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THE HANDBOOK OF STUDY

For the study programmes at

UMB SCHOOL OF ECONOMICS AND BUSINESS

NORWEGIAN UNIVERSITY OF LIFE SCIENCES



2012/2013

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1 STUDIES AT NORWEGIAN UNIVERSITY OF LIFE SCIENCES

Norwegian University of Life Sciences (UMB) 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.

UMB 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

- UMB School of Economics and Business

Together with other research institutes established at Aas, UMB 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
- **Development and Natural Resource Economics**
- 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.

17 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 UMB students conduct part of their studies abroad

1.1 MEETING TOMORROW'S CHALLENGES

January 2005 the institution received the Norwegian university status. UMB, 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, UMB has some 4 080 students of which about 450 are PhD students. Annually, the University confers about 60 to 70 PhD degrees upon successful candidates. There are many different nationalities at UMB; the international students make up over 17% of all students at the University. Of the 1140 University staff, more than half hold scientific positions.

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

1.2 UMB'S DEPARTMENTS AND CENTRES

- Dept. of Animal and Aquacultural Sciences, IHA
- Dept. of Chemistry, Biotechnology and Food Science, IKBM
- Dept. of Ecology and Natural Resource Management, INA,
- **UMB School of Economics and Business**
- Dept. of Landscape Architecture and Spatial Planning, ILP
- Dept. of Mathematical Sciences and Technology, IMT
- Dept. of Plant and Environmental Sciences, IPM
- Dept. of International Environment and Development Studies, Noragric

- Aquaculture Protein Centre, APC
- Animal Production Experimental Centre, SFF
- Centre for Plant Research in Controlled Climate, SKP
- Centre for Continuing Education, SESU
- Centre for Integrative Genetics, Cigene

2 UMB SCHOOL OF ECONOMICS AND BUSINESS

UMB 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. IØR has a significant portfolio of projects financed by EU, the Nordic Council, the Research Council of Norway various Norwegian government ministries and private companies.

UMB School of Economics and Business was the first at UMB 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 of Science in Development and Natural Resource Economics (English)
- Master in Entrepreneurship and Innovation

2.1 THE PURPOSE OF THE STUDY

1. The purpose of the 3 -year study is to reach a degree: Bachelor of Science, and 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.
3. The bulk of the required curriculum is designed to develop an understanding of the economic and social systems. In addition encourage 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, there 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 UMB offers. The number of ECTS/credits of free choice will vary depending on the form of specialization.

2.1.1 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		
Start		Week 32, Monday, Introduction week for international students	
August block:	Aug	Week 33, 34, 35, including Monday in week 36	
Exam in block	Aug	Monday in week 36	Wednesday in week 33
Fall parallel	F	Tuesday in week- 36 to the end of week 49	
Exam	F	Week 50 to 51	1 st . September
Spring	S		
Re-exam (Aug/S)	Jan	Week 1	1 st October Contact SiT ^{*)}
January block:	Jan	Week 2,3,4 including Monday in week 5	
Exam in block	Jan	Monday in week 5	1 st December
Spring parallel	S	Tuesday in week 5 to Friday in week 19	
Exam	S	Week 20 – 22 (depending on holidays)	1 st February
Re-exam (F/Jan)		Week 22	1 st March Contact SiT ^{*)}
June block	S	Week 23 – 26, (and week 32)	
Exam in block	Jun	Friday in week 24, 25 or 26	1 st April

^{*)} SiT= Student information Office

Details in the academic calendar enclosed back in this book and on SiT, english.

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 about only one course.

2.1.1.1 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-DNRE -	Master of Science in Development and Natural Resource Economics (English)
M-EI -	Master in Entrepreneurship and Innovation

3 THE PROGRAMMES OF STUDY

3.1 UNDERGRADUATE STUDIES

3.1.1 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 3 years of study and the students have to achieve 180 ECTS. The mandatory 130 ECTS consists of business-, administration-, economics- and methodology subjects. The students can choose subjects from most of the University courses.

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

Bachelor-ØA	Mandatory	ECTS	Term
Year 1	AOS130	Introduction to Organisation Theory	5 Aug
	PF1100	Examen Philosophicum	10 F
	ECN110	Introduction to Economics - Micro	5 F
	MATH100	Mathematics	10 F
	ECN120	Introduction to Macroeconomics, part I	5 Jan
	ECN122	Introduction to Macroeconomics, part II	5 S
	BUS100	Managerial Economics, Introduction	5 S
	AOS120	Marketing	5 S
	BUS110	Accounting – Financial Reporting	10 S
		60	

Bachelor-ØA	Mandatory	ECTS	Term
Year 2	AOS230	The Psychology of Organisation and Leadership	5 Aug
	STAT100	Statistics	10 F
	BUS133	Excel for Business (in 2013)	5 F
	ECN211	Microeconomics - Institutions, Games and Market Failures (else ECN210)	10 F
	BUS160	Tax Law for Economists	5 Jan
	BUS220	Finance and Investment	10 S
	ECN210	Microeconomics – Consumers, Producers, Market and Welfare	10 S
		Free to chose subjects	5-15 S/Jun
		60	

The last year for the profiles and/or study abroad.

Bachelor-ØA Mandatory		ECTS	Term
Year 3	Elective courses	5	Aug
AOS240	Research in Social Sciences	5	F
	Electing profiles or study abroad	20	F
	Elective course	5	Jan
BUS210	Managerial Accounting and Budgeting	10	S
AOS237	Business Strategy	10	S
	Electing profiles or study abroad	5-10	S+Jun

Students who are interesting in agriculture may choose such courses in the second and the third year.

We will show the most common profiles in this program:

Profile: Business Decisions Methods and Finance

		ECTS	Term
Year 2	AOS230	The Psychology of Organisation and Leadership	5 Aug
	ECN211	Microeconomics - Institutions, Games and Market Failures (else ECN210)	10 F
	STAT100	Statistics	10 F
	BUS133	Excel for Business	5 F
	JUS100	Legal Method and Norwegian Legal System	5 F
	BUS160	Tax Law for Economists	5 Jan
	BUS220	Finance and Investment	10 S
	BUS230	Management Science - Principles	10 S
	JUS102	Law of Contract and Companies	5 S
Year 3		Elective course	5 Jan
	AOS240	Research in Social Sciences	5 F
	ECN202	Introduction to Econometrics	5 F
	BUS280	Private and Corporate Insurance	5 F
	BUS240	Operation Management	10 F
		Elective course	5 F
	BUS210	Managerial Accounting and Budgeting	10 S
	AOS237	Business Strategy	10 S
		Free to choose	5-10 S
	BUS233	Management Information Systems	5 Jun

Profile: Leadership and Innovation

		ECTS	Term
Year 2	AOS230	The Psychology of Organisation and Leadership	5 Aug
	ECN211	Microeconomics - Institutions, Games and Market Failures (else ECN210)	10 F
	STAT100	Statistics	10 F
	BUS133	Excel for Business	5 F
	JUS100	Legal Method and Norwegian Legal System	5 F
	BUS160	Tax Law for Economists	5 Jan
	BUS220	Finance and Investment	10 S
	TIP100	Technical Innovation	5 S
	BUS271	Business Start-Up	5 S
		Elective course	5 S+Jun
Year 3		Elective course	5 Jan
	AOS240	Research in Social Sciences	5 F
	BUS240	Operation Management	10 F
	TIP200	Product Development and Design	10 F
		Free to choose	0-5 F
	BUS210	Managerial Accounting and Budgeting	10 S
	AOS237	Business Strategy	10 S
	BUS271	Business Start-Up	5 S
		Free to choose	5 S
	BUS233	Management Information Systems	5 Jun

Profile: Accounting and Taxation

			ECTS	Term	
Year 2	AOS230	The Psychology of Organisation and Leadership	5	Aug	
	ECN211	Microeconomics - Institutions, Games and Market Failures (else ECN210)	10	F	
	STAT100	Statistics	10	F	
	BUS133	Excel for Business	5	F	
	JUS100	Legal Method and Norwegian Legal System	5	F	
	BUS160	Tax Law for Economists	5	Jan	
	BUS220	Finance and Investment	10	S	
	BUS260	Tax Law	10	S	
	JUS102	Law for Contract and Companies	5	S	
	JUS210	Law of Real Property I	5	S	
	Year 3	BUS112	Electronic Accounting (Daldata/Agrodata)	5	Aug
		AOS240	Research in Social Sciences	5	F
JUS201		Administrative Law	5	F	
JUS220		Environmental Law	5	F	
BUS280		Private and Corporate Insurance	5	F	
BUS210		Managerial Accounting and Budgeting	10	S	
AOS237		Business Strategy	10	S	
BUS215		Annual Accounting	10	S	
BUS216		Annual Accounting, special topics	5	Jun	

Profile: Environment and Economics

			ECTS	Term	
Year 2	AOS230	The Psychology of Organisation and Leadership	5	Aug	
	ECN220	Macroeconomics II	10	F	
	STAT100	Statistics	10	F	
	BUS133	Excel for Business	5	F	
	BUS160	Tax Law for Economists	5	Jan	
	BUS220	Finance and Investment	10	S	
	ECN210	Microeconomics – Consumers, Producers, Market and Welfare	10	S	
	ECN150	Development Economics (given in odd years)	5	S	
	ECN170	Environmental- and Resource Economics	5	S	
	ECN140	Economic History (given in even years)	5	S	
	Year 3	Elective course		5	Aug
		AOS240	Research in Social Sciences	5	F
ECN211		Microeconomics - Institutions, Games and Market Failures (else ECN210)	10	F	
ECN202		Introduction to Econometrics	5	F	
ECN230		International Economics	10	F	
ECN262		Regional Economics and Regional Politics	5	Jan	
BUS210		Managerial Accounting and Budgeting	10	S	
AOS237		Business Strategy	10	S	
ECN271		Project Evaluation and Environmental Valuation	10	S	

3.1.2 BACHELOR IN ECONOMICS

The Bachelor in Economics is a three year of study and the students have to reach 180 ECTS, and 85 ECTS is 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)

ECN262 - Regional Economics and Regional Policy, 5 ECTS (January)

ECN280 - Energy Economics 10 ECTS (Spring)

Bachelor-ECON	Mandatory	ECTS	Term	
Year 1	ECN100	Introduction to Economics	5	Aug
	PHI100	Examen Philosophicum	10	F
	ECN110	Introduction to Economics - Micro	5	F
	MATH100	Mathematics	10	F
	ECN120	Introduction to Macroeconomics, part I	5	Jan
	ECN122	Introduction to Macroeconomics, part II	5	S
	STAT100	Statistics	10	S
	ECN170	Environmental and Resource Economics	5	S
	BUS100	Cost Accounting, fundamentals	5	S
			60	
Year 2		Elective course	5	Aug
	ECN211	Microeconomics – Institutions, Games and Market Failures	10	F
	ECN220	Economics II	10	F
		Elective course	5	F
	ECN140	Economic History	5	Jan
	ECN210	Microeconomics – Consumers, Producers, Market and Welfare	10	S
	BUS220	Investment and Finance	10	S
	Elective course	5	S+ Jun	
		60		
Year 3		Elective course	5	Aug
	ECN201	Econometrics	10	F
		Elective courses or study abroad	15	F
		Elective course	5	Jan
	ECN271	Project Evaluation and Environmental Valuation	10	S
		Elective courses	15	S+Jun
		60		

A study plan for Environment and Development

Bachelor-ECON	ECTS	Sem		
Year 1	ECN100	Introduction to Economics	5	Aug
	PHI100	Examen Philosophicum	10	F
	ECN110	Introduction to Economics - Micro	5	F
	MATH100	Mathematics	10	F
	ECN120	Introduction to Macroeconomics, part I	5	Jan
	ECN122	Introduction to Macroeconomics, part II	5	S
	STAT100	Statistics	10	S
	ECN170	Environmental and Resource Economics	5	S
	BUS100	Cost Accounting, fundamentals	5	S
			60	
Year 2	ECN211	Microeconomics – Institutions, Games and Market Failures	10	F
	ECN220	Economics II	10	F
	EDS234/	Environmental Economics – the Role of Institutions or	5	F
	EDS235	Political Economy – Institutions and the Environment	10	F
	ECN140	Economic History (given in even years)	5	Jan
	ECN210	Microeconomics – Consumers, Producers, Market and Welfare	10	S
	BUS220	Investment and Finance	10	S
	EDS215	Sustainable Agriculture and Environment	5	S
		60		
Year 3	EDS201	Introduction to Development Studies	5	Aug
	ECN201	Econometrics	10	F
	ECN230	International Economics or ECN270	10	F
	NATF210	Environmental Monitoring	5	Jan
	ECN271	Project Evaluation and Environmental Valuation	10	S
	BUS230	Managerial Science, Principles	10	S
ECN280	Energy Economics	10	S	
		65		

A study plan including some business subjects

Bachelor-ECON		ECTS	Sem	
Year 1	ECN100	Introduction to Economics	5	Aug
	PHI100	Examen Philosophicum	10	F
	ECN110	Introduction to Economics - Micro	5	F
	MATH100	Mathematics	10	F
	ECN120	Introduction to Macroeconomics, part I	5	Jan
	ECN122	Introduction to Macroeconomics, part II	5	S
	STAT100	Statistics	10	S
	ECN170	Environmental and Resource Economics	5	S
	BUS100	Cost Accounting, fundamentals	5	S
			60	
Year 2				
	ECN211	Microeconomics – Institutions, Games and Market Failures	10	F
	ECN220	Economics II	10	F
	ECN260	Agricultural Policy	10	F
	ECN140	Economic History (given in even years) or	5	Jan
	ECN210	Microeconomics – Consumers, Producers, Market and Welfare	10	S
	BUS220	Finance and Investment	10	S
	BUS271	Business Start-Up or BUS210	5	S
	BUS210	Managerial Accounting and Budgeting	10	S
			60-65	
Year 3				
	ECN201	Econometrics	10	F
	BUS133	Excel for Economists	5	F
	ECN230	International Economics	10	F
	ECN262	Regional Economics and Regional Policy	5	Jan
	ECN271	Project Evaluation and Environmental Valuation	10	S
	BUS230	Operation Research	10	S
	ECN280	Energy Economics	10	S
			55	

3.2 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 courses in common with the department's two programmes in Economics and Resource Management and Development and Resource Economics.

Graduates from the programme will have a competence that is acknowledged as equally high and relevant as graduates from other Norwegian and international institutions that offer a Master's degree in Business Administration. In addition, the department aims for graduates from UMB 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 to an ever higher degree 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. The Master's degree programme has many courses in common with the master program in Development and Natural Resource Economics.

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.

Master of Science in Development and Natural Resource Economics. The study program aims to give the students: - a solid basis in economic theory, with a

specialization in development and resource economics; - knowledge, training and practical experience with economic methodologies, as a bridge between theories and policy relevant problems; - deeper insights into the links between the social well-being of rural people, their natural resource base, and the underlying causes of poverty and environmental degradation; - insight into relevant policies for poverty reduction, promotion of economic development and conservation of the natural resource base.

There is a great need for policy-oriented economists who are able to integrate and apply knowledge from resource, environmental, agricultural and development economics. This program has an applied profile, and the students get knowledge, training and practical experience in using economic methodologies, as a bridge between theories and real-world problems.

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

3.2.1 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 profile, where 25 ECTS must be taken within courses marked with a stare and darker colour for the profiles:
 - Finance and Investment
 - Business Management
 - Strategy and Leadership
 - For the profile Economics – ECN302 and ECN311 is mandatory and
 - For the profile Energy Economics – ECN302, ECN311, (ECN280 from the bachelor or in addition), ECN380 and ECN301
 - For the profile Environment- and Resource Economics - ECN302, ECN311, (ECN270 from the bachelor or in addition), ECN371, ECN372 and ECN301
- 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 UMB School of Economics and Business..

Profiles for Master of Science in Business Administration

I	Finance and Investment	ECTS	Term
*	ECN302 Mathematics for Economists (recommended) else BUS305	5	Aug
*	BUS305 Strategy Implementation (mandatory)	5	Aug
*	ECN202 Introduction to Econometrics ¹⁾	5	F
*	BUS324 Options, Derivatives and Risk Management	10	F
*	BUS322 Investment Analysis and Financial Risk Management	10	S
*	BUS323 Commodity Market Analysis	10	S
*	BUS325 Fixed Income Instruments	10	S
*	BUS321 Empirical Analysis of Financial and Commodity Markets - Theory	5	Jun
*	BUS320 Empirical Analysis of Financial and Commodity Markets II	5	Aug+F
	PHI301 Ethics in Business	5	S
	BUS331 Business Management Science: Methods and Techniques	10	S
	BUS230 Management Science Principles ¹⁾	10	S
	ECN331 International Economics and Finance	5	Aug
	ECN301 Econometric Methods	10	F
	STAT250 Mathematical Statistics	5	Aug
	STAT300 Statistical Data Analysis	10	S
	STAT330 Analysis of Categorical Data	10	S
	MATH250 Partial Differential Equations and Models	10	S
	MATH310 Continuous Dynamical Systems	10	S
	M30-IØR Master Thesis (mandatory for all)	30	S

1) For students who miss this knowledge from the bachelor

II Business Management		ECTS	Terms
* BUS305	Strategy Analysis and Strategy Development (mandatory for all)	5	Aug
* BUS312	Advanced Management Accounting (mandatory)	10	F
* BUS313	Strategy Cost Management	5	S
* BUS340	Supply Chain Management	10	F
* BUS310	Strategy Implementation and Performens Measurements	5	Jan
* BUS331	Business Management Science: Methods and Techniques	10	S
BUS230	Management Science Principles ¹⁾	10	S
BUS314	Corporate Governance	5	S
AOS340	Qualitative Methods	5	F
PHI301	Ethics in Business	5	S
BUS311	Environmental Accounting and Management	5	S
M30-IØR	Master Thesis (mandatory for all)	30	S

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

1) For students who lack this knowledge from the bachelor

IV Economics		ECTS	Terms
* ECN302	Mathematics for Economists	5	Aug
* ECN311	Microeconomics II	10	F
* ECN202	Introduction to Econometrics ¹⁾	5	F
* ECN201	Econometrics ¹⁾	10	F
* ECN270	Natural Resouce Economics	5	F
ECN270	Natural Resouce Economics	5	F
ECN280	Energy Economics I	10	S
ECN301	Econometric Methods	10	F
ECN312	Industrial Organisation	5	Jan
ECN320	Macroeconomics III	10	S
ECN331	International Economics and Finance	5	Aug
ECN330	Economic Integration and Trade Liberalization	10	F
ECN350	Development and Environment Economics	15	F
ECN353	Development Economics, Micro	5	S
ECN360	Agricultural Policy and Resource Management	10	F
ECN371	Environmental Economics	10	S
ECN372	Climate and Environmental Economics	10	F
BUS311	Environmental Accounting and Management	5	S
ECN380	Energy Markets and Regulations	10	F
M30-IØR	Master Thesis (mandatory for all)	30	S

1) For students who miss this knowledge from the bachelor

V Environment- and Resource Economics		ECTS	Term
* ECN302	Mathematics for Economists	5	Aug
* ECN311	Microeconomics III	10	F
ECN270	Natural Resource Economics	5	F
* ECN372	Climate and Environmental Economics	10	F
* ECN371	Environmental Economics	10	S
ECN202	Introduction to Econometrics ¹⁾ or (ECN201 10 ECTS)	5	F
* ECN301	Econometric Methods	10	F
ECN271	Project Evaluation and Environmental Valuation	10	S
ECN360	Agricultural Policy and Resource Management	10	F
BUS311	Environmental Accounting and Management	5	S
M30-IØR	Master Thesis (mandatory for all)	30	S

1) For students who miss this knowledge from the bachelor

IV Energy Economics		ECTS	Term
ECN280	Energy Economics ¹⁾ (lessons in Norwegian)	10	V
• ECN302	Mathematics for Economists	5	H
• ECN311	Microeconomics	10	H
• ECN312	Industrial Organization	5	Jan
• ECN380	Energy Market and Regulations	10	H
• ECN301	Econometric Methods	10	H
ECN202	Introduction to Econometrics ¹⁾ or (ECN201, 10 ECTS)	5	H
ECN372	Climate and Environmental Economics	10	H
M30-IØR	Master Thesis (mandatory for all)	30	V

1) For students who miss this knowledge from the bachelor

3.2.2 MASTER OF SCIENCE IN ECONOMICS

120 ECTS/credits must be completed, 40 ECTS/credits with mandatory courses on the 300 level: Mathematics, microeconomics, macroeconomics, and econometrics. There are two main specializations (at least 30 ECTS on 300 level); Environment and Resource Economics and Development Economics. The students can also choose business economics for a broader preparation for the labor market.

Master ECON: Mandatory		ECTS	Term
Year 1	Code Name		
	ECN302 Mathematics for Economists	5	Aug
	ECN311 Microeconomics	10	F
	ECN301 Econometric Methods (alt: ECN201 ¹⁾)	10	F
	ECN270 Natural Resource Economics	5	F
	ECN312 Industrial Organisation	5	Jan
	ECN320 Macroeconomics III	10	S
	ECN305 Research Methods in Economics	5	S
	300-level Elective subjects in economics	10	S
		60	
Year 2	Code Name		
	300-level Elective courses	5	Aug
	300-level Elective courses	25	F
	M30-IØR Master Thesis with seminar	30	Jan/S
		60	

Profiles:

Master ECON: Development Economics		ECTS	Term
Year 1	Code Name		
	ECN302 Mathematics for Economists	5	Aug
	ECN311 Microeconomics	10	F
	ECN301 Econometric Methods (alt: ECN201 ¹⁾)	10	F
	ECN270 Natural Resource Economics	5	F
	ECN312 Industrial Organisation	5	Jan
	ECN305 Research Methods in Economics	5	S
	ECN320 Macroeconomics III	10	S
	ECN353 Development Economics, micro	5	S
	ECN358 Issues in Development Economics	5	S
	ECN355 Research for Development, part II	5	Jun+Aug
		60-65	
Year 2	Code Name		
	ECN331 International Economics and Finance	5	Aug
	ECN330 Economic Integration and Trade Liberal.	10	F
	ECN303 Impact Assessment Methods	5	F
	ECN304 Behavioral and Experimental Economics	10	F
	ECN350 Development Economics	10	F
	M30-IØR Master Thesis with seminar	30	Jan+S
		60	

Master ECON: Environment and Resource Economics

Year 1	Code	Name	ECTS	Term
	ECN302	Mathematics for Economists	5	Aug
	ECN311	Microeconomics	10	F
	ECN301	Econometric Methods (alt: ECN201 ¹⁾)	10	F
	ECN270	Natural Resource Economics	5	F
	ECN312	Industrial Organisation	5	Jan
	ECN320	Macroeconomics III	10	S
	BUS311	Environmental Accounting and Management (or: ECN271 ¹⁾ for those who don't have the course in the bachelor)	5 (10)	S
	ECN371	Environmental Economics	10	S
			60	

Year 2

	ECN331	International Economics and Finance	5	Aug
	ECN372	Climate and Environmental Economics	10	F
	ECN330	Economic Integration and Trade	10	F
	ECN380	Energy Economics II	10	F
	M30-IØR	Master Thesis with seminar	30	Jan/S
			60-65	

Master ECON: Energy Economics

Year 1	Code	Name	ECTS	Term
	ECN302	Mathematics for Economists	5	Aug
	ECN311	Microeconomics	10	F
	ECN301	Econometric Methods (alt: ECN201 ¹⁾)	10	F
	ECN270	Natural Resource Economics	5	F
	ECN312	Industrial Organisation (alt ECN270)	5	Jan
	ECN320	Macroeconomics III	10	S
	ECN280	Energy Economics (Norwegian) or ECN371	10	S
	ECN371	Environmental Economics	10	S
	BUS321	Empirical Analysis of Financial and Commodity Markets, theory	5	Jun
			60	

Year 2

	BUS320	Empirical Analysis of Financial and Commodity Markets II	5	Aug+F
	ECN380	Energy Economics II	10	F
	ECN372	Climate and Environmental Economics	10	F
		Elective	5	F
	M30-IØR	Master Thesis with seminar	30	Jan/S
			60-65	

For this plan the students need to have the course BUS220 Finance and Investment in the bachelor degree

Master ECON: Economics and Business/Finance

Year 1	Code	Name	ECTS	Term
	ECN302	Mathematics for Economists	5	Aug
	ECN311	Microeconomics	10	F
	ECN301	Econometric Methods (alt: ECN201 ¹⁾)	10	F
	ECN270	Natural Resource Economics	5	F
	ECN312	Industrial Organization	5	Jan
	ECN320	Macroeconomics III	10	S
	BUS322	Investment Analysis and Financial Risk Management	10	S
	BUS321	Empirical Analyses of Financial and Commodity Markets, Theory	5	Jun
			65	

Year 2

	ECN331	International Economics and Finance	5	Aug
	BUS320	Empirical Analyses of Financial and Commodity Markets II (term paper)	5	F
	ECN330	Economic Integration and Trade Liberalization	10	F
	BUS324	Options, Derivates and Risk Management	10	F
	M30-IØR	Master Thesis with seminar	30	Jan/S
			55	

¹⁾ For students who miss this knowledge from the bachelor degree. This students can take ECN301 the second year.

3.2.3 MASTER IN ENTREPRENEURSHIP AND INNOVATION

The program will begin with an introduction in innovation and management accounting. Later the focus will be turned to the development of business plans and students will be working on actual projects or ideas from researchers, private or public businesses. A stay in "Gründerskolen" is a mandatory part of the program.

Master EI: Mandatory

Year 1	Code	Name	ECTS	Term
	INN210	Innovation	5	Aug
	INN200	Management Accounting	10	F
	AOS240	Research in Social Sciences	5	F
	INN220	Introduction to Entrepreneurship	10	Aug+F+S
	INN310	Intellectual Property and Rights	5	Jan
		School of Entrepreneurship/ Gründerskolen	25	S
			60	

Year 2	Code	Name	ECTS	Term
	BUS305	Strategy Analysis and Strategy Development	5	Aug
	BUS370	Economic Development and Entrepreneurship	10	F
	AOS340	Qualitative Methods	5	F
		Free to choose courses at other Departments, (BUS240) or (individual course work)	10	F
	M30-IØR	Master Thesis	30	Jan+S
			60	

Individual course work can be carried out instead of taking courses. The student need to have an agreement with the teacher/adviser which describe the subject, the number of ECTS and the deadline of submitting the term paper. The deadline for the agreement is the 15th of September og 15th of February.

The students have to sign up for exam in the individual course work. The M- for the master level and the B for the bachelor level. The number tells how mange ECTS the work require. FRIE indicates the individual work.

3.2.4 MASTER OF SCIENCE IN DEVELOPMENT AND NATURAL RESOURCE ECONOMICS

This master's program is conducted in English and has a strong international profile. It is a Master program within Economics, with a special emphasis on issues from the developing world. The program is policy-oriented and important issues in the program are rural development, management of renewable resources and academic research.

Students on this program will get the opportunity to take one semester at a university in Africa. However, this is provided that the necessary agreements between UMB and the universities in Africa are successfully finalized. This program also includes a mandatory field-work in a developing country during the summer between the first and second year.

This Master of Science program equals two year's full time study, awarding a total of 120 ECTS. The last part of the program is a 30 ECTS Master's Thesis, which is an individual academic work, based on the data collected in the field work. A minimum of 45 ECTS of the course work should consist of subjects on the 300-code level.

Master DNRE: Mandatory courses

Year 1	Code	Name	Points	Term
	ECN302	Mathematics for Economists	5	Aug
	ECN301	Econometric Methods	10	Fall
	ECN311	Microeconomics	10	Fall
	ECN270	Natural Resource Economics	5	Fall
	ECN312	Industrial Organization	5	Jan
	ECN305	Research Methods in Economics	5	June+Aug
	ECN353	Development Economics - Micro	5	Spring
	ECN320	Macroeconomics III	10	Spring
	ECN358	Issues in Development Economics	5	Spring
	ECN355	Research in Development Economics, part II	5	June+Aug
			60 - 65	

Year 2	Code	Name	Points	Term
	ECN350	Development and Environment Economics	10	Fall
	ECN303	Impact Assessment Methods	5	Fall
		Elective courses	15	Fall
	M30-IØR	Master Thesis including seminar	30	Jan+Spring
			60	

Masterprofil: Option 1

		ECTS		
Year 1	Code	Name	Points	Term
	ECN302	Mathematics for Economists	5	Aug
	ECN301	Econometric Methods	10	Fall
	ECN311	Microeconomics	10	Fall
	ECN270	Natural Resource Economics	5	Fall
	ECN312	Industrial Organization	5	Jan
	ECN305	Research Methods in Economics	5	June+Aug
	ECN353	Development Economics - Micro	5	Spring
	ECN320	Macroeconomics III	10	Spring
	ECN358	Issues in Development Economics	5	Spring
	ECN355	Research in Development Economics, part II	5	June+Aug

60-70

	ECN331	International Economics and Finance	5	Aug
Year 2	ECN303	Impact Assessment Methods	5	Fall
	ECN350	Development and Environment Economics	10	Fall
	ECN330	Economic Integration and Trade	10	Fall
		Seminar		Jan
	M30-IØR	Master Thesis	30	Jan+ Spring

60

Other elective courses

Year 2	BUS311	Environmental Accounting and Management	5	Spring
	ECN372	Climate and Environmental Economics	10	Fall
	ECN380	Energy Markets and Regulations	10	Fall
	ECN304	Behavioral and Experimental Economics	10	Fall
		Master Thesis seminar		Jan
	M30-IØR	Master Thesis	30	Jan/ Spring

60**3.2.5 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. IØR emphasize interaction among researchers, including an active seminar series.

The Department publish 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 (December 15th, 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 UMB front page template. Make sure you write UMB School of Economics and Business on the front page.

When you submit your thesis you first visit The student information center (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 UMB'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 UMBs 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

4 DESCRIPTIONS OF COURSES

Please take note of the teaching language!

AOS120 Marketing

Markedsføring

ECTS: 5 **Staff/institute:** Frode Alfnes

Language: Norwegian

Start term: Spring parallel **Terms:** Spring parallel

The course is offered: Annually

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 outcomes: Basic principles of modern marketing.

Methods of examination: Continuous assessment. **Grading:** A-F

Assessment methods: Written examination (3 hours): 2/3 of the grade. Written case 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. The grade for the written case work is only valid the semester the paper is written.

Curriculum: Textbook: 'Markedsføringsledelse', Philip Kotler. or the latest edition of 'Marketing Management', Philip Kotler et al. Lecture notes. Additional reading material may be distributed. The literature list can be changed before the first lecture.

AOS130 Introduction to Organisation Theory

Innføring i organisasjonsteori

ECTS: 5 **Staff/institute:** Gro Ladegård

Language: Norwegian

Start term: August block **Terms:** August block

The course is offered: Annually

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

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 centred around 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 outcomes: 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 analyse 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.

Methods of examination: Final written exam. **Exam:** Written **Grading:** A-F

Assessment methods: Final examination counts 100%.

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

AOS230 The Psychology of Organisation and Leadership

Organisasjons- og ledelsespsykologi

ECTS: 5 **Staff/institute:** Gro Ladegård

Teachers: External teacher.

Language: Norwegian

Start term: August block **Terms:** August block

The course is offered: Annually

Mandatory activities:

Prerequisites: AOS130.

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

Learning outcomes: The ability to comprehend the most significant theories within the field of work 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.

Methods of examination: Final written exam **Eksamen:** Written **Grading:** A-F

Assessment methods: Written examination, 3.5 hours, counts 100%.

Curriculum: Kaufmann og Kaufmann: Psykologi i organisasjon og ledelse. Fagbokforlaget, latest edit.

AOS233 Strategic Processes and Decision-Making

Strategiske prosesser og beslutningstaking

ECTS: 10 **Staff/institute:** Carl Brønn

Language: English

Start term: Spring parallel **Terms:** Spring parallel

Prerequisites: General knowledge of economics and organisation theory concepts.

Reductions of credits for overlapping course AOS232: 10 credits.

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 outcomes: This interdisciplinary course focuses on a class of problems called "wicked problems" or "messes." Evidence of wicked problems comes from experts in many areas & -product designers, planners, program managers and policy makers. All warn that traditional methods of problem solving are not working and no apparent alternatives are in sight. Wicked problems have the following characteristics: 1) there is no agreement about "the problem;" the formulation of the problem IS the problem. 2) There is no agreement on a solution. Stakeholders put forward many competing "solutions" none of which have stopping rules to determine when the problem is solved.

3) The problem solving process is complex because constraints, such as resources and political ramifications, are constantly changing. 4) Constraints also change because they are generated by numerous interested parties who come and go, change their minds, fail to communicate, or otherwise change the rules by which the problem must be solved. Upon completion of the course, students will be able to properly characterize complex problem situations and apply a range of methodologies for effectively working with relevant stakeholders in the problem context.

Methods of examination: Term paper **Grading:** A-F

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

Curriculum: Selected articles.

AOS234 Leadership - Course for Student Representatives

Studenter i ledelse

ECTS: 10 **Staff/institute:** Sigurd Rysstad

Teachers: Per Ove Røkholt

Language: Norwegian

Start term: January block **Terms:** January block Spring parallel June block

The course is offered: Annet - The course will be given if teachers are available.

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

Prerequisites: Practical leadership and management experience.

Recommended prerequisites: AOS130.

Contents: The course is made up of four parts, each centred 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 outcomes: There are two goals: Firstly, to make our elected student representatives proficient in their roles as elected student representatives at UMB. Secondly, to give knowledge and an understanding of topics in organisation theory that are relevant to a leader. Students are to gain knowledge of UMB 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 analysing 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.

Methods of examination: Continuous assessment. **Grading:** A-F

Assessment methods: 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 dead-line, and presented and defended in an oral exam.

Curriculum: 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.

AOS237 Business Strategy

Foretaksstrategi

ECTS: 10 **Staff/institute:** Silja Korhonen-Sande

Teachers: Guest lecturers

Language: Norwegian

Start term: Spring parallel **Terms:** Spring parallel

The course is offered: Annually

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 is compulsory.

Prerequisites: AOS120, AOS130, BUS100.

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 in relation to these themes as well as special topics.

Learning outcomes: 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.

Methods of examination: Continuous assessment **Grading:** A-F

Assessment methods: Term paper in small groups (max. 4 persons) or individually (40%), written individual three-hours 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.

Curriculum: Text book Articles (available from ClassFronter) Lecture notes

AOS240 Research in Social Sciences

Samfunnsvitenskapelig metode

ECTS: 5 **Staff/institute:** Frode Alfnes

Language: Norwegian

Start term: Autumn parallel **Terms:** Autumn parallel

The course is offered: Annually

Prerequisites:

Recommended prerequisites: Basic statistics.

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 organised 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 analysed 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 analysed and thereby answer some of the central questions of the investigation.

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

Methods of examination: Continuous assessment. **Grading:** A-F

Assessment methods: Written examination, 3 hours (2/3). Written assignment (1/3). The examination and the 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 written assignment, but not the examination will be given the following semester. The grade for the written assignment is only valid the year it was submitted. Students who wants to take the course a second time have to hand in a new assignment with a new topic.

Curriculum: The literature will be updated before the start of course.

AOS320 Perspectives on Institutions and Organisations

Perspektiver på institusjoner og organisasjoner

ECTS: 5 Staff/institute: Sigurd Rysstad

Teachers:

Language: Norwegian

Start term: Autumn parallel Terms: Autumn parallel

The course is offered: Anually

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

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 outcomes: 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, Guest presenters, Student presentations.

Case discussion

Methods of examination: Continuous assessment. Grading: A-F

Assessment methods: Essays

Curriculum: Reading list handed out at start up.

AOS331 Leadership and HRM

Ledelse og HRM

ECTS: 10 Staff/institute: Gro Ladegård

Teachers:

Language: Norwegian

Start term: Spring parallel Terms: Spring parallel

The course is offered: Anually

Mandatdory activities: The students are organised 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.

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).

Recommended prerequisites:

Contents: Topics: Leadership behaviour and styles. Leadership and empowerment. Leadership development and coaching. Strategic HRM, incentive systems, leadership development, assessment.

Learning outcomes: The aim of the course is to provide a deeper insight into studies of modern organisations and leadership, as well as management of human resources. 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, analysing and discussing central problems related to the management and leadership in organisations.

Methods of examination: Continuous assessment. Grading: A-F

Assessment methods: A home examination of 30 hours.

Curriculum: A compendium with scientific articles and book chapters.

AOS332 Strategy Dynamics

Dynamisk strategi

ECTS: 10 Staff/institute: Carl Brønn

Language: English

Start term: Autumn parallel Terms: Autumn parallel

Mandatdory activities:

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 outcomes: 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.

Methods of examination: Continuous assessment. Grading: A-F

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

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

AOS335 Organisations in transition

Organisasjoner i endring

ECTS: 5 Staff/institute: Bernt Aarset

Teachers: Guest lecturer.

Language: Norwegian

Start term: Autumn parallel Terms: Autumn parallel

The course is offered: Anually

Prerequisites: AOS320. The students may follow AOS335 and AOS320 in the same semester.

Contents: The foundation of this course is theories and perspectives on the relationship between the organizations and the society, but with its main focus on business organization. The course will provide knowledge in modern organizations and how these influence, and are influenced by, its surroundings. The course is based on theory as a tool to analysis and understanding. Further, the course will use the theoretical insight to develop practical procedures in order to manage various change processes in different categories of organisations. The course provides live exercises in how to manage change and change processes in organisations.

Learning outcomes: 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. Specific goals are: 1. Be familiar with the core theories for organizations and the environment. 2. Demonstrate capability to manage change processes in praxis.

Methods of examination:Continuous assessment. **Grading:** A-F

Assessment methods: A combination of grades on group assignment and a forty-eight hour take-home exam. The course grade is based on these two components weighed 40/60.

Curriculum: Compendium of selected articles and further literature will be presented at the beginning of the course.

AOS340 Qualitative Methods

Kvalitative metoder

ECTS: 5 **Staff/institute:** Bernt Aarset

Language: Norwegian

Start term: Autumn parallel **Terms:** Autumn parallel

The course is offered: Anually

Prerequisites: AOS240 - Research in Social Sciences or equivalent.

Reductions of credits for overlapping course MAST300: 5 credits

Contents: The course will provide the student with an introduction to qualitative methods. The course will present all steps of the qualitative research process.

Development of research question, design of research project (case studies and other designs), choice of method and methodology, analysis of data and generalisation based on qualitative data are core issues in the course. Methods such as depth interview, participating observation, document analysis, conversation analysis, discourse analysis will be presented. The course will provide increased understanding of research, knowledge and knowledge development. Choice of method will be based on research question, theoretical perspectives, analysis, and the direction of the project.

Learning outcomes: This course will provide the students with the necessary tools to conduct the masters thesis as a a qualitative research project. A basic introduction to qualitative methods, principles for research design, for qualitative data analysis, and for generalisation based on qualitative data are provided.

Methods of examination:Continuous assessment. **Grading:** A-F

Assessment methods: One mid-term assignment which counts 40% of total grade and one assignment at the end of the semester which counts 60% of total grade.

Curriculum: Reading list will be handed out at start-up.

BUS100 Cost Accounting, fundamentals

Grunnleggende foretaksøkonomi

ECTS: 5 **Staff/institute:** Jens Bengtsson

Teachers: Jens Bengtsson

Language: Norwegian

Start term: Autumn parallel

Terms: Autumn parallel Spring parallel

The course is offered: Annet - Given twice a year - spring and autumn. In Spring parallel og in Autumn parallel.

Mandatory activities: One compulsory assignment.

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

Learning outcomes: The course is a foundation course in Cost Accounting.

Methods of examination:Continuous assessment. **Grading:** A-F

Assessment methods: One written examination of 60 minutes during the course and one final multiple choice test. The first examination counts 25%, while the final examination of 180 minutes counts 75%. The final grade is based on a weighted average. There will be no repeat examinations for students with an average grade below passing, because the course is given twice a year. Mid term test and final exam must be taken in the same term.

Curriculum: Hoff, Kjell Gunnar: Grunnleggende bedriftsøkonomisk analyse, Universitetsforlaget 2009.

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

BUS110 Accounting - Financial Reporting

Eksternregnskap

ECTS: 10 **Staff/institute:** Nils Sanne

Teachers: Nils Sanne.

Language: Norwegian

Start term: Spring parallel. **Terms:** Spring parallel

The course is offered: Anually

Mandatory activities: One compulsory assignment.

Reductions of credits for overlapping course: The economic students will not obtain ECTS for BUS200

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

Methods of examination:Final written exam. **Exam:** Written exam **Grading:** A-F

Assessment methods: 3 hour written examination. The written 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.

Curriculum: Voldsund, Vågsether, Hoff, Hansen: Grunnleggende regnskap, Universitetsforlaget 2007.

Hansen, Hoff, Voldsund: Analyse av finansregnskapet, Universitetsforlaget 2007.

BUS112 Accounting and Computing*Elektronisk regnskap***ECTS:** 5 **Staff/institute:** Ole Gjøølberg**Teachers:** Guest lecturers from the software provider (Daldata or Agrodata). Contact person: Inger-Lise Labagt, UMB School of Economics and Business.**Language:** Norwegian**Start term:** August block **Terms:** August block**The course is offered:** Anually**Prerequisites:** Preferably some knowledge of accounting (BUS110).**Recommended prerequisites:** BUS110 or equivalent.**Reductions of credits for overlapping course:** BUS111 - 5 credits.**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 outcomes:** The student shall acquire qualifications in accounting and balance of independent businesses based on the software '\Duett\' or '\Agrosat\''. 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.**Methods of examination:** Avsluttende Eksamen: Skriftlig **Grading:** A-F**Assessment methods:** Final individual examination, using a computer and the software

\Duett\' or '\Agrosat\''. More information about the examination aids is given at the beginning of the course.

Curriculum: Information about the syllabus is provided at the start of the course.**BUS133 Excel for Business***Excel for økonomer***ECTS:** 5 **Staff/institute:** Kolbjørn Christoffersen**Language:** Norwegian**Start term:** Spring parallel **Terms:** Spring parallel**The course is offered:** Anually**Prerequisites:** BUS100 (can be taken concurrently), ECN110**Contents:** A detailed plan for the course will be presented in the first lecture.**Learning outcomes:** The course shall give the students basic knowledge about and skills in Excel, an important computer program in business. One major goal for the course is to teach the students how to use the Excel program during their studies and in their future jobs.**Methods of examination:** Continuous assessment. **Grading:** A-F**Assessment methods:** Home exam using Excel: 40 % of total grade. Final written exam:

60 % of total grade

Curriculum: Excel textbook/handbook (will be presented at course start).**BUS160 Tax Law for Economists***Skatterett for økonomer***ECTS:** 5 **Staff/institute:** Ole Gjøølberg**Teachers:** David Eilertsen (Skatt øst).**Language:** Norwegian**Start term:** January block **Terms:** January block**The course is offered:** Anually**Contents:** Income and wealth taxation of both individuals and companies.**Learning outcomes:** 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 taxrelated issues.**Methods of examination:** Final written Eksamen: Written **Grading:** A-F**Assessment methods:** Final written examination.**Curriculum:** Lars Fallan: Innføring i skatterett (latest issue) Ole Gjems-Onstad (red);

Skattelover og sentrale forskrifter: studenthefte (latest issue)

BUS200 Applied Cost Accounting*Anvendt foretaksøkonomi***ECTS:** 5 **Staff/institute:** Nils Sanne**Teachers:** To be decided later**Language:** Norwegian**Start term:** Spring parallel **Terms:** Spring parallel**The course is offered:** Anually**Mandatdory activities:** Written hand ins,**Prerequisites:** BUS100**Reductions of credits for overlapping course** BUS110: 3 credits BUS210: 2 credits INN200: 5 credits**Learning outcomes:** 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.**Methods of examination:** Continuous assessment. **Grading:** A-F**Assessment methods:** One written examination of 1 hour during the course and one final examination. The first examination counts 25%, while the final examination of 3 hours counts 75%. The final grade is based on a weighted average. Mid term test and final exam must be taken in the same term.**Curriculum:** To be decided later.**BUS210 Managerial Accounting and Budgeting***Driftsregnskap og budsjettering***ECTS:** 10 **Staff/institute:** Kjell Gunnar Hoff**Teachers:** Jens Bengtsson, Kjell Gunnar Hoff.**Language:** Norwegian

Start term: Spring parallel **Terms:** Spring parallel

The course is offered: Anually

Mandatory activities: Compulsory assignments

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

Reductions of credits for overlapping course BUS200, 2 ECTS,

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 outcomes: 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.

Methods of examination:Continuous assessment. **Grading:** A-F

Assessment methods: One written examination of 60 minutes during the course and one final examination. The first examination counts 25 %, while the final examination of 3 hours counts 75 %. Mid term test and final exam must be taken in the same term. A repeat examination for students with an average grade below passing will be arranged as a written examination with a duration of 3 hours. This examination counts 100 %.

Curriculum: Hoff, Kjell Gunnar: Driftsregnskap og budsjettering, Universitetsforlaget 2010. Hoff,

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

BUS215 Annual Accounts

Årsregnskap

ECTS: 10 **Staff/institute:** Nils Sanne

Teachers: Lecturer: Jens-Erik Huneide

Language: Norwegian

Start term: Spring parallel

Terms: Spring parallel

The course is offered first time: VÅR2012

The course is offered: Anually

Mandatory activities: Participation in seminars

Prerequisites: Passed BUS100 and BUS110

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

Learning outcomes: 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..

Methods of examination:Final Written exam **Eksamen:** Written **Grading:** A-F

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

BUS216 Annual Accounts - Specific Accounting Topics

Årsregnskap – spesielle emner

ECTS: 5 **Staff/institute:** Nils Sanne

Teachers:

Language: Norwegian

Start term: June block **Terms:** June block

The course is offered first time: VÅR2013

The course is offered: Anually

Mandatory activities: Case solutions

Prerequisites: Passed BUS100, BUS110 and BUS215

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

Methods of examination:Final term paper **Grading:** Pass/Fail

Assessment methods: Term paper - case solutions

Curriculum:

BUS220 Finance and Investment

Finansiering og investering

ECTS: 10 **Staff/institute:** Atle Guttormsen

Teachers: Ole Gjøølberg.

Language: Norwegian

Start term: Spring parallel **Terms:** Spring parallel

The course is offered: Anually

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

Reductions of credits for overlapping course Students can not be awarded credits for both BUS220 and RØP310.

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 outcomes: 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.

Methods of examination:Final Written exam. **Grading:** A-F

Curriculum: Distributed at the start of the course.

BUS230 Operation Research*Operasjonsanalyse***ECTS:** 10 **Staff/institute:** Marie Steen**Teachers:** Teaching assistants. Guest lecturers.**Language:** Norwegian**Start term:** Spring parallel **Terms:** Spring parallel**The course is offered:** Annually**Mandatory activities:** Compulsory elements**Prerequisites:** Introductory courses in mathematics, statistics and micro economics.**Reductions of credits for overlapping course** BUS231 - 10 credits, BUS232 - 5 credits.**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 outcomes:** 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.**Methods of examination:** Final written examination counts 100% .**Eksamen:** Written**Grading:** A-F**Assessment methods:** Final written examination counts 100%.**Curriculum:** 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.**BUS233 Management Information Systems***Informasjonssystemer for virksomhetsledelse***ECTS:** 5 **Staff/institute:** Kjell Gunnar Hoff**Teachers:** Teacher 2012: Heidi Boverud, NHH - Norwegian School of Economics**Language:** Norwegian**Start term:** June block **Terms:** June block**The course is offered:** År med partall**Prerequisites:** BUS133 - Excel for Business**Contents:** We will examine how organizations choose technological innovations and investments, manage and design the information system architecture, enable commerce using Internet technologies as well as gain business intelligence by acquiring, designing, and securing their information systems investments. In addition, the course will examine how information systems influence numerous ethical issues facing organization and society such as data privacy and ownership as well as how information systems are enabling computer crime and cyber terrorism.**Learning outcomes:** Today, information systems are an integral part of all business activities and careers. This course is designed to introduce students to contemporary

information systems and demonstrate how these systems are used throughout organizations. Most notably, the course will extensively examine how information systems are fueling globalization making the world smaller and more competitive in virtually every industry and at an ever-increasing pace. We will focus on the key components of information systems; people, software, hardware, data, and telecommunications, and how these components can be integrated and managed to create competitive advantage.

Methods of examination: Continuous assessment. **Grading:** A-F**Assessment methods:** Multiple choice, more details will be available on the ClassFronter.**Curriculum:** Literature will be provided on the ClassFronter**BUS240 Operations Management***Vareproduksjon og logistikk***ECTS:** 10 **Staff/institute:** Kolbjørn Christoffersen**Language:** Norwegian**Start term:** Autumn parallel **Terms:** Autumn parallel**The course is offered:** Annually**Mandatory activities:****Prerequisites:** STAT100.**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 outcomes:** 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.**Methods of examination:** Avsluttende **Eksamen:** Skriftlig **Grading:** A-F**Assessment methods:** Final written examination (3 hours).**Curriculum:** Slack, Chambers, Johnston: Operations Management, 6th edition. Financial Times/ Prentice-Hall. 2010.**BUS260 Tax Law***Skatte- og avgiftsrett***ECTS:** 10 **Staff/institute:** Ole Gjølberg**Teachers:** David Eilertsen**Language:** Norwegian**Start term:** Spring parallel **Terms:** Spring parallel**The course is offered first time:** VÅR2013**The course is offered:** Annually**Mandatory activities:** An assignment must be approved before the student can take part at the exam.**Prerequisites:** BUS 160 - Tax Law for Economists

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. Inheritance tax, including the liability and scale basis, with particular emphasis on generational change related to business.

Learning outcomes: 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 and inheritance tax.

Methods of examination: Final written exam **Grading:** A-F

Assessment methods: Final written examination.

Curriculum: Lars Fallen, Innføring i skatterett (latest issue) Ole Gjems-onstad, Merverdiavgift – en innføring (latest issue) Ole Gjems-Onstad (red), Skattelover og sentrale forskrifter: studenthefte (latest issue)

BUS271 Business Start-Up

Bedriftsetablering

ECTS: 5 **Staff/institute:** Anders Lunnan

Teachers: Svein Kolstad Hansen.

Language: Norwegian

Start term: Spring parallel **Terms:** Spring parallel

The course is offered: Annually

Mandatory activities: Submission of project plan.

Recommended prerequisites: It would be an advantage, but no absolute requirement, if the students have some background in the subject area they are studying. This will help them finding an idea that they can work on to make a business plan.

Reductions of credits for overlapping course BUS171 - 5 credits.

Contents: 1. Lectures about the different parts of a business plan. 2. Entrepreneur presentations/ investor presentations/ inspirational presentations are associated with the different lectures. Emphasis on presenting the entrepreneurs in the Ås area and organisations working with entrepreneurship in the Ås area (Start, Venture Cup, Research Department, Bio Park, different departments). 3. Supervision of the semester assignments, a practical business plan.

Learning outcomes: After the course, students will be able to make a business plan. They will know the difference between an idea and an opportunity and the difference between a life style business and a growth business. Students will know what is

required for the start-up of a new business, and will have some knowledge about business opportunities that can be found and commercialized at UMB.

Methods of examination: Continuous assessment. **Grading:** A-F

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

Curriculum: Fra ide til ny virksomhet - En håndbok for nye vekstselskaper. Universitetsforlaget.

Additional literature will be distributed. Refer to the course web site. For students continuing on the Gründer (Entrepreneur) School, we recommend that they buy an American book dealing with entrepreneurship. Information about this will be given during the course.

BUS280 Private and Corporate Insurance

Private og næringsforsikringer

ECTS: 5 **Staff/institute:** Ragnar A. Øygard

Teachers: Roger Loen

Language: Norwegian

Start term: Autumn parallel **Terms:** Autumn parallel

The course is offered first time: HØST2012

The course is offered: Annually

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 outcomes: 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.

Methods of examination: Continuous assessment. **Grading:** A-F

Assessment methods: Term paper 40%, written exam 60%

Curriculum:

BUS305 Strategy Analysis and Strategy Development

Strategianalyse og strategitviking

ECTS: 5 **Staff/institute:** Silja Korhonen-Sande

Teachers: Silja Korhonen-Sande

Language: English

Start term: August block **Terms:** August block

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. Accordingly, 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.

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.

Recommended prerequisites: Knowledge in marketing strategy and microeconomics makes it easier to understand the theoretical foundations of strategy.

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 outcomes: By presenting and discussing theories/ perspectives applied in strategic management and by analysing 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.

Methods of examination:Continuous assessment. **Grading:** A-F

Assessment methods: 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.

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

BUS310 Strategy Implementation and Performance Measurements

Strategiimplementering og prestasjonsmåling

ECTS: 5 **Staff/institute:** Kjell Gunnar Hoff

Teachers: Per Aksel Holving, Kjell Gunnar Hoff, guest lecturers

Language: Norwegian

Start term: January block **Terms:** January block

The course is offered: Annually

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

Prerequisites: BUS305

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

Methods of examination:Continuous assessment.. **Grading:** A-F

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

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

BUS311 Environmental Accounting and Management

Miljøregnskap og miljøledelse

ECTS: 5 **Staff/institute:** Ståle Navrud

Teachers: Carl Brønn.

Language: English on request

Start term: Spring parallel **Terms:** Spring parallel

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

Reductions of credits for overlapping course Overlap with ECN373

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, ecoefficiency 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, criticised 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. Systems thinking is an analytic framework for understanding complex organizational 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 outcomes: 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.

Methods of examination:Avsluttende **Grading:** A-F

Assessment methods: The semester assignment counts 100 % of the grade.

Curriculum: - 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.

BUS312 Advanced Management Accounting*Styring og organisering***ECTS:** 10 **Staff/institute:** Kjell Gunnar Hoff**Teachers:** Kjell Gunnar Hoff, guest lecturers**Language:** Norwegian**Start term:** Autumn parallel **Terms:** Autumn parallel**The course is offered:** Anually**Mandatory activities:** Written hand ins to be graded as pass or fail.**Prerequisites:** BUS305**Contents:** The course comprises discussions of organizational design, including responsibility centers, management information systems and various tools and methods for planning, decision making and control, like rolling budgets and the use of forecasts. A computer game (group based) is also a part of the course.**Learning outcomes:** The aim of the course is to understand how the right organizational setup can help increase the competitive strength, and how various management systems and tools can contribute to better decisions and control.**Methods of examination:** Continuous assessment. **Grading:** A-F**Assessment methods:** Written cases (group based). Final written examination (individually).**Curriculum:** Compendium, Business Simulation Game: Mogul Articles.**BUS313 Strategic Cost Management***Strategisk økonomistyring***ECTS:** 10 **Staff/institute:** Kjell Gunnar Hoff**Teachers:** Kjell Gunnar Hoff, guest lecturers**Language:** Norwegian**Start term:** Autumn parallel **Terms:** Autumn parallel**The course is offered:** Anually**Mandatory activities:** Hand ins of written work to be graded as pass or fail.**Prerequisites:** BUS305, BUS310 and BUS312**Contents:** Strategic profitability analysis comprises strategic cost driver analysis, value chain analysis, outsourcing, value creation, product attributes, target costing, quality costs, customer profitability analysis and interorganizational cost management.

Strategic performance management comprises competition analysis, benchmarking, strategic decomposition, strategy implementation, value based performance management and incentive programs.

Learning outcomes: The aim is to learn how companies can create competitiveness through strategic profitability analyzes and decisions, and how develop tools for measuring strategic achievements.**Methods of examination:** Continuous assessment. Lærer skal kunne dokumentere hvordan delaktivitetene skal evalueres, om det må være bestått, og hvor mye de skal vektlegges i den endelige slutt karakteren for emnet. **Grading:** A-F**Assessment methods:** Written case hand ins (groups). Final written exam (individual).**Curriculum:** Hoff, Kjell Gunnar: Strategisk økonomistyring, Universitetsforlaget, 2009**BUS314 Corporate Governance***Virksomhetsstyring***ECTS:** 5 **Staff/institute:** Jonas Gaudernack**Teachers:** Jonas Gaudernack**Language:** English ved behov**Start term:** Spring parallel **Terms:** Spring parallel**Mandatory activities:** Brief written assignments**Prerequisites:** Basic business, primarily financial accounting, cost accounting; finance**Recommended prerequisites:** Accounting, corporate law, tax law, auditing**Contents:** The course will consist of traditional lecturing as well as classes, guest lectures and written assignments.**Learning outcomes:** 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.**Methods of examination:** Final written exam **Grading:** A-F**Curriculum:** 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 mmmnt. (www.theiia.org)**BUS320 Empirical Analyses of Financial and Commodity Markets II***Empirisk analyse av finans og varemarkeder II***ECTS:** 5 **Staff/institute:** Ole Gjølberg**Teachers:** Ole Gjølberg, Atle Guttormsen**Language:** English on request**Start term:** Autumn parallel **Terms:** Autumn parallel**Prerequisites:** BUS321.**Contents:** Group and individual guidance. The students are expected to invest a significant amount of individual work in the semester assignment.**Learning outcomes:** The aim of the course is to develop the students ability to conduct econometric analyses of financial and commodity markets.**Methods of examination:** Term paper **Grading:** A-F**Assessment methods:** Semester assignment.**Curriculum:** Relevant articles from the scientific journals.

BUS321 Empirical Analyses of Financial and Commodity Markets - Theory

Empirisk analyse av finans og varemarkeder, teoridel

ECTS: 5 **Staff/institute:** Ole Gjøølberg

Teachers: Prof. Frank Asche, Assoc. Prof. Olvar Bergland, Prof. Alan Love.

Language: Norwegian

Start term: June block **Terms:** June block

The course is offered: Anually

Prerequisites: Bachelor, BUS220 and ECN202 or equivalent.

Recommended prerequisites: BUS220, ECN212 or equivalent.

Reductions of credits for overlapping course 5 credit reduction against the former BUS320 (10 credits).

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, bioenergy), soft commodities, metals etc. The course includes the following activities: 1. Lectures. 2. Econometric exercises.

Learning outcomes: 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.

Methods of examination:Final written exam. **Grading:** A-F

Assessment methods: Written examination, 3.5 hours.

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

BUS322 Investment Analysis and Financial Risk Management

Investeringsanalyse og finansiell risikostyring

ECTS: 10 **Staff/institute:** Ole Gjøølberg

Language: Norwegian

Start term: Spring parallel **Terms:** Spring parallel

The course is offered: Anually

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

Prerequisites: Basic finance, statistics/econometrics, microeconomics.

Recommended prerequisites: Financial accounting, cost accounting, operation analysis.

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 outcomes: 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.

Methods of examination:Continuous assessment. **Grading:** A-F

Assessment methods: Take home 2-day examination. Individual analysis of a case.

Curriculum: Bodie, Kane & Marcus, Investments. Distributed materials and web sites.

BUS323 Commodity Market Analysis

Varemarkedsanalyse

ECTS: 10 **Staff/institute:** Atle Guttormsen

Teachers: Ole Gjøølberg, Marie Steen

Language: Norwegian

Start term: Spring parallel **Terms:** Spring parallel

The course is offered: Anually

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

Recommended prerequisites: Microeconomics on bachelors degree level.

Introductory course in finance and investment.

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 outcomes: English:The aim of the course is to develop the students 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.

Methods of examination:Continuous assessment. **Grading:** A-F

Assessment methods: Based on scientific report and oral examination.

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

BUS324 Options, Derivatives and Risk Management

Opsjoner, derivater og risikostyring

ECTS: 10 **Staff/institute:** Espen Haug

Teachers: Lecturer 2012: PhD Glenn Kristiansen

Language: Norwegian

Start term: Autumn parallel **Terms:** Autumn parallel

The course is offered: Anually

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

Recommended prerequisites: Basic knowledge of options

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 outcomes: 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.

Methods of examination: Avsluttende Eksamen: Skriftlig **Grading:** A-F

Curriculum: Hull, J. Options, Futures and Other Derivatives, Prentice Hall last version + some handouts and information from the internet.

BUS325 Fixed Income Instruments

Obligasjoner, swapper og andre renteinstrumenter

ECTS: 10 **Staff/institute:** Espen Haug

Teachers: Lecturer 2012: PhD Glenn Kristiansen

Language: Norwegian

Start term: Spring parallel **Terms:** Spring parallel

The course is offered first time: VÅR2012

The course is offered: Anually

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

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 outcomes: In this course students will acquire solid knowledge about bonds, interest rate swaps, asset swaps, FRA’s 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 modeling, credit risk, caps, floors, swaption.

Methods of examination: Final written exam, details on ClassFronter. **Grading:** A-F

Curriculum: Will be decided later on.

BUS331 Business Management Science: Methods and Techniques

Bedriftsøkonomisk styring: Operasjonsanalytiske metoder og teknikker

ECTS: 10 **Staff/institute:** Marie Steen

Teachers: Ole Gjølberg and Carl Brønn (and possibly guest lecturers).

Language: Norwegian

Start term: Spring parallel **Terms:** Spring parallel

The course is offered: Annet - The course may not be given in some years, depending on the resource and personnel situation. Det tas forbehold om at kurset kan utgå enkelte år avhengig av personell- og ressursituasjonen.

Mandatory activities: Compulsory homework/cases must be approved in order to take the final examination.

Prerequisites: Introductory Management Science.

Recommended prerequisites: Introductory statistics, financial accounting, cost accounting, microeconomics, finance and investment.

Reductions of credits for overlapping course BUS330: 5 ECTS reduction.

Contents: The course will be given as a 'smörgåsbord' of a number of methods and techniques within Management Science and Management of the firm. The content may vary from year to year, but most of the following subjects will normally be covered: * Project Management, PERT/CPMmodels. * Decision analysis. * Waiting lines and queueing theory. * Logistics. * Advanced linear programming. * Non-linear programming. * Transportation and assignment problems. * Markov analysis. * Peak-load pricing.

Learning outcomes: Through this course the students acquire knowledge of important Management Science methods and techniques and skills to apply these in practical management of firms.

Methods of examination: Continuous assessment. **Grading:** A-F

Assessment methods: 30 hour individual take-home examination.

Curriculum: F.S. Hillier & M.S. Hillier, Introduction to Management Science plus handouts.

BUS340 Supply Chain Management

Integrert logistikk

ECTS: 10 **Staff/institute:** Kolbjørn Christoffersen

Teachers: Jens Bengtsson

Language: Norwegian

Start term: Autumn parallel **Terms:** Autumn parallel

The course is offered: Anually

Mandatory activities: Cases with oral presentations

Prerequisites: BUS240 Operations Management or some other basic logistics course.

STAT100 Statistics. BUS230 Management Science/Operations Research

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 outcomes: 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.

Methods of examination: Avsluttende Eksamen: Skriftlig **Grading:** A-F

Curriculum: Chopra, Meindl: Supply Chain Management. Prentice-Hall. 4th ed. 2010.

BUS370 Economic Development and Entrepreneurship

Næringsutvikling og entreprenørskap

ECTS: 10 **Staff/institute:** Anne Moxnes Jervell

Teachers: Anders Lunnan and others.

Language: Norwegian

Start term: Autumn parallel **Terms:** Autumn parallel

The course is offered: Anually

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

Prerequisites: Bachelordegree or equivalent.

Recommended prerequisites: ECN262, BUS210, AOS120

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 studentpresentations and discussion of selected research papers 10. Written assignments (group and individual) 10. Assignments

Learning outcomes: 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.

Methods of examination:Continuous assessment. **Grading:** A-F

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

Curriculum: 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.

ECN100 Introduction to economics

Innføring i samfunnsøkonomi

ECTS: 5 **Staff/institute:** Per Halvor Vale

Teachers: Arild Angelsen, Olvar Bergland, Torstein Bye, Ole Gjølberg, Stein Holden, Ståle Navrud, Eirik Romstad, Caroline Rohde Wang, Ragnar Øygard

Language: Norwegian

Start term: August block **Terms:** August block

The course is offered: Anually

Mandatory activities: Information only available in Norwegian.

Prerequisites: -

Recommended prerequisites: -

Contents: Information only available in Norwegian.

Learning outcomes: Information only available in Norwegian

Methods of examination:Continuous assessment. Lærer skal kunne dokumentere hvordan delaktivitetene skal evalueres, om det må være bestått, og hvor mye de skal vektlegges i den endelige slutt karakteren

for emnet. **Grading:** Bestått/ikke bestått

Assessment methods:

Curriculum: Information only available in Norwegian

ECN110 Introduction to Microeconomics

Innføring i samfunnsøkonomi, mikro

ECTS: 5 **Staff/institute:** Mette Wik

Teachers: Atle Guttormsen

Language: Norwegian

Start term: Autumn parallel **Terms:** Autumn parallel

The course is offered: Anually

Mandatory activities: The students need to participate in at least 70% of the exercises.

Recommended prerequisites: A good background in mathematics will make it easier for students to acquire economic theories.

Reductions of credits for overlapping course ECN111 - 5 ECTS.

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 outcomes: 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.

Methods of examination:Final written exam. **Grading:** A-F

Assessment methods: Written examination, 3.5 hours.

Curriculum: Frank/Bernanke: Principles of Microeconomics. Or: McDowell, Thom, Frank & Bernanke: Principles of Economics

ECN120 Introduction to Macroeconomics, part I

Innføring i makroøkonomi, del I

ECTS: 5 **Staff/institute:** Per Halvor Vale

Language: Norwegian

Start term: January block **Terms:** January block

The course is offered: Anually

Prerequisites:

Recommended prerequisites: A good background in Mathematics from high school will make it easier for students to acquire economic theories.

Reductions of credits for overlapping course

Contents: Part 1: The needs for economic policy. Part 2: Models for economic stabilization. Part 3: Economic growth and development.

Learning outcomes: Students should be able to apply simple macroeconomic models to 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) be trained in logical reasoning. iii) be given some training in the application of mathematics. iv) develop an academic attitude

Methods of examination: Avsluttende Eksamen: Skriftlig **Grading:** A-F

Assessment methods: Written examination (3.5 hours).

Curriculum: Will be provided at course start.

ECN122 Introduction to Macroeconomics, part II

Innføring i makroøkonomi, del II

ECTS: 5 **Staff/institute:** Per Halvor Vale

Language: Norwegian

Start term: Spring parallel **Terms:** Spring parallel

The course is offered first time: VÅR2013

The course is offered: Annually

Prerequisites: ECN120

Reductions of credits for overlapping course ECN220 - 5 ECTS.

Learning outcomes: Students shall be able to utilize economic models to analyze relevant issues pertaining to growth and stabilization of open market economies

Methods of examination: Final written examination. **Grading:** A-F

Curriculum: Literature to be handed out at course start.

ECN140 Economic History

Økonomisk historie

ECTS: 5 **Staff/institute:** Ragnar A. Øygard

Teachers:

Language: Norwegian

Start term: January block **Terms:** January block

The course is offered: Annually

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 outcomes: 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 economical development and transfer these to other periods, areas and problems.

Methods of examination: Final written exam **Grading:** A-F

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

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

ECN150 Introduction to Development Economics

Innføring i utviklingsøkonomi

ECTS: 5 **Staff/institute:** Mette Wik

Teachers: Ragnar Øygard, Arild Angelsen and Stein Holden.

Language: English

Start term: Spring parallel **Terms:** Spring parallel

Course frequency: Odd years

Comment on frequency: The course is given in years with uneven numbers

Mandatory activities: One or more assignments which will probably be part of the final coursegrade.

Prerequisites: ECN110 or EDS140.

Contents: Who are the poor? What is growth and development? Why are some countries poor and some rich? Classical and recent theories on growth and development. Poverty and dissimilarities. Population growth. Urbanisation and migration from the countryside. Education and health. Agriculture and developments in the countryside. Environment and development. Globalisation, poverty and environment.

Learning outcomes: After completing the course, the students should have an overview of: 1) Typical distinctive characteristics of developing countries. 2) Important theories and models for economic development and reduced poverty. 3) Relevant development problems and possible means for solving these.

Methods of examination: Continuous assessment. **Grading:** A-F

Assessment methods: 3.5 hour written examination.

Curriculum: Todaro, M. P. and S. C. Smith. Economic Development. 11th edition. Addison Wesley

ECN170 Environmental and Resource Economics

Miljø- og ressursøkonomi

ECTS: 5 **Staff/institute:** Ståle Navrud

Teachers: Eirik Romstad, Arild Angelsen.

Language: Norwegian

Start term: Spring parallel **Terms:** Spring parallel

The course is offered: Annually

Mandatory activities:

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

Reductions of credits for overlapping 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). – Nonrenewable 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) Decentralised 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 analysed, 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 outcomes: 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.

Methods of examination:Final written exam. **Grading:** A-F

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

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

ECN201 Econometrics

Økonometri

ECTS: 10 **Staff/institute:** Kyrre Rickertsen

Language: English

Start term: Autumn parallel **Terms:** Autumn parallel

Mandatdory activities:

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

Recommended prerequisites: Macroeconomics and courses in applied economics.

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

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 outcomes: 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.

Methods of examination:Continuous assessment. **Grading:** A-F

Assessment methods: 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.

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

ECN202 Introduction to Econometrics

Innføring i økonometri

ECTS: 5 **Staff/institute:** Frode Alfnes

Language: Norwegian

Start term: Autumn parallel **Terms:** Autumn parallel

The course is offered: Annually

Mandatdory activities: Compulsory assignment.

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

Recommended prerequisites: Courses in macroeconomics and applied economics.

Reductions of credits for overlapping course ECN201- 5 credits, STAT200 - 5 credits.

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 outcomes: ECN202 gives a practical introduction to econometrics with main emphasis on regression analysis. The goal is to teach students to use econometrics to analyse 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.

Methods of examination: Final written exam **Grading:** A-F

Assessment methods: Written examination, 3.5 hours. The compulsory assignment must be passed in the same semester as the examination.

Curriculum: Demodar N. Gujarati. Essentials of Econometrics, McGraw-Hill. Might be updated before the course begins.

ECN210 Microeconomics- Consumers, Producers, Market and Welfare

Mikroøkonomi – konsument, produsent, marked og velferd

ECTS: 10 **Staff/institute:** Mette Wik

Teachers:

Language: Norwegian

Start term: Autumn parallel **Terms:** Autumn parallel

The course is offered: Annually

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

Recommended prerequisites: A good background in mathematics will make it easier for students to acquire economic theories. We normally recommend that students take courses in mathematics.

Reductions of credits for overlapping course

Contents: Part I: Unconstrained and constrained Optimisation. Part II: Consumer theory. Part III: Producer theory. Part IV: Perfect competition and monopoly. Part V: Welfare economics.

Learning outcomes: 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.

Methods of examination: Final written exam. **Grading:** A-F

Assessment methods: Final written examination: 5 hours.

Curriculum: Will be decided later.

ECN211 Microeconomics - Institutions, Games and Market Failures

Mikroøkonomi – institusjoner, spill og markedsvikt

ECTS: 10 **Staff/institute:** Sigurd Rysstad

Teachers: Sigurd Rysstad

Language: Norwegian

Start term: Autumn parallel **Terms:** Autumn parallel

The course is offered: Annually

Prerequisites: ECN110 or equivalent.

Contents: 1. Introduction - economics and institutions. 2. Game theory and the tools of strategic business analysis. 3. The internal organisation of the firm. 4. Monopoly and monopolistic competition. 5. Natural monopolies and the economics of regulation. 6. Oligopoly. 7. Market entry and the emergence of perfect competition. 8. Perfect competition and auction theory. 9. Uncertainty and insurance markets. 10. Informational market failures. 11. Externalities and public goods. 12. Input markets.

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

Methods of examination: Final written exam. **Grading:** A-F

Assessment methods: Final written examination: 5 hours.

Curriculum: Schotter: Microeconomics. A Modern Approach.

ECN220 Economics II

Samfunnsøkonomi II

ECTS: 10 **Staff/institute:** Per Halvor Vale

Language: Norwegian

Start term: Autumn parallel **Terms:** Autumn parallel

The course is offered last time: HØST2012

The course is offered: Annually

Mandatory activities: 1 Compulsory assignment.

Prerequisites: ECN120 or an equivalent course.

Reductions of credits for overlapping course ECN122 - 5 ECTS.

Contents: Part 1: Discussion of economic stabilization, based on different models as: - the ISLM model. - the IS-LM-BP. model. - the AD-AS model. Part 2: Discussion of economic growth and development, based on: Solow's growth model - and endogenous growth theory. Part 3: Compulsory assignment - having the possibility to go deeper into the theoretical and applied stuff.

Learning outcomes: The aim of the course is to give: (i) The competence in macroeconomics required for a Bachelor's degree in Economics and in Business Administration. (ii) Competence in macroeconomics that gives a foundation for admission to a Master's degree programme in economics. (iii) Knowledge of central macroeconomic models as: *Keynesian multiplier models. *The IS-LM-BP, including the Mundell-Fleming version. *The AD-AS model. *Solow's growth model, and recent growth theory. (iv) Armed with these tools of models, the student should be able to undertake evaluations of macroeconomic issues and consequences of the macroeconomic phenomena for trade, businesses and individuals. (v) Finally, the course should give the students training in: - Reading economic reports, for instance

parliament reports, NOU-reports, etc. - Speak about and discuss economic problems when others are present. The course, like other economics courses, is to teach the students: - To be involved in society. - An analytical attitude. - An academic attitude, with special requirements for objectivity and impartiality. - That the world is more complicated than any of our macroeconomic models and that a final answer is not given - we must have respect for other answers and solutions than our own.

Methods of examination:Final written exam **Grading:** A-F

Assessment methods: Written examination - 4.0 hours

Curriculum: Main Textbook: Vale: Makroøkonomi. Har vi kontroll på utviklingen?, Abstrakt forlag, second edition, 2007.

Supplement (selected parts) : M. Gartner: Macro Economics, Pearson Education, 2006. In addition Røisland, Øistein og Tommy Sveen (2005): “

Pengepolitikk

under et inflasjonsmål”, Norwegian Økonomisk Tidsskrift 119 (2005),

page 1–29.

Sveen og Røisland.pdf Isachsen, Arne Jon og Geir Bjønnes Høidal: Globale penger,

Gyldendal,

Chapter 4 and Chapter 5.Isachsen, globale penger.pdf Røed, Knut (1997): Hysteresis in

unemployment; Journal of Economic Surveys . 11 (4), 389-418. Hysteresis_knut

røed.pdf

Erling Steigum, Working paper Series 1/05, BI:

Finn Kydland – Norges tredje nobelprisvinner i økonomi(P107). Kydland_

3dje Norwegian e nobelprisvinner i økonomi.pdf Kap. 1-3 av St. meld. 1

2008/09(Nasjonald budsjettet) and St. meld nr. 2 2009/08 (Revidert nasjonalbudsjett

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ECN230 International Economics

Internasjonal økonomi

ECTS: 10 **Staff/institute:** Roberto J. Garcia

Teachers: Roberto J. Garcia

Language: English

Start term: Autumn parallel **Terms:** Autumn parallel

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.

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

Recommended prerequisites: Good background in basic microeconomics, background in macroeconomics is less important.

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 outcomes: 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.

Methods of examination:Final written exam **Grading:** A-F

Assessment methods: 3 hour written examination.

Curriculum: * Appleyard and Field (A+F), International Economics (International

Edition); * Supplementary reading materials provided on the web at

<http://athene.umb.no/emner/ECN230>.

ECN260 Agricultural Policy

Landbrukspolitikk

ECTS: 10 **Staff/institute:** Normann Aanesland

Language: Norwegian

Start term: Autumn parallel **Terms:** Autumn parallel

The course is offered: Annually

Prerequisites: Fundamental knowledge in Microeconomics (ECN110).

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 outcomes: The purpose of the course is to give a broad introduction to policies

concerning agriculture and forestry. The course is mainly based on welfare theory and micro theory. The connection between agriculture and forestry and the general development of society. The development of Norwegian forestry and agriculture policies. The system for political administration of agriculture and forestry. The use of resources and production adaptation: Goals and means for achieving the goals. The influence of agriculture and forestry on the environment. Municipal management of agriculture and forestry. The agriculture and forestry policies in the EU. New policies on agriculture and forestry. The topics may vary somewhat from one year to the next.

Methods of examination:Final written exam **Grading:** A-F

Assessment methods: Final written examination - 3.5 hrs.

Curriculum: Aanesland, Normann (1987): Landbrukspolitikk. Produksjonstilpassing for å nå ulike jordbrukspolitiske mål.

Aanesland, N. and H. Blytt (1993): Internasjonal handel med mat, Landbruksforlaget.

Aanesland, N. and H. Mjelde, (1997): Fra politikk til entreprenørskap,

Landbruksforlaget. Aanesland, N. and I. L. Labugt (2000): Bygdeutvikling til nytte for

hvem,

Landbruksforlaget. An overview of the course readings will be handed out at the first lecture.

ECN262 Regional Economics and Regional Policy

Regional Economics and Regional Policy

ECTS: 5 **Staff/institute:** Sigurd Rysstad

Teachers: Economics teacher.

Language: Norwegian

Start term: January block **Terms:** January block

The course is offered: Annually

Prerequisites: ECN110 and ECN120.

Recommended prerequisites: ECN210 - Mikroekonomics, Consumer, Producer, Market and Welfare

Contents: (i) Regional development trends. (ii) Regional economic models. (iii) Rural and regional policies in Norway and the EU.

Learning outcomes: The course will enable students to (i) Master selected regional economic models. (ii) Gain an overview over Norwegian industry and district policies as well as an overview over how the EU/EEC influences the development of industry and industrial and regional policies.

Methods of examination: Final written exam **Grading:** A-F

Assessment methods: 3 hour written examination.

Curriculum: Armstrong and Taylor: Regional economics and policy (or the equivalent).

ECN270 Natural Resource Economics

Naturressursøkonomi

ECTS: 5 **Staff/institute:** Arild Angelsen

Teachers: Caroline Rohde Wang

Language: English

Start term: Autumn parallel **Terms:** Autumn parallel

Mandatory activities: Four out of five exercises approved.

Prerequisites: Microeconomics at the level of ECN212 or ECN210/211.

Reductions of credits for overlapping course ECN273 and EDS240 reduced respectively with 2 and 3 credits.

Contents: Lectures and exercises will address the following issues: Economy - ecology interactions, sustainable development, cost-benefit analysis, optimal management of renewable and nonrenewable resources, pollution, biodiversity conservation, land degradation and deforestation, valuation of environmental resources and accounting for the environment, international environmental agreements. The course will also emphasise issues, cases and perspectives of relevance to developing countries.

Learning outcomes: 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, optimal pollution, biodiversity conservation, land

degradation and deforestation, valuation of environmental resources and accounting for the environment, and international environmental agreements.

Methods of examination: Final written exam **Grading:** A-F

Assessment methods: Final written examination, 3 hours: 100 %.

Curriculum: Perman, R., Y. Ma, J. McGilvray, and M. Common, 2003. Natural Resource & Environmental Economics. 3rd. ed. Harlow, UK: Pearson Education (selected parts). Selected articles and book chapters.

ECN271 Project Evaluation and Environmental Valuation

Prosjektanalyse og verdsetting av miljøgoder

ECTS: 10 **Staff/institute:** Ståle Navrud

Teachers: Yohei Mitani

Language: English ved behov

Start term: Spring parallel **Terms:** Spring parallel

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

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 judgements/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 outcomes: 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.

Methods of examination: Term paper **Grading:** A-F

Assessment methods: 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.

Curriculum: - Boardman, A. E, D. H Greenberg, A. R. Vining & 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.

ECN280 Energy Economics*En ergjökonomi***ECTS:** 10 **Staff/institute:** Torstein Bye**Language:** Norwegian**Start term:** Spring parallel **Terms:** Spring parallel**The course is offered:** Annually**Prerequisites:** Microeconomics (ECN210)

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 outcomes: 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 decentralised and relatively open economy.

Methods of examination: Final written exam. **Grading:** A-F**Assessment methods:** Written examination (3.5 hours), counts 100%.**Curriculum:** The syllabus will be handed out at the first lecture.**ECN301 Econometric Methods***Økonometrisk metode***ECTS:** 10 **Staff/institute:** Olvar Bergland**Language:** English**Start term:** Autumn parallel **Terms:** Autumn parallel**Mandatory activities:** Compulsory exercises and project work involving econometric analysis using computers. (Approved work is valid for two - 2 - years.)**Prerequisites:** An introductory course in econometrics (ECN201) (or regression analysis), statistics (STAT100), microeconomics (ECN210), and linear algebra at the level of ECN302.**Reductions of credits for overlapping course** This course replaces ECN300. A student can not be given credit for both ECN300 and ECN301.

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 outcomes: 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.

Methods of examination: Avsluttende Eksamen: Skriftlig **Grading:** A-F**Assessment methods:** 4 hour final examination.**Curriculum:** J.M. Wooldridge (2009): 'Introductory Econometrics: A Modern Approach', 4th edition.

Handouts. (This is may change.)

ECN302 Mathematics for Economists*Matematikk for økonomer***ECTS:** 5 **Staff/institute:** Kyrre Rickertsen**Teachers:** Kyrre Rickertsen and Dadi Kristofersson.**Language:** English**Start term:** August block **Terms:** August block**Prerequisites:** Mathematics on the level of MATH100.**Recommended prerequisites:** Microeconomics on the level of ECN210/ECN212.**Reductions of credits for overlapping course** There are the following reductions: MATH111, 1 ECTS; MATH112, 1 ECTS; MATH130, 2 ECTS.

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 IØR. 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: Elasticities, the chain rule, unconstrained optimization, equality constrained optimization (Lagrange), inequality constrained optimization (Kuhn Tucker), implicit function theorem, and envelope theorem.

Learning outcomes: 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.

Methods of examination: Final written exam. **Grading:** Pass/Fail**Assessment methods:** Permitted tools on exam: Textbooks published by publishing houses. Lecture notes from Classfonter or other private notes are NOT allowed.**Curriculum:** The required readings may change.

- 1) Parts of Alpha C. Chiang and Kevin Wainwright (2005) Fundamental Methods of Mathematical Economics, McGraw Hill International edition.
- 2) Parts of Silberberg and Suen (2001). The Structure of Economics - A Mathematical Analysis, third edition, Irwin McGraw-Hill.
- 3) Lecture notes.

ECN303 Impact Assessment Methods*Statistiske metoder for politikkvirkning***ECTS:** 5 **Staff/institute:** Stein Terje Holden**Language:** English**Start term:** Autumn parallel **Terms:** Autumn parallel**Mandatory activities:** Compulsory participation in exercises**Prerequisites:** Econometrics (ECN201), Statistics (STAT100), basic knowledge of STATA**Recommended prerequisites:** Recommended to combine with ECN301 Econometric methods.**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 outcomes: 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 as experience with their application.**Methods of examination:** Final written exam. **Grading:** A-F**Assessment methods:** 3.5 hours written exam**Curriculum:** Detailed list of readings is provided at the beginning of the course.**ECN304 Behavioral and Experimental Economics***Adferds- og eksperimentell økonomi***ECTS:** 10 **Staff/institute:** Stein Terje Holden**Teachers:** Yohei Mitani**Language:** English**Start term:** Autumn parallel **Terms:** Autumn parallel**Mandatory activities:** Compulsory exercises**Prerequisites:** Econometrics (ECN201), Statistics (STAT100), Micro (ECN311)**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 outcomes:** 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**Methods of examination:** Avsluttende Eksamen: Skriftlig **Grading:** A-F**Assessment methods:** Written examination, 3.5 hours.**Curriculum:** A detailed list of readings will be presented at the beginning of the course.**ECN305 Research Methods in Economics***Forskningsmetode isamfunnsøkonomi***ECTS:** 5 **Staff/institute:** Arild Angelsen**Teachers:** Frode Alfnes, Ståle Navrud**Language:** English**Start term:** Spring parallel **Terms:** Spring parallel**The course is offered first time:** VÅR2013**Mandatory activities:** Compulsory exercises**Prerequisites:** Fundamental knowledge of economic theory and method, e.g. ECN212 Microeconomics or ECN210/211 Microeconomics II and ECN220 Economics II, ECN201 Econometrics**Reductions of credits for overlapping course** ECN351, 5 ECTS. The same reduction for other similar courses.**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 outcomes:** 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/or 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 analyse the data.**Methods of examination:** Term paper **Grading:** Pass/Fail**Assessment methods:** The semester assignment (research proposal) is due in April, and

makes up 100 percent of the final grade.

Curriculum: Selected journal articles and book chapters**ECN311 Microeconomics***Mikroøkonomi***ECTS:** 10 **Staff/institute:** Kyrre Rickertsen**Language:** English**Start term:** Autumn parallel **Terms:** Autumn parallel**Mandatory activities:** Five problem sets must be graded as passed before taking the examination.**Prerequisites:** Microeconomics on the level of ECN210/ECN211. Mathematics on the level of ECN302 (Mathematics for economists).**Recommended prerequisites:** Intermediate courses in economics.**Reductions of credits for overlapping course** ECN310, 5 ECTS.**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 outcomes: 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.

Methods of examination: Final written exam **Grading:** A-F

Assessment methods: The grades will be set on the basis of a 3.5 hour written examination.

Curriculum: Eugene Silberberg and Wing Suen. The Structure of Economics - A Mathematical Analysis, Irwin McGraw-Hill, third edition, 2001. Alternatively: Hal R. Varian. Microeconomic Analysis, third edition, Norton, 1992.

ECN312 Industrial Organisation

Industri og markedsstruktur

ECTS: 5 **Staff/institute:** Olvar Bergland

Language: English

Start term: January block **Terms:** January block

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

Recommended prerequisites: Coursework at the intermediate level in economics.

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

Contents: The following topics are covered: partial and general equilibrium, welfare theory, noncooperative game theory, market power, monopoly, oligopoly, horizontal and vertical relations, and strategic behavior towards entry deterrence.

Learning outcomes: 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.

Methods of examination: Final written exam. **Grading:** A-F

Assessment methods: Final examination, counts 100%, 3 hours.

Curriculum: M. Motta (2004): 'Competition Policy'. (Subject to change.)

ECN320 Macroeconomics III

Makroøkonomi III

ECTS: 10 **Staff/institute:** Ragnar A. Øygard

Language: English

Start term: Spring parallel

Terms: Spring parallel

Mandatory activities: Students will be assigned three individual written assignments, two of which must obtain a pass grade. Passed compulsory activities will be valid for 1.5 years.

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

Recommended prerequisites: ECN302 Mathematics for economists

Reductions of credits for overlapping course ECN352: 10 ECTS.

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

Learning outcomes: 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.

Methods of examination: Avsluttende Eksamen: Skriftlig **Grading:** A-F

Assessment methods: A written examination (3.5 hours)

Curriculum: 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.

ECN330 Economic Integration and Trade Liberalization

Økonomisk integrasjon og internasjonal handel

ECTS: 10 **Staff/institute:** Roberto J. Garcia

Language: English

Start term: Autumn parallel **Terms:** Autumn parallel

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

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

Contents: The course is designed with two objectives: to complete the student's understanding of the basic economics of trade through a formal treatment of the macro economy and its relation to exchange rates, exchange regimes and policy; and to provide a practical understanding of economic integration 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 outcomes: 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).

Methods of examination: Continuous assessment. **Grading:** A-F

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

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

ECN331 International Economics and Finance

Internasjonal økonomi og finans

ECTS: 5 **Staff/institute:** Roberto J. Garcia

Language: English

Start term: August block **Terms:** August block

Mandatory activities: 3-4 exercises or problem sets.

Prerequisites: ECN230.

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 outcomes: The course is designed to complete the students\'s 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 government\'s (and central bank\'s) macroeconomic policy/objectives under fixed, flexible and managed foreign exchange regimes and the economic implications of the policy choices from each.

Methods of examination:Final written exam **Grading:** A-F

Assessment methods: Written examination, 3,5 hours.

Curriculum: Appleyard and Field (A+F), International Economics, McGraw-Hill, 4th edition, 2006;

Houck, Elements of Agricultural Trade Policies, Macmillan Publishing Co., 1986 (chapter 15);

Webbased readings

ECN350 Development and Environment Economics

Utviklings- og miljøøkonomi

ECTS: 10 **Staff/institute:** Stein Terje Holden

Teachers:

Language: English

Start term: Autumn parallel **Terms:** Autumn parallel

Mandatory activities: Compulsory exercises. Group work/presentations.

Prerequisites: Basic knowledge in economic theory (microeconomics, macroeconomics, development economics, resource economics, econometrics, operations research. ECN200/201, ECN230, ECN353, ECN270.

Recommended prerequisites: ECN271, ECN351, ECN320, ECN371.

Reductions of credits for overlapping course ECN450, 10 credits.

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

Learning outcomes: 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.

Methods of examination:Final written exam **Grading:** A-F

Assessment methods: Written examination (3.5 hours).

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

ECN353 Development Economics, Micro

Utviklingsøkonomi, mikro

ECTS: 5 **Staff/institute:** Mette Wik

Language: English

Start term: Spring parallel **Terms:** Spring parallel

Mandatory activities: Compulsory assignments.

Prerequisites: Intermediate Microeconomics (ECN210)

Recommended prerequisites: Microeconomics on master level (ECN311).

Reductions of credits for overlapping course With ECN251, 5 ECTS.

Contents: In the course we investigate how microeconomic theory can be used for the study of developing countries. The focus is on the economics of farm households. We especially emphasise the difference between farm-household economics and conventional economics of the firm. The course will also study rural organisations (institutions), including market and non-market institutions.

Learning outcomes: The students should understand and be able to elaborate on: - how rural households and rural institutions adapt in developing countries; - why the behaviour of rural households and rural institutions in developing countries are different from the behaviour of firms and markets in developed countries.

Methods of examination:Avsluttende Eksamen: Skriftlig **Grading:** A-F

Assessment methods: A 3.5 hour sit-in examination counts as 100 percent of the final

grade. This examination arrangement might be changed.

Curriculum: Ellis, F. (1993): Peasant Economics: Farm Households and Agrarian Development. Cambridge University Press.

Ray, D. (1998): Development Economics. Princeton University Press, Princeton, N.J.
Other relevant literature.

ECN354 Issues in Development Economics; Poverty Analysis

Emner I utviklingsøkonomi; Fattigdomsanalyse

ECTS: 5 **Staff/institute:** Arild Angelsen

Language: English

Start term: Spring parallel **Terms:** Spring parallel

The course is offered: Every third year (2014, 2017..) rotates with ECN356 and ECN358.

Mandatdory activities: Presentation in class.

Prerequisites: Intermediate knowledge (200 level) of micro and development economics.

Contents:

Learning outcomes: Give insights into key issues in poverty analysis: definition, methods and main results.

Methods of examination: Continuous assessment. **Grading:** A-F

Assessment methods: Home exam (2 days).

Curriculum: Selected journal articles.

ECN355 Research in Development Economics II

Forskningsmetoder i utviklingsøkonomi II

ECTS: 5 **Staff/institute:** Ragnar A. Øygard

Teachers: Arild Angelsen, Stein Holden, Mette Wik.

Language: English

Start term: June block **Terms:** August block Autumn parallel

Prerequisites: ECN210 or ECN211 (or equivalent course in Microeconomics) and ECN220 Economics II (or equivalent course in Macroeconomics) and ECN201 or ECN201 (or equivalent course in Econometrics and ECN351 or ECN305 (ECN305/ECN351 may be taken in the same semester as ECN355).

Reductions of credits for overlapping course

Contents: The course is based on completing data collection through field work in a developing country and reporting on the process.

Learning outcomes: In this course, students will generate an original data set on which their Master's thesis can be based. The data collection process will be described and analysed.

Methods of examination: Continuous assessment. **Grading:** Pass/Fail

Assessment methods: A data set collected through own field research in a developing country must be submitted together with a report on the data collection process.

Curriculum: Angelsen, A. et.al. 2011: Measuring Livelihoods and Environmental Dependence, London: Earthscan Other relevant literature.

ECN356 Issues in development economics: Institutions

Emner i utviklingsøkonomi: Institusjoner

ECTS: 5 **Staff/institute:** Arild Angelsen

Language: English

Start term: Spring parallel **Terms:** Spring parallel

Mandatdory activities: Presentation in class.

Prerequisites: Intermediate knowledge (200 level) of micro and development economics.

Contents: The course will review 12-15 key articles within institutional analysis. The class will meet once a week (2 hours) to present and discuss that article. The course ends with a 3-day written take home exam.

Learning outcomes: Give insights into key issues in institutional analysis. The course focuses on three main areas: (i) what are institutions? (ii) institutions and economic growth, (iii) institutions and natural resource management

Methods of examination: Continuous assessment. **Grading:** A-F

Assessment methods: Home exam (2 days).

Curriculum: Selected journal articles.

ECN358 Issues in Development Economics

Emner I utviklingsøkonomi

ECTS: 5 **Staff/institute:** Arild Angelsen

Language: English

Start term: Spring parallel **Terms:** Spring parallel

Prerequisites: Intermediate knowledge of micro- and development economics

Contents: The course will review 12-15 key articles within development aid. The class will meet once a week (2 hours) to present and discuss that article. The course ends with a 3-day written take home exam.

Learning outcomes: Provide knowledge of the key contributions within a specific area of development economics: development aid. What are the motivations behind aid? Does it work, or rather: under what conditions does aid work? How to measure aid effectiveness?

Methods of examination: Continuous assessment. **Grading:** A-F

Assessment methods: Home examination (2 days).

Curriculum: Selected journal articles.

ECN360 Agricultural Policy and Resource Management

Landbrukspolitikk og ressursforvaltning

ECTS: 10 **Staff/institute:** Normann Aanesland

Language: Norwegian

Start term: Autumn parallel **Terms:** Autumn parallel

The course is offered: Annually

Prerequisites: Fundamental knowledge in microeconomics and courses in agricultural politics, ECN210 and ECN260.

Contents: The management system for agricultural policies, environment management and resource management in Norway, resource allocation - Norwegian agriculture in a global context, income transfer (OECD calculations etc.), international trade and agreements (GATT), WTO. Forestry policies, welfare theory, public choice theory, institutional economics and entrepreneur theory, (Asymmetric information, transaction costs, rent seeking and principal agent theory). Free market economy, market types and economic rent - Coase theorem - the tragedy of the common lands - external effects, market failures/management failures. The system for agricultural policies. Systems for resource management: predators, moose, small game. The right of access. Land management at municipal level and county level. The market for farm real estate. The individual topics may vary somewhat from one year to the next.

Learning outcomes: Lectures, topic seminars and semester project shall give a deeper insight into theories and problems of current interest in agricultural policies. Emphasis is placed on teaching the students to use economic theories and theories from the social sciences to analyse topics of current interest in agricultural politics and resource management.

Methods of examination:Continuous assessment. **Grading:** A-F

Assessment methods: Topic assignment: 50 %. Oral examination: 50 %.

Curriculum: Stevens, Joe B., 1993. The Economics of Collective Choice, Westview Press, Boulder, San Francisco, Oxford.

North, Douglas C. (1993): Institutionerna Tillväxt och välståndet, SNS Förlaget, Stockholm.

Tullock, G (1976): Den politiske marknaden, RATIO.

Schumpeter, J. (Urval ur Richard Swedberg, 1994): Om den skapande förstörelse och entreprenörskap.

ECN371 Environmental Economics

Miljøøkonomi

ECTS: 10 **Staff/institute:** Eirik Romstad

Teachers: Eirik Romstad.

Language: English on request

Start term: Spring parallel **Terms:** Spring parallel

Mandatory activities: Work on and presentation of case studies.

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.

Recommended prerequisites: ECN 271 (project analysis and benefit-cost analysis). This course can be taken simultaneously with ECN 371. A good understanding of natural science subjects.

Contents: The course contains three elements. A) Advanced theory concerning systems analysis, resource allocation mechanisms, risk, control, information handling, behavioural assumptions, preference changes, transaction costs, rights, effects of

different policy instruments with relation to various types of environmental problems and different behavioural 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 outcomes: 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.

Methods of examination:Final written exam. **Grading:** A-F

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

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

ECN372 Climate and Environmental Economics

Klima og miljø-økonomi

ECTS: 10 **Staff/institute:** Eirik Romstad

Teachers: E. Romstad, A. Angelsen, S. Navrud, O. Bergland

Language: English ved behov

Start term: Autumn parallel **Terms:** Autumn parallel

Mandatory activities: Hand-ins. Seminars with presentations.

Prerequisites: ECN 210 or an equivalent course in microeconomics

Recommended prerequisites: ECN 371 or an equivalent course in environmental regulation; and ECN170 (or ECN270) and ECN271 or equivalent courses in introductory environmental and resource economics and cost-benefit analysis/project evaluation.

Reductions of credits for overlapping course ECN370: 10 credits.

Contents: The course consists of two main parts: i) GLOBAL CLIMATE REGIME AND NEGOTIATIONS Here we will provide the background to understand the global climate negotiations, and also to assess the different options currently being discussed in the UNFCCC process, leading up to the main climate meeting (COP15) in Copenhagen in December 2009. Topics include: - the science of climate change, how to value the future and deal with risk? - main principles for a global climate regime: tradable emission quotas or a global carbon tax? - what is a fair distribution of quotas (distribution of costs and benefits) between countries? - how much should rich

countries pay for emissions reduction in developing countries, and how much should developing countries bring to an agreement? - What is the climate game? What happening at the negotiation table and in the corridors? - what is Norway's role? - how to assess the economic costs of climate change ii) NATIONAL POLICIES AND IMPLEMENTATION - what policies are available for implementing climate targets in Norway? - can technological development solve the problem? - what co-benefits can greenhouse gas emission reductions produce? - policies for implementing Reduced Emissions from Deforestation and forest Degradation (REDD) in developing countries
Learning outcomes: The course will give the students a theoretical overview, using environmental economics and game theory, and learn them to apply this to current international negotiations and national policy discussions. The aim is to show how economic tools yield insights into the current debate, and can also be used to assess different options being discussed. While the combination of theoretical overview and application is focussed on the climate issues, the integrative part of the course will also be useful to many other environmental issues.
Methods of examination: Final oral exam. **Grading:** A-F
Assessment methods: Oral exam counts 100% of the grade. The students must have passed on all hand-ins.
Curriculum: Selected journal articles

ECN380 Energy Markets and Regulation

Energi-markeder og regulering

ECTS: 10 **Staff/institute:** Olvar Bergland

Teachers:

Language: English

Start term: Autumn parallel **Terms:** Autumn parallel

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

Prerequisites: BUS220, ECN201/ECN202, ECN210, ECN280.

Recommended prerequisites: ECN301, ECN302, ECN311, ECN312, BUS320.

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 outcomes: 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.

Methods of examination: Final oral exam. **Grading:** A-F

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

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

ECN416 Analysis of Commodity Markets

Varemarkedsanalyse

ECTS: 5 **Staff/institute:** Olvar Bergland

Teachers: Professor and Director Alan Love, School of Economics Sciences, Washington State University, USA.

Language: English

Start term: June block **Terms:** August block Autumn parallel

The course is offered first time: Spring 2012, and will be given occasionally.

Mandatory activities: Course participation

Prerequisites: Master degree

Contents: Fundamental market modeling provides a framework for theoretical and empirical economic analysis of commodity markets. Information economics addresses issues including asymmetric information, moral hazard and adverse selection in a variety of settings. Agency theory, or contract theory, uses these and related topics for analyzing various contractual relationships among firms. The course will cover analysis and modeling of vertical and horizontal relationships among firms, as well as market structures, product differentiation, pricing and market power.

Learning outcomes: This course will show how economic analysis and modeling has been, and is being, applied to vertical and horizontal relationships among firms, as well as market structures, product differentiation, pricing and market power in commodity markets

Methods of examination: Continuous assessment **Grading:** Pass/Fail

Assessment methods: Term paper must be assigned within 15th of September

Curriculum: Will be provided at course start.

ECN450 Development Economics: Methods and Policy Analysis

Utviklingsøkonomi: Metoder og analyser

ECTS: 20 **Staff/institute:** Stein Terje Holden

Teachers:

Language: English

Start term: Autumn parallel **Terms:** Autumn parallel January block

Mandatory activities: Exercises, group work, presentations.

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

Recommended prerequisites: As ECN350.

Reductions of credits for overlapping course ECN350 - 10 credit units.

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 organisation. - 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

Learning outcomes: 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.
Methods of examination: Continuous assessment.. **Grading:** A-F
Assessment methods: Final written examination: 1/2, Scientific paper: 1/2. Final written examination joint with ECN350.

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

ECN452 Topics in Development Economics I

Emner i utviklingsøkonomi I

ECTS: 5 **Staff/institute:** Arild Angelsen

Teachers: Gerald Shively

Language: English

Start term: June block **Terms:** By demand

Learning outcomes: Topics vary from year to year, but will generally be within applied

microeconomics for development analysis.

Methods of examination: Continuous assessment.. **Grading:** Pass/Fail

Curriculum:

ECN454 Topics in Development Economics II

Emner i utviklingsøkonomi II

ECTS: 5 **Staff/institute:** Ragnar A. Øygard

Teachers: Arild Angelsen, Gerald Shively, Ian Coxhead.

Language: English ved behov

Start term: Spring parallel **Terms:** By demand

Mandatory activities:

Prerequisites: Graduate level economics. (PhD-student)

Contents: Course contents vary from year to year.

Learning outcomes: Course content will vary from year to year, depending on demand and supply.

Methods of examination: Continuous assessment. **Grading:** Pass/Fail

Assessment methods: Exercises and home-examination/semester assignment. All assignments/semester assignment/examinations must receive a 'pass' grade.

Curriculum: Will vary from year to year.

INN200 Management Accounting

Økonomistyring

ECTS: 10 **Staff/institute:** Nils Sanne

Teachers: Nils Sanne and guest lecturers.

Language: Norwegian

Start term: Autumn parallel **Terms:** Autumn parallel

The course is offered: Annually

Mandatory activities: Participation in group work and presentations

Reductions of credits for overlapping course

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

Learning outcomes: 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 analyse financial statements. The students shall after the course be able to actively contribute to the financial management and control of companies and projects.

Methods of examination: Continuous assessment. **Grading:** A-F

Assessment methods: 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. Grading is based on the oral examination. No re-sit examinations.

Curriculum: Announced just before the program starts

INN210 Innovation

Nyskaping

ECTS: 5 **Staff/institute:** Anders Lunnan

Teachers: Eystein Ystad.

Language: Norwegian

Start term: August block **Terms:** August block

The course is offered: Annually

Mandatory activities: Two written assignments.

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. Innovation strategy. Technological entrepreneurship. Innovation management. Innovation policy.

Learning outcomes: 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 and be able to describe the connection between innovation, opportunities and entrepreneurship. 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, innovation strategy, innovation policy and the importance of knowledge and learning in the innovation process.

Methods of examination:Continuous assessment. **Grading:** A-F

Assessment methods: 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. To qualify for the oral examination the students must have completed both assignments. The oral examination counts 100% of the final grade.

Curriculum: David Smith: Exploring Innovation. McGraw-Hill. ISBN: 9780077108618. Additional literature will be announced when the course starts.

INN220 Introduction to Entrepreneurship

Entreprenørskap i praksis

ECTS: 10 **Staff/institute:** Anders Lunnan

Teachers: Eystein Ystad, Nils Sanne, Elin Kubberød, Casper Rasmussen

Language: Norwegian

Start term: August block **Terms:** August block Autumn parallel Spring parallel

The course is offered: Annually

Mandatory activities: Four written assignments. Participating in excursions.

Prerequisites: Bachelors degree or equivalent.

Recommended prerequisites: INN 210

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; Organisation of start-up businesses; How to organize startup businesses and innovation processes; Marketing and market strategies; Economy planning and financing start-up ventures.

Learning outcomes: The students shall acquire indepth knowledge within chosen topics in entrepreneurship and innovation, with main focus on business planning and innovation strategies. The students shall apply this knowledge to make a business plan or a innovation strategy for an existing firm or venture. The students shall through excursions know about firms and other important institutions for innovation and entrepreneurship on and outside of UMB.

Methods of examination:Continuous assessment. **Grading:** A-F

Assessment methods: 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.

Curriculum: Byers, Thomas H, Richard C. Dorf & Andrew J. Nelson. Technology Ventures. From Idea to Enterprise. McGrawHill. Third Edition 2011. Schilling, Melissa A. Strategic Management of Technological Innovation. McGrawHill. Third Edition 2010.

INN310 Intellectual Property Rights

Industrielle rettigheter

ECTS: 5 **Staff/institute:** Anders Lunnan

Teachers: Ivar Wergeland and others.

Language: Norwegian

Start term: January block **Terms:** January block

The course is offered: Annually

Mandatory activities: Case study, presentation of case study.

Prerequisites: Students should have a Bachelor degree or equivalent.

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. Commercialisation of IPR.

Learning outcomes: The course aims at giving the students the ability to read, analyse 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.

Methods of examination:Avsluttende Eksamen: Skriftlig **Grading:** A-F

Assessment methods: Written examination; the case study must be approved before the

written examination can be taken. No re-sit examinations will be arranged.

Curriculum: Will be announced at start of course.

INN410 Intellectual Property Rights and Innovation

Industrielle rettigheter og innovasjon

ECTS: 5 **Staff/institute:** Anders Lunnan

Teachers: Associate Professor Peter Horn Møller, University of Copenhagen Legal Council

Vegard Arnhoff, UMB Lecturer Ivar Wergeland, UMB and others.

Language: English

The course offered: 2011 and will be given occasionally, not offered in 2012

Start term: Autumn parallel **Terms:** Autumn parallel

Mandatory activities: Course participation.

Prerequisites: PhD students only.

Contents: The role of IPR in the innovation process. How to realize the commercial value of own research. Market analysis and market based product development. The patent system and its institutions. Patentability. Search strategies, search profiles and Boolean algebra. Copyright, design and new media challenges. Trademark and branding. The effect of a patent, freedom to operate. Industry examples from energy technology, biotechnology and aquaculture. Presentation of cases. The role of TTO-offices and venture capitalists. Assignments.

Learning outcomes: The objective of the course is to increase the competence about IPR and innovation among the participants. To train the participants to see the commercial value of their own research and how different IPR-strategies can be used to

secure the commercial value of the research. To give the participants skills in searching, identifying, reading and evaluation of patents and patent applications.

Methods of examination: Term paper **Grading:** Pass/Fail

Assessment methods: A written assignment must be submitted within two weeks after the course. Course participation counts 40%, assignment counts 60%.

Curriculum: Course material will be delivered at the start of the course.

PHI100 Examen Philosophicum

Examen Philosophicum

ECTS: 10 **Staff/institute:** Terje Kvilhaug

Teachers: Frode Kjosavik

Language: Norwegian annually, and in English every odd year in January block and June block

Start term: January block **Terms:** Autumn parallel January block June block

The course is offered: Annet - The course is offered in Norwegian each year in the Autumn parallel. PHI100 and PHI101 have the same lectures. The course is taught in ENGLISH in the January (Part I) and June block (Part II) every second year, i.e., in 2013, 2015, etc. The course is not offered in Norwegian in the blocks. Emnet tilbys på Norwegian Annually i Autumn parallel. Common lectures for PHI100 og PHI101. Given in ENGLISH in January block (part I) and in June block (part II). i 2013, 2015, and so on.

Contents: Part I deals with the history of philosophy and of science, whereas Part II deals with philosophy of science and ethics.

Learning outcomes: 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 UMB in this connection, on the basis of its environmental profile.

Methods of examination: Avsluttende Eksamen: Skriftlig **Grading:** A-F

Assessment methods: Written examination, 3.5 hours. There will be a re-take exam in the spring semester in even years (2014, 2016...).

Curriculum: 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 June block.

PHI101 Examen Philosophicum - Seminar

Examen Philosophicum - Seminar

ECTS: 10 **Staff/institute:** Terje Kvilhaug

Teachers: Frode Kjosavik

Language: Norwegian

Start term: Autumn parallel **Terms:** Autumn parallel

The course is offered: Annually

Mandatory activities: Students are required to attend the seminars.

Contents: Part I deals with the history of philosophy and of science, whereas Part II deals with philosophy of science and ethics.

Learning outcomes: 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 students awareness for value questions linked to research and its application, in particular in connection with nature. The course emphasises the special responsibility of UMB in this connection, on the basis of its environmental profile.

Methods of examination: Continuous assessment. **Grading:** A-F

Assessment methods: 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.

Curriculum: 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).

PHI201 Bioscience, Ethics and Environmental Philosophy

Biovitenskap, etikk og miljøfilosofi

ECTS: 5 **Staff/institute:** Frode Kjosavik

Teachers: Terje Kvilhaug

Language: Norwegian

Start term: Autumn parallel **Terms:** Autumn parallel

The course is offered: Annually

Prerequisites: Examen Philosophicum or equivalent.

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/conserved, 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 outcomes: The aim of the course is to train the student to analyse and reflect critically on issues concerning animal and environmental ethics, and to put these into a wider scientific and philosophical context.

Methods of examination: Final written exam **Grading:** A-F

Assessment methods: Written examination, 3 hours.

Curriculum: Compendium.

PHI301 Corporate Social Responsibility

Bedriftens samfunnsansvar

ECTS: 5 **Staff/institute:** Terje Kvilhaug

Teachers: Deborah Oughton, Frode Kjosavik

Language: Norwegian

Start term: Spring parallel **Terms:** Spring parallel

The course is offered: Annually

Mandatory activities: Students have to attend at least 65 % of the lectures/seminars.

Recommended prerequisites: Examen Philosophicum.

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 outcomes: The course shall prepare students for ethical problems, challenges and dilemmas that they will face in their future professions.

Methods of examination: Continuous assessment. Lærer skal kunne dokumentere hvordan delaktivitetene skal evalueres, om det må være bestått, og hvor mye de skal vektlegges i den endelige slutt karakteren for emnet. **Grading:** A-F

Assessment methods: Written assignment.

Curriculum: Selection from Crane & Matten: 'Business Ethics' (3. edition, Oxford University Press, 2010).

PHI401 Research Ethics and Philosophy of Science I

Forskningsetikk og vitenskapsfilosofi I

ECTS: 5 **Staff/institute:** Terje Kvilhaug

Teachers: Frode Kjosavik, Deborah Oughton.

Language: English

Start term: Autumn parallel **Terms:** Autumn parallel

Mandatory activities: The studentens must attend at least 65 % of lectures and seminars.

Recommended prerequisites: Examen Philosophicum or equivalent.

Reductions of credits for overlapping course The course overlaps 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 receive no study points by taking the courses PHI 401 or PHI 402. **Contents:** An elementary and introductory course in philosophy of science will give the student a good basis for a better understanding of issues in the main part (research ethics/social responsibility of science), both through illuminating science as a practice form and through its own ethical aim ('good' science). Among the issues to be discussed can be mentioned: The value- and norm systems of science; facts and values; political-economical 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 outcomes: 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 sphere. The course considers what is specific about scientific practice, rationality and method in diverse fields, what its aims are, how it is influenced by society and what kinds of social and cultural consequences it may be said to have. The objective is to stimulate students to reflect on their own and others research projects and research fields, in particular with a view to increase their ability to see and diagnose philosophical and ethical problems in the sciences as well as their consciousness of their ethical responsibility.

Methods of examination: Avsluttende **Grading:** Bestått/ikke bestått

Assessment methods: Term paper.

Curriculum: 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*

PHI402 Research Ethics and Philosophy of Science II

Forskningsetikk og vitenskapsfilosofi II

ECTS: 10 **Staff/institute:** Terje Kvilhaug

Teachers: Frode Kjosavik, Deborah Oughton

Language: English

Start term: Autumn parallel **Terms:** Autumn parallel January block

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.

Recommended prerequisites: Examen Philosophicum or equivalent.

Reductions of credits for overlapping course See PHI 401.

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; antireductionism and the developmental system-theories about onto-genesis and evolution.

Learning outcomes: 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.

Methods of examination: Avsluttende **Grading:** Bestått/ikke bestått

Assessment methods: Term paper.

Curriculum: 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.

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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.

Overview of academic calendar Autumn 2012 and Spring 2013

Autumn Semester 2012

August

- 6. - 10. Introduction for new international students
- 11.- 12. Registration for new students
- 13. Semester start
- 13.- 31. August block
- 15. "Gras Kurs" - information day for new students 12-16 (no classes)
- 15. August block registration/withdrawal deadline
- 17. Matriculation in Aud Max for new students 13:00 (no classes after 12:00)

September

- 1. Autumn parallel registration deadline
- 1. Thesis registration deadline
- 3. August block examination
- 4. Autumn parallel until 7 December

Oktober

- 10. Career Day (no classes 12-14)

November

- 1. Thesis withdrawal deadline
- 1. Autumn parallel withdrawal deadline
- 28. General Meeting for students 12-16 (no classes)

Dezember

- 1. Registration/withdrawal deadline for re-examination in January
- 1. January block registration
- 10. - 21. Autumn parallel examination
- 15. Thesis submission deadline
- 22. Christmas break until 2 January

Note: Democracy hour Wednesdays: 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. day

Spring Semester 2013

January

- 3 - 4 Re-examination (konte)
- 7 Semester start
- 7 - 25 January block
- 9 January block withdrawal deadline
- 25 and 28 January block examination
- 29 Spring parallel until 10 May

February

- 1 Spring parallel registration deadline
- 1 Thesis registration deadline
- 1 Deadline semester registration
- 1 Deadline confirmation of educational plan
- 1 Application deadline for bilateral exchange studies

March

- 1 Registration deadline for re-examination in May (konte)
- 1 Application deadline for special needs facilitation for spring parallel, re-examination (konte) and June block examinations
- 1 Application deadline for Erasmus and N+ exchange studies
- 25 March - 1 April Easter Holiday (no classes)

April

- 1 Spring parallel withdrawal deadline
- 1 Thesis withdrawal deadline
- 1 June block registration deadline
- 1 Withdrawal deadline for re-examination in May (konte)
- 24 General Meeting for students 12-16 (no classes)

May

- 1 June block withdrawal deadline
- 1 Public holiday (no classes)
- 9 Public holiday – Ascension Day (no classes)
- 13 - 28 Spring parallel examinations
- 15 Thesis submission deadline
- 17 Public holiday – National Day (no classes)
- 20 Public holiday – Whit Monday (no classes)
- 30-31 Re-examination (konte)

June

- 1 Application deadline to transfer to another study programme
- 3 June block until 27 June
- 14, 21 and 28 June block examinations
- 29 End of semester