining the combination of the master courses. Before the student can follow the graduate courses, she/he needs background in the required intermediate courses from this university or from university colleges in their bachelor study.

In addition, it is also possible to make a minor of biology and agriculture, especially on bachelor level. The students are free to choose between a large numbers of courses that NMBU offers. The number of ECTS/credits of free choice will vary depending on the form of specialization.

1.3.1 THE ACADEMIC CALENDAR

The academic year has two semesters and five terms.

Semesters and Terms	Code	Teaching/exam	Assignments for the exam
Fall/Autumn	F		
<i>Start</i>		<i>Week 33, Monday, Introduction week for international students</i>	
<i>August block:</i>	<i>Aug</i>	<i>Week 33, 34, 35, including Monday in week 36</i>	
<i>Exam in block</i>	<i>Aug</i>	<i>Monday in week 36</i>	<i>Wednesday in week 33</i>
<i>Fall parallel</i>	<i>F</i>	<i>Tuesday in week- 36 to Friday in week 49</i>	
<i>Exam</i>	<i>F</i>	<i>Week 50 to 51</i>	<i>1st September</i>
Spring	S		
<i>Re-exam (Aug/S)</i>	<i>Jan</i>	<i>Week 1</i>	<i>1st October Contact SiT^{*)}</i>
<i>January block:</i>	<i>Jan</i>	<i>Week 2,3,4</i>	
<i>Exam in block</i>	<i>Jan</i>	<i>Monday in week 5</i>	<i>1st December</i>
<i>Spring parallel</i>	<i>S</i>	<i>Tuesday in week 5 to Friday in week 19</i>	
<i>Exam</i>	<i>S</i>	<i>Week 20 – 22 (depending on holidays)</i>	<i>1st February</i>
<i>Re-exam (F/Jan)</i>	<i>S</i>	<i>Week 22</i>	<i>1st March Contact SiT^{*)}</i>
<i>June block</i>	<i>S</i>	<i>Week 23 – 26 (and week 32)</i>	
<i>Exam in block</i>	<i>Jun</i>	<i>Friday in week 24, 25 or 26</i>	<i>1st April</i>

^{*)} SiT= Student information Office

Details in the academic calendar are enclosed to this book and are available in SiT.

Normal work load for a semester is 30 ECTS, 25 ECTS in the parallel and 5 ECTS in the block. In the block period the students are concentrating only on one course.

1.3.2 CODES OF THE PROGRAMS

B-ØA -	Bachelor in Business Administration
B-ECON -	Bachelor in Economics
M-ØA -	Master in Business Administration
M-ECON -	Master in Economics (English)
M-EI -	Master in Entrepreneurship and Innovation

2 THE PROGRAMMES OF STUDY

2.1 UNDERGRADUATE STUDIES

2.1.1 BACHELOR IN BUSINESS ADMINISTRATION

The aim of the program is to educate reflective professionals qualified for specialist and advisory tasks within the fields of economics and administration in firms, organizations and public administration. The studies should form the foundation of life-long learning. In addition the candidates can get special qualifications in the areas of natural sciences and technology that may make them attractive in the job market.

Bachelor in business administration is a 3-year study programme where the students have to achieve 180 ECTS. The mandatory 130 ECTS consist of business-, administration-, economics- and methodology subjects. The students can choose subjects from most of the University courses.

In the last year of the studies the students can make their own profile and/or study abroad.

Mandatory courses:

Period	Year 1	Year 2	Year 3
August	AOS130 Introduction to Organisation theory (5)	AOS230 The Psychology of Organisation and Leadership (5)	Elective courses
Fall	BUS100 Cost Accounting, Fundamentals (5) MATH100 Mathematics (10) BUS133 Excel for Business (5) ECN110 Introduction to Microeconomics(5)	PHI100 Examen Philosophicum (10) BUS220 Finance and Investment (10) AOS240 Research and Social Sciences (5)	Elective courses or study abroad
January	ECN120 Introduction to Macroeconomics, part I (5)	BUS160 Tax Law for Economists (5)	Elective courses
Spring	ECN122 Introduction to Macroeconomics, part II (5) STAT100 Statistics (10) BUS110 Accounting – Financial Reporting (10)	ECN210 Microeconomics – Consumers, Producers, Market and Welfare (10) BUS210 Managerial Accounting and Budgeting (10) AOS120 Marketing (5)	AOS237 Business Strategy (10) Elective courses
June	Elective courses	Elective courses	Elective courses

Bachelor in Business Administration, certified accountant

Period	Year 1	Year 2	Year 3
August	AOS130 Introduction to Organisation theory (5)	AOS230 The Psychology of Organisation and Leadership (5)	BUS112 Accounting and Computing (5)
Fall	BUS100 (5) Cost Accounting, Fundamentals MATH100 Mathematics (10) BUS133 Excel for Business (5) ECN110 Introduction to Microeconomics (5)	PHI100 Examen Philosophicum (10) BUS220 Finance and Investment (10) JUS100 Legal Method and Norwegian Legal system (5)	AOS240 Research in Social Sciences (5) ECN211 Microeconomics – Institutions, Games and Market Failures (10) BUS217 Accounting Structure, Regulation and Ethics (5) BUS218 Public Accounting and Budgeting (5)
January	ECN120 Introduction to Macroeconomics, part I (5)	BUS160 Tax Law for Economists (5)	JUS103 Business Law (5)
Spring	ECN122 Introduction to Macroeconomics, part II (5) STAT100 Statistics (10) BUS110 Accounting – Financial Reporting (10)	BUS260 Tax Law(10) BUS210 Managerial Accounting and Budgeting (10) JUS102 Business Law (5)	AOS237 Business Strategy (10) BUS215 Annual Accounts (10) AOS120 Marketing (5)
June	Elective courses	Elective courses	BUS216 Annual Accounts – Specific Accounting Topics (5)

¹⁾ ECN211 can be substituted with ECN210 Microeconomics – Consumers, Producers, Market and Welfare.

Highlighted are the courses beyond the mandatory courses at School of Economics and Business to meet the educational requirements for certified accountant.

The following illustrates examples of elective courses taken at the 2nd and 3rd year of studies for those taking the entire program at NMBU.

Business Economics and relevant law		ECTS	Term
JUS100	Legal Methods and Norwegian Legal System	5	F
IND200	Practical project management	10	F
BUS280	Private and Corporate Insurance	5	F
BUS240	Operations Management	10	F
BUS230	Operation Research	10	S
JUS102	Law of Contract and Companies	5	S
JUS103	Business Law II	5	Jan

Those who want to take JUS102 Law of Contract and Companies, must first take JUS100 Legal Methods and Norwegian Legal System given in autumn parallel. Those who want to specialize themselves in finance in master degree, will benefit from taking mathematics and statistics (econometrics) as well.

Leadership and Innovation		ECTS	Term
JUS100	Legal Methods and Norwegian Legal System	5	F
TIP100	Technical Innovation, shall be taken before TIP200	5	S
JUS102	Law of Contract and Companies	5	S
AOS233	Strategic Processes and Decision-Making	10	S
TIP200	Product Development and Design	10	F
IND200	Practical project management	10	F
BUS240	Operations Management	10	F
BUS271	Business Development and Business Start-Up	5	S
IND230	Quality Management	5	Jan

Environment and Economics		ECTS	Term
ECN170	Environmental and Resource Economics	5	S
ECN202	Introduction to Econometrics	5	F
ECN270	Natural Resource Economics	5	F
ECN211	Microeconomics – Institutions, Games and Market Failures	10	F
ECN222	Macroeconomics II	10	F
ECN230	International Economics	10	F
ECN260	Agricultural Policy	10	F
ECN263	Food Industry Economics	5	Jan
ECN271	Cost Benefit Evaluation and Environmental Valuation	10	S
ECN280	Energy Economics	10	S

Students, who are interested in energy, should supplement their study plan with elective courses in renewable energy. For ex.: FORN200 - Energy Systems and Technologies (subject to FYS100, MATH100 and BUS100), FORN210 - Climate accounting, life cycle analyzes and climate policy (subject to FORN200). See more about proposals of non-economical courses in a separate section.

Law and real estate		ECTS	Term
JUS100	Legal Methods and Norwegian Legal System	5	F
JUS102	Law of Contract and Companies	5	S
JUS110	Introduction to Land Law	5	F
JUS201	Administrative Law	10	F
JUS210	Land Law	10	S
JUS220	Environmental Law	5	F
EIE101	Introduction to Real Estate I	5	F
EIE222	Real Estate Valuation	10	S

Agricultural economics and food industry sector		ECTS	Term
ECN230	International Economics	10	F
ECN260	Agricultural Policy	10	F
ECN263	Food Industry Economics	5	Jan
PØL100	Ecological Agriculture	5	S
HFX130A	Basic Animal Science/ Module A - Practical Animal Husbandry	5	Aug+F
HFX130B	Basic Animal Science/ Module B - Challenges for Future Food Production	5	S
HFX130C	Basic Animal Science/ Module C – Scientific Process	5	Jan
HFX130D	Basic Animal Science/ Module D - Animal Ethology	5	F
HFX130E	Basic Animal Science/ Module E- Animal Nutrition	5	F
HFX130F	Basic Animal Science/ Module F - Animal Breeding and Genetics	5	S

2.1.2 BACHELOR IN ECONOMICS

The Bachelor in Economics is a 3-year study programme and the students have to obtain 180 ECTS, of which 85 ECTS are mandatory. **In addition the students must choose 10 ECTS in Economics on the 200-level.**

The available courses are:

- ECN230 – International Economics, 10 ECTS - fall
- ECN260 – Agricultural Policy, 10 ECTS - fall
- ECN263 – Food Industry Economics, 5 ECTS – Jan
- ECN270 – Natural Resource Economics, 5 ECTS - fall
- ECN280– Energy Economics 10 ECTS – spring
- B15-ECON – Bachelor thesis, 15 ECTS - spring

The structure of the basic block and profiles, have been based on students starting in year 2015. Students already enrolled in the program will find their plans on the website of the program.

Bachelor thesis (B15-ECON) is elective. The thesis can be written in Spring of the 2nd or 3rd year.

Mandatory courses:

Period	Year 1	Year 2	Year 3
August	ECN100 Introduction to Economics (5)	Elective course	Elective course
Fall	PHI100/PHI101 Examen Philosophicum (10) ECN110 Introduction to Microeconomics (5) MATH100 Mathematics (10) ¹⁾	ECN211 Microeconomics – Institutions, Games and Market Failures (10) ECN222 Macroeconomics II (10) Elective course	ECN201 Econometrics (10) ²⁾ BUS220 Finance and Investment (10) Elective courses
January	ECN120 Introduction to Macroeconomics, part I (5)	ECN140 Economic History (5)	Elective courses
Spring	ECN122 Introduction to Macroeconomics, part II (5) ECN210 Microeconomics – Consumers, Producers, Market and Welfare (10) ECN170 Environmental and Resource Economics (5) BUS100 Cost Accounting, Fundamentals (5)	STAT100 Statistics (10) Elective courses	ECN271 Cost Benefit Evaluation and Environmental Valuation (10) Elective courses
June	Elective courses	Elective course	Elective course

¹ Students with good knowledge in Mathematics (R2 from upper secondary school) can choose MATH111 instead of MATH100.

² Those students who are weak in statistics are encouraged to attend classes in ECN 202 (which is easier and goes in Norwegian) at the same time as they take ECN201.

Recommended elective courses in the bachelor ¹

Economic courses

- ECN230 - International Economics, 10 ECTS - fall
- ECN260 – Agricultural Policy, 10 ECTS – fall
- ECN263 - Food Industry Economics, 5 ECTS – Jan
- ECN270 – Natural Resource Economics, 5 ECTS - fall
- ECN280 - Energy Economics, 10 ECTS – spring
- B15-ECON – Bachelor thesis, 15 ECTS -spring

Courses in Business Administration

- BUS110 – Accounting – Financial Reporting, 10 ECTS - spring
- BUS210 – Managerial Accounting and Budgeting, 10 ECTS – spring
- BUS218 – Public Accounting and Budgeting, 5 ECTS - fall
- BUS230 – Operation Research, 10 ECTS – spring
- BUS280 – Private and Corporate Insurance, 5 ECTS – fall

Courses in Administration and Organization

- AOS120 – Marketing, 5 ECTS - spring
- AOS130 – Introduction to Organisation Theory, 5 ECTS - August
- AOS230 – The Psychology of Organisation and Leadership, 5 ECTS - August
- AOS237 – Business Strategy, 10 ECTS – spring
- IND200 – Practical project management, 10 ECTS – autumn

Method-, data- and writing courses

- AOS240 – Research in Social Sciences, 5 ECTS – fall
- BUS133 – Excel for Business, 5 ECTS –fall
- INF100 – Principles of Information Processing, 5 ECTS - fall
- EDS275- Writing Seminar, 10 ECTS – fall and spring

Mathematical courses

- MATH 111 – Calculus I, 10 ECTS - fall
- MATH 112 – Calculus II, 10 ECTS – spring
- MATH113 – Linear algebra and linear differential equations, 10 ECTS - fall
(altern. MATH131)

¹ It is proposed to set up a list of recommended elective bachelor courses from different disciplines rather than presenting them as «profiles» which are not binding (the list is not exhaustive and students may select other courses).

Courses in Law

- JUS100 – Legal Method and Norwegian Legal System, 5 ECTS - fall
- JUS102 – Law of Contract and Companies, 5 ECTS - spring
- JUS103 – Business Law II, 5 ECTS - January
- JUS110– Introduction to Land Law, 5 ECTS – fall
- JUS201 – Administrative law, 5 ECTS – fall
- JUS210 – Land Law, 10 ECTS – spring
- JUS220 – Environmental law, 5 ECTS – fall

Environment, Energy and Development courses from other departments

- ECOL100 – Introductory Ecology, 5 ECTS - spring
- KLIMA100 – Climate change, research and societal impacts, 5 ECTS - fall
- MINA100 – Energy, Environment and Natural Resources, 10 ECTS - August + fall
- EDS104 - Environmental and Sustainability Sciences, 10 ECTS - spring
- EDS130 - Introduction to Political Ecology, 10 ECTS – Jan + spring
- EDS170 - Introduction to Gender and Development, 10 ECTS - spring
- EDS234 – Environmental Economics – the role of institutions, 5 ECTS - fall
- EDS285 – Global Food Security, 10 ECTS - fall
- FORN200 – Energy Systems and Technologies, 10 ECTS - fall
- FORN220 – Greenhouse Gass Accounting, Life Cycle Analysis and Climate Policies, 10 ECTS - spring
- FORN230 – Energy policy and markets, 5 ECTS - spring
- NATF260 – Multi-disciplinary Impact Assessment, 10 ECTS - January + spring

2.2 GRADUATE STUDIES

Master of Science in Business Administration: The programme satisfies the scientific requirements of civil economy education and has much in common with such study programmes at other institutions in Norway and abroad. The Master's degree programme has many common courses with other program in Economics that is offered by the department.

Graduates from the programme will have a competence that is acknowledged equally high and relevant as for graduates from other Norwegian and international institutions that offer a Master's degree in Business Administration. In addition, the department aims for graduates from NMBU to have a special profile focused towards natural sciences and technology, which will make them especially attractive in the job market. Students can specialise in business economy analysis and administration that builds on the courses from the Bachelor's degree. They can also choose courses in logistics, industry development and international economy.

Master of Science in Economics: Modern economics is characterized by complexity and rapid changes. Decision-makers in both the private and public sector demand an ever higher degree of the information that renders it possible to make the right decisions. Economists hold theoretical and methodological knowledge which equips them to function as premise providers in such situations. The programme provides comprehensive training in economic approaches, theories, topics and methods. This degree qualifies for work with economic analyses within business and public administration. It also qualifies for further studies at doctoral level. The programme satisfies the scientific requirements of education on master level in economics and has much in common with such study programmes at other institutions in Norway and abroad.

Master in Entrepreneurship and Innovation. Innovation is a key factor for the success of many companies. However, innovation and commercialization is a demanding process where a crucial factor is the ability to evaluate, analyze, implement and commercialize a good or a service. This master program educates candidates that can contribute to the commercialization of their own or other people's ideas for a new product or service.

Acceptance to this program requires a bachelor's degree or equivalent, preferably with a major in science or engineering. Students with a bachelor's degree in economics will also be considered for admission.

60 ECTS of the course work has to be on the 300 level the MSc-programmes.

60 ECTS has to be taken at NMBU.

2.2.1 MASTER OF SCIENCE IN BUSINESS ADMINISTRATION

The Master degree is built on the Bachelor in Business Administration.

120 ECTS/credits must be completed:

- **A *major* of 70 ECTS, consisting of:**
 - 40 ECTS with courses in a major
 - 30 ECTS master thesis within the major.
- **A minor of 30 ECTS**, within a profile different from the major.
- **20 ECTS free to choose** among almost all courses given at this University.

The final Master thesis is mandatory for all Master students and with supervisor at School of Economics and Business.

Profiles for Master of Science in Business Administration

I Finance and Investment		ECTS	Term
BUS305	Strategy Development (ECN302 can be chosen instead of BUS305 if the profile is combined with Economics profile)	5	Aug
BUS322	Investment Analysis and Financial Risk Management (mandatory)	10	F
BUS323	Varemarkedsanalyse (mandatory)	10	S
BUS321	Empirical Analyses of Financial and Commodity Markets – Theory (mandatory)	5	Jun
BUS315	Corporate Finance and Valuation	10	F
BUS325	Options, Derivatives and Risk Management	10	S
ECN331	International Economics and Finance	5	Aug
BUS324	Opsjoner, derivater og risikostyring	10	F
ECN301	Econometric Methods	10	F
M30-ØA	Master Thesis (mandatory for all)	30	S

It is required to have minimum 20 ECTS within the courses marked with the star in the Business Management major profile.

II Business Management		ECTS	Term
BUS305	Strategy Analysis and Strategy Development (mandatory)	5	Aug
* BUS315	Corporate Finance	10	F
* BUS310	Strategy Implementation and Performance Measurements	5	Jan
* BUS340	Supply Chain Management	10	F
* BUS332	Decision Analysis and Capital Budgeting	10	S
* BUS313	Strategy Cost Management	10	F
* BUS314	Corporate Governance	5	S
BUS333	Approaches to Management Accounting and Control	5	F
AOS340	Qualitative Methods	5	F
PHI301	Ethics in Business	5	S
BUS311	Environmental Accounting and Management	5	S
M30-ØA	Master Thesis (mandatory for all)	30	S

It is required to have minimum 20 ECTS within the courses marked with the star in the Strategy and leadership major profile.

III Strategy and leadership		ECTS	Term
BUS305	Strategy Analysis and Strategy Development (mandatory)	5	Aug
AOS340	Qualitative Methods	5	F
* AOS320	Perspectives on Institutions and Organizations	5	F
* AOS335	Organization and Management	10	F
* AOS333	Organization Theory	5	Jan
* AOS331	Organization and Leadership, Theory part	10	S
* BUS310	Strategy Implementation and Performance Measurements	5	Jan
* BUS314	Corporate Governance	5	S
AOS336	Omdømmeledelse	5	S
BUS311	Environmental Accounting and Management	5	S
AOS332	Strategy Dynamics	10	F
PHI301	Ethics in Business	5	S
M30-ØA	Master Thesis (mandatory for all)	30	S

IV Economics		ECTS	Term
ECN302	Mathematics for Economists (mandatory)	5	Aug
ECN311	Microeconomics III (mandatory)	10	F
ECN270	Natural Resource Economics	5	F
ECN271	Cost Benefit Project Evaluation and Environmental Valuation	10	S
ECN280	Energy Economics I	10	S
ECN301	Econometric Methods	10	F
ECN303	Impact Assessment Methods	5	F
ECN304	Behavioral and Experimental Economics	10	F
ECN305	Research Methods in Economics	5	S
ECN312	Industrial Organization	5	F
ECN320	Macroeconomics III	10	S
ECN331	International Economics and Finance	5	Aug
ECN330	Economic Integration and Trade Liberalization	10	F
ECN352	Poverty	10	S
ECN371	Environmental Economics	10	S
ECN372	Climate Economics	10	F
ECN380	Energy Markets and Regulations	10	F
M30-ØA	Master Thesis (mandatory for all)	30	S

V Environmental and Resource Economics		ECTS	Term
ECN302	Mathematics for Economists (mandatory)	5	Aug
ECN311	Microeconomics III (mandatory)	10	F
ECN270	Natural Resource Economics (mandatory)	5	F
ECN371	Environmental Economics (mandatory)	10	S
ECN301	Econometric Methods	10	F
ECN271	Project Evaluation and Environmental Valuation	10	S
ECN372	Climate Economics	10	F
BUS311	Environmental Accounting and Management	5	S
M30-ØA	Master Thesis (mandatory for all)	30	S

VI Energy Economics		ECTS	Term
ECN280	Energy Economics (mandatory)	10	S
ECN302	Mathematics for Economists (mandatory)	5	F
ECN311	Microeconomics III (mandatory)	10	F
ECN312	Industrial Organization (mandatory)	5	Jan
ECN380	Energy Markets and Regulations (mandatory)	10	F
ECN301	Econometric Methods (mandatory)	10	F
ECN372	Klimaøkonomi (eng. ved behov)	10	F
M30-ØA	Master Thesis (mandatory for all)	30	S

Property		ECTS	Term
EIE310	Property Market and Analysis	10	F
JUS311	Real Estate Transactions	5	F
EIE311	Real Estate Development, Economics analysis and Valuation	10	S
JUS320	Planning and Building Law	5	S
EIE320	Expropriation, Compulsory Purchase	10	F+Jan

2.2.2 MASTER OF SCIENCE IN ECONOMICS

120 ECTS must be completed, including 50 ECTS with mandatory courses and a Master thesis of 30 ECTS. In addition, students must choose at least 30 ECTS from one of the five elective specializations:

- Environment and Resource Economics
- Development International Economics
- Energy Economics
- Financial Economics
- Trade and Commodity Markets

The last 10 ECTS are elective and may be chosen among courses at NMBU at the 200- or 300- level or from a list of eligible 100-level courses.

Mandatory courses:

Semester	Year 1	Year 2
August	ECN302 Mathematics for Economists (5)	Elective courses
Fall	ECN311 Microeconomics (10) ECN301 Econometric Methods (10) ¹⁾ ECN270 Natural Resource Economics (5)	Elective courses
January	ECN312 Industrial Organization (5)	Elective courses
Spring	ECN320 Macroeconomics III (10) ECN305 Research Methods in Economics (5) Elective courses	M30-ECON Master Thesis (30)
June	Elective courses	

¹⁾ ECN201 Econometrics or the equivalent is a prerequisite for ECN301 and should be taken before ECN301. Thus, for those that do not have ECN201 or the equivalent; ECN301 should be taken in the fall in Year 2.

Environment and Resource Economics

Code	Name	ECTS	Term
ECN271	Project Evaluation and Environmental Valuation	10	S
ECN371	Environmental Economics	10	S
BUS311	Environmental Accounting and Management	5	S
ECN331	International Economics and Finance	5	Aug
ECN372	Climate Economics	10	F
ECN330	Economic Integration and Trade	10	F
ECN380	Energy Markets and Regulations	10	F
M30-ECON	Master Thesis with seminar	30	Jan/S

Development and International Economics

Code	Name	ECTS	Term
ECN352	Poverty	10	S
ECN331	International Economics and Finance	5	Aug
ECN330	Economic Integration and Trade Liberal.	10	F
ECN303	Impact Assessment Methods	5	F
ECN304	Behavioural and Experimental Economics	10	F
ECN350	Development Economics	10	F
M30-ECON	Master Thesis with seminar	30	Jan/S

Energy Economics

Code	Name	ECTS	Term
ECN280	Energy Economic (only in Norwegian)	10	S
ECN371	Environmental Economics	10	S
BUS321	Empirical Analysis of Financial and Commodity Markets, Theory	5	Jun
ECN380	Energy Economics	10	F
ECN372	Climate Economics	10	F
M30-ECON	Master Thesis with seminar	30	Jan/S

For this profile the students need to have the course BUS220- Finance and Investment in the bachelor degree.

Financial Economics (Some courses are given in Norwegian)

Code	Name	ECTS	Term
BUS322	Investment Analysis and Financial Risk Management (Norwegian)	10	F
BUS323	Commodity Market Analysis (Norwegian)	10	S
BUS321	Empirical Analysis of Financial and Commodity Markets, Theory	5	Jun
ECN331	International Economics and Finance	5	Aug
BUS324	Options, Derivatives and Risk Management (Norwegian)	10	F
M30-ECON	Master Thesis with seminar	30	S

The prerequisites for the profile “Trade and Commodity Markets” are ECN230 - International Economics and ECN260- Agricultural Policy (Students that do not have ECN230 (or equivalent) from their B.Sc. degree, you need to take this course in the first year, in addition to the mandatory courses).

Trade and Commodity Markets (Some courses are given in Norwegian)

Code	Name	ECTS	Term
BUS323	Commodity Market Analysis (Norwegian)	10	S
BUS321	Empirical Analysis of Financial and Commodity Markets, Theory	5	Jun
ECN331	International Economics and Finance	5	Aug
ECN330	Economic Integration and Trade	10	F
ECN260	Agricultural Policy (Norwegian)	10	F
ECN263	Food Industry Economics (Norwegian)	5	Jan
M30-ECON	Master Thesis with seminar	30	S

2.2.3 MASTER IN ENTREPRENEURSHIP AND INNOVATION

Mandatory courses:

Semester	Year 1	Year 2
August	INN210 Innovation (5)	BUS305 Strategy Analysis and Strategy Development (5)
Fall	INN200 Management Accounting (10) INN220 Introduction to Entrepreneurship (15)	BUS370 Economic Development and Entrepreneurship (10) AOS340 Qualitative Methods (5) AOS240 Research in Social Sciences(5) Elective courses (5 – 10 ECTS)
January	INN310 Intellectual Property and Rights (5)	M30-EI Master Thesis
Spring	INN220 - ending School of Entrepreneurship/ Gründerskolen (25)	M30-EI Master Thesis (30)
June	Gründerskolen - ending	

In the third semester, there is room for elective courses. It may be interesting and relevant courses at other Departments or courses at the School of Economics and Business.

NMBU's course catalog can be obtained at SiT website: www.nmbu.no/sit

Some suggestions for elective courses:

<u>Code</u>	<u>Name</u>	<u>ECTS</u>	<u>Term</u>
ECN202	Introduction to Econometrics	5	F
BUS240	Operations Management	10	F
BUS220	Finance and Investment	10	F
TIP200	Product Development and Design	10	F
INN200	Practical project management	10	F
BUS311	Environmental Accounting and Management	5	S
PHI301	Corporate Social Responsibility	5	S
AOS120	Marketing	5	S
AOS331	Leadership and HRM	10	S
AOS336	Reputation Management	5	S
AOS320	Institutional Perspectives on Organizations	5	F
AOS335	Organizations in Tranzition	10	F
INN331	Enternship	10	F

2.2.4 MASTER THESIS

The master thesis gives the finish of the study and an important part of the specialization. It is a minor research task. In the last semester the students shall submit a 30 ECTS thesis and show that they are able to this alone.

After submitting the thesis, there will be arranged a defence for the thesis with questions from an external sensor.

MSc and doctoral students are integrated in the research process. School of Economics and Business emphasizes interaction among researchers, including an active seminar series.

The Department publishes a catalogue with projects/problems for master thesis connected to many of the research fields, examples:

- Agricultural economics and policy
- Aquaculture and fisheries economics
- Consumer economics
- Development economics
- Economics and business administration
- Environmental and natural resource economics
- Entrepreneurship and rural development
- Investment and finance
- International trade
- Marketing
- Organization and management

The students have to make an agreement with an advisor a year before submitting the thesis.

At the start of the last semester there will be a seminar with methodological approaches with emphasis on data analysis, research design and use of literature.

THESIS SUBMISSION

The deadline is the **15th of May**, at 15.00 hours (**December15th**, for those who entered the master-program in the spring term).

The thesis is to be delivered in 4 soft bound copies (5 in cases where there are 2 supervisors).

Use the NMBU front page template. Make sure you write School of Economics and Business on the front page.

When you submit your thesis you first visit the Student Information Senter (SiT) where the thesis is registered and marked.

SiT takes 1 copy of your thesis. You deliver the other 3 copies in at the reception of the School of Economics and Business (4 if you have 2 supervisors; that is a total of 5 copies).

All of NMBU's students are to post their Master thesis in Brage as one document, including the front page and enclosed material. When you submit your thesis at the SiT and School of Economics and Business you are to hand in a receipt that verifies that you have posted your paper in Brage, at the same time.

You are also to fill in a registration form for thesis submission.

In cases when the thesis is confidential you fill in a form for confidential master thesis.

3 DESCRIPTIONS OF COURSES

AOS120 Marketing

Course responsible: Frode Alfnes

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: The course aims to give the students' knowledge of the principles underlying modern marketing. Such insight is important for several reasons: As consumers it is useful to understand how businesses and public authorities compete for our understanding of reality in order to influence our purchase decisions. As cultural individuals it is interesting to have knowledge about how our consumer choices are assigned symbolic values and thereby associate us with different types of lifestyles. In the role as professional workers it is important to see how the success of businesses or organizations depends on our ability to integrate the thoughts and behaviour of the consumer into our work. The course has a consumer-behaviour perspective, which means that marketing must be based on an understanding of how consumers think and act.

Learning outcome: Basic principles of modern marketing.

Teaching methods: Lectures. Group work.

Teaching support:-

Syllabus: Textbook. Lecture notes. Additional reading material may be distributed.

Prerequisites:-

Mandatory activities:-

Exam: Written examination (3 hours): 2/3 of the grade. Written group work: 1/3 of the grade. Both the written examination and the case work must be passed to get a passing grade in the course. A re-sit examination for those passing the case work but failing the written examination will be given the following semester.

Note:-

Nominal workload: 150 hours.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: 30 hours.

AOS130 Introduction to Organisation Theory

Course responsible: Arild Wæraas

Teachers: Are Vegard Haug

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size: A maximum number of attending students may be set as a result of limited teaching facilities.

Teaching exam periods: This course starts in August block. This course has teaching/evaluation in August block.

Course contents: In the first part of the course, emphasis is placed on understanding different perspectives that are used in the study of organisations. The remaining academic content of the course is centered on the most central ideas of organisation theory: the surroundings, strategies, aims, technology, structure and culture of organisations. The composition of the course will to a large extent follow the contents of the textbook, combined with practical cases.

Learning outcome: The primary learning goal is for students to gain knowledge on how organisations work. The specific learning goals are threefold: 1) Knowledge about the most central theories that are used when studying organisations and how these can be used to analyze practical problems and to help them navigate in organisations they come into contact with. 2) Practice analytical thinking and train the systematic investigation of organisations. 3) Develop critical attitudes towards organisational problems, especially the way these are portrayed in the media.

Teaching methods: Lectures, colloquia and exercises. Case studies.

Teaching support: Teaching assistants will supervise the students throughout the seminars.

Syllabus: The lectures are considered to be part of the curriculum. Textbook: Jakobsen, Dag Ingvar og Jan Thorsvik: Hvordan organisasjoner fungerer. Bergen: Fagbokforlaget. (3.ed.).

Prerequisites:-

Mandatory activities: Assignments. Participation in study groups. Students who arrive later than the second day of the course will be dismissed.

Exam: Final examination counts 100%.

Note:-

Nominal workload: 5 ECTS

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: Seminars from 09:00 - 16:00 the first two weeks of the august semester

AOS230 The Psychology of Organisation and Leadership

Course responsible: Arild Wæraas

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in August block. This course has teaching/evaluation in August block.

Course contents: Topics: Perceptions/cognition; Learning; Attitudes and Leadership; Group psychology; Satisfaction and turn-over.

Learning outcome: The ability to comprehend the most significant theories within the field of psychology and the relationship between these. The course will specifically focus on challenges in the knowledge economy. The ability to apply theories to practical problems is stressed, as well as the ability to draw on interdisciplinary knowledge.

Teaching methods: Core lectures, exercises, class discussions and written project work. Submission of voluntary report for comments.

Teaching support: None in particular other than contact with the teacher.

Syllabus: Kaufmann og Kaufmann: Psykologi i organisasjon og ledelse. Fagbokforlaget, latest edition.

Prerequisites: AOS130.

Mandatory activities:-

Exam: Written examination, 3.5 hours, counts 100%.

Note:-

Nominal workload: 150 hours included the lectures

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: Organized lecturing time: ca. 40 hours in total over two weeks. The lecturing time will partly be group work on problem solving.

AOS233 Strategic Processes and Decision-Making

Course responsible: Carl Brønn

ECTS credits: 10

Department: School of Economics and Business

Frequency: Odd years

Teaching language: EN

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: Definition and characteristics of wicked problems. Processes for working with wicked problems. Cognitive influences on perception and issue definition. Stakeholder analysis. Modelling dynamic resource systems and the strategic architecture. Alternate futures, scenarios and flight simulators. Implementation - politics and negotiations.

Learning outcome: This interdisciplinary course focuses on a class of problems called "wicked problems" or "messes." Evidence of wicked problems comes from experts in many areas.

Teaching methods: Lectures. Guest presenters. Student presentations. Case discussions.

Teaching support: Office hours and procedures are established at the first class meeting. A course schedule is handed out at the same time.

Syllabus: Selected articles.

Prerequisites: General knowledge of economics and organisation theory concepts.

Mandatory activities:-

Exam: The assessment is based on a semester assignment: 100%.

Note:-

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: AOS232: 10 credits.

Type of Course: Approx. 50 hours.

AOS234 Leadership - Course for Student Representatives

Course responsible: Sigurd Henning Rysstad

Teachers: Per Ove Røkholt

ECTS credits: 10

Department: School of Economics and Business

Frequency: The course will be given if teachers are available

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size: Maximum 25 participants. Priority: Elected student representatives at NMBU.

Teaching exam periods: This course starts in January block. This course has teaching/evaluation in January block, Spring parallel, June block.

Course contents: The course is made up of four parts, each centered around a topic: - social motive forces, conditions and strategic adjustment, - structuring and organisation design as a strategic tool, - central organisational management structures, - with main emphasis on the role, functions and working method of management, - leadership and human resource management. On the one hand, the topics are naturally limited topics that are illuminated through practical cases and relevant theory. On the other hand, substantial emphasis is, during the course, placed on developing connections between the four topics. The connections will be made clear through the use of practical, realistic examples, and by the integration of theory and analysis.

Learning outcome: There are two goals: Firstly, to make our elected student representatives' proficient in their roles as elected student representatives at NMBU. Secondly, to give knowledge and an understanding of topics in organisation theory that

is relevant to a leader. Students are to gain knowledge of NMBU as an organisational system, how the system is structured, how it works, and what challenges one is faced with due to current social developments. In addition, students are to gain general knowledge of organisation theory and an understanding of how organisations work strategic adjustment and planning, leadership and management work. Students are to be given an understanding of the connections between conditions, challenges, leadership and management work. The students are to be given an understanding of the connection between conditions, strategic choices and the implementation of strategies. Helped by organisation and leadership theories, students are to develop skills in analyzing complex, practical, organisational problems. The course deals explicitly with ethical questions in connection with management work, leadership and leader behaviour. Central ethical issues that are dealt with are, among others, honesty, loyalty and justice.

Teaching methods: The course uses a variety of different learning methods: core lectures, seminars, class discussions, individual literature studies, colloquium work, project work and presentations (written and oral).

Teaching support: Plenary discussion of the projects.

Syllabus: The syllabus consists of lectures + book chapters + a series of articles published in scientific journals and newspapers + materials with concrete case information (for example annual reports, strategic plans, reports, etc.). The syllabus will vary somewhat from year to year, depending on which projects the students will be working with.

Prerequisites: Practical leadership and management experience.

Mandatory activities: Formal connection to a class group. Participation in the Saturday gatherings.

Exam: All students must hand in 2-4 individual short papers (pass/fail) and participate in 2-4 group presentations. The course grade (A-F) will be based on a group project report which has to be handed in within a specified deadline, and presented and defended in an oral exam.

Note: The course is intended specifically for elected student representatives at NMBU.

Nominal workload: In accordance with NMBU's norms.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: Lectures/seminars are given 4-5 Saturdays and several evenings. In total around 40 hours of class time. The course is made up of four sections. All four sections are structured alike: -Introduction of the topic by the responsible teacher and guest lecturers. -Elaboration on the subject and generalization of the chosen issues related to the subject, led by the teacher. -The teacher will go through the main topics discussed in the course literature. -Distribution and presentation of project assignments. Distribution of literature relevant to the course. -Review of experiences from previous gatherings. -Preliminary presentation and discussion of project work. -Introduction to the next topic.

AOS237 Business Strategy

Course responsible: Silja Marianna Korhonen-Sande

Teachers: Glenn Roger Kristiansen

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: The central themes are strategic planning, internal and external analysis, formulation of business strategies, strategies in various contexts, and strategy implementation. Corporate social responsibility and the role of innovation in strategy are discussed as special topics.

Learning outcome: This course provides the students with a basic theoretical tool bag in business strategy: knowledge of central concepts and models. The students will apply these concepts and models to analyze the external and internal environment of an organization, to formulate and choose between appropriate strategy alternatives and to discuss organizational designs for strategy implementation based on the analysis. The students will develop an interest in strategy and appreciate the importance of strategic thinking in various societal contexts.

Teaching methods: The students are encouraged to acquaint themselves with the theory before each lecture in order to participate in discussions and exercises in the classroom. The literature for each lecture is given in the lecture plan. The students apply the theories on cases also in small groups and present the results at case-seminars.

Teaching support: The students will receive feedback at the case-seminars.

Syllabus: Robert M. Grant and Judith Jordan. Foundations of Strategy. 2012. Wiley (or a Norwegian version of this book). Articles. Lecture notes.

Prerequisites: AOS120, AOS130, BUS100.

Mandatory activities: Two compulsory assignments (case analysis assignments and presentation of those assignments at case-seminars) that are graded passed/ failed and must be passed before the student can participate in the final exam. Participation in the seminars are compulsory, please notice that we form the seminar groups during the first lecture.

Exam: Term paper in small groups (max. 4 persons) or individually (40%), written individual three-hour exam (60%). A retake exam is organized in the following semester for those students who passed the term paper assignment but failed the individual exam. The grade for the term paper is valid only for the semester when the assignment was written and at the following retake exam.

Note:-

Nominal workload: 300 hours.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: 3-4 hours lectures and seminars per week. In addition group work related to cases.

AOS240 Research in Social Sciences

Course responsible: Frode Alfnes

Teachers: Tor Morten Løland

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: The course aims to give the students insight into how one can plan and conduct empirical analyses of questions in the social sciences. The course aims to enable students to conduct investigations that can endure a critical evaluation based on the most common quality criteria that are used for such investigations. The course is organized around the two types of empirical design that are most referred to - the survey and the experiment. Emphasis will be placed on the students' understanding of the possibilities and limitations of these two designs and how the concrete question that is analyzed influences them, and which of these two designs should be chosen and how the shaping of the chosen design determines what conclusions can be drawn on the basis of the conducted investigation. Inside this framework, the lecturers will more specifically deal with how the information brought forward by the investigation may be analyzed and thereby answer some of the central questions of the investigation.

Learning outcome: To plan and conduct social science and marketing studies.

Teaching methods: Lectures, group work, and exercises.

Teaching support:-

Syllabus: Textbook and some additional reading.

Prerequisites:

Mandatory activities:-

Exam: Written examination, 3 hours (2/3). Group assignment (1/3). The examination and the group assignment must be passed in the same semester. If you fail one of them, you fail the course. A re-sit examination for those passing the group assignment, but not the examination will be given the following semester.

Note:-

Nominal workload: 150 hours.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: 2 hours per week with classroom lectures + a few weeks with 2 hours per week with classroom exercises.

AOS320 Institutional Perspectives on Organizations

Course responsible: Sigurd Henning Rysstad

Teachers: Bernt Aarset, Arild Wæraas

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: "Rational choice" institutionalism: markets and hierarchies, transaction costs. Historical institutionalism: historical patterns for organizational development. Sociological institutionalism: rational, normative, and cognitive thought models for organizations and their adaptations.

Learning outcome: The objectives are that the students will achieve knowledge about different theoretical perspectives of organizations and institutional change, and be able to explain and critically evaluate these perspectives.

Teaching methods: Lectures and seminars.

Teaching support:-

Syllabus: Reading list handed out at start up.

Prerequisites:-

Mandatory activities: 2-3 individual essays (pass / non-pass).

Exam:

Note:-

Nominal workload: Total work load is estimated to 150 work hours or 5 credits.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: The course will be organized as 2 hour weekly sessions.

AOS331 Leadership and HRM

Course responsible: Arild Wæraas

Teachers: Susann Gjerde

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: Topics: Old and new leadership theories, leadership as myth and symbol, Scandinavian leadership, leadership behaviour and styles. Human Resource Management, knowledge management, leadership and empowerment. Leader identity.

Learning outcome: The aim of the course is to provide insight into studies of modern organisations and leadership. It gives a broad theoretical overview of the field, with a specific purpose of applying theory as a tool for analysis and understanding. Further, a learning objective is to train the students in defining, analyzing and discussing central problems related to the management and leadership in organisations.

Teaching methods: Lectures, discussions, and group work. Presentations of required readings by students and teacher.

Teaching support: Supervision of the semester assignment in groups. Oral feedback on each presentation. Class discussions.

Syllabus: A compendium with scientific articles and book chapters.

Prerequisites: Introduction to Organisation Theory (AOS130). The Psychology of Organisation and Leadership (AOS230). Strategic Management and Organisation Design (AOS232 or AOS237). Research Methods in the Social Sciences (AOS240).

Mandatory activities: The students are organized into groups, and each group will hand in a semester assignment. The semester assignment is assessed as passed/failed. The semester assignment must be approved to be eligible for the final examination.

Exam: A take-home examination of 30 hours.

Note:-

Nominal workload: According to NMBU's norms. Ten credits = 300 hours.

Entrance requirements: Bachelor

Reduction of credits:-

Type of Course: Teaching is organized in two to four hour sessions. Some periods of the semester have two sessions per week, others have none. The teaching schedule will be presented at the beginning of the course.

AOS332 Strategy Dynamics

Course responsible: Carl Brønn

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: Fundamental principles of dynamic systems mapping of stock-and-flow structures connecting feedback to stock and flow structures the dynamic resource perspective on strategy, interactions between operations, strategy, and human resource policy, managing instabilities in supply chains applications - scenarios and management flight simulators.

Learning outcome: The course gives an introduction to system dynamics as a language and a methodology for analyzing and understanding organizations business policies and strategies. This is accomplished by presenting the effects of the cognitive

dimension on strategic business activities. This leads to the development of a conceptual structure for understanding organizations as complex systems. This perspective gives strategic decision makers a powerful methodology for both analyzing and communicating the long-term consequences of their strategic planning activities.

Teaching methods: Each weekly session will be organized as a combination of lectures, student presentations, and group assignments.

Teaching support:-

Syllabus: Sterman, J. (2000). Business Dynamics: Systems Thinking and Modeling for a Complex World. Boston: Irwin/McGraw Hill. (Text and CD-ROM). Selected articles.

Prerequisites:- BUS305 or another course in strategy

Mandatory activities:-

Exam: 3 deliverables (50% total) and a final written examination (50%)

Note:-

Nominal workload: Total work load is estimated to 300 work hours or 10 credits.

Entrance requirements: Bachelor

Reduction of credits:-

Type of Course: The course will be organized as 4 hour weekly sessions over 13 weeks.

AOS333 Organization Theory

Course responsible: Arild Wæraas

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

AOS335 Organisations in Transition

Course responsible: Arild Wæraas, Bernt Aarset

Teachers: Arild Wæraas

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: The relationship between the organizations and the society, with main focus on the business organization. The course focuses on causes of change, perspective on change and implementation of change. Change is analyzed in light of culture, power, politics, and learning.

Learning outcome: The main goal is to achieve a theory based insight in modern organizations and how they work in relation to internal and external stakeholders, and in relation to their environment. A core theme is management of change and change processes in organizations. Be familiar with the core theories for organizations and the environment, and demonstrate capabilities to analyze change processes in organisations.

Teaching methods: Combination of lectures, student presentations, and group assignments.

Teaching support: Supervision on group assignments, with oral feedback.

Syllabus: Textbook and selected papers. Myers, P., Hulks, S. and Wiggins, L. (2012): Organizational change. Perspectives on theory and practice. Oxford University Press.

Prerequisites: AOS130, AOS230, and AOS237, or similar. AOS320, but the students may follow AOS335 and AOS320 in the same semester.

Mandatory activities: The students work in groups. All groups will deliver a semester assignment. The assignment is assessed by passed / failed. Assignment approval is a requirement for participation in the final exam. All groups will participate in analysis, presentation and discussion of selected cases.

Exam: Thirty hours take home exam.

Note:-

Nominal workload: Total work load is estimated to 300 work hours or 10 credits.

Entrance requirements: Bachelor

Reduction of credits:-

Type of Course: The course will be organized as 2 2-hour sessions a week over 12 weeks. How the two weekly sessions will be organized over the fall semester will vary, but a detailed plan will be presented at the beginning of the course.

AOS336 Reputation Management

Course responsible: Arild Wæraas

Teachers: Bernt Aarset

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: - Identity management at the organizational level - Theories and strategies for building, maintaining, and defending reputation - Gap analysis of desired and actual organizational identity - Reputation crises - Corporate branding - Storytelling - Ethics, value statements, and social responsibility

Learning outcome: The purpose of this course is to offer graduate students insights into how formal organizations in various ways seek to change their reputation. The course will particularly address the relationship between organizational identity, strategic communication, and reputation. More specifically, upon completion of this course students will be expected to master the following: - Possess a theoretical basis

for analyzing tensions between organizational self-perception and external perceptions of the organization - Be able to suggest relevant strategies for managing reputation - Relate reputation and brand management concepts to broader societal trends

Teaching methods: A combination of lectures and discussions.

Teaching support:-

Syllabus:-

Prerequisites:-

Mandatory activities: Two take-home assignments must be passed in order to take the final exam.

Exam: A 30 hour final take-home exam.

Note:-

Entrance requirements: Bachelor

Reduction of credits:-

Type of Course: - This course will periodically have classes twice a week. Some weeks will have no classes. The class schedule will be presented at the first class session.

AOS340 Qualitative Methods

Course responsible: Bernt Aarset

Teachers: Arild Wæraas

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: The course provides the students with an introduction to qualitative methods. Development of research question, design of research project (case studies and other designs), choice of method and methodology, analysis of data and possible generalization based on qualitative data are core issues in the course. The main technique to collect data will be depth interviews, but participating observation, document analysis, conversation analysis, and others will be presented. The course will provide increased understanding of research and knowledge development. Design and choice of method will be based on research question, theoretical perspectives, analysis, and the direction of the project.

Learning outcome: This course will provide the students with the necessary knowledge to conduct the master thesis as qualitative research project. A basic introduction to qualitative methods, principles for research design and for qualitative data analysis are provided.

Teaching methods: The course will be organized as a combination of lectures and group assignment.

Teaching support: Guidance on appointment.

Syllabus: Textbook with additional papers on selected themes. Silverman, D. (2011): Interpreting qualitative data. 4th edition. Sage.

Prerequisites: AOS240 - Research in Social Sciences or equivalent.

Mandatory activities: A project assignment will be conducted in groups midterm. In this period there will be no lectures. The group assignment will be assessed as passed/failed. A pass is required in order to have the term paper evaluated.

Exam: The mid-term group assignment is assessed passed/failed. The end of the semester assignment is graded. A pass on the group assignment is required to have the semester assignment evaluated.

Note:-

Nominal workload: The workload is estimated to 5 ECTS or approximately 150 work hours.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: One 2-hour seminar/lecture each week.

BUS100 Cost Accounting, Fundamentals

Course responsible: Karl Jens Fredrik Bengtsson

ECTS credits: 5

Department: School of Economics and Business

Frequency: Given twice a year - spring and autumn.

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel, Spring parallel.

Course contents: The company and its surroundings. Cost and cost behaviour, Markets and optimization, Product costing, Cost allocation, Cost-volume-profit models, The optimal use of scarce resources, Product mix analysis. Capital budgeting.

Learning outcome: Knowledge: The course is an introduction to cost accounting. After the course the student should have a wide knowledge in basic topics, theories, methods, problems and tools within cost accounting.

Teaching methods: Lectures on video. Supervised seminars/discussions/ exercises.

Teaching support:-

Syllabus: Hoff, Kjell Gunnar: Grunnleggende bedriftsøkonomisk analyse, Universitetsforlaget 2009. Hoff, Kjell Gunnar og Hoff, Jan-Erik: Oppgaver og løsningsforslag til Grunnleggende bedriftsøkonomisk analyse, Universitetsforlaget 2009.

Prerequisites:-

Mandatory activities: Two compulsory assignments. The assignments must be approved to be allowed to take the final exam.

Exam: Written exam. One final multiple choice test. The final examination of 3,5 hours counts 100%. There will be no repeat examinations for students with an average grade below passing, because the course is given twice a year.

Note:-

Nominal workload: The company and its surroundings. Cost and cost behaviour, Markets and optimization, Product costing, Cost-volume-profit models, the optimal use of scarce resources, Capital budgeting.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: Lectures: 1-2 hours per week (prerecorded video on the internet). Seminars/problem solving exercises: 2 hours per week.

BUS110 Accounting - Financial Reporting

Course responsible: Nils Sanne

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO
(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: The main elements and principles of financial accounting. Theory and terminology, rules and regulations, the most common accounting transactions, The closing, measurement and valuation problems, year-end closing, taxation and accounting, financial statement analysis, semester assignment.

Learning outcome: To provide students with a basic understanding of financial accounting and financial statement analysis.

Teaching methods: Lectures. Supervised exercises.

Teaching support:-

Syllabus: Pedersen, Voldsund, Hoff, Hansen: Grunnleggende regnskap, Universitetsforlaget 2013. Hansen, Hoff, Voldsund: Analyse av finansregnskapet, Universitetsforlaget 2013.

Prerequisites:-

Mandatory activities: One compulsory assignment.

Exam: One written examination: Some hands in during the semester, counting 30%, while the final examination of 3 hours counts 70%. The final grade is based on a weighted average. The final examination is based on the student assignment. The students' solution of the semester assignment is not to be handed in, but students must bring their solutions to the examination as many of the examination questions will be based on the assignment and the solution.

Note:-

Nominal workload: The main elements and principles of financial accounting. Theory and terminology, rules and regulations, the most common accounting transactions, The closing, measurement and valuation problems, year-end closing, taxation and accounting, financial statement analysis, semester assignment.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: The economic students will not obtain ECTS for BUS200

Type of Course: 4 hours of lectures and 2 hours of exercises per week.

BUS112 Accounting and Computing

course responsible: Ole Gjølberg

Teachers: Sverre Mære (Daldata)

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size: Depending on the availability of computers. 2012: 35

Teaching exam periods: This course starts in August block. This course has teaching/evaluation in August block.

Course contents: The course is designed so that it can be attended by students without a background in economics. It would nevertheless be beneficial if the students have taken an introductory course in business administration and external accounting. For students who shall continue: the course should be taken before the courses BUS210 and BUS220. The course is based on a specific, practical approach by building up an account plan, posting different receipts, aggregating and conducting a yearly balance.

Learning outcome: The student shall acquire qualifications in accounting and balance of independent businesses based on the software "Duett" or "Agro Økonomi". The students shall develop, through a practical approach of the software, an understanding of the way accounting is built up, how accounting can be evaluated, tax calculated etc.

Teaching methods: The course combines lectures with the use of the software "Duett" or "Agro Økonomi" plus exercises in discussion groups.

Teaching support: Accounting programme 'Duett' from Daldata AS eller 'Agro Økonomi' from Agrodato.

Syllabus: Information about the syllabus is provided at the start of the course.

Prerequisites: Preferably some knowledge of accounting (BUS110).

Mandatory activities:-

Exam: Final individual examination, using a computer and the software "Duett" or "Agro Økonomi". More information about the examination aids is given at the beginning of the course.

Note:-

Nominal workload: The course is designed so that it can be attended by students without a background in economics. It would nevertheless be beneficial if the students have taken an introductory course in business administration and external accounting. For students who shall continue: the course should be taken before the courses BUS210 and BUS220. The course is based on a specific, practical approach by building up an account plan, posting different receipts, aggregating and conducting a yearly balance.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: BUS111 - 5 credits.

Type of Course: Lectures and exercises in auditorium: approx. 35 hours. Exercises in seminar groups: ca. 20 hours.

BUS133 Excel for Business

Course responsible: Kolbjørn Christoffersen

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: Formulas and functions in Excel, cell references, formatting, charts, data table, lists, sorting, and filtering, conditional formatting, data validation, pivot table, database connections, goal seek and solver, macros. A detailed plan for the course will be presented in the first lecture.

Learning outcome: The course shall give the students basic knowledge about and skills in Excel, an important computer program in business. An important goal of the course is that students will benefit from using Excel in conjunction with their studies and in their future job.

Teaching methods: Lectures: Demonstration of Excel. Exercises in the computer lab.

Teaching support:-

Syllabus: Excel textbook/handbook (will be presented at course start).

Prerequisites: BUS100 Cost Accounting, Fundamentals (can be taken concurrently).

ECN110 Introduction to Microeconomics (can be taken concurrently)

Mandatory activities:-

Exam: Home exam using Excel: 40 % of total grade. Final written exam: 60 % of total grade

Note:-

Nominal workload: 150 hours (5 credits).

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: Lectures: 2 hours per week. Exercises: 2 hours per week. Total: Approximately 52 hours.

BUS160 Tax Law for Economists

Course responsible: David Eilert Eilertsen

Teachers: Ole Gjølberg

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in January block. This course has teaching/evaluation in January block.

Course contents: Income and wealth taxation of both individuals and companies.

Learning outcome: The course introduces students to basic tax laws for private persons, industry/small and medium sized businesses, with a focus on making economic decisions in light of tax-related issues.

Teaching methods: Lectures. Assignments.

Teaching support:-

Syllabus: Lars Fallan- Innføring i skatterett (latest issue) Ole Gjems-Onstad (red)- Skattelovsamlingen, studentutgave (latest issue)

Prerequisites:-

Mandatory activities:-

Exam: Final written examination.

Note:-

Nominal workload: 150 hours, included 42 lectures

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: 42 hours.

BUS200 Applied Cost Accounting

Course responsible: Nils Sanne

Teachers: Kjell Gunnar Hoff

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Learning outcome: The course objective is for the students to understand financial statements and actively use them to improve the results of companies through goal setting and budgeting, as well be able to analyze decision problems in conjunction with investments and outsourcing options.

Teaching methods: Lectures.

Teaching support:-

Syllabus: To be decided later.

Prerequisites: BUS100

Mandatory activities: Written hand-ins.

Exam: Written examination. Some hands in during the semester, counts 30%, while the final examination of 3 hours counts 70 %. The final grade is based on a weighted average. Midterm test and final exam must be taken in the same term.

Note: This is a course offered to students in non-financial and non-economic study programs. The course overlaps with BUS110, BUS210, and INN200.

Nominal workload: 150 hours.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: BUS110: 3 credits BUS210: 2 credits INN200: 5 credits

Type of Course: 2 lecture hours per week.

BUS210 Managerial Accounting and Budgeting

Course responsible: Atle Guttormsen

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: Normal costing, standard costing, flexible budgets, activity based costing, relevant costs and decision problems, the budgeting process, goal setting, budgeted income statement, cash flow budgets and the budgeted balance sheet. Control and follow up. Performance management.

Learning outcome: The course is a second tier cost accounting course based on BUS100. The course aims at qualifying the students to work with and develop the internal accounts of a company and to make in depth analyses and computations for increased profitability. The students shall after the course be able to actively contribute in the financial management and control of companies. One compulsory assignment in two parts which is assessed as passed/failed.

Teaching methods: Lectures and supervised exercises.

Teaching support:-

Syllabus: Hoff, Kjell Gunnar: Driftsregnskap og budsjettering, Universitetsforlaget 2010. Hoff, Kjell Gunnar, Hoff, Jan-Erik: Driftsregnskap og budsjettering. Oppgaver og løsningsforslag, Universitetsforlaget 2010.

Prerequisites: The students must have passed BUS100. It is recommended that the students also have knowledge in financial accounting corresponding to BUS110.

Mandatory activities: Compulsory assignments

Exam: One final examination of 3,5 hours which counts 100 %. A repeat examination for students with a grade below passing will be arranged as a written examination with a duration of 3,5 hours. This examination counts 100 %.

Note:-

Nominal workload: Normal costing, standard costing, flexible budgets, activity based costing, relevant costs and decision problems, the budgeting process, goal setting, budgeted income statement, cash flow budgets and the budgeted balance sheet. Control and follow up. Performance management.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: BUS200, 2 ECTS,

Type of Course: Lectures: 4 hours per week. Exercises: 2 hours per week.

BUS215 Annual Accounts

Course responsible: Nils Sanne

Teachers: Roy Kristiansen, Jørgen Eilertsen

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: Laws and regulations. Quality requirements and accounting principles. The balance sheet items. Income statement items. Notes to financial statements. Cash Flow Statement.

Learning outcome: The purpose of discipline is to give students a deeper understanding of the main problems associated with the preparation of financial statements in the companies.

Teaching methods: Lectures and seminars

Teaching support:-

Syllabus: Huneide, Pedersen, Schwencke, Haugen: Årsregnskapet i teori og praksis 2014 (last edition)

Prerequisites: Passed BUS100 and BUS110

Mandatory activities: Participation in seminars

Exam:-

Note:-

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: 300 hours, included 4 hours lectures and 2 hours seminars per week

BUS216 Annual Accounts - Specific Accounting Topics

Course responsible: Nils Sanne

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in June block. This course has teaching/evaluation in June block.

Course contents: Merger. Fission. Consolidated. Financial statements for other types of companies than the corporation. Accounts for non-profit organizations. Financial statements of international accounting standards (IFRS).

Learning outcome: Students will gain a deeper understanding of more specific accounting issues

Teaching methods: Lectures and case solutions

Teaching support: Huneide, Pedersen, Schwencke, Haugen: Årsregnskapet i teori og praksis 2012

Syllabus: Huneide, Pedersen, Schwencke, Haugen: Årsregnskapet i teori og praksis 2013

Prerequisites: Passed BUS100, BUS110 and BUS215

Mandatory activities: Case solutions/term paper

Exam: Written exam.

Note:-

Nominal workload: 150 hours

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: 24 hours intensive lectures and instructions

BUS217 Accounting Structure, Regulation and Ethics

Course responsible: Ole Gjølberg

Teachers: Karl Jakob Enger

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: - Have good knowledge of the rules that regulate rights and duties of authorized accountants, including the accountants' liability. - Have good knowledge of rights, duties and recommendations that follow from good accounting standards - Can apply rules about rights and duties and the content of good accounting practice, including rules and regulations relating to risk and money laundering. - Know the roles and responsibilities of the board, the chief executive and the auditor of a firm. - Know the most important accounting routines - Know generic control routines and can discuss organizational issues related to internal control, including measures to ensure effective internal control - Know requirements for safety and control in ICT-systems - Know fundamental accounting principles in the law and good accounting practice, including supplementary rules and regulations follow from "bokføringslov" and "regnskapslov".

Learning outcome: Obtain an overview of the formal procedures of annual report and accounts and have knowledge of ethical accounting professional issues

Teaching methods:-

Teaching support:-

Syllabus: God regnskapføringsskikk av Høylye, Kristensen og Opsahl. 2 utgave 2011. Regnskapsførerloven og Bokføringsloven med forskrifter og standarder.

Prerequisites: BUS100, BUS110, BUS210, BUS220 Basic business, financial statement, Tax Law.

Mandatory activities:-

Exam:-

Note:-

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course:-

BUS218 Public Accounting and Budgeting

Course responsible: Ragnar Arnljot Øygard

Teachers: Asbjørn Blomberg Pedersen

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: Government accounting and financial reporting: -Accounting rules and principles -Year End and accounting in relation to the Municipal Act -Accounting and Financial Regulations of the Municipal -Accounting Standards. Governmental Accounting and Reporting: -Main principles of governmental budgeting and accounting. -Grants Regulations and Rules for Financial Management. -State financial organization,

Learning outcome:-have basic knowledge of legislation (framework and basic contexts) -have basic knowledge of the purpose and recognition of municipal accounts -be able to post the most common transactions -have an understanding of the concepts of costs, expenses, payments, revenues and receipts, as well as to conduct regular accrual entries -know the account plan -be able to reconcile the fundamental relationships and reconcile cycle of working -conduct annual financial statements with simple posts and delisting rules -be able to set up a clustered results and balance sheet in accordance with the regulations -have insight in the municipal accounts structure and framework, able to explain the statement as a source of information and a better understanding of accounting principles and reporting requirements be able to treat central accounting measurement and valuation issues -implement adaptation and correction of accounting for analytical purposes be able to calculate key figures in connection with a financial analysis and make an assessment of the municipality's financial position and results

Teaching methods: Lectures, exercises and working in groups

Teaching support:-

Syllabus: -Last edition of "Kommuneregnskapet" Øyvind Sunde, in addition to lectures and exercises.

Prerequisites: BUS100, BUS110, BUS210 Cost accounting, financial accounting,

Mandatory activities:-

Exam:-

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course:-

BUS220 Finance and Investment

Course responsible: Atle Guttormsen

Teachers: Ole Gjølberg

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: Basic financial mathematics. Net present value. Risk and return. Basic portfolio theory. Capital asset pricing method (CAPM). Pricing of stocks and bonds. Capital budgeting. Project analysis. Cost of capital. Financial structure and dividend policy. Ethical problems in finance.

Learning outcome: The course should provide the student with basic knowledge and understanding of modern finance and investment theory. Through the course students should acquire necessary theoretical and methodological skills to analyse finance and investment problems in different practical situations.

Teaching methods: Lectures, exercises, group work.

Teaching support:-

Syllabus: Distributed at the start of the course.

Prerequisites: Basic financial accounting. Basic cost accounting. Introductory mathematics and statistics.

Mandatory activities:-

Exam:-

Note:-

Nominal workload: 300 hours

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: Students cannot be awarded credits for both BUS220 and RØP310.

Type of Course: Lectures: 45 hours, plus direct guidance and guidance over the Internet. Review of exercises.

BUS230 Operation Research

Course responsible: Marie Gotteberg Steen

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN, NO
(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: Introduction to modelling, extensive use of spreadsheets in quantitative decision making models, linear programming, integer programming, network modelling, non-linear modelling, goal programming.

Learning outcome: To give students a solid basis for using quantitative decision-making methods, where linear programming will be central, in solving economic problems. The main focus of the course will be on formulating and solving different problems. As well, the economic significance of the results will be central. There will be focus on discussing the strengths and weaknesses of the different methods and the fact that models will always be a simplification of reality. The course will to a certain degree focus on issues connected to agriculture and resource management.

Teaching methods: Lectures (2 hours/week) with integrated use of IT, especially use of spreadsheets, to analyze different models interactively in class. Computer lab exercises in smaller groups. In addition the students are encouraged to work with different kinds of problems from the textbooks.

Teaching support: The main lecturer is available through e-mail and phone, and for office visits by appointment, throughout the whole semester. The teaching assistants are also available for guidance.

Syllabus: Sections of Hillier, F. S. and M. S. Hillier, 2. ed.: 'Introduction to Management Science', or an equivalent book. Compendium with selected material from other textbooks.

Prerequisites: Introductory courses in mathematics, statistics and micro economics.

Mandatory activities: Compulsory elements, minimum 7 of 10 assignments have to be passed

Exam: Final written examination counts 100%.

Note:-

Nominal workload: 300 hours

Entrance requirements: Minimum requirements for entrance to higher education in Norway)

Reduction of credits: BUS231 - 10 credits, BUS232 - 5 credits.

Type of Course: Lectures: 2 hours per week. Class hours for exercises: 2 hours per week.

BUS240 Operations Management

Course responsible: Kolbjørn Christoffersen

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: Operations management. The strategic role and objectives of operation. Process design and product design. Supply network design. Layout and flow. Process technology. Job design and work organisation. Capacity planning and control. Inventory planning and control. Supply chain planning and control. ERP, Lean operations and Just-In-Time. Project planning and control. Total quality management. Operations improvement. Failure prevention and recovery.

Learning outcome: The course will provide students with basic knowledge about the operations function in the firm, and with knowledge about design planning, control, and improvement of operation activities and product flow.

Teaching methods: Lectures.

Teaching support:-

Syllabus: Slack N., A. Brandon-Jones, R. Johnston. (2013). Operations Management, 7th edition. Pearson.

Prerequisites: STAT100 Statistics.

Mandatory activities:

Exam: Final written examination (3 hours).

Note:-

Nominal workload: 300 hours total work for the students.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: Lectures: Approximately 50 hours

BUS260 Tax Law

Course responsible: Ole Gjølberg

Teachers: David Eilert Eilertsen

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: Introduction to Business Taxation, with particular emphasis on differences from personal taxation. Income from business activities, with particular emphasis on the timing of revenues and expenses, including differences from the accounting Act. Special provisions relating to shareholders and companies, including deferred tax. Special provisions relating to participant taxed companies. Personal income from business activities, including the conditions, the calculation and allocation/distribution of current owners. Restructuring, business and succession, including taxable and reorganization free of tax. Value added tax system, including the liability for tax scale (taxation area) and the possibility of a voluntary registration fee, tax base and specific exemption for value added tax and special restrictions on the right to deduct value added tax.

Learning outcome: The course will give an overview of the basic principles of tax law, including jurisprudence, application of the law and use of sources of law. Business taxation, including taxation of companies and corporate participants as well as restructuring, constitute the most significant part of the course. In particular, with emphasis on practice in an economic context. The course will also provide good knowledge of the following parts of tax law (value added tax).

Teaching methods: Lectures. Assignments.

Teaching support:-

Syllabus: Lars Fallen, Innføring i skatterett (latest issue) Ole Gjems-onstad, Merverdiavgift - en innføring (latest issue) Ole Gjems-Onstad (red), Skattelovsamlingen, studentutgave (latest issue)

Prerequisites: BUS 160 - Tax Law for Economists

Mandatory activities: An assignment must be approved before the student can take part at the exam.

Exam: Final written examination.

Note:-

Nominal workload: 300 hours included 52 hours lectures

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: 4 hours of lecture per week (consecutive). Total 48 hours.

BUS271 Idea and Business Development

Course responsible: Elin Kubberød, Nils Sanne

Teachers: Nils Sanne, Elin Kubberød

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO
(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: The main elements of the course: - what is a business idea and business model - The value of learning about the customer in business development -

Economic analysis in a Start-up - Main focus: The business plan as tool in developing a business idea (Business model, and business modelling, organisation and team, market strategy plan, profit and economic analysis)

Learning outcome:- Understanding and learning the basic essence and tools of business development, evaluation of new products, services and markets - Develop skills in business plan writing with its elements as basic market analysis, economic analysis and profit, and be able to collect and analyze information and apply theoretical concepts - Using own knowledge in a new and entrepreneurial setting - Developing creativity and innovations skills - Developing presentation skills - Developing collaborative skills.

Teaching methods: Lectures and workshops under supervision, assignments and independent team work on the term paper (the business plan). The students are required to form interdisciplinary groups early in the semester.

Teaching support:-

Syllabus: Osterwalder, Alexander & Pigneur, Yves: Business Model Generation, 2010. Hoboken, N.J.: Wiley. ISBN: 978-0470-87641-1, h.. Available as E bok: (ISBN: 9780470901038). Additional literature will be distributed in the Fronter system. For students continuing on the Gründer (Entrepreneur) School, we recommend that they buy an American book dealing with entrepreneurship, for example Dorf and Byers: Technology Ventures. From Idea to Enterprise. McGraw and Hill International Edition. Third Edition 2011

Prerequisites:-

Mandatory activities: 3 compulsory assignments (one of them is an oral presentation)

Exam: Business plan (50 %) and oral presentation (50 %). No re-take examination will be arranged.

Note:-

Nominal workload: 150 hours.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: BUS171 - 5 credits.

Type of Course: Lectures: 20 hours. Guidance and workshops: 20 hours Participation in innovation camp in the beginning of the semester (hosted by the Business Office, NMBU)

BUS280 Private and Corporate Insurance

Course responsible: Ragnar Arnljot Øygard

Teachers: Roger Loen

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: Private insurance and commercial lines of insurance. These two areas are divided in to two insurance against loss and damage (property and liability insurance) and personal insurances.

Learning outcome: Understanding and knowledge of basic principles how insurance are calculated regarding risk and risk-transfer. The student should be able to do some simple insurance consulting regarding private insurance. The student should further be able to do some risk assessment, handling of insurance and ask for quotation.

Teaching methods:-

Teaching support:-

Syllabus: -Syllabus available on Fronter in August

Prerequisites:-

Mandatory activities:-

Exam: Term paper 40%, written exam 60%

Note:-

Nominal workload: 150 hours

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: 150 hours, included 30 lectures

BUS305 Strategy Analysis and Strategy Development

Course responsible: Silja Marianna Korhonen-Sande

Teachers: Glenn Roger Kristiansen

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Limits of class size:-

Teaching exam periods: This course starts in August block. This course has teaching/evaluation in August block.

Course contents: The course has two main themes. Strategic positioning in relation to the analysis of industry, company resources and stakeholders, and strategic choice in relation to competitive advantage and the boundaries of the firm. The linkages between entrepreneurial and strategic thinking are discussed.

Learning outcome: By presenting and discussing theories/ perspectives applied in strategic management and by analyzing strategic action in various industry contexts, the students will develop an understanding of why some firms succeed in competition and others do not. The students will understand how different theories complement and contradict each other, and deepen their knowledge of factors that influence firm strategy as well as the antecedents and consequences of various strategic choices. The course will strengthen the skills in using different methods in the analysis of external and internal environment and in choosing the appropriate strategies. The students will see the uncertainty and trade-offs that management must deal with in strategic decision making.

Teaching methods: The students are encouraged to acquaint themselves with the theory before each lecture in order to participate in discussions and exercises in the

classroom. The literature for each lecture is given at the course program. The students apply the theories on cases and discuss and present key literature in small groups.

Teaching support: The students receive feedback on their progress based on the presentations in the class room. The teacher is available via e-mail and during the lectures for questions and supervision.

Syllabus: Johnson, G., K. Scholes and R. Whittington. 2012. Fundamentals of Strategy, 2/E. (for repetition) Articles (reading list will be published at Fronter).

Lecture notes

Prerequisites: AOS 130 (Introduction to organization theory) or similar knowledge, and AOS 237 (Introduction to business strategy) or similar knowledge. It is expected that the participants are able to read scientific literature in English.

Mandatory activities: This course requires intensive studying. The participants will be organized in small groups and each group will deliver a case report and present articles. Consequently, the participation in classroom activities and groups is compulsory. Those with good bachelor-level knowledge in strategy do not have to participate in the repetition lectures.

Exam: The assessment is based on case analysis assignment in small groups (30%) and a 30 hours individual written home exam (70%). A retake exam is organized in the following semester for those students who passed the assignment but failed the individual exam. The grade for the semester assignment is valid only for the semester when the assignment was written.

Note:-

Nominal workload: 5ECTS=150 hours

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: The course will be organized in august with 4-5 hours structured activities per day (approx. 30 hours of structured activities, and in addition work in small groups). Each lecture is divided into two parts: 1) Repetition for those who feel they lack solid knowledge of central concepts and theories in strategy from the bachelor level. This knowledge is needed to solve the case assignments. 2) Article- and case-based lectures for all the students.

BUS310 Strategy Implementation and Performance Measurements

Course responsible: Silja Marianna Korhonen-Sande

Teachers: Per Aksel Holving, Kjell Gunnar Hoff, Dag Øivind Madsen

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in January block. This course has teaching/evaluation in January block.

Course contents: The course focuses on performance management and strategy implementation. Balanced scorecard as a strategic tool is a central topic in the course. The theory will be supplemented with both written and oral case discussions.

Learning outcome: The aim of the course is to give students qualifications within strategy implementation and performance management.

Teaching methods: The course consists of: 1. Lectures. 2. Case work in groups.

Teaching support:-

Syllabus: K. G. Hoff and P. A. Holving, Balansert målstyring. Balanced scorecard in Norwegian. Universitetsforlaget 2002, plus articles and other material handed out.

Prerequisites: BUS305

Mandatory activities: The lecturers and group work are compulsory activities.

Exam: 1. Written cases (groups). 2. Final written examination (individual).

Note: The course is aimed at students taking a Master's degree in Business Administration, with specialization Strategy, Management and Management Control Systems/Managerial Accounting. The course emphasizes strategy implementation and balanced managerial implementation tools.

Nominal workload: Corresponds to 5 ECTS.

Entrance requirements: Bachelor

Reduction of credits:-

Type of Course: An intensive course in the January block with mandatory meetings on selected days, 26 hours of structured activities in total. In addition, students group work on cases and games.

BUS311 Environmental Accounting and Management

Course responsible: Ståle Navrud

Teachers: Carl Brønn

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN, NO
(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: The course consists of three main parts: i) Environmental accounting: The course begins with a model of the environmental requirements that private and public enterprises are faced with and the alternative strategies that they may follow in order to fulfil these requirements from various stakeholders. Basic concepts such as sustainable development, ecological efficiency, eco-efficiency are reviewed, as well as the three bottom lines: economics, environment and corporate social responsibility, CSR. Social responsibility implies that existing and new enterprises take into consideration the rights and needs of the local population and that employees work under safe conditions with regards to health, environment and security. Then various methods for environmental accounting, life cycle assessment (LCA), environmental product declarations as well as systems for environmental labelling and certification are described, criticized and exemplified. ii) Environmental management:

Environmental management for sustainable development of public and private enterprises is a dynamic and complex organisational challenge which requires adaptation and a willingness to think in new ways. Therefore, management methods for working with environmental cases must be sensitive to the social as well as to the technical consequences that this has for the organisation. System thinking is an analytic framework for understanding complex organisational structures as systems. In this way, the course gives an introduction to the method for thinking in systems, and shows how this can be applied to an organisation using the Balance Score Card (BSC) method. iii) Sustainable development for private and public enterprises: The course seeks to show how knowledge of environmental accounting, systems thinking, the Balanced Score Card (BSC) method and Corporate Social Responsibility (CSR) can be used as management tools for environmentally friendly and sustainable public and private enterprises.

Learning outcome: The students should be able to explain system-based management methods and practical tools for developing environmental strategies and environmental accounting systems for private and public enterprises, and be able to evaluate existing environmental accounting and management systems.

Teaching methods: Lectures and extensive supervision of student groups in their work on the semester assignment. Students will present "almost finished" semester assignments in class and receive comments from fellow students and the teachers. Exercise in evaluation of environmental accounts from selected firms, with presentation and feedback in class.

Teaching support: Extensive supervision of student groups in their work with the semester assignment.

Syllabus: - Schaltegger, S. and R. Burritt 2000: Contemporary Environmental Accounting. Issues, Concepts and Practice. Greenleaf Publishing, Sheffield, UK. - Selected journal articles and book chapters, which are available at the course web site.

Prerequisites: ECN170 or an equivalent introductory course in environmental and resource economics.

Mandatory activities:-

Exam: The semester assignment counts 100 % of the grade.

Note:-

Nominal workload: 150 hours.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: Overlap with ECN373

Type of Course: 40 hours.

BUS313 Strategic Cost Management

Course responsible: Ole Gjølberg

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO
(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: Strategic profitability analysis comprises pricing, strategic cost management, capacity costs, customer profitability, target costing, quality costs and inter organizational cost management. Moreover, the role of the controller in implementing strategic management accounting will be discussed. The course also seeks to stimulate the consideration of appropriate costing systems in different situations.

Learning outcome: The aim is to learn how companies can create competitiveness through strategic profitability analyzes and decisions, and how develop tools for measuring strategic achievements.

Teaching methods: Traditional lectures, presentations given by students in combination with various hand-ins of written work (group work).

Teaching support:-

Syllabus: Reading list available at the start of education

Prerequisites: BUS305 and Bachelor in business administration

Mandatory activities: Hand-ins of written work to be graded as pass or fail.

Exam: Written hand-ins (groups). Final written exam (individual).

Note:-

Nominal workload: 300 hours

Entrance requirements: Bachelor

Reduction of credits:-

Type of Course: Lectures 36 Hours

BUS314 Corporate Governance

Course responsible: Jonas Gaudernack

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: The course will consist of traditional lecturing as well as classes, guest lectures and written assignments.

Learning outcome: There are numerous laws and regulations related to corporate governance/risk management/internal control in Norwegian companies. The course will deal with important concepts, rules and regulations, and also highlight the roles of different agents such as the board, auditing board, administrative leadership, auditor, risk management and compliance functions.

Teaching methods: Lectures, seminars, classes, assignments

Teaching support:

Syllabus: Relevant parts of the laws that regulate corporations, accounting, auditing. Norwegian recommended standard for corporate governance.(www.nues.no) COSO Integrated Framework and COSO Enterprise Risk Management. (www.theiia.org)

Prerequisites: Basic business, primarily financial accounting, cost accounting; finance

Mandatory activities: Brief written assignments

Exam:-

Note:-

Nominal workload: According to the norm for 5 ECTS.

Entrance requirements: Bachelor

Reduction of credits:-

Type of Course: Approx. 30 hours

BUS315 Corporate Finance and Valuation

Course responsible: Glenn Roger Kristiansen

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: Course topics: $\hat{}$ prediction of unlevered cash flow $\hat{}$ discounting of cash flow $\hat{}$ calculation of capital costs of capital (e.g., WACC) $\hat{}$ sensitivity- and scenario analysis (e.g., the use of binomial trees) $\hat{}$ fundamentals underlying corporate valuation $\hat{}$ corporate valuation methods (e.g., multiples, certainty-equivalent cash flows, adjusted present value, NPV, IRR) $\hat{}$ the use of risk-free interest rates (theoretical spot rates; investment horizon issues) $\hat{}$ terminal value $\hat{}$ assessing and calculating historical performance $\hat{}$ amending the financial statement for the purpose of corporate valuation $\hat{}$ financial ratios $\hat{}$ corporate strategy and prediction of performance $\hat{}$ unlevered beta $\hat{}$ the functions of asset pricing models (e.g., CAPM and APT) $\hat{}$ integrating principles and thinking in finance, strategy and accounting in order to value assets, projects and corporations The topics listed are not meant to be exhaustive, and may be amended.

Learning outcome: The students will learn how to value projects and corporations of various sizes. This entails integrating the disciplines of finance, strategy, and accounting. The valuation process consists of many details and potential pitfalls, which we aim to overcome through this course. There is not one correct way of valuing a company or project, and we triangulate among several methods in order to ensure that we are in the ballpark of the best estimated value. We will employ Excel in a way that will benefit you in a later job position with respect to valuation challenges. You will learn how to convert accounting measures into free cash flow, which is the foundation for the much used discounting-valuation method. The separation between accounting measures and cash flow is crucial for all valuation, and even though you may know the calculations by heart, it takes time to think in cash-flow terms if you have a background from accounting or business economics. The course aims to naturally shift focus from

the accounting statement to the cash-flow statement and related applications for valuation purposes. We will perform pro-forma financial statements in order to estimate future unlevered operational cash flow, a basis that is important for valuation. We naturally also focus on estimation of the cost of capital for equity, debt, and the combined assets, and the effects of debt on project and company valuation. We take into account both personal and corporate tax rates. Estimation of the cost of capital is a complex and debated area, and we will therefore spend considerable amount of time on this topic. An overview of asset-pricing models is important in this respect, together with an understanding of theoretical spot rates, which can be used as estimates for risk-free interest rates at different maturities. Alternative valuation methods include for instance free-cash-flow discounting, the adjusted-present-value (APV) method, the flow-to-equity approach, the WACC method, the portfolio-tracking method, and the certainty-equivalent method. We will combine these methods with scenario and sensitivity analyses, for instance by systematically changing growth estimates. In this regard, the binomial-tree valuation method is an important tool when taking into account the flexibility to continue or stop a project. We will also look at how to compare the value of projects and corporations, and why you in most cases would prefer the NPV over the IRR criterion. Lastly, capital structure and dividend policy are short topics of the course. The value of debt depends partly on your personal and corporate tax rate, and we will discuss why, for instance, required return to equity holders increases with leverage. The theoretical perspectives by Modigliani and Miller are central for the treatment of capital structure.

Teaching methods: Lectures and group work

Syllabus: to be announced.

Prerequisites: BUS220, BUS210 or equivalent

Minimum requirements for entrance to higher education in Norway (generell studiekompetanse)

Mandatory activity: Attendance is compulsory in order to be able to take the exam. Students will be required to work in groups.

Exam: Home exam/term paper (70%); mid-term exam (30%). The retake exam is a written individual exam (100%). Note that the mid-term exam is not valid for the retake exam.

Examination details: Continuous exam: A - E / Ikke bestått

BUS321 Empirical Analyses of Financial and Commodity Markets -

Theory

Course responsible: Sjur Westgaard

Teachers: Ole Gjølberg, Frank Asche, Olvar Bergland

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO
(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in June block. This course has teaching/evaluation in June block.

Course contents: Different topics will be dealt with in the course. These may be different from year to year, based on current research at the department such as foreign exchange, energy markets (oil, electricity, and bioenergy), soft commodities, metals etc. The course includes the following activities: 1. Lectures. 2. Econometric exercises.

Learning outcome: The aim of the course is to develop the students ability to read empirical analyses based on problem issues and data from the finance and commodity markets and also develop skills that enable the student to conduct his/her own empirical analyses. This aim shall be accomplished through combining economic theory and hypotheses of these markets with applied econometric methods and data. Central issues, methods and results from the research literature will be presented in the lectures.

Teaching methods:-

Teaching support: GiveWin/PcGive.

Syllabus: Well established text book in econometrics plus hand-outs.

Prerequisites: Bachelor, BUS220 and ECN202 or equivalent.

Mandatory activities:-

Exam: Written examination, 3.5 hours.

Note: The course is a theoretical part and a prerequisite for taking BUS320.

Entrance requirements: Bachelor

Reduction of credits: 5 credit reduction against the former BUS320 (10 credits).

Type of Course: Lectures and organized exercises: approx. 60 hours.

BUS322 Investment Analysis and Financial Risk Management

Course responsible: Ole Gjølberg

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO
(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: The course covers key topics and problem issues within financial market analysis and financial risk management: - stock pricing, - dividends analysis and risk, portfolio optimization, interest and currency markets - risks and risk management, - bonds pricing and management, - bond management evaluation, - forward markets - futures pricing and tools for risk management, - stock option pricing - investment and risk management through stock options, calculating capital costs.

Learning outcome: By completing the course, the students will acquire key qualifications within contemporary financial market analysis and finance management.

Key concepts include: portfolio optimization, finance management evaluation, risk analysis of financial markets, stock option pricing and calculation of capital costs.

Teaching methods: Lectures and exercises in the computer lab. The students are expected to become familiar with computer software for financial analysis and investments. The students should also closely follow the financial and commodity markets (stocks, options, futures, interests, currencies).

Teaching support:

Syllabus: Bodie, Kane and Marcus, Investments. Distributed materials and websites.

Prerequisites: Basic finance, statistics/econometrics, microeconomics.

Mandatory activities: 2-3 assignments accepted in order to present oneself for final exam.

Exam: 2-day examination. Individual analysis of a case.

Note:-

Nominal workload: In accordance with NMBUs norm.

Entrance requirements: Bachelor

Reduction of credits:-

Type of Course: Lectures: 30 hours. Supervised exercises in the computer lab: 30 hours.

BUS323 Commodity Market Analysis

Course responsible: Marie Gotteberg Steen

Teachers: Marie Gotteberg Steen, Ole Gjølberg, Atle Guttormsen

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: Topics to be included will vary from year to year. Examples are: Trading of commodities, supply and demand, trade conflicts, derivatives, commodity in a portfolio etc. The course will consist of traditional class lectures, guest lectures from the industry (traders, portfolio managers etc.) and the writing of a scientific report presenting one specific commodity. Students will work in groups and should present their report in a seminar.

Learning outcome: The aim of the course is to develop the student's ability to understand international commodity markets. This aim shall be accomplished through combining economic theory with institutional knowledge about these markets. Knowledge about important commodity markets, trade issues, supply and demand and market issues will be presented in the lectures.

Teaching methods: Lectures, guest lectures, excursion and semester assignment.

Teaching support:-

Syllabus: A reading list will be available at the beginning of the course.

Prerequisites:-

Mandatory activities: Compulsory participation in seminars, guest lectures and potentially some ordinary lectures.

Exam: Based on scientific report and oral examination.

Note:-

Entrance requirements: Bachelor

Reduction of credits:-

Type of Course:-

BUS324 Options, Derivatives and Risk Management

Course responsible: Espen Gaarder Haug

Teachers: Glenn Roger Kristiansen

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: The course will mainly focus on options and risk management, but also cover convertible bonds. Option pricing, risk-parameters for options, general risk management, probability distributions in theory and practice. Options embedded in other contracts, real options. Investment and hedging strategies. The course will actively use Excel spread sheets where we will implement option models and risk management tools.

Learning outcome: The students will in this course develop solid knowledge of options, investment and risk management. Key words: options, option pricing, options on stocks, commodities, futures and forwards, real options, probability distributions, theory and practice.

Teaching methods:-

Teaching support:-

Syllabus: Hull, J. Options, Futures and Other Derivatives, Prentice Hall last version + some hand-outs and information from the internet.

Prerequisites: Basic knowledge of finance, statistics as well as Excel

Mandatory activities:-

Exam:-Final Written Exam

Note:-

Entrance requirements: Bachelor

Reduction of credits:-

Type of Course: Approx. 35 hours of lectures and about 25 hours PC-lab training

BUS325 Fixed Income Instruments

Course responsible: Espen Gaarder Haug

Teachers: Glenn Roger Kristiansen

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: The course will cover bonds, interest rate swaps and other fixed interest rate instruments that are actively used in the Norwegian as well as international financial markets. We will look at the use of such instruments by the government sector, corporations and financial institutions. The value, investments strategies, hedging and risk related to such instruments. In the course we will actively use and build Excel Spreadsheets to analyze fixed income instruments.

Learning outcome: In this course students will acquire solid knowledge about bonds, interest rate swaps, asset swaps, FRAs and other forms of interest rate products. The course is highly relevant for a series of jobs in the government sector as well as private sector that has to do with financing and investments. Key words: government financing, private financing, hedging and investments, fixed income asset management, yield, duration, convexity, swap spreads, credit spreads, interest rate modelling, credit risk, caps, floors, swaption.

Teaching methods:-

Teaching support:-

Syllabus: Will be announced later on.

Prerequisites: Basic finance and statistics, basic knowledge of Excel.

Mandatory activities:-

Exam:-Final written exam

Note:-

Nominal workload: Approx. 35 hours of lectures and about 25 hours PC-lab training.

Entrance requirements: Bachelor

Reduction of credits:-

BUS332 Decision Analysis and Capital Budgeting

Course responsible: Karl Jens Fredrik Bengtsson

Teachers: Carl Brønn

ECTS credits: 10

Department: School of Economics and Business

Exam: Written exam, A-E/Fail

BUS333 Approaches to Management Accounting and Control

Course responsible: Inger Johanne Pettersen

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Course contents: This course focuses on the company and its context. Especially, we consider the concept of a company to be very broad. A modern company is a complex organization which can be studied from many theoretical perspectives and by different methods. Learning management accounting and control implies a knowledge to cope with many kinds of analyses and discussions. This course contains the following elements:

- Management tools in theory and practice
- Management accounting and control and the behavioural implications
- Alternative theoretical perspectives

Learning outcome: The course aims at giving the student the following knowledge, capabilities and competence:

The candidate

- has advanced knowledge within the field of management control
- has comprehensive knowledge within the field's scientific theories and methods of analyses
- can use knowledge within the field by working with cases.

Capabilities:

The candidate

- can analyse problems based on theories, methods and interpretations from the field of management control
- can use management control tools in solving practical problems
- can use relevant methods for research and development

Competence:

The candidate

- can analyse academic problems
- can use the knowledge and competence in management control to perform practical problem solving and projects.
- can communicate topics from the field.

Teaching methods: Lectures, literature, student presentations and work with cases

Teaching support: Presentation of the literature in lectures, feedback and discussions

Syllabus: Book: Hopper, D. Northcott, and R.W. Scapens, (eds.), (2007) Issues in Management Accounting. (Hertfordshire, UK: Prentice-Hall). Diverse chapters & Articles

Prerequisites: Bachelor

Mandatory activity: One compulsory case submission, group work.

Exam: Submission of term paper (group work) Grade: Passed/non-passed. Written exam 3,5 hours

BUS340 Supply Chain Management

Course responsible: Kolbjørn Christoffersen

Teachers: Karl Jens Fredrik Bengtsson

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: The supply chain, strategic fit and drivers. Designing the supply chain network. Planning demand and supply in a supply chain. Planning and managing inventories in a supply chain. Sourcing, transporting, and pricing products. Coordination and technology in the supply chain.

Learning outcome: The goal of the course is to give students knowledge about the importance of supply chain strategy, knowledge about how to manage supply chains, and to learn important tools and methods for the design and control of supply chains.

Teaching methods: Lectures, exercises, and cases with mandatory attendance.

Teaching support:-

Syllabus: Chopra S., P. Meindl. (2013). Supply Chain Management. Pearson. 5th edition.

Prerequisites: BUS240 Operations Management or some other basic logistics course. STAT100 Statistics. BUS230 Operations Research

Mandatory activities: 3 assignments. 2 cases with subsequent group discussions.

Exam:-

Note:-

Nominal workload: 300 hours total work for the students.

Entrance requirements: Bachelor

Reduction of credits:-

Type of Course: Lectures and oral presentations: 50 hours.

BUS370 Economic Development and Entrepreneurship

Course responsible: Siw Fosstenløykken, Anders Lunnan

Teachers: Anne Moxnes Jervell

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size: 35 students.

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: 1. Small business and entrepreneurship, concepts, theory, definitions 2. Start-up, survival and growth 3. Finance in entrepreneurship and small business 4. Public policy and the small business: theoretical justifications and practise 7. Policy on a regional/municipal level (excursion with preparations and reporting) 8. Guest lectures (Norwegian innovation and entrepreneurship policy) 9. Seminar with student presentations and discussion of selected research papers 10. Written assignments (group and individual) 10. Assignments

Learning outcome: Through the study of theory, literature and assignments, insight is given into current problems connected with economic development and entrepreneurship. The students should: - Become familiar with theoretical justifications for and the main characteristics of Norwegian regional development policy - Be able to use theories in the analysis of practical problems - Become familiar with scientific journals and current research within the field.

Teaching methods: Lectures, case presentations, excursions, study of literature, seminars with presentations of articles and discussions on main themes, assignments.

Teaching support:-

Syllabus: 1. David J. Storey and Francis J. Greene: Small Business and Entrepreneurship, 1st ed. 550 pages. The whole book. 2. Additional literature: Selected articles. Information about additional literature will be posted on Fronter.

Prerequisites: Bachelor degree or equivalent.

Mandatory activities: Compulsory one-day excursion. Three sets of assignments. Student presentations.

Exam: Three assignments that must be approved before final exam. Final written examination.

Note: Basis for grading will be announced on Fronter before the course starts.

Nominal workload: 300 hours.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: In total ca 50 hours in class with lectures, guest lectures, cases, student presentations and discussions. Excursion: 1 day. Assignments for submission: 3 sets.

B15 –ECON Bachelor Thesis

ECTS credits: 15

Department: School of Economics and Business

Exam: A-E/ Fail

ECN100 Introduction to economics

Course responsible: Per Halvor Vale

Teachers: Tor Iver Grotheim Steig, Caroline Wang Gierløff, Knut Einar Rosendahl, Torstein Arne Bye, Eirik Romstad, Arild Einar Bjørn Angelsen, Stein Terje Holden, Ståle Navrud, Ragnar Arnljot Øygard, Olvar Bergland, Ole Gjølberg

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size: 36

Teaching exam periods: This course starts in August block. This course has teaching/evaluation in August block.

Course contents: Basic economic theory and how the theory / philosophy can help to understand current social problems. To a large extent, students will be activate in discussions and by writing mandatory topic assignments. In both of these activities academic working methods will be required.

Learning outcome: This course will - help the students to get an early professional identity and get to know fellow students - give the students' knowledge of central subjects in Economics - give the students understanding of central concepts in economic theory as market, rationality, equilibrium and - give the students experience in communicating economic issues orally and in writing - give the students experience in planning and implementing tasks together with others in groups

Teaching methods: Lectures, reading articles, field trip, two seminar meetings, presentations and discussion of assignments

Teaching support: Information only available in Norwegian

Syllabus: Reading list

Prerequisites:-

Mandatory activities: Two accepted papers and two accepted opponent contributions

Exam: Two approved topic assignments, two approved critic assignments and satisfactory knowledge of the literature. All parts of the examination must be passed. Knowledge of the course material will be demonstrated in the assignment presentations and opposition assignments.

Note:-

Nominal workload: 150 hours

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course:-

ECN101 Economics for Environment and Development

Course responsible: Ragnar Arnljot Øygard

Teachers: Kristine Malmkvist Grimsrud, Mette Wik, Eirik Romstad, Ståle Navrud

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: The course comprises four main sections: 1. Microeconomics with emphasis on food and agricultural production. 2. Environmental and resource

economics. 3. Social appraisal of development projects with emphasis on environmental aspects. 4. Macroeconomics with focus on development.

Learning outcome: The students will be able to apply basic concepts and theories from microeconomics, resource economics, project appraisal and macroeconomics in interdisciplinary analysis of problems relating to environment, agriculture, development and natural resources.

Teaching methods: Lectures, compulsory assignments/exercises and individual reading.

Teaching support:-

Syllabus: Information will be given during the first lecture and will be made available on Fronter.

Prerequisites:-

Mandatory activities:-

Exam: Exam in ENGLISH ONLY.

Note:-

Nominal workload: Total: 300 hours.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: ECN110 3 ECTS, ECN120 3 ECTS, ECN170 3 ECTS, ECN100 5 ECTS, EDS140 10 ECTS.

Type of Course: Fifty hours of lectures

ECN110 Introduction to Microeconomics

Course responsible: Mette Wik

Teachers: Atle Guttormsen

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: The course consists of the following subjects: The behaviour of the consumer. The behaviour of the producer. Different markets with emphasis on perfect competition and monopoly. Welfare theory, especially about market success and failure.

Learning outcome: This is an introductory course in microeconomics. The aim of the course is to give the student i) an overview of the most important concepts and models in microeconomics, (ii) the first training to formulate and solve microeconomic problems and, (iii) good qualifications for further studies in economics.

Teaching methods: The course consists of lectures, exercises and supporting web sites. The purpose of the exercises is to apply the theories presented in the lectures to specific problems, and to activate the students.

Teaching support: Tutorials and web site.

Syllabus: Frank/Bernanke: Principles of Microeconomics. Or: McDowell, Thom, Frank and Bernanke: Principles of Economics

Prerequisites:-

Mandatory activities: The students need to submit and pass 7 out of 10 assignments. The assignments should be submitted on Fronter within the deadline and will be graded by teaching assistants.

Exam: Written examination, 3.5 hours.

Note:-

Nominal workload: Lectures: 24 hrs. Exercises: 20 hrs. Reading literature etc.: 106 hours. Total: 150 hrs.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: ECN111 - 5 ECTS. ECN101 - 3 ECTS, EDS140 - 3 ECTS.

Type of Course: Lectures: 2 hours per week for 12 weeks. Exercises: 2 hours per week in smaller groups.

ECN120 Introduction to Macroeconomics, part I

Course responsible: Eirik Romstad

Teachers: Per Halvor Vale

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in January block. This course has teaching/evaluation in January block.

Course contents: Part 1: Basic economic terminology and theory that enables more focused analyses in parts 2 and 3. Part 2: The economy in the long and intermediate term: Economic growth, development and well-being. Part 3: The economy in the short term: Corrective and stabilizing economic policies.

Learning outcome: Students should be able to understand basic macroeconomic models, which enables them to conduct basic analysis of questions regarding economic growth and development in the long run, full employment and stabilized economic development in the short run etc., and understand how the use of fiscal and monetary policy affects the economy in the short and long term. The students should i) learn economic concepts and ideas. ii) to be trained in logical reasoning. iii) be given some training in the application of mathematics. iv) to develop an academic attitude

Teaching methods: The course combines lectures, exercises (with answers presented) and discussions. Overheads are available prior to lectures (to enable the students to prepare and have a more focused read of course readings). Kurset kombinerer forelesninger, øvinger (med gjennomgang) og diskusjon. Separate exercise and discussion sessions are thematically organized. Exercises (with proposed solutions) are available on the course web pages. Students are expected to have attempted to solve the exercises prior to the exercise sessions. Each exercise and discussion session is organized according to theme, and central questions for discussion are posted on the

course web pages. Students are divided in groups, and each group discusses and prepares a summary of their discussion prior to plenary discussions.

Teaching support: The course web pages contains pointers to background materials and news events that are related to the course contents, and make up an important source for student learning.

Syllabus: Information about textbook will be available approximately three weeks prior to the beginning of the course. Additional readings/teaching materials available on the course web page as the semester progresses.

Prerequisites:

Mandatory activities:-

Exam: Written examination (3 hours).

Note: The course is a standard introductory course in macroeconomics, and equivalent courses are given at the universities and regional colleges in Norway, as well as at universities abroad.

Nominal workload: 150 hours.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: ECN101 3 ECTS, EDS140 3 ECTS.

Type of Course: Lectures: 24 hours. Exercise and discussion sessions: 10 hours.

ECN122 Introduction to Macroeconomics, Part II

Course responsible: Eirik Romstad

Teachers: Per Halvor Vale

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: The course consists of two main parts: economic growth and human well-being, and economic stabilization policies. In addition, trade central theories are introduced and discussed in conjunction with international currency markets.

Learning outcome: Students are expected to be able to use and understand basic economic models for analyzing economic growth and stabilization policies. The course builds on ECN120, where a broad introduction was given. Compared to ECN 120, this course provides a more in-depth analysis on the following areas: - Growth and human well-being (classical growth models, Solow type models, human capital and endogenous growth models), internationally and for Norwegian conditions. - Capital management linked to countries with stock resources, with a special emphasis on Norway: the Hartwick rule applied to Norway's petroleum sector and the risk for Dutch disease. - Economic stabilization policies (fiscal policies/basic Keynes models, monetary policy. The financial crisis is used to illustrate issues at the international level, and nationally for economies with low and high capacity utilization. - The national budget and accounts - International trade and currency markets.

Teaching methods: Lectures (20-25 hours), and exercise and discussion sessions (8-12 hours). Lecture overheads are provided prior to lectures, and it is expected that students are prepared when they turn up for lectures. The exercise and discussion sessions consist of two parts: - A run through of exercises (suggested answers available on the course web pages) and discussion sessions. It is expected that students have attempted to solve the problem sets. - Group discussions, where groups discuss given topics and provide a short introduction for plenary discussions.

Teaching support: This course has an extensive web page with links to related news, further readings, governmental agencies and NGOs that are deemed important for macroeconomic policy. The course web is supposed to be the starting point for all learning in the course.

Syllabus: Information about the main textbook will be available on the course web pages approx. three weeks prior to the beginning of the course. Additional materials may be added as the course progresses. Lectured materials are part of the mandatory curriculum.

Prerequisites: ECN120

Mandatory activities:-

Exam: Three hours written exam, consisting of three parts: (i) multiple choice, (ii) graphical analysis, and (iii) verbal/mathematical analysis

Note: The course builds on ECN120

Nominal workload: 150 hours.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: ECN220 - 5 ECTS.

Type of Course: Lectures: 2 hours per week Exercise and discussion sessions: about 2 hours every other week

ECN140 Economic History

Course responsible: Ragnar Arnljot Øygard

Teachers: Espen Ekeberg

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in January block. This course has teaching/evaluation in January block.

Course contents: Familiarity with the main trends in recent Norwegian and international history and elementary economic theory. The student's personal effort consists of the work on the syllabus and a compulsory semester assignment.

Learning outcome: There are three learning goals in this course: 1. Students are to acquire basic knowledge of the economic development in a historical perspective - mainly in Norway, but examples are also taken from international situations. 2. Students are to be able to link the economic theory with historical problems. 3.

Students are to be able to abstract trends from the Norwegian economic development and transfer these to other periods, areas and problems.

Teaching methods: Lectures and independent study. In addition, there will be work on a semester assignment and possibly guidance associated with that.

Teaching support:-

Syllabus: An overview of the course literature will be handed out at start of the course.

Prerequisites:-

Mandatory activities:-

Exam: The final written examination (3,5 hours) counts 100%.

Note:-

Nominal workload: 150 hours.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: 24 hours

ECN170 Environmental and Resource Economics

Course responsible: Ståle Navrud

Teachers: Eirik Romstad, Arild Einar Bjørn Angelsen

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: The course gives an introduction to environmental and resource economics (ERE). This consists of four parts: 1) The general model for the interactions between the economic and the ecological systems. 2) Models for optimal use of resources: i) Renewable/conditionally renewable resources. - Environmental resources - water-, air-, and soil quality (= environmental economics). - Biological resources - fish, forest, wildlife populations (bioeconomic models). - Non-renewable resources - oil, gas, minerals. 3) Regulatory tools (environmental taxes, tradeable emission permit, etc.) i) Cost-benefit analysis (CBA)/Cost-effectiveness analysis (CEA)/ valuation of environmental goods ii) Green accounting (at the national level - green national accounts, and firm level - triple bottom line: financial, ecological and ethical/corporate social responsibility). 4) Policies/regulatory measures. i) Decentralized policies (Liability laws, property rights, voluntary action). ii) Command-and-control measures (laws, standards). iii) Incentive-based measures (taxes, subsidies, tradable permits). Criteria for choice of policies. The aim of ERE is socially optimal management of environment and natural resources maximizing social welfare. Part 1 reviews welfare theory and a general model for interaction between the economic and ecological systems, and how optimal resource management maximises the welfare of society. Part 2 reviews the specific models for socially optimal management of environmental resources, biological resources and non-renewable resources. If we are currently not at

the socially optimal of the resource, we can identify alternative actions that may reach this goal. Part 3 reviews analytical tools that can be used to identify measures where social benefits exceeds social costs, which will bring us closer to the optimal amount of the resource. Part 4 discusses how to implement these profitable actions through the use of various policy measures. Often, specific combinations of the action and policy measure must be analyzed, and combinations of measures are also considered. Policy measures are compared based on a list of criteria including their efficiency, fairness, incentives for long-run improvements, and enforceability.

Learning outcome: The students should be able to explain the basic ideas, theories, methods and models in environmental and resource economics, and be able to conduct simple applications of this knowledge to current issues in management of environment and natural resources.

Teaching methods: Lectures and exercises

Teaching support: Exercises can be found on the course website, and the solutions are reviewed and explained in class. Exams from previous years are reviewed in class.

Syllabus: - B. C. Field and M. K. Field (2009): Environmental Economics. An Introduction. McGraw-Hill, New York, 5. edition. - Selected journal articles and book chapters at the course website

Prerequisites: ECN110 or an equivalent introductory course in economics (with focus on microeconomics).

Mandatory activities:-

Exam: Written examination, counts as 100 % of the final grade.

Note:-

Nominal workload: 150 hours.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: ECN101 3 ECTS, EDS140 ECTS.

Type of Course: 40 hours.

ECN201 Econometrics

Course responsible: Kyrre Rickertsen

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course has teaching/evaluation in Autumn parallel.

Course contents: The lectures in ECN201 cover two- and multiple-variable regression analysis, OLS, hypothesis testing, violations of OLS assumptions, GLS, dummy independent variables, and the use of the econometric program SHAZAM. In addition, there are problem sets, computer exercises, and a term paper.

Learning outcome: ECN201 gives an introduction to econometric methods. The focus is on applied and not theoretical econometrics. There are two specific goals. First, the course aims at giving the students practice in reading and understanding empirical works in economics and other social sciences. That includes knowledge of ordinary

least squares (OLS) and its assumptions, the consequences of violating these assumptions, and how to detect and correct misspecification in econometric models. Second, the students will do their own econometric analysis, which includes formulating the problem to be investigated, developing an econometric model based on economic theory, obtaining the required data, estimating the econometric model, testing and correcting for misspecification in the estimated model, describing the empirical findings, and discussing their relevance for the investigated problem. The second specific goal also includes learning to use an econometric program such as SHAZAM.

Teaching methods: The course consists of lectures and independent studies in the form of reading the textbook, solving problem sets, doing PC exercises, and writing a term paper. The students are encouraged to work in groups, however, a maximum of two students can write one term paper. It is important to get started with all the activities early in the semester.

Teaching support: The lecturer will have two office hours each week.

Syllabus: Demodar N. Gujarati and Dawn C. Porter (2009). Basic Econometrics, fifth edition, McGraw-Hill. The textbook used in the course may be changed.

Prerequisites: Mathematics (MATH100), statistics (STAT100), and microeconomics (ECN210).

Mandatory activities:

Exam: 60% of the final grade will be based upon a 3.5 hour written examination. 40% of the final grade will be based on a term paper. Students must have a passing grade (A-E) on both the term paper and the written examination to get a passing grade in this subject.

Note: ECN202 is a basic version of ECN201. However, ECN202 does not use the computer program SHAZAM and does not include a term paper. A different textbook is also used in ECN202.

Nominal workload: The expected total workload of this course is 300 hours. About 250 hours are unstructured time. About 150 hours must be allocated to independent studies (such as reading, doing problem sets, etc) and about 100 hours to the term paper.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: The course partly overlaps with ECN202 and STAT200. There is reduction in credits for ECN202 (5 credits) and STAT200 (5 credits).

Type of Course: There are four hours of lectures and/or exercises per week or a total of about 50 hours of structured time. The lectures will take about 60% of the structured time and the exercises about 40% of the structured time.

ECN202 Introduction to Econometrics

Course responsible: Frode Alfnes

Teachers: Erik Smith-Meyer

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: The topic of the lectures in ECN202 is regression analysis using one or more explanatory variables, the construction of models and the testing of hypothesis. An introduction will be given in the use of Excel for econometric analysis. This topic is further treated in ECN201 (Econometrics), ECN301 (Econometric Methods)

Learning outcome: ECN202 gives a practical introduction to econometrics with main emphasis on regression analysis. The goal is to teach students to use econometrics to analyze different types of data in Excel. The students learn to construct and estimate models and critically evaluate the results. The main emphasis is the application of econometrics and the interpretation of empirical results.

Teaching methods: Lectures and exercises.

Teaching support: Students will have access to the teacher in his office 2 hours per week for questions. Course material will be posted on the course web site.

Syllabus: Textbook will be announced at the start of the semester.

Prerequisites: Basic knowledge in math, statistics and economics: MATH100, STAT100, ECN210.

Mandatory activities: Compulsory assignments.

Exam: Written examination, 3.5 hours. The compulsory assignments must be passed before you can take the exam.

Note:-

Nominal workload: 150 hours.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: ECN201- 5 credits, STAT200 - 5 credits.

Type of Course: 36 hours.

ECN210 Intermediate Microeconomics- Consumers, Producers, Market and Welfare

Course responsible: Mette Wik

Teachers: Sigurd Henning Rysstad

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: Part I: Markets and prices. Part II: Consumer theory. Part III: Producer theory. Part IV: Market structure and competitive strategy. Part V: General equilibrium, economic efficiency and market failure.

Learning outcome: The course aims to give a basic introduction to microeconomic theory: (a) Consumer theory. (b) Producer theory. (c) Perfect competition and monopoly. (d) Welfare economics. Most applied courses in economics and business economics are based on microeconomics. This course will, hopefully, help the student to: (i) Acquire an overview over the most important concepts and models in microeconomics. (ii) Learn to formulate and solve microeconomic problems graphically and mathematically. (iii) Acquire good qualifications for further studies in economics.

Teaching methods: Lectures, exercise sessions.

Teaching support:-

Syllabus: Pindyck, R.S. and D.L. Rubinfeld: Microeconomics. Pearson. or Pindyck, R.S., D.L. Rubinfeld og T. Synnestvedt: Introduksjon til Mikroøkonomi. Pearson.

Prerequisites: MATH100 Introductory Mathematics. It is an advantage but not required to have some background in microeconomics, for instance equivalent to ECN110.

Mandatory activities: The students need to submit and pass 7 out of 10 assignments. The assignments must be submitted in Fronter before deadline and will be graded by a teaching assistant.

Exam: Final written examination: 3,5 hours.

Note:-

Nominal workload: 300 hours.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Type of Course: Lectures: 4 hours per week for 12 weeks. Exercise sessions: 2 hours per week.

ECN211 Intermediate Microeconomics - Institutions, Games and Market

Failures

Course responsible: Knut Einar Rosendahl

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: 1. Introduction - economics and institutions. 2. Game theory. 3. Monopoly and regulation. 4. Oligopoly. 5. The emergence of perfect competition. 6. Welfare theory. 7. Risk, uncertainty and insurance markets. 8. Non-rational behaviour. 9. Informational market failures. 10. Externalities and public goods.

Learning outcome: To be able to understand and analyse market behaviour and market organisation, and why and how governments should regulate business behaviour.

Teaching methods: Lectures. Mini-experiments. Practical exercises - exercise lessons.

Teaching support: Web support. Exercise lessons.

Syllabus: Schotter: Microeconomics. A Modern Approach.

Prerequisites: ECN110 or equivalent course in Microeconomics.

Mandatory activities:-

Exam: Final written examination: 3,5 hours.

Note:-

Nominal workload: 300 hours

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: Lectures: 4 hours per week. Exercises: 2 hours per week.

ECN222 Intermediate Macroeconomics

Course responsible: Ragnar Arnljot Øygard

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: The course consist of three parts: 1. Business cycle analysis and stabilization policy 2. Economic growth 3. Topics of special current interest, e.g. inflation targeting, the zero lower bound on the interest rate, and the Eurozone crisis.

Learning outcome: Candidates from the course shall know core macroeconomic models, such as: *Keynesian multiplier models. *IS-LM-BP, including the Mundell-Fleming model. *AD-AS *The Solow growth model and newer growth theory. Candidates should be able to use these models for - analyzing macroeconomic issues, and consequences of macroeconomic changes for firms and individuals. - analyzing economic policy and economic reports such as "Parliamentary White Papers" and NOU-reports

Teaching methods: The course combines lectures, exercises, class discussions, as well as a comprehensive web site with links to economic literature.

Teaching support:-

Syllabus: Selected parts of: Blanchard, Olivier m.fl. "Macroeconomics. A European Perspective" (newest edition) plus supplementary material.

Prerequisites: ECN120 and ECN122 or similar course

Mandatory activities:-

Exam: Written exam 3 hours.

Note: A similar course in "intermediate macroeconomics" is offered in many universities in Norway and internationally.

Nominal workload: 300 hours

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: ECN220 - 5 ECTS

Type of Course: 2*2 hours of lectures and exercises per week.

ECN230 International Economics

Course responsible: Roberto Javier Garcia

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN

(NO=Norwegian, EN=English)

Limits of class size: There is no limit to enrollment.

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: This course is designed to bridge international economic theory and applied agricultural economics, providing a review of issues in development, policy, trade, and welfare.

Learning outcome: The student is expected to develop: an understanding of why nations trade and under which conditions trade occurs knowledge of the role of supply and demand factors in determining the gains from trade the ability to evaluate the welfare effects of protectionist trade policies, free trade, managed trade, and the economic implications of other forms of government intervention to foster development a conceptual framework for evaluating international competitiveness, comparative advantage, and foreign investment and strategic behaviour.

Teaching methods: Students are expected to read the sections in the text prior to attending lectures. There are four problem sets that will be related to the class notes and readings. Students are expected to complete these assignments during exercise sessions on the dates assigned by the instructor. These assignments are intended to monitor the progress of the class in its understanding of the material. These assignments require a passing grade.

Teaching support:-

Syllabus: * Appleyard and Field (A+F), International Economics (International Edition) * Supplementary reading materials provided on the web at <http://athene.nmbu.no/emner/ECN230>.

Prerequisites: Basic knowledge in macro- and microeconomics ECN120 and ECN210. The course is intensive in basic microeconomic principles.

Mandatory activities: There are 4 problems sets. These will be group exercises on problem sets that must be submitted and a passing grade received. The course plan includes four assignment sessions during which students can work on the assignments and consult with a teaching assistant and/or the instructor.

Exam: 3 hour written examination.

Note: The course is divided into two parts: (1) trade modelling under partial and general equilibrium and (2) trade policy analysis, trade and strategic behavior by government/firm, and international factor movements (capital and labor). Course description, lecture plan, detailed course outline and course materials (web-based readings, homework assignments and handouts) are available on the web at the following site: <http://athene.nmbu.no/emner/ECN230> Students who have previously

taken an international economics course are discouraged from taking ECN 230 and are encouraged to take ECN 330

Nominal workload: 300 hours.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: There are 20 2-hour lecture sessions with 4 lecture hours per week. There will also be 4 2-hour exercise sessions scheduled with a teaching assistant who will help with the problem sets.

ECN260 Agricultural Policy

Course responsible: Sigurd Henning Rysstad

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO
(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: The course is built up of several topics: Historical development, theory parts, relevant problems concerning agriculture and forestry policies, e.g.: Goals for agriculture and forestry policies, means and institutions. The effects of the EEC, EU and WTO on Norwegian agriculture and forestry.

Learning outcome: The purpose of the course is to give a broad introduction to policies concerning Norwegian agriculture. The policy system, goals and means. The effects of some key policies will be analyzed mainly using microeconomic theory. The course will also present the historic development of Norwegian agriculture policies. Other relevant topics like EU's Common Agricultural Policy, the WTO and potential changes in Norwegian agricultural policies may also be covered. These topics may vary somewhat from one year to the next.

Teaching methods: Lectures, class discussions, individual literature studies and group projects and presentations.

Teaching support:-

Syllabus: An overview of the course readings will be made available on Fronter.

Prerequisites: Basic knowledge in Microeconomics ECN110 or an equivalent course.

Mandatory activities: -Participation in a group project and presentation of the group project in class. Evaluation: Pass/fail.

Exam: To take an exam, you must obtain approval of a project (group) on assigned topics. The project work will be presented in plenary. Project and presentation judged pass / not passed. Final written examination - 3.5 hrs.

Note:-

Nominal workload: 300 hours.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: 4 hours per week.

ECN263 Food Industry Economics

Course responsible: Ivar Fredrik Pettersen

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in January block. This course has teaching/evaluation in January block.

Course contents: Food supply chains: Horizontal and vertical relations and structural characteristics, types of ownership, market power and competition, strategy formation and sources of competitive advantage in food markets. Food sector as industrial clusters: Agglomeration effects in food industries, the Norwegian bio-economy in a global perspective, innovation systems in the food sector. Food sector policies: From private to social value added, national competitiveness, the case for regulation, food safety, food security, trade policy, intellectual property rights.

Learning outcome: Students shall know how to approach the analysis of structure, competition and regulation of food supply chains, and have gained skills for food market strategy development (market segmentation, product development/ branding, business system development etc.).

Teaching methods: Lectures, class discussions, readings

Teaching support:-

Syllabus:-

Prerequisites: Introduction course in Microeconomics (ECN110).

Mandatory activities:-

Exam:-

Note:-

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course:-

ECN270 Natural Resource Economics

Course responsible: Knut Einar Rosendahl

Teachers: Therese Dokken, Ståle Navrud, Arild Einar Bjørn Angelsen

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: Lectures and exercises will address the following issues: Economy - ecology interactions, sustainable development, optimal management of renewable and non-renewable resources, pollution control, valuation of environmental resources, international environmental agreements.

Learning outcome: Candidates should be able to apply economic theory to analyse environmental and natural resource management issues. These issues include: economy - ecology interactions, sustainable development, optimal management of renewable and non-renewable resources, pollution control valuation of environmental resources and accounting for the environment, and international environmental agreements.

Teaching methods: The course will include lectures and exercises. Three compulsory exercises must be passed.

Teaching support:-

Syllabus: Perman, R., Y. Ma, M. Common, D. Maddison, J. McGilvray. 2011. Natural Resource and Environmental Economics. 4th ed. London: Longman.

Prerequisites: Microeconomics at the level of ECN210 or ECN211.

Mandatory activities: Three out of four exercises approved.

Exam: Final written examination, 3 hours: 100 %.

Note:-

Nominal workload: Time use estimate: Lectures: $13 * 2 = 26$ hrs. Work on exercises: 4 exercises of 4 hours = 16 hrs. Reading course literature: 108 hours. TOTAL: 150 hrs.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Type of Course: 2-4 hours per week lectures and exercise review ($13 * 2$ hours with lectures, and $4 * 2$ hours with exercise review)

ECN271 Cost Benefit Project Evaluation and Environmental Valuation

Course responsible: Ståle Navrud

Teachers: Yohei Mitani

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN, NO
(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: The course gives an overview of theory and methods for economic appraisal of projects, in terms of cost-benefit analysis (CBA) and theory and methods for economic valuation of environmental goods including the damage function approach, environmental and health valuation methods and benefit transfer techniques. Applications to environmental impacts from renewable and non-renewable energy investments (e.g. wind farms, hydro power plants, gas-fired power plants), noise and other impacts from transportation projects, air and water pollution policies, landscape

aesthetics, biodiversity preservation, recreational fishing and hunting, marine oil spills, and health impacts from air pollution. Environmental valuation in developing countries. Laws and guidelines for CBA in Norway, EU, USA and developing countries. Welfare theoretic basis for CBA and the value judgments/assumptions made in CBA. A stepwise approach to CBA, with special emphasis on risk/uncertainty, distributional impacts, economic valuation of environmental impacts, and treatment/presentation of non-valued impacts.

Learning outcome: After the course, students should be able to carry out, interpret and critically evaluate Cost-Benefit Analyses (CBAs) of projects and policies, including the treatment and economic valuation of environmental impacts, health impacts and impacts on cultural heritage.

Teaching methods: Lectures and extensive supervision of student groups in their preparation of semester assignments. 1-2 weeks prior to the deadline, the students presents a 'near complete' draft of the semester assignment to the class, and get feedback from the teacher and fellow students.

Teaching support: All groups have a start-up meeting with the teacher to identify and define the topic of their semester assignments. Afterwards each group makes appointment with the teacher when they need supervision. 1-2 weeks before the deadline of the semester assignment, all groups present their near complete semester assignment in class, and get feedback from the teacher and fellow students.

Syllabus: - Boardman, A. E, D. H Greenberg, A. R. Vining and D. L. Weimer: 2011: Cost-Benefit Analysis. Concepts and Practice. 4th edition. Prentice Hall, Inc., Upper Saddle River, New Jersey, USA- Selected journal papers will be posted at the course website.

Prerequisites: ECN170 or similar introductory course in environmental and resource economics; and ECN210 or similar introductory course in microeconomics.

Mandatory activities:-

Exam: A semester assignment (100 %), which is prepared by groups of 2-4 students. In the semester assignments the students will apply what they have learned about theory and methods to a case of their own choice, i.e. an economic analysis of a project with environmental impacts. In the semester assignment, the students will also have to answer questions from a check list, which covers the curriculum of the course.

Note:-

Nominal workload: 300 hours.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: 28-30 hours plus supervision of the group assignments.

ECN280 Energy Economics

Course responsible: Torstein Arne Bye

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: 1) Introductory lecture with an overview over energy markets. 2) Water employment in a hydro-based power system - from simple systems to complicated systems - with main emphasis on theory and the setting of prices through various types of counters in the system. 3) From free competition to market power in energy markets. 4) Taxation of energy markets with focus on problems concerning the basic rent and environmental problems. 5) Green mechanisms in the energy markets. 6) Special problems in connection with gas and gas transport. 7) Special problems in connection with oil markets.

Learning outcome: To give the students an understanding of central economic problems and insight into theory and analysis methods in connection with trade and production, sale and taxation of various forms of energy in a decentralized and relatively open economy.

Teaching methods: Lectures, independent study, exercises.

Teaching support:-

Syllabus: The syllabus will be handed out at the first lecture.

Prerequisites: Intermediate Microeconomics (ECN210 or equivalent)

Mandatory activities:-

Exam: Written examination (3.5 hours), counts 100%.

Note:-

Nominal workload: 300 hours.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: Lectures, guidance on set days, 4 hours per week.

ECN301 Econometric Methods

Course responsible: Olvar Bergland

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN
(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: This course focuses on modern econometric methods for the analysis of economic data - both cross-sectional and time-series data. The following topics are covered: estimation and testing of linear regression models with stochastic and possibly endogenous regressors, panel data models, systems of equations, models with limited dependent variables, models of sample selection and program evaluation, and time-series models for stationary or non-stationary processes, cointegration and error correction models.

Learning outcome: The successful student should be able to conduct independent econometric analysis of economic data, and to critically evaluate econometric analysis with respect to choice of model, method and interpretation of results. The analysis should be performed using a computer and appropriate software. The econometric analysis should be in accordance with current standards for scientific documentation within economics.

Teaching methods: The course consists of lectures, computer laboratory time, independent exercises and self-study.

Teaching support: Open office 2 hours/week.

Syllabus: J.M. Wooldridge (2009): 'Introductory Econometrics: A Modern Approach', 4th edition. Handouts. (This is subject to change.)

Prerequisites: An introductory course in econometrics (ECN201) (or regression analysis), statistics (STAT100), microeconomics (ECN210), and linear algebra at the level of ECN302.

Mandatory activities: Compulsory exercises and project work involving econometric analysis using computers. (Approved work is valid for two - 2 - years.)

Exam: 3.5 hour final examination, 100%.

Note:-

Nominal workload: Normalized effort is 300 hours, of which 70 hours are organized activities; some 80 hours are related to exercises/project work, and 150 hours for self-study.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: This course replaces ECN300. A student cannot be given credit for both ECN300 and ECN301.

Type of Course: Class lectures: 45 hours. Laboratory work: 25 hours.

ECN302 Mathematics for Economists

Course responsible: Dadi Mar Kristofersson, Kyrre Rickertsen

Teachers: Arnar Mar Buason

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: The course has teaching/evaluation in August block.

Course contents: The course covers mathematical tools that will be assumed known in courses such as, for example, ECN311 (Microeconomics) and ECN301

(Econometrics). The course is a required course for the M.Sc. degree in Economics at NMBU School of Economics and Business. Topics covered in matrix algebra include: Summation operators, types of matrixes, matrix operations, Gauss-Jordan elimination, determinants, the inverse of a square matrix, matrix differentiation, Cramer's rule, and the matrix approach to regression. Topics covered in optimization include: Elasticity, the chain rule, unconstrained optimization, equality constrained optimization

(Lagrange), inequality constrained optimization (Kuhn Tucker), implicit function theorem, and envelope theorem.

Learning outcome: The course will introduce the matrix algebra required in courses in econometrics and the tools required for solving optimization problems in economics. The focus is on applying the mathematical tools rather than proving them. An important part of the course is to solve problem sets.

Teaching methods: The course consists of lectures and exercises. The students are encouraged to work in groups.

Teaching support:-

Syllabus: Parts of Alpha C. Chiang and Kevin Wainwright (2005) Fundamental Methods of Mathematical Economics, McGraw Hill International edition. Parts of Silberberg and Suen (2001). The Structure of Economics - A Mathematical Analysis, third edition, Irwin McGraw-Hill. Lecture notes. The required readings may change.

Prerequisites: Mathematics on the level of MATH100.

Mandatory activities:-

Exam: Permitted tools on exam: Textbooks published by publishing houses. Lecture notes from Classfrontier or other private notes are NOT allowed.

Note:-

Nominal workload: 150 hours. About 25 hours will be used for lectures and about 25 hours will be used for exercises. The remaining unstructured time should be allocated to reading the textbook and lecture material and solving problems.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: There are the following reductions: MATH111, 1 ECTS
MATH112, 1 ECTS MATH130, 2 ECTS

Type of Course: There are four hours of lectures and exercises per day. About half the time will be allocated to lectures and the remaining time will be allocated to exercises.

ECN303 Impact Assessment Methods

Course responsible: Therese Dokken

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: Basic introduction to Impact Assessment and Overview of Methods: Establishment of causality vs. correlations. Impacts of what on what? How far can the results be generalized? Introduction and exercise in use of Matching methods, Selection methods, Instrumental variable methods, Control function methods, Difference-in-Difference methods, Panel data methods.

Learning outcome: An introduction to modern impact assessment methods for quantitative assessment of impacts of changes in policies, projects, shocks and other changes. An overview of the most relevant methods, their strengths, weaknesses and

areas of application. An exercise is given for each of the main methods to give students an experience with their application.

Teaching methods: Lectures and exercises

Teaching support: Exercises with support from teacher

Syllabus: Cameron, A. C. and Trivedi, P. K. (2010). Microeconometrics Using Stata. Revised Edition. Stata Press. Detailed list of readings is provided at the beginning of the course.

Prerequisites: Econometrics (ECN201), Statistics (STAT100), basic knowledge of STATA

Mandatory activities: Compulsory participation in exercises

Exam: 3.5 hours written exam (100 %)

Note:-

Nominal workload: 150 hours

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: 2 hours per week, combining lecture and exercise.

ECN304 Behavioral and Experimental Economics

Course responsible: Frode Alfnes, Stein Terje Holden

Teachers: Yohei Mitani, Frode Alfnes

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: Topics in behavioral economics: Rational vs. irrational behavior, uncertainty and expected utility, prospect theory, time preferences and discounting, risk preferences and responses to risk, altruism, fairness, trust. Topics in experimental design: Basic design issues, implementation of laboratory experiments, field experiments

Learning outcome: Get an overview of important lessons in behavioral economics including recent contributions in the literature, an overview of research methods in experimental behavioral economics including laboratory and field experiments

Teaching methods: Lectures and exercises

Teaching support: Students will have access to detailed information about the course through Fronter.

Syllabus: A detailed list of readings will be presented at the beginning of the course.

Prerequisites: Econometrics (ECN201), Statistics (STAT100), Microeconomics (ECN311)

Mandatory activities: Compulsory exercises

Exam: Written examination, 3.5 hours (100 %).

Note:-

Nominal workload: 300 hours

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: Lectures 2 hours per week, exercises 0-2 hours per week

ECN305 Research Methods in Economics

Course responsible: Ragnar Arnljot Øygard

Teachers: Arild Einar Bjørn Angelsen, Frode Alfnes, Ståle Navrud

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: The course will cover the following topics: - How to find good research questions - How to write a thesis and research proposal - General writing rules - Field research methods - Social surveys, including sampling, questionnaire design and analysis - Impact studies - Introduction to the STATA statistical package. - Introduction to literature search

Learning outcome: In this course, students should be able to find and present a researchable topic within economics and to write a research proposal for their thesis. In order to write a research proposal they need to be able to: - demonstrate command of existing knowledge within their research topic - use existing knowledge to explore the issue of interest formulate researchable research questions and hypotheses - identify relevant data sources either existing data sources or through a plan to collect their own data and understand the methods used to compile and analyze the data.

Teaching methods: Lectures and presentations with group discussion. Individual supervision while writing the research proposal.

Teaching support: Students will be allocated a supervisor for their MSc thesis in the beginning of this course. The supervisors will discuss research topics and give close supervision during the writing of the research proposals.

Syllabus: Selected journal articles and book chapters

Prerequisites: Fundamental knowledge of economic theory and method, e.g. ECN212 Microeconomics or ECN210/211 Microeconomics II and ECN222 Economics II, ECN201 Econometrics

Mandatory activities: Preliminary research proposal. Stata exercise.

Exam: The semester assignment (research proposal) is due in April, and makes up 100 percent of the final grade.

Note: The course gives an introduction to research methods that are relevant for the Master thesis. It is particularly useful for students planning to collect own data, but it also covers research methods more generally. The project description is the first step in the work on the Master thesis.

Nominal workload: Lectures and group work: 24 hours; individual supervision: 2 hours; Write proposal: 104 hours

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: ECN351, 5 ECTS. The same reduction for other similar courses.

Type of Course: Classes during the 6 weeks of the term (2x2 hours per week).

Proposal to be submitted in April.

ECN311 Microeconomics III

Course responsible: Kyrre Rickertsen

Teachers: Arnar Mar Buason

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN

(NO=Norwegian, EN=English)

Teaching exam periods: The course has teaching/evaluation in the autumn parallel.

Course contents: The course extends the material covered in intermediate courses in microeconomics. Special emphasis is put on duality theory in economics. The lectures cover the theory of the consumer, welfare measures, the theory of the producer, and behavior under uncertainty.

Learning outcome: The theory introduced in intermediate courses in microeconomics is further developed in ECN311. The course will give the students basic training in solving economic problems related to supply, demand, and input demand. The focus is on applying rather than proving theory. The course gives a basis for further studies in, for example, development, resource, and environmental economics.

Teaching methods: There are lectures. Furthermore, independent work such as reading the textbook and solving problem sets are important parts of the course. The students are encouraged to work in groups, but the problem sets have to be turned in for individual grading. It is important to get started with all the activities early in the semester.

Teaching support: The lecturer will have two office hours each week.

Syllabus: Eugene Silberberg and Wing Suen. The Structure of Economics - A Mathematical Analysis, Irwin McGraw-Hill, third edition, 2001. Hal R. Varian. Microeconomic Analysis, third edition, Norton, 1992. Lecture notes. The required readings may change.

Prerequisites: Microeconomics on the level of ECN210/ECN211. Mathematics on the level of ECN302 (Mathematics for Economists).

Mandatory activities: Five problem sets must be graded as passed before taking the final examination.

Exam: The grades will be set on the basis of a 3.5 hour written examination (100 %)

Note:-

Nominal workload: 300 hours. About 50 hours are used to structured activities while 250 hours are unstructured time that the students should allocate to reading and solving problems.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: ECN310, 5 ECTS.

Type of Course: There are four hours of lectures and exercises per week. About 60% of the time will be allocated to lectures and 40% to exercises.

ECN312 Industrial Organisation

Course responsible: Olvar Bergland

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN

(NO=Norwegian, EN=English)

Teaching exam periods: This course starts in January block. This course has teaching/evaluation in January block.

Course contents: The following topics are covered: non-cooperative game theory, market power, monopoly, oligopoly, horizontal and vertical relations, and strategic behavior towards entry deterrence.

Learning outcome: The course aims at providing the students with economic concepts and analytical tools required for understanding, explaining and analyzing market behavior, market structure and market power and the interplay between the market conditions and strategic behavior. The use of game theory is emphasized.

Teaching methods: The course is organized with lectures combined with case studies and project work for group discussions.

Teaching support: Open office 2 hours/week.

Syllabus: P. Belleflamme and M. Peitz (2010): 'Industrial Organization' (Subject to change).

Prerequisites: Intermediate microeconomics (ECN211/210). Mathematics at the level of ECN302.

Mandatory activities:-

Exam: Final examination, counts 100%, 3 hours.

Note:-

Nominal workload: Normalized effort is 150 hours, of which 36 hours are organized activities, and 114 hours are related to self-study and case work.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: This course replaces ECN213, a student cannot receive credits for both ECN213 or ECN312.

Type of Course: Lectures: 24 hours. Group discussions: 12 hours.

ECN320 Macroeconomics III

Course responsible: Joachim Minge Thøgersen

Teachers: Ragnar Arnljot Øygard

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: Topics in the course include: 1. Growth theory. 2. The relationship between economic growth and development. 3. Stabilization policy. 4. Current issues

Learning outcome: Students should be able to use economic models to analyze current concerns related to macroeconomic stabilization, economic growth and development. The course should also stimulate interest in current social issues and an analytical attitude.

Teaching methods: Lectures with student - teacher interaction and seminars.

Individual assignments on key theories and models.

Teaching support: The teacher has office hours, and is available to discuss topics and assignment activities.

Syllabus: Romer, D. (2012) Advanced Macroeconomics (selected sections), plus a selection of book chapters and journal articles. A reading list will be provided at the start of the semester.

Prerequisites: Bachelor's degree in economics or an intermediate course in macroeconomics at the level of ECN220/ECN222.

Mandatory activities:-

Exam: A written examination (3.5 hours), counts 100 %

Note:-

Nominal workload: 300 hours.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Type of Course: 4 hours per week for lectures and exercises.

ECN330 Economic Integration and Trade Liberalization

Course responsible: Roberto Javier Garcia

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: The course is designed to provide a practical understanding of economic integration (factor mobility and trade in goods and services) and the importance of the multilateral trading system (the WTO in particular) as a platform to address issues or voice concerns related to trade in goods and services (with special emphasis on the Agreements on Agriculture, Sanitary and Phytosanitary measures, Technical Barriers to Trade). Finally, trade policy and agricultural programs in selected

importing and exporting countries are discussed in terms of their compliance with WTO Agreements.

Learning outcome: Students are expected to develop: · a conceptual framework for understanding the legal, political and economic implications of economic integration versus trade liberalization through a study of the development of the European Union and the multilateral trading system under the WTO and · the ability to assess trade policies and domestic regulations affecting trade in goods, services and intellectual property (special attention is paid to agricultural programs of a country to determine whether such policy is compliant with a country's commitments under the WTO Agreements).

Teaching methods: Students are expected to stay up-to-date on their reading. There are 3 assignments related to the class lectures/readings to demonstrate competence. In some cases, students might have to submit written assignments on the due dates set by the instructor and receive a passing grade on each. There is a semester project on a trade topic related to the WTO.

Teaching support:-

Syllabus: Any international economics textbook covering ECN 230 equivalent material · Hoekman and Kostecki, The Political Economy of the World Trading System, 2001 · Web-based readings

Prerequisites: Microeconomics, International Economics, ECN211/ECN212, ECN230, ECN 331, ECN201.

Mandatory activities: There are exercises (problem sets) and a semester project.

Exam: Final written examination, 3.5 hours, 60%. Oral examination of written semester project 40%. The student must pass both parts of the exam.

Note: Course description, lecture plan, detailed course outline and course materials (web-based readings, homework assignments and handouts) are available on the web at the following site: <http://athene.nmbu.no/emner/ECN330> The course is divided into 4 modules: (1) Economic integration and trade liberalization (2) Trade in goods: market access restrictions (3) Trade in goods: subsidies and countervailing measures (4) Trade in services and trade-related aspects of intellectual properties.

Nominal workload: The course is designed to provide a practical understanding of economic integration (factor mobility and trade in goods and services) and the importance of the multilateral trading system (the WTO in particular) as a platform to address issues or voice concerns related to trade in goods and services (with special emphasis on the Agreements on Agriculture, Sanitary and Phytosanitary measures, Technical Barriers to Trade). Finally, trade policy and agricultural programs in selected importing and exporting countries are discussed in terms of their compliance with WTO Agreements.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: Class will meet 6 hours per week and 42 hours total (seven weeks). This will allow time for students to work on the semester project.

ECN331 International Economics and Finance

Course responsible: Roberto Javier Garcia

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in August block. This course has teaching/evaluation in August block.

Course contents: Macroeconomic analysis and international trade. - Balance of payments. - Balance of trade. - Capital account. - Reserves. Exchange rates. - Law of one price, terms of trade, and purchasing power parity. - Forecasting, speculation, hedging and arbitrage: equilibrium exchange. - Modelling currency markets. Money markets and interest rate determination. - Money demand and money supply. - Interest parity and exchange rates. - Capital markets. Fiscal policy, goods market equilibrium. Monetary policy and asset market equilibrium. Alternative exchange regimes and central bank operation. Capital controls. Monetary union.

Learning outcome: The course is designed to complete the students understanding of the basic economics of trade through a formal treatment of the international macroeconomy and its relation to foreign exchange, foreign exchange regimes, capital movements, exchange rates and macroeconomic policy. Specifically, the student is expected to develop: 1) an understanding the relation of the microeconomics of international trade with the macroeconomics of international transactions (2) an appreciation for the complex relationships between macroeconomic indicators and the foreign exchange markets, and the interrelationships among assets, goods, and foreign exchange markets and (3) an understanding of the implications of a governments (and central banks) macroeconomic policy/objectives under fixed, flexible and managed foreign exchange regimes and the economic implications of the policy choices from each.

Teaching methods: Lectures, problem sets.

Teaching support:-

Syllabus: Appleyard and Field (A+F), International Economics, McGraw-Hill , 4th edition, 2006 Houck, Elements of Agricultural Trade Policies, Macmillan Publishing Co., 1986 (chapter 15) Web-based readings

Prerequisites: ECN230.

Mandatory activities: 3-4 exercises or problem sets.

Exam: Written examination, 3.5 hours, counts 100 %.

Note: Course description, lecture plan, detailed course outline and course materials (web-based readings, homework assignments and handouts) are available on the web at the following site: <http://athene.nmbu.no/emner/ECN331> The course is taught as three related topic areas: (1) Macroeconomic mechanisms supporting international trade flows (2) Money market, goods market and asset market equilibrium (3) Alternative exchange regimes, optimal currency area and monetary union.

Nominal workload: 150 hours.

Entrance requirements: Minimum requirements for entrance to higher education in Norway (

Reduction of credits:-

Type of Course: 21 lecture hours and exercise sessions there are seven 3-hour sessions. There is flexibility to slow down or increase the pace of meetings. Can either meet in morning sessions (09.15-12.00), afternoon sessions (14.15-17.00) or both.

ECN350 Development and Natural Resource Economics

Course responsible: Stein Terje Holden

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: Quantitative Development Policy Analysis, Microeconomics of Development, Household Modeling, Economy-wide Modeling, Economics of rural organisation, Natural resource economics, poverty and development.

Learning outcome: To give the students deeper insights in economic theory and methodology and how to use these for the analysis of development and environment policy issues in developing countries. - Advancement of theoretical and methodological skills. - Combine theory and methodology to do applied policy analysis. - Policy analysis for poverty reduction, food security and natural resource management.

Teaching methods: Lectures, exercises (computer exercises), group work, presentations, discussions.

Teaching support: A teaching assistant will guide the students with the exercises. The teacher is available during office hours upon request from the students.

Syllabus: A detailed reading list is handed out at the start of the course.

Prerequisites: Basic knowledge in economic theory (microeconomics, macroeconomics, development economics, resource economics, econometrics, operations research). ECN200/201, ECN230, ECN352, ECN270.

Mandatory activities: Compulsory exercises. Group work/presentations.

Exam: Written examination (3.5 hours), 100%

Note:-

Nominal workload: 300 hours.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: ECN450, 10 credits.

Type of Course: Lectures: 2-4 hours per week. Exercises: 0-2 hours per week. Total: 4 hours per week (lectures and exercises).

ECN352 Poverty

Course responsible: Arild Angelsen

Teachers: Espen Olav Sjaastad, John Andrew Mcneish

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: The course draws on the central debates from existing poverty literature and debates. The course is divided into five parts: (i) introduction, with overview of the key issues and the historical formation of the subject (ii) concepts and perspectives of poverty (absolute-relative, chronic, multi-dimensional approaches, social exclusion etc.) (iii) measures and methods for the definition and analysis of poverty (iv) dynamics of poverty, including debates on causes and on policies and instruments to reduce poverty.

Learning outcome: The aim of this course is to introduce students to the multi-dimensional study of poverty, thereby acquiring a thorough understanding of key debates and controversies. The course is designed to provide students with the practical and analytic skills needed to undertake research on poverty as part of their Master theses, or later employment.

Teaching methods: A combination of lectures, student presentations and class discussions.

Teaching support:-

Syllabus: Addison, T, Hulme, D and Kanbur, R (2009). Poverty dynamics: interdisciplinary perspectives. New York, Oxford University Press. + selected articles.

Prerequisites:-

Mandatory activities:

Exam:-

Note:-

Nominal workload: 300 hours, including 40 hours of lectures.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: Approx. 20 lectures (2 hours each)

ECN371 Environmental Economics

Course responsible: Eirik Romstad

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN, NO
(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: The course contains three elements. A) Advanced theory concerning systems analysis, resource allocation mechanisms, risk, control, information handling, behavioral assumptions, preference changes, transaction costs, rights, effects of different policy instruments with relation to various types of environmental problems and different behavioral assumptions. B) Studying concrete environmental economic problems - application of the theories. C) Case studies, where students in groups will discuss suitable policy instruments for the environmental issue in focus.

Learning outcome: Students shall acquire an understanding of how to create more environmentally friendly behavior among individuals and firms. The main focus is on the use of various policy instruments in environmental policy formulation. The course offers knowledge about the causes behind environmental problems and the various interactions between ecological processes and economic activity. Concerning economic behavior, the students will be educated in game theory and institutional behavioral theory. Within game theory (principal-agent models) the concept of resource allocation mechanisms and uncertainty will be emphasized. In the institutional part cooperative behavior, preference changes, and the importance of transaction costs and rights are core issues. The students shall learn to evaluate under which conditions the various theories are relevant. They shall, moreover, acquire knowledge about the effect of different policy instruments - economic, legal and informational - under different conditions.

Teaching methods: Lectures, exercises and case studies.

Teaching support: Seminars with group guidance.

Syllabus: Compendium with selected articles. There is no suitable text book in this course, but new books are constantly reviewed.

Prerequisites: Microeconomic analysis at the advanced/MSc level equivalent to ECN 311. Environmental and resource economics courses at the introductory level (ECN 170 or equivalent). For students without any previous courses in environmental and resource economics from their BSc, ECN270 is recommended.

Mandatory activities: Work on and presentation of case studies.

Exam: Written examination, 3 hours (100%). To qualify for taking the examination, students must have participated in the case studies.

Note: ECN 371 is still recommended to take ECN 372. ECN 371 is recommended for any MSc level student in economics specializing in environmental and resource economics, and/or energy economics.

Nominal workload: 300 hours.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: About 50 hours, together with considerable guidance in connection with the case studies. There will be additional seminars where student assignments will be presented.

ECN372 Climate Economics

Course responsible: Knut Einar Rosendahl

Teachers: Therese Dokken, Ståle Navrud, Arild Einar Bjørn Angelsen

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN, NO

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: The course consists of two main parts: i) THE GLOBAL CLIMATE REGIME AND CLIMATE NEGOTIATIONS. Here we will discuss factors affecting the global climate negotiations, and assess various options being discussed. Topics include: 1. Economic costs of climate change - how to value future damage costs, og how to deal with risk and uncertainty? 2. Main principles for the global climate regime - emission quotas, global carbon tax etc. 3. Fair distribution of emissions obligations between countries. 4. The climate game - what is happening at the negotiation table and in the corridors? 5. Norway's role in the climate negotiations. ii) NATIONAL CLIMATE POLICIES. 1. Policies to reduce climate emissions in Norway and the EU. 2. Climate and technology policies. 3. Carbon leakage from national climate policies. 4. Policies for implementing Reduced Emissions from Deforestation and forest Degradation (REDD) in developing countries.

Learning outcome: The course gives the students insights into environmental economics and game theory, applied to international climate negotiations and design of national climate policies. The aim is to show how economic methods may provide insights into the current climate debate, and to assess different policy options. Although the combination of theory and application is focused on the climate issues, the methodological part of the course will also be useful for other environmental issues.

Teaching methods: Lectures including guest lecturers. Compulsory group term paper and presentation of this

Teaching support: Seminars

Syllabus: Selected journal articles

Prerequisites: ECN 210 or an equivalent course in microeconomics

Mandatory activities: Group term paper and presentation of this.

Exam: Oral exam. The grade is determined based on the term paper, the presentation of this, and the exam.

Note:-

Nominal workload: 300 hours.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: ECN370: 10 credits.

Type of Course: 34-36 hours (incl. presentations of term papers) + supervising term paper

ECN380 Energy Markets and Regulation

Course responsible: Olvar Bergland

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN

(NO=Norwegian, EN=English)

Limits of class size: A minimum of 5 students is required for the course to be offered.

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: The course covers central issues concerning energy markets and economic regulation in the energy sector. Specific topics include: 1) regulation of network providers through dynamic yardstick competition, 2) measuring efficiency with DEA (data envelopment analysis) and SFA (stochastic frontier analysis), 3) organization of energy markets, 4) modeling of energy markets, 5) stochastic production planning in hydropower systems, 6) investments under uncertainty.

Learning outcome: The students shall acquire knowledge about and experience with the use of economic analysis tools as applied to economic and political issues in the energy sector.

Teaching methods: Lecture series on selected topics, exercises and project work.

Teaching support: Open office 2 hours/week.

Syllabus: Selected parts of Førsund (2007): 'Hydropower Economics', Coelli (2005) 'An Introduction to Efficiency and Productivity Analysis'. The reading list will be handed out at the first lecture.

Prerequisites: BUS220, ECN201/ECN202, ECN280, ECN312.

Mandatory activities: Approved project report. An approved project report is valid for two - 2 - years.

Exam: Oral examination. (Note: Students have no right to complain against the marking of oral tests/examinations, in accordance with the University and College Act Â§ 5-3).

Note:-

Nominal workload: Standard work load is 300 hours, of which 40 hours are lectures and supervised project work. 260 hours are devoted to self-study and project work.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: About 30 hours of lectures, and 10 hours of organized project work.

ECN410 Microeconomic Theory

Course responsible: Olvar Bergland

ECTS credits: 10

Department: School of Economics and Business

Teaching language: EN

(NO=norsk, EN=Engelsk)

Limits of class size: -

Frequency: Other, Given on request.

Course contents: The following topics will be covered:

- Optimization and prices
- Consumer choice and firm behavior
- Market equilibrium in exchange and production economies
- Dynamic optimization in discrete and continuous time
- Uncertainty and risk aversion
- Strategic equilibrium with symmetric or asymmetric information

Learning outcome: The objective of this course is to give the successful student a deep understanding and command of the core of microeconomic theory: maximizing behavior and equilibrium outcomes.

Teaching methods: Lectures, laboratory, exercises.

Teaching support: The teacher is available during office hours.

Syllabus: Selected chapters from J. G. Riley (2012): Essential Microeconomics. Cambridge University Press, Cambridge.

Prerequisites: ECN302 Mathematics for Economists and ECN311 Microeconomics III.

Mandatory activity: Completed and approved exercises. Active class participation.

Exam: Pass/fail based on written exercises.

ECN450 Development Economics: Methods and Policy Analysis

Course responsible: Stein Terje Holden

ECTS credits: 20

Department: School of Economics and Business

Frequency: Other, Given on request.

Teaching language: EN

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: The course is not given Autumn 2014/January 2015. This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel, January block.

Course contents: Teaching is combined with ECN350. Quantitative Development Policy Analysis: - Economic model building. - Production analysis and natural resources. - Demand analysis. - Household models. - Economy-wide models. - Supply response. - Econometric estimation with limited dependent variables. Economics of rural organisations. - New Institutional Economics and development. - Theories of collective action. - Market failures and externalities. - Food security and price stabilization. - Land reforms and impact assessment. Environment and development. - Market imperfections and the environment. - Poverty and land degradation. Choice of own topic for paper

Learning outcome: Application of economic theory and methodology on development policy issues in developing countries. Combination of theory and methodology. Tools for policy analysis. Training in scientific writing.

Teaching methods: Lectures, compulsory exercises, presentations, writing a scientific paper.

Teaching support: The teacher is available during office hours.

Syllabus: A detailed reading list is handed out at the start of the course.

Prerequisites: Master's degree in Economics or Agricultural Economics.

Mandatory activities: Exercises, group work, presentations.

Exam: Final written examination: 1/2, Scientific paper: 1/2. Final written examination joint with ECN350.

Note:-

Nominal workload: Teaching is combined with ECN350. Quantitative Development Policy Analysis: - Economic model building. - Production analysis and natural resources. - Demand analysis. - Household models. - Economy-wide models. - Supply response. - Econometric estimation with limited dependent variables. Economics of rural organisations. - New Institutional Economics and development. - Theories of collective action. - Market failures and externalities. - Food security and price stabilisation. - Land reforms and impact assessment. Environment and development. - Market imperfections and the environment. - Poverty and land degradation. Choice of own topic for paper

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: ECN350 - 10 credit units.

Type of Course: Lectures: 2-4 hours per week. Exercises: 0-2 hours per week. Writing of paper.

INN200 Management Accounting

Course responsible: Nils Sanne

Teachers: Torun Sæther Fretheim

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size: Maximum 35 students. Master's degree students in Entrepreneurship and Innovation and Nature-based Tourism have priority.

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: Cost accounting Calculation principles and methods Different tools for decision making Project evaluation Budgeting. Analysis of financial statements.

Learning outcome: The students will be at ease with cost and income theory, and be able to use this in decision making. The course aims at giving the students' knowledge to read, understand and analyze financial statements. The students shall after the course be able to actively contribute to the financial management and control of companies and projects.

Teaching methods: The course is based on active participation of the students and will focus on knowledge-building through individual problem-solving and group work. Case and problems to be addressed at seminars and workshops.

Teaching support:-**Syllabus:** Announced just before the program starts**Prerequisites:-****Mandatory activities:** Participation in group work and presentations**Exam:** The continuous assessment of the students. The grades are given on the hands in, counting 40% and final written exam, counting 60%. For taking a re-sit exam in the following semester, the hands in has to be passed.**Note:-****Entrance requirements:** Minimum requirements for entrance to higher education in Norway**Type of Course:** 4 contact hours per week.**INN210 Innovation****Course responsible:** Elin Kubberød**Teachers:** Nils Sanne, Siw Fosstenløyken**ECTS credits:** 5**Department:** School of Economics and Business**Frequency:** Annually**Teaching language:** NO

(NO=Norwegian, EN=English)

Limits of class size: Maximum 30 students.**Teaching exam periods:** This course starts in August block. This course has teaching/evaluation in August block.**Course contents:** Introduction to innovation, definitions. Innovation in global context, economic importance of innovation. Sources of and models for innovation. Types of innovation. Theories of innovation. The innovation process. Creativity and innovative teams. Innovation Management. Sources of innovation. Innovation networks. Decision under uncertainty.**Learning outcome:** The course shall provide the students with basic knowledge about what innovation is and the importance of innovation for value creation of firms and nations. Students should know the difference between innovation and invention. They will learn about different types and theories of innovation, and the connection between innovation and technological change. The students will get insight in the innovation process, creativity in innovation, innovation strategy, sources of innovation, importance of networks, decisions under uncertainty, basic insights in the business plan and evaluation of innovation projects and the importance of knowledge and learning in the innovation process. In addition the students will gain insight and experiential training in how to develop ideas, evaluate them and test them out in early innovation phase.**Teaching methods:** The course is based on active participation of the students and focuses on knowledge building through individual problem solving, exercises, presentations and group work.**Teaching support:-****Syllabus:** Joe Tidd and John Bessant: Managing Innovation. 5th Edition. Wiley
Additional literature will be announced when the course starts.**Prerequisites:-****Mandatory activities:** Two written assignments.

Exam: The continuous assessment of the students work and contributions conclude with an oral examination based on the work the students have done during the course. The two assignments count 15% of the final grade each. The final oral examination counts 70% of the final grade.

Note:-

Nominal workload: 150 hours.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: Lectures, excercises and written assignements.

INN220 Introduction to Entrepreneurship

Course responsible: Elin Kubberød

Teachers: Siw Fosstenløkken, Silja Marianna Korhonen-Sande, Nils Sanne

ECTS credits: 15

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size: Maximum 30 students.

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel, Spring parallel.

Course contents: Visits to businesses and research groups: Entrepreneurship and innovation: How to develop new ideas: Internal and external analysis: Business planning: Development and implementation of innovation strategies: Marketing, market strategies and market plan: Economic analyses and financing: Revenue models

Learning outcome: The students shall acquire in depth knowledge within chosen topics in entrepreneurship and innovation, with main focus on customer oriented business planning and innovation strategies. The students shall apply this knowledge to make a business plan or a innovation strategy for an existing firm/ venture or business opportunity. The students shall through excursions learn about firms and other important institutions for innovation and entrepreneurship on and outside of NMBU.

Teaching methods: The course is based on active participation of the students and will focus on knowledge-building through problem-solving and group work and presentations from students themselves.

Teaching support:-

Syllabus: Joe Tidd and John Bessant: Managing Innovation.5th Edition. Wiley
Osterwalder, Alexander & Pigneur, Yves: Business Model Generation, 2010. Hoboken, N.J. : Wiley. ISBN: 978-0470-87641-1, h.. Finnes som E bok: (ISBN: 9780470901038).

Prerequisites: Bachelor's degree or equivalent.

Mandatory activities: Three written assignments and one oral assignment.
Participating in excursions.

Exam: Evaluation of a semester thesis (business plan or innovation strategy) and individual oral examination. Written assignment including oral presentation in groups counts 40 %. The individual oral examination counts 60 %. No re-sit examinations in

this course. All four written assignments have to be completed and approved before the exam.

Note:-

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: Lecturing/problem solving one to two days per week. The number of lecturing hours per day will vary from week to week. Excursions and workshops. Group work.

INN310 Intellectual Property Rights

Course responsible: Siw Fosstenløyken

Teachers: Ivar Wergeland, Vegard Arnhoff

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=Norwegian, EN=English)

Limits of class size: Maximum 40 students.

Teaching exam periods: This course starts in January block. This course has teaching/evaluation in January block.

Course contents: What is the purpose of IPR? Introduction to the fundamental understanding of innovations novelty, inventiveness and industrial usefulness. Introduction to the fundamentals of the patent application process. Design, trade mark and copyright when, where and how to apply. Business agreements: license-, confidentiality- and collaboration agreements. Commercialization of IPR.

Learning outcome: The course aims at giving the students the ability to read, analyze and practice the fundamental principles of intellectual property rights, IPR. The students should be able to handle the fundamental theory of trademarks, design, patents and business agreements (but also copyright and geographical rights). The skills should be demonstrated as essential elements in the development of new products and services.

Teaching methods: The course is based on active participation by the students during the lectures and problem solving - and participation in a case situation.

Teaching support:-

Syllabus: Will be announced at start of course.

Prerequisites: Students should have a Bachelor degree or equivalent.

Mandatory activities: Case study, presentation of case study, attendance at lectures.

Exam: Written examination the case study must be approved before the written examination can be taken. No re-sit examinations will be arranged.

Nominal workload: 150 hours.

Entrance requirements: Bachelor or equivalent

Reduction of credits:-

Type of Course: 30 hours lectures, 10 hours exercises. The course is given in the January block. The teaching is given in two blocks, the students are expected to work on exercises between the teaching periods.

INN330 Internship - Business and Society

Course responsible: Siw Fosstenløykken, Elin Kubberød

Teachers: Anders Lunnan, Nils Sanne

ECTS credits: 20

Department: School of Economics and Business

Teaching language: NO

(NO=Norwegian, EN=English)

Teaching exam periods: Spring parallel and June block.

Course contents: Students will be working on problems in innovation.

Commercialization and business development in a specific company or public institution. The work can be structured functionally (the student with a specific function and task in the business) or can be independent as a project, where students work with a real mission according to client's needs. Part of the internship involves the student to become familiar the working environment and take part in the normal day to day operations, but will be responsible for its own field or project. The student is supervised by a mentor in the company and has a main supervisor at The School of Economics and Business. Days in Business: Rated 4 days per week (the days where students do not take courses). The content of the internship in consultation with the business defined in a project to be approved by the principal supervisor at The School of Economics and Business. Students are jointly responsible to help find relevant principal for the internship as well as be involved in defining the project.

Learning outcome: Knowledge: The student will be able to relate their practical experience he or she gets through internship theory of innovation and entrepreneurship and thus could create new insights and understanding that challenges conventional wisdom. Skills: The student will be trained to act as change agents who can help new and creative ideas, restructuring and growth in the business they practice in. Candidates should be able to apply the theoretical knowledge they acquire through the study of issues and challenges in practice operations and make informed choices in the link between theory and empirical knowledge. General competencies: Students will be trained to appear as professional practitioners and change agents in innovation and entrepreneurship. Students should be able to work independently, participate in activities such as team member and contribute as equal partner with problem solving in business. Students will be able to complete a project and develop a statement and academic basis reporting and decision-making basis for business practices under the guidance

Teaching methods: It is an advantage if the tasks or parts of tasks in business scan be related to social relevant issues in the course which the student takes.

Teaching support:

Syllabus:

Prerequisites: For students in the master programme Entrepreneurship and Innovation

Mandatory activities: According to the approved project. Furthermore, students must take a 5 credit course at the School of Economics and Business at the same time they take INN330. Students can choose to take PHI301 (Corporate Social Responsibility) or BUS311 (Environmental accounts and environmental management).

Exam: Continuous assessments: The learning will be documented through weekly reflection logs. The company's contact and mentor provides weekly feedback on the history of how the student has

completed custom duties of the project description. The student meets the three tutor sessions with the supervisor at The School of Economics and Business and the log serves as the basis for dialogue and guidance.

Entrance requirements: Master students in Entrepreneurship and innovation

INN331 Enternship

Course responsible: Siw Fosstenløyken, Elin Kubberød

Teachers: Anders Lunnan

ECTS credits: 10

Department: School of Economics and Business

Teaching language: NO

(NO=Norwegian, EN=English)

Teaching exam periods: Autumn parallel

Course contents: Students will be working on issues of innovation, commercialization and business development in a specific company or public sector. The work can be structured functional the student with a specific function and task in the business) or can be completely detached as a project, where students work with a real mission according to client's needs. Part of the internship involves the student become familiar working environment and take part in the normal day to day operations , but will be responsible for its own field or project. The student is supervised by a mentor in the company and has a main supervisor at School of Economics and Business. Days in the company: around 3 days per week. The content of the internship is to be decided in consultation with the Company and defined in a project that shall be approved by the principal supervisor at School of Economics and Business. Students are jointly responsible to help finding relevant principal for the internship as well as to be involved in defining the project description.

Learning outcome: Knowledge: The student will be able to relate their practical experience he or she gets through internship theory of innovation and entrepreneurship and thus could create new insights and understanding that challenges conventional wisdom. Skills: The student will be trained to act as change agents who can help new and creative ideas, restructuring and growth in the business they practice in. Candidates should be able to apply the theoretical knowledge they acquire through the study of issues and challenges in practice operations and make informed choices in the link between theory and empirical knowledge. General competencies: Students will be trained to appear as professional practitioners and change agents in innovation and entrepreneurship. Students should be able to work independently, participate in activities such as team member and contribute as equal partner with problem solving in business. Students will be able to complete a project and develop a statement and academic basis reporting and decision-making basis for business practices under the guidance

Teaching methods:

Teaching support:

Syllabus:

Prerequisites: For students in the master programme Entrepreneurship and Innovation

Mandatory activities: According to the approved project.

Exam: Continuous assessments: The learning will be documented through weekly reflection logs. The client's contact and mentor provides weekly feedback on the history of how the student has completed custom duties of the project description. The student meets the three tutor sessions with the supervisor at The School of Economics and Business of the log serves as the basis for dialogue and guidance.

Entrance requirements: Master students in Entrepreneurship and innovation

INN410 Intellectual Property Rights (IPR) and Innovation

Course responsible: Anders Lunnan

Teachers: Ivar Wergeland

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN

(NO=Norwegian, EN=English)

Limits of class size:-

Teaching exam periods: This course starts in August block. This course has teaching/evaluation in August block, Autumn parallel, January block, Spring parallel, June block, .

Learning outcome:-

Teaching methods:-

Teaching support:-

Syllabus:-

Prerequisites:-

Mandatory activities:-

Exam:-

Note:-

Entrance requirements:-

Reduction of credits:-

Type of Course:-

M30- ECON Master Thesis

ECTS credits: 30

Department: School of Economics and Business

Exam: A-E/ Fail

M30-ØA Master Thesis

ECTS credits: 30

Department: School of Economics and Business

Exam: A-E/ Fail

M30-EI Master Thesis

ECTS credits: 30

Department: School of Economics and Business

Exam: A-E/ Fail

PHI100 Examen Philosophicum

Course responsible: Terje Bent Kvilhaug

ECTS credits: 10

Department: School of Economics and Business

Frequency: Other. The course is offered in Norwegian each year in the Autumn parallel. PHI100 and PHI101 have the same lectures. PHI100 is offered each year in ENGLISH in Spring parallel.

Teaching language: EN, NO

(NO=norsk, EN=Engelsk)

Limits of class size:-

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel, Spring parallel.

Course contents: Part I deal with the history of philosophy and of science, whereas Part II deals with philosophy of science and ethics.

Learning outcome: The aim is to increase critical awareness within the student's academic field, related to such aspects as history and social context, ethics, as well as epistemological and methodological basis. The course is to improve the understanding of scientific justification, of the relationship between the sciences and between science, society and nature, as well as making students more conscious of value questions linked to research and its application, in particular in connection with nature. The course emphasises the special responsibility of NMBU in this connection, on the basis of its environmental profile.

Teaching methods: Lectures in Part I and II and problem-solving course in Part II.

Teaching support: The students acquire practical experience in solving exercises, which are supervised.

Syllabus: The syllabus is defined by the topics, but a specific compendium and two textbooks are recommended: Pedersen (ed.): 'Exphil II. Tekster i etikk' (Unipub, Universitetet i Oslo) - Ragnar Fjelland: 'Innføring i vitenskapsteori', (Universitetsforlaget, 1999). An alternative in English will be available in the Spring parallel.

Prerequisites: -

Mandatory activities: -

Exam: Written examination, 3.5 hours. There will be no specific re-take exam. If students want to re-take the exam they should join the ordinary exam given each parallel period.

Note: The course is equivalent to Examen Philosophicum at other universities in Norway. It is offered in Norwegian in the Autumn parallel every year. It is offered in English in the Spring parallel every year. The exam will be given in both Norwegian and English at all times, regardless of the language of teaching.

Nominal workload: 10 credits.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: Autumn and Spring parallel: 2 x 2 hours of lectures + 2 hours of exercises per week.

PHI101 Examen Philosophicum – Seminar

Course responsible: Terje Bent Kvilhaug

Teachers: Terje Bent Kvilhaug, Frode Kjosavik

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=norsk, EN=Engelsk)

Limits of class size: Minimum 10, maximum 40 students per group. Number of groups to be decided for each semester.

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: Part I deal with the history of philosophy and of science, whereas Part II deals with philosophy of science and ethics.

Learning outcome: The aim is to increase critical awareness within the students' academic field, regarding such aspects as history and social context, ethics, as well as the fields epistemological and methodological basis. The course is to improve the understanding of scientific justification and of the relation between the sciences and between science, society and nature, and to promote the student's awareness for value questions linked to research and its application, in particular in connection with nature. The course emphasizes the special responsibility of NMBU in this connection, on the basis of its environmental profile.

Teaching methods: Lectures, group discussions, presentations at seminars, composition of semester assignments, feedback from teacher. Students work on their own and in groups with various projects, and there is continuous assessment.

Teaching support: Training through seminars (presentations, group discussion, and composition of semester assignments).

Syllabus: The syllabus is defined by the topics, but a specific compendium and two textbooks are recommended: Pedersen (Ed.): 'Exphil II. Tekster i etikk' (Unipub, Universitetet i Oslo) - Ragnar Fjelland: 'Innføring i vitenskapsteori' (Universitetsforlaget, 1999).

Prerequisites: -

Mandatory activities: Students are required to attend the seminars.

Exam: No final examination, but semester assignment and tests, continuous assessment. The semester assignment and two multiple choice tests are graded according to the rules of the course description, with the semester assignment carrying more weight than the two tests combined. The term paper has to be submitted in the same semester as the student attends the course.

Note: The course is equivalent to Examen Philosophicum at other universities in Norway. PHI100 and PHI101 have the same lectures in the autumn parallel.

Nominal workload: 10 credits.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits:-

Type of Course: Seminar arrangement in Autumn parallel: 2 x 2 hours of lectures + 2 hours of seminars per week.

PHI102 Examen Philosophicum – English

Course responsible: Rani Lill Anjum

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=norsk, EN=Engelsk)

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

PHI201 Bioscience, Ethics and Environmental Philosophy

Course responsible: Frode Kjosavik

Teachers: Frode Kjosavik, Terje Bent Kvilhaug

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=norsk, EN=Engelsk)

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: Connection between view of man and view of nature. Future generations. Moral status for other life forms than humans. To what extent are humans entitled to exploit other organisms? Experiments with animals will be discussed on the basis of welfare and rights. Understanding of technology, including biotechnology, i.e.,

genetic modification. Views of nature with anthropocentrism and biocentrism as two extremes. Ethical relevant distinction between man-made and natural environments? Which parts of nature do we wish to preserve/conservate, and what is the justification for this? Cost-benefit analysis and environmental goods. Social justice and the ecologically good society (ecotopia)? Climate research and the politics of science. In what sense can we speak of equilibrium in nature? Is there a difference between man-made and natural disturbance? Do disturbances increase or decrease biodiversity? Is there a connection between complexity and stability in ecosystems? What are the implications of chaos theory for conservation biology?

Learning outcome: The aim of the course is to train the student to analyze and reflect critically on issues concerning animal and environmental ethics, and to put these into a wider scientific and philosophical context.

Teaching methods: Lectures and seminars.

Teaching support: -

Syllabus: Compendium.

Prerequisites: Examen Philosophicum or equivalent.

Mandatory activities: -

Exam: Written examination, 3 hours.

Note: -

Nominal workload: 5 credits.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: -

Type of Course: Two hours weekly: 2/3 lectures, 1/3 seminars.

PHI301 Corporate Social Responsibility

Course responsible: Terje Bent Kvilhaug

Teachers: Frode Kjosavik, Deborah Helen Oughton

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: NO

(NO=norsk, EN=Engelsk)

Limits of class size: -

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

Course contents: It targets future managers and economists in business and public administration. It will deal with relevant ethical issues, like globalization, sustainability, corporate responsibilities, techniques of business ethics managements, business ethics in relation to shareholders, employees, consumers, civil society, government and regulations, etc.

Learning outcome: The course shall prepare students for ethical problems, challenges and dilemmas that they will face in their future professions.

Teaching methods: Lectures, seminars, colloquia, case studies, semester assignments, guest lecturers.

Teaching support: -

Syllabus: Selection from Crane - Matten: 'Business Ethics' (3. edition, Oxford University Press, 2010).

Prerequisites: -

Mandatory activities: Students have to attend at least 65 % of the lectures/seminars.

Exam: Written assignment.

Note: -

Nominal workload: 30-32 hours of teaching + 125 hours of student work.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: -

Type of Course: 30-32 hours of teaching.

PHI302 Causation in Science

Course responsible: Rani Lill Anjum

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN

(NO=norsk, EN=Engelsk)

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: Causation is essential for science. In our attempt to understand and influence the world around us, we need to know what causes what. Once we understand the causal connections, we are in a position to explain what has gone before, predict what will come in the future, and intervene to produce the outcomes we require. While scientists deal with the concrete details, it is philosophers who consider in the abstract what it is for one thing to cause another. The aim of this course is to bring together that abstract philosophical approach to causation with a more concrete understanding of the work actually undertaken by the practitioners of the sciences. Some of the chief goals of science are understanding, explanation, prediction and application in new technologies. Only if the world has some significant degree of constancy in what follows from what can these scientific activities be conducted with any purpose. But what is the source of such predictability and how does it operate? In many ways, this is a question that goes beyond science itself - beyond the data - and inevitably requires a philosophical approach. This course starts from the perspective that causation is the main foundation upon which science is based. Should scientists

concern themselves, however, with what philosophers have to say? The answer should certainly be yes. To find causes we need scientific methods. But which methods are best at picking out causation? It seems plausible to assume that, in order to find causes, we must have some prior knowledge of what causation is. In this project, we wanted to bring together that abstract philosophical approach to causation with a more concrete understanding of the work actually undertaken by the practitioners of the sciences. Selected topics: What is causation? Causation as correlations. Causation as difference-making. Causation as tendencies. Reductionism and emergence. Finding causes. Predicting effects and explaining causes. Causal complexity. Free will and determinism. What is probability? In this seminar we will read classic and contemporary texts which will be discussed in the group. The discussions will be backed up with empirical examples. Emphasis will be put on the nature of causation, the relation between our scientific methods and philosophical theories of causation and probability, and on how our scientific practice is influenced and shaped by philosophical assumptions that are part of our methods but rarely criticised or discussed.

Learning outcome: This course will enable students to present the general outlines of the central philosophical theories of causation, to account for some strengths and weaknesses of these theories, to recognise which philosophical notion of causation is presupposed in certain scientific methods and to identify and critically discuss some shortcomings of a scientific method by using philosophical arguments. The students will also be able to relate some of this knowledge to their own discipline or research area. The student will be expected to demonstrate such understanding in written and oral presentation.

Teaching methods: Lectures, group work, student presentations, written assignments and group discussions.

Syllabus: Texts and links will be available on Fronter. As preparation to the course, we recommend the book *Causation - A very short introduction*, Oxford University Press 2013, by Stephen Mumford and Rani Lill Anjum. This book briefly introduces most of the topics that will be discussed in the course.

Prerequisites: Exam Philosophicum

Mandatory activity: Students have to attend at least 70 % of the lectures/seminars. Mandatory written and oral assignments.

Exam: Continuous evaluation, written assignments and oral presentation in class:
Passed / Not passed

Entrance requirements: Minimum requirements for entrance to higher education in Norway (generell studiekompetanse)

Type of course: 30 hours lectures with discussion. Self-study, group work and preparations: 120 hours.

PHI401 Research Ethics and Philosophy of Science I

Course responsible: Terje Bent Kvilhaug

Teachers: Terje Bent Kvilhaug, Deborah Helen Oughton, Frode Kjosavik

ECTS credits: 5

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN

(NO=norsk, EN=Engelsk)

Limits of class size: -

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel.

Course contents: An elementary and introductory course in philosophy of science will give the student a good basis for a better understanding of issues concerning research ethics and social responsibility of science by viewing science as a practice form and by examining its own ethical aim ("good" science). Among issues to be discussed are: The value- and norm systems of science facts and values political-economic interests and scientific integrity research ethical guidelines duties towards other scientists and research objects science, technology and society ethical challenges in developmental research scientific rationality and scientific methods scientific realism and social constructivism metaphors and theory formation theoretical experience/experimental experience.

Learning outcome: The course aims at an increased understanding of science in practice, i. e. science as it is carried out in diverse ways within the natural, social and cultural field. In the course we will look into what is specific about scientific practice, rationality and method in different fields what are its aims, how is it influenced by society and what kind of social and cultural consequences does it seem to have? The objective is to stimulate students to reflect on their own and to understand other research projects and research fields, in particular with regard to increasing their ability to see and diagnose philosophical and ethical problems in the sciences as well as their consciousness of their ethical responsibility.

Teaching methods: Lectures and seminars, in addition to application of theory in term paper.

Teaching support: Teachers will be available by appointment.

Syllabus: Course Readings, PHI401 and PHI402 PHI401: Selection from below, ca. 300 pages PHI402: Selection from below, ca. 600 pages Textbook (Chapters 9 and 12 may be skipped): Chalmers, A. What is this thing called Science?, 3rd edition, Open University Press, Buckingham, 1999. Further material (may be subject to revision): Cartwright, N. The Dappled World. A Study of the Boundaries of Science, Cambridge University Press, Cambridge, UK, 1999, Chap. 4. Cartwright, N. Nature's Capacities and their Measurement. Clarendon Press, Oxford, 1989, Chap. 5. Caruana, Louis. 'Method.' In: Science and Virtue. An Essay on the Impact of the Scientific

Mentality on Moral Character, Ashgate, Hampshire, 2006, 33-57. Collier, A. Critical Realism. An Introduction to Roy Bhaskar's Philosophy, Verso, London, 1994, Chap. 2, 31-51, Chap. 4, 107-120, Chap. 5, 137-169. Feyerabend, P. Against Method, 3rd ed., Verso, London, 1994, 'Introduction', 9-13, Parts 1-5, 14-53, and Parts 15-19, 147-251. Geertz, C. 'The Strange Estrangement: Taylor and Natural Sciences.' In: J. Tully (ed.), Philosophy in an Age of Pluralism, Cambridge University Press, Cambridge, 1994, 83-95. Gibbons, M. 'Science's New Social Contract with Society.' Nature 402/C81, 1999, 11-17. Hodgson, G. 'Biological and Physical Metaphors in Economics', in S. Maasen, E. Mendelsohn, and P. Weingart (Eds.), Biology as Society, Society as Biology: Metaphors, Kluwer, Dordrecht, 1994, 339-355. Kuhn, T. The Structure of Scientific Revolutions, 2nd edition, University of Chicago Press, Chicago, 1970, Chaps. IX-X. Kuhn, T. 'Postscript - 1969'. In: The Structure of Scientific Revolutions, 3rd ed., University of Chicago Press, Chicago, 1996, 174-210. Maasen, S., 'Who is afraid of Metaphors?' In: S. Maasen, E. Mendelsohn, and P. Weingart (Eds.), Biology as Society, Society as Biology: Metaphors, Kluwer, Dordrecht, 1994, 11-35. Miller, R. W. 'Value Freedom' excerpted from 'Fact and Method in the Social Sciences.' In: Boyd, R. et al (Eds.), The Philosophy of Science, 1991, MIT Press, Cambridge, Mass., 744-749. Nanda, M. 'The Epistemic Charity of the Social Constructivist Critics of Science and Why the Third World Should Refuse the Offer.' In: N. Koertge (Ed.), A House Built on Sand. Exposing Postmodernist Myths about Science, Oxford University Press, Oxford, 1998. Penslar, R. L. Research Ethics. Cases

Prerequisites: -

Mandatory activities: The students must attend at least 65 % of the lectures and seminars.

Exam: Term paper.

Note: The first part of the course PHI 402 will share lectures, seminars and literature with the course PHI 402.

Nominal workload: 150 hours, term paper included.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: The course PHI 401 overlaps with the first part of the course PHI 402. Students who take the course PHI 402 in addition to PHI 401, will only receive 5 study points. Students who have taken the course PHI 400 (given last time autumn 2008) will not receive any study points by taking the courses PHI 401 or PHI 402.

Type of Course: Around 28 hours of lectures + seminars and group discussions.

PHI402 Research Ethics and Philosophy of Science II

Course responsible: Terje Bent Kvilhaug

Teachers: Terje Bent Kvilhaug, Frode Kjosavik, Deborah Helen Oughton

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN

(NO=norsk, EN=Engelsk)

Limits of class size: -

Teaching exam periods: This course starts in Autumn parallel. This course has teaching/evaluation in Autumn parallel, January block.

Course contents: The contents and structure of this course are by far the same as in the course PHI 401 (see "Contents" under PHI 401). But the course PHI 402 offers an extended study in philosophy of science especially. It should be noted that the following examples of issues to be discussed here are also ethically relevant: The relation between natural and human sciences science in society (science as social practice) what nature must be like for science to be possible open and closed systems epistemological problems in open (natural and social) systems naturalism and its limits the transformative model of society laws, powers, models and idealization reductionism and anti-reductionism in biology problems related to the understanding of the selection entities anti-reductionism and the developmental system-theories about onto-genesis and evolution.

Learning outcome: Teaching goals as well as lectures, seminars and syllabus are by far the same as in the course PHI 401 (see "Teaching goals" under PHI 401). But the course PHI 402 will, with an extended course in philosophy of science as its point of departure, give the students an opportunity to go deeper into philosophical and/or ethical issues related to their own research projects. Through the work with a term paper related to their own projects, the students will receive a possibility to think through pressing problems of the kind.

Teaching methods: Lectures, seminars, group discussions, self-studies and work with term paper of free choice.

Teaching support: The students will receive individual supervision.

Syllabus: Course Readings, PHI401 and PHI402 PHI401: Selection from below, ca. 300 pages PHI402: Selection from below, ca. 600 pages Textbook (Chapters 9 and 12 may be skipped): Chalmers, A. What is this thing called Science?, 3rd edition, Open University Press, Buckingham, 1999. Further material (may be subject to revision): Cartwright, N. The Dappled World. A Study of the Boundaries of Science, Cambridge University Press, Cambridge, UK, 1999, Chap. 4. Cartwright, N. Nature's Capacities and their Measurement. Clarendon Press, Oxford, 1989, Chap. 5. Caruana, Louis. 'Method.' In: Science and Virtue. An Essay on the Impact of the Scientific Mentality on Moral Character, Ashgate, Hampshire, 2006, 33-57. Collier, A. Critical Realism. An Introduction to Roy Bhaskar's Philosophy, Verso, London, 1994, Chap. 2, 31-51, Chap. 4, 107-120, Chap. 5, 137-169. Feyerabend, P. Against Method, 3rd ed., Verso, London, 1994, 'Introduction', 9-13, Parts 1-5, 14-53, and Parts 15-19, 147-251. Geertz, C. 'The Strange Estrangement: Taylor and Natural Sciences.' In: J. Tully (ed.), Philosophy in an Age of Pluralism, Cambridge University Press, Cambridge, 1994, 83-

95. Gibbons, M. 'Science's New Social Contract with Society.' *Nature* 402/C81, 1999, 11-17. Hodgson, G. 'Biological and Physical Metaphors in Economics', in S. Maasen, E. Mendelsohn, and P. Weingart (Eds.), *Biology as Society, Society as Biology: Metaphors*, Kluwer, Dordrecht, 1994, 339-355. Kuhn, T. *The Structure of Scientific Revolutions*, 2nd edition, University of Chicago Press, Chicago, 1970, Chaps. IX-X. Kuhn, T. 'Postscript - 1969'. In: *The Structure of Scientific Revolutions*, 3rd ed., University of Chicago Press, Chicago, 1996, 174-210. Maasen, S., 'Who is afraid of Metaphors?' In: S. Maasen, E. Mendelsohn, and P. Weingart (Eds.), *Biology as Society, Society as Biology: Metaphors*, Kluwer, Dordrecht, 1994, 11-35. Miller, R. W. 'Value Freedom' excerpted from 'Fact and Method in the Social Sciences.' In: Boyd, R. et al (Eds.), *The Philosophy of Science*, 1991, MIT Press, Cambridge, Mass., 744-749. Nanda, M. 'The Epistemic Charity of the Social Constructivist Critics of Science and Why the Third World Should Refuse the Offer.' In: N. Koertge (Ed.), *A House Built on Sand. Exposing Postmodernist Myths about Science*, Oxford University Press, Oxford, 1998. Penslar, R. L. *Research Ethics. Cases*

Prerequisites: -

Mandatory activities: Students must attend at least 65 % of lectures and seminars in the part that is common with PHI401 and 65 % of the additional part that is exclusive to PHI402.

Exam: Term paper.

Note: Lectures, seminars and syllabus in the first part of the course will be the same as for the course PHI 401.

Nominal workload: Around 300 hours, work with term paper included.

Entrance requirements: Minimum requirements for entrance to higher education in Norway

Reduction of credits: See PHI 401.

Type of Course: Around 40-44 hours lectures + seminars/group discussions.

PHI403 Causation in Science

Course responsible: Rani Lill Anjum

ECTS credits: 10

Department: School of Economics and Business

Frequency: Annually

Teaching language: EN

(NO=norsk, EN=Engelsk)

Teaching exam periods: This course starts in Spring parallel. This course has teaching/evaluation in Spring parallel.

3.1 Academic Calendar

This information relates to NBMU Campus Ås. Information for students at Campus Adamstuen can be found here www.nmbu.no/sit.

Academic calendar 2015/2016, campus Ås

Autumn Semester 2015

August

- 3 - 7 Introduction for new international students
- 8-9 Registration for new students
- 10 Semester start
- 10 - 28 August block begins
- 12** Deadline for August block registration/withdrawal
- 21 Matriculation for new students 13:00 (no classes after 12:00)
- 31 August block examination

September

- 1** Deadline for applying for exchange studies spring 2016
- 1 Autumn parallel until 4 December
- 15** Deadline for Autumn parallel registration
- 15** Deadline for Thesis registration
- 15** Deadline for semester registration/semester fee/confirmation of education plan
- 30 Career day

October

- 1** Deadline for re-examination (konte) in December registration
- 1** Deadline application for special needs facilitation during Autumn parallel, re-examination (konte) and January block examinations (new applicants only)

November

- 1** Deadline for Autumn parallel withdrawal
- 1** Deadline for re-examination (konte) in December withdrawal
- 1** Deadline for applying for transfer to another study program

December

- 1** Deadline for January block registration
- 7 - 18 Autumn parallel examinations

January

- 15** Deadline for Thesis submission
- 21-22 Re-examination (konte)

Note: Democracy hour Wednesdays in the parallel periods: 12-14 (no classes)

If the above **deadlines** fall on a Saturday, Sunday or a public holiday the deadlines are postponed to the next working day.

Spring Semester 2016**January**

- 4 Semester start
- 4 - 22 January block
- 6** Deadline for January block withdrawal
- 22 and
- 25 January block examination
- 26 Spring parallel until 6 May

February

- 1** Spring parallel registration deadline
- 1** Deadline for Thesis registration
- 1** Deadline for semester registration/semester fee/confirmation of educational plan
- 1** Deadline for application for exchange studies autumn 2016/spring 2017

March

- 1** Deadline for registration for re-examination in May (konte)
- 1** Deadline application for special needs facilitation during spring parallel, re-examination (konte) and June block examinations (new applicants only)
- 19 Easter Holiday until 28 March (no classes)

April

- 1** Deadline for Spring parallel withdrawal
- 1** Deadline for June block registration
- 1** Deadline for re-examination in May (konte) withdrawal

May

- 1** Deadline for June block withdrawal
- 5 Public holiday – Ascension day (no classes)
- 9 - 24 Spring parallel examinations

- 15 Deadline for Thesis submission
- 16 Public holiday – Whit Monday (no classes)
- 17 Norway's national day (no classes)
- 26-27 Re-examination (konte)
- 30 June block until 24 June

June

- 1** Deadline for applying for transfer to another study programme
- 10, 17
and 24 June block examinations
- 24 End of semester

Note: Democracy hour Wednesdays in the parallel periods: 12-14 (no classes)

If the above **deadlines** fall on a Saturday, Sunday or a public holiday the deadlines are postponed to the next working day.