

THE HANDBOOK OF STUDY

For the study programmes at

DEPARTMENT OF ECONOMICS AND RESOURCE MANAGEMENT



2008/2009

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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
- food
- environment
- land use and natural resource management.

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
- Aquaculture
- Biotechnology
- Chemistry
- Applied Mathematics and Statistics
- Physics
- Spatial Planning
- Biotechnology
- Environment and Natural Resources
- Plant Science
- Forestry
- Ecology and Natural Resource Management
- Food Science
- Landscape Architecture
- Economics and Resource Management
- Development Studies
- Teacher education in Natural Science

About 180 of the 650 courses at the Bachelor and Master level are taught in English, as well as many PhD level courses. Eleven Master 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 30% of UMB students conduct part of their studies abroad.

1.1 MEETING TOMORROW'S CHALLENGES

1 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 2,900 students of which about 250 are PhD students. Annually, the University confers about 50 PhD degrees upon successful candidates. There are many different nationalities at UMB; the international students make up over 10% of all students at the University. Of the 940 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, IFA
- Dept. of Chemistry, Biotechnology and Food Science, IKBM
- Dept. of Ecology and Natural Resource Management, INA
- Dept. of Economics and Resource Management, IØR
- 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 DEPARTMENT OF ECONOMICS AND RESOURCE MANAGEMENT

The Department of Economics and Resource Management (IØR) is known to be one of the leading university departments specializing in areas mixing economics and agriculture. 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.

IØR was one of the first university departments in economics 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
- Master of Science in Development and Natural Resource Economics
- 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 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 three levels. The code numbers describe the level in the following fashion:

100 - 199	Introduction 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 to semesters and five terms.

Semesters and Terms	Code	Teaching/exam	Assignments for the exam
Fall			
Start		Week 33, Monday	
August block:	Aug	Week 33, 34, 35, including Monday in week 36	
Exam in block	Aug	Monday in week 36	Friday in week 33
Fall parallel	F	Tuesday in week- 36 to Friday in week 49	
Exam	F	Week 50 and 51	15 th . September
Spring			
Re-exam (Aug/S)		Week 1 and 2, depending on holidays	Contact SiT ^{*)}
January block:	Jan	Week 2, 3, 4, including Monday in week 5	
Exam in block	Jan	Monday in week 5	Friday week 2
Spring parallel	S	Tuesday in week 5 to Friday in week 19	
Exam	S	Week 21 – 22 (depending on holidays)	15 th February
Re-exam (F/Jan)		Week 22	Contact SiT ^{*)}
June block	S	Week 23 – 26, (and week 32)	
Exam in block	Jun	Friday in week 26	15 th February

^{*)} SiT= Student information Office

Some details can be changed for the next academic year.

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 Code for the programs

B-ØA - Bachelor in Business Administration

B-ØA - Bachelor in Economics

M-ØA - Master in Business Administration

M-ECON - Master in Economics

M-DNRE - Master of Science in Development and Natural Resource Economics

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 125 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
	PFI100	Examen Philosophicum	10	F
	ECN110	Introduction to Economics - Micro	5	F
	MATH100	Mathematics	10	F
	ECN120	Introduction to Economics - Macro	5	Jan
	BUS133	Excel for Business	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
	ECN220	Economics II	10	F
	AOS232/237	Strategic Management/ Business Strategy	10	F
		Free to choose subjects or (JUS100- Legal Method and Norwegian Legal System)	5	F
	BUS160	Tax Law for Economists	5	Jan
	STAT100	Statistic	10	S
	BUS210	Managerial Accounting and Budgeting	10	S
		Free to chose subjects	5	S/Jan
		60		

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

Bachelor-ØA		Mandatory	ECTS	Term
Year 3	BUS220	Finance and Investment	10	F
	AOS240	Research in Social Sciences	5	F
		Electing profiles or study abroad	50	F + S

Students who are interesting in agriculture may choose such courses in the last year.

We will show the most common profiles in this program:

Profile: Business Decisions Methods and Finance			ECTS	Term
Year 3	BUS220	Finance and Investment	10	F
	AOS240	Research in Social Sciences	5	F
	ECN202	Introduction to Econometrics	5	F
	ECN210	Microeconomics – Consumers, Producers, Market and Welfare	10	F
		Free to choose	5	Jan
	BUS230	Management Science - Principles	10	S
	JUS102	Law of Contract and Companies (JUS100 required before)	5	S
		Free to choose	10	S
	BUS233	Management Information Systems	5	Jun
			60	

Profile: Leadership and Innovation			ECTS	Term	
Year 3	BUS220	Finance and Investment	10	F	
	AOS240	Research in Social Sciences	5	F	
	TIP200	Product Development and Design	10	F	
	BUS240	Operation Management	10	F	
		Free to choose	5	Jan	
	TIP100	Technical Innovation, recommended before TIP200	5	S	
	BUS271	Business Start-Up	5	S	
		Free to choose	10-15	S	
	BUS233	Management Information Systems, or	5	Jun	
	BUS233	Management Information Systems	5	Jun	
				60	

Profile: Accounting and Taxation

		ECTS	Term	
Year 3	BUS112	Electronic Accounting (Daldata)	5	Aug
	BUS220	Finance and Investment	10	F
	AOS240	Research in Social Sciences	5	F
	JUS100	Legal Method and Norwegian Legal System	5	F
		Accounting in cooperation with the Østfold College University	10	F
		Free to choose	5	Jan
	JUS102	Law for Contract and Companies	5	S
	JUS210	Law of Real Property I	5	S
		Taxation Law in cooperation with Østfold College University		
		Free to choose	10	S
	BUS233 BUS111	Management Information Systems or Electronic Accounting (Agrodata)	5	Jun
			60	

Profile: Environment and Economics

		ECTS	Term	
Year 3	BUS220	Finance and Investment	10	F
	AOS240	Research in Social Sciences	5	F
	AOS210	Political Structures and Processes	10	F
	ECN210	Microeconomics – Consumers, Producers, Market and Welfare	10	F
	ECN262	Regional Economics and Regional Politics	5	Jan
	ECN150	Development Economics (English in uneven years)	5	S
	ECN271	Project Evaluation and Environmental Valuation	10	S
	ECN170	<i>Environmental- and Resource Economics (before ECN271)</i>	5	S
	ECN140	Economic History (given in even years)	5	S
			60	

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 20 ECTS in economics on the 200 level.

The available courses are:

ECN230 – International Economics , 5 ECTS (Fall)

ECN260 - Agricultural Policy, 5 ECTS (Fall)

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

ECN271 - Project Evaluation and Environmental Valuation, 10 ECTS (Spring)

ECN280 - Energy Economics 10 ECTS (Spring)

Bachelor-ECON	Mandatory	ECTS	Term	
Year 1	AOS130	Introduction to Organisation Theory	5	Aug
	PHI100	Examen Philosophicum	10	F
	ECN110	Introduction to Economics - Micro	5	F
	MATH100	Mathematics	10	F
	ECN120	Introduction to Economics - Macro	5	Jan
	STAT100	Statistics	10	S
		Free to choose	15	S/Jun
		60		
Year 2		Free to choose	5	Aug
	ECN210	Microeconomics – Consumers, Producers, Market and Welfare	10	F
	ECN220	Economics II	10	F
		Free to choose	5	F
		Free to choose	5	Jan
		Free to choose	25	S+ Jun
		60		
Year 3		Free to choose	5	Aug
	ECN211	Microeconomics – institutions. Games and Market Failures	10	F
	ECN201	Econometrics	10	F
		Free to choose	5	F
		Free to choose	5	Jan
		Free to choose	25	S+Jun
			60	

A study plan including business

Bachelor-ECON		ECTS	Sem	
Year 1	AOS130	Introduction to Organisation Theory	5	Aug
	PHI100	Examen Philosophicum	10	F
	ECN110	Introduction to Economics - Micro	5	F
	MATH100	Mathematics	10	F
	ECN120	Introduction to Economics - Macro	5	Jan
	STAT100	Statistics	10	S
	ECN170	Environment and Resource Economics	5	S
	BUS100	Managerial Economics, Introduction	5	S
	BUS133	Excel for Business	5	S
		60		
Year 2				
	ECN210	Microeconomics – Consumers, Producers, Market and Welfare	10	F
	ECN220	Economics II	10	F
	BUS220	Finance and Investment	10	F
	ECN262	Regional Economics and Regional Policy	5	Jan
	ECN140	Economic History (given in even years)	5	S
	BUS271	Business Start-Up	5	S
	BUS210	Managerial Accounting and Budgeting	10	S
		60		
Year 3				
	ECN211	Microeconomics – Institutions. Games and Market Failures	10	F
	ECN201	Econometrics	10	F
	ECN230	International Economics	5	F
	ECN260	Agricultural Policy	5	F
	ECN271	Project Evaluation and Environmental Valuation	10	S
	BUS230	Managerial Science, Principles	10	S
ECN280	Energy Economics	10	S	
		60		

A study plan for Environment and Development

Bachelor-ECON		ECTS	Sem	
Year 1	AOS130	Introduction to Organisation Theory	5	Aug
	PHI100	Examen Philosophicum	10	F
	ECN110	Introduction to Economics - Micro	5	F
	MATH100	Mathematics	10	F
	ECN120	Introduction to Economics - Macro	5	Jan
	STAT100	Statistics	10	S
	ECN170	Environment and Resource Economics	5	S
	ECN150	Introduction to Development Economics	5	S
BUS133	Excel for Business	5	S	
		60		
Year 2				
	ECN210	Microeconomics – Consumers, Producers, Market and Welfare	10	F
	ECN220	Economics II	10	F
	EDS234/	Environmental Economics – the Role of Institutions	5	F
	EDS235	Political Economy – Institutions and the Environment	10	F
	NATF210	Environmental Monitoring	5	Jan
	ECN140	Economic History (given in even years)	5	S
	EDS215	Sustainable Agriculture and Environment	5	S
		60		
Year 3	EDS201	Introduction to Development Studies	5	Aug
	ECN211	Microeconomics – Institutions. Games and Market Failures	10	F
	ECN201	Econometrics	10	F
	ECN230	International Economics or	5	F
	ECN260	Agricultural Policy	5	F
	ECN271	Project Evaluation and Environmental Valuation	10	S
	BUS230	Managerial Science, Principles	10	S
ECN280	Energy Economics	10	S	
		60		

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.

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 15 ECTS must be taken within courses marked with a stare and darker colour.
 - 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.

Profiles for Master of Science in Business Administration

I	Finance and Investment	ECTS	Term	
	BUS310	Strategy Implementation (mandatory for all)	5	Aug
	ECN202	Introduction to Econometrics ¹⁾	5	F
	BUS331	Business Management Science: Methods and Techniques	10	S
	BUS230	Management Science Principles ¹⁾	10	S
*	BUS322	Investment Analysis and Financial Risk Management	10	S
*	NBØ310	Valuation for Merges and Acquisitions	10	S
	PHI301	Ethics in Business	5	S
*	BUS321	Empirical Analysis of Financial and Commodity Markets - Theory	5	Jun
*	BUS320	Empirical Analysis of Financial and Commodity Markets II	5	Aug+F
*	BUS323	Commodity Market Analysis	5	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
	STAT360	Theoretical Statistics	10	F
	MATH250	Partial Differential Equations and Models	10	S
	MATH260	Numerical Linear Algebra	10	F
	MATH310	Continuous Dynamical Systems	10	S
	M30-IØR	Master Thesis (mandatory for all)	30	S

¹⁾ For students who lack this knowledge from the bachelor

II Business Management		ECTS	Terms	
	BUS310	Strategy Implementation (mandatory for all)	5	Aug
*	BUS340	Supply Chain Management	5	F
*	BUS331	Business Management Science: Methods and Techniques	10	S
	BUS230	Management Science Principles ¹⁾	10	S
*	BUS311	Strategy cost Management	5	F
*	BUS312	Advanced Management Accounting (in 2009 or 2010)	10	F
	PHI301	Ethics in Business	5	S
	ECN373	Environmental Accounting and Management	5	S
	M30-IØR	Master Thesis (mandatory for all)	30	S

III Administration and leadership		ECTS	Terms	
	BUS310	Strategy Implementation (mandatory for all)	5	Aug
*	AOS331	Organization and Leadership, Theory part	10	F
	NADM310	Strategy Development	10	F
	NADM320	Internationalization SMEs	10	F
*	AOS340	Qualitative Methods	5	S
*	NADM330	Leadership and Working Environment	10	Jan+S
	NADM340	Intercultural business communication	10	S
	PHI301	Ethics in Business	5	S
	AOS330	Leadership, Project	5	F
*	AOS335	Organization and Management	10	F
	M30-IØR	Master Thesis (mandatory for all)	30	S

¹⁾ For students who lack this knowledge from the bachelor

IV Economics		ECTS	Terms	
	BUS310	Strategy Implementation (mandatory for all)	5	Aug
*	ECN302	Mathematics for Economists	5	Aug
*	ECN311	Microeconomics II	10	F
*	ECN270	Resource and Environmental Economics	5	F
	ECN202	Introduction to Econometrics ¹⁾	5	F
	ECN201	Econometrics ¹⁾	10	F
	ECN280	Energy Economics I	10	S
	ECN301	Econometric Methods	10	F
	ECN312	Industrial Organisation	5	F
	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
	ECN371	Environmental Economics	10	S
	ECN373	Environmental Accounting and Management	5	S
	ECN380	Energy Economics II	10	F
	M30-IØR	Master Thesis (mandatory for all)	30	S

¹⁾ For students who lack this knowledge from the bachelor

3.2.2 MASTER OF SCIENCE IN ECONOMICS

120 ECTS/credits must be completed, including at least 45 ECTS/credits with courses on the 300 level: Mathematics, microeconomics, macroeconomics, and econometrics. There are two main specializations; 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

Year 1	Code	Name	ECTS	Term
	ECN302	Mathematics for Economists	5	Aug
	ECN311	Microeconomics	10	F
	ECN301	Econometric Methods (alt: ECN201 ¹⁾)	10	F
	ECN312	Industrial Organisation (can be and taken the second year if interested in ECN270)	5	F
	ECN320	Macroeconomics III	10	S
	300-level	Free to choose subjects in economics	20	S
			60	
Year 2				
	300-level	Free to choose subjects in economics	10	F
		Free to choose	20	F
	M30-IØR	Master Thesis with seminar	30	Jan/S
			60	

Profiles:

Master ECON: Development 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
	ECN312	Industrial Organisation (can be taken the 2 nd year)	5	F
	ECN270	Resource and Environmental Economics	5	F
	ECN351/ ECN355	Research for Development	5 (10)	Jan+S+Jun
	ECN320	Macroeconomics III	10	S
	ECN353	Development Economics, micro	5	S
	ECN354	Issues in Development Economics	5	S
			Ca 60	
Year 2				
	ECN331	International Economics and Finance	5	Aug
	ECN330	Economic Integration and Trade	10	F
	ECN350	Development Economics	15	F
	M30-IØR	Master Thesis with seminar	30	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
	ECN312	Industrial Organisation (alt ECN270)	5	F
	ECN374	Dynamic Optimisation	5	Jan
	ECN320	Macroeconomics III	10	S
	ECN373	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

	ECN372	Environment and Resource Economics	10	F
	300-level	Free to choose	20	F
	M30-IØR	Master Thesis with seminar	30	Jan/S
			60	

Other subjects to choose

	ECN280	Energy Economics	10	S
	ECN331	International Economics and Finance	5	Aug
	ECN330	Economic Integration and Trade	10	F
	ECN380	Energy Economics II	10	F
	JUS220	Law of Planning and Environment	5	F

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

Master ECON: Economics and Business

Year 1	Code	Name	ECTS	Term
	ECN305	Mathematics for Economists	5	Aug
	ECN311	Microeconomics	10	F
	ECN301	Econometric Methods (alt: ECN201 ¹⁾)	10	F
	ECN312	Industrial Organization	5	F
	ECN320	Macroeconomics III	10	S
	BUS230	Managerial Science, Principles	10	S
	BUS330	Business Decision Methods	10	S
	BUS321	Empirical Analyses of Financial and Commodity Markets, Theory	5	Jun

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Year 2	Code	Name	ECTS	Term
	BUS320	Empirical Analyses of Financial and Commodity Markets II (term paper)	5	Aug
	ECN330	Economic Integration and Trade	10	F
	BUS370	Economic Development and Entrepreneurship	10	F
	M30-IØR	Master Thesis with seminar	30	Jan/S

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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
	INN220	Introduction to Entrepreneurship	15	Aug+F+S
	INN310	Intellectual Property and Rights	5	Jan
		School of Entrepreneurship/ Gründerskolen	25	S
			60	

Year 2

	BUS310	Strategic Management and Balanced Scorecard	5	Aug
	BUS370	Economic Development and Entrepreneurship	10	F
	INN320	Research Methods in Entrepreneurship and Innovation	5	F
	M10FRIE-IØR/ B10FRIE-IØR	Free to choose Courses at other Departments, 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

		ECTS		
Year 1	Code	Name	Points	Term
	ECN302	Mathematics for Economists	5	Aug
	ECN301	Econometric Methods	10	Fall
	ECN311	Microeconomics	10	Fall
	ECN270	Resource and Environmental Economics	5	Fall
	ECN351/ ECN355	Research in Development Economics/ or Research in Development Economics + field work	5 10	Jan Jan+Jun
	BUS232	Decision Modelling - Fundamentals	5	Spring
	ECN353	Development Economics - Micro	5	Spring
	ECN320	Macroeconomics III	10	Spring
	ECN354	Issues in Development Economics	5	Spring
			60 - 65	
Year 2				
	ECN350	Development and Environment Economics	15	Fall
		Free to choose	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	Resource and Environmental Economics	5 Fall
	ECN351/ ECN355	Research in Development Economics/ or Research in Development Economics + field work	5 10 Jan Jan+Jun
	BUS232	Decision Modelling - Fundamentals	5 Spring
	ECN353	Development Economics - Micro	5 Spring
	ECN320	Macroeconomics III	10 Spring
	ECN271	Project Evaluation and Environmental Valuation	10 Spring

60-70

Year 2

	ECN331	International Economics and Finance	5 Aug
	ECN330	Economic Integration and Trade	10 Fall
	ECN350	Development and Environment Economics	15 Fall
		Seminar	Jan
	M30-IØR	Master Thesis	30 Jan/ Spring

60

Masterprofil: Option 2

		ECTS	
Year 1	Code	Name	Points Term
	ECN302	Mathematics for Economists	5 Aug
	ECN301	Econometric Methods	10 Fall
	ECN311	Microeconomics	10 Fall
	ECN270	Resource and Environmental Economics	5 Fall
	ECN351/ ECN355	Research in Development Economics/ or Research in Development Economics + field work	5 10 Jan Jan+Jun
	BUS232	Decision Modelling - Fundamentals	5 Spring
	ECN353	Development Economics - Micro	5 Spring
	ECN320	Macroeconomics III	10 Spring
	ECN373	Environmental Accounting and Management	5 Spring

60

Year 2

	ECN350	Development and Environment Economics	15 Fall
	ECN312	Industrial Organization	5 Fall
	ECN330	Economics Integration and Trade	10 Fall
		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.

4 DESCRIPTIONS OF COURSES

Please take note of the teaching language!

AOS120 Marketing

Credits: 5 **Course responsible/Department:** Frode Alfnes / IØR

Language: Norwegian

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

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.

Teaching goals: Basic principles of modern marketing.

Form of Exam: Continuous **Grading:** A-F

Syllabus: Textbook: 'Maretsføringsledelse', Philip Kotler. Gyldendal 2003, or the latest edition of 'Marketing Management', Philip Kotler et al. Lecture notes.

Additional reading material may be distributed. It is possible the literature will be changed before the first lecture.

AOS130 Introduction to Organisation Theory

Credits: 5 **Course responsible/Department:** Gro Ladegård / IØR

Language: Norwegian

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

Mandatory activities: Assignments. Participation in study groups.

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.

Teaching goals: 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.

Form of Exam: Final Written **Grading:** A-F

Syllabus: The lectures are considered to be part of the curriculum. Textbook: Jakobsen, Dag Ingvar og Jan Thorsvik (2002): Hvordan organisasjoner fungerer. Bergen: Fagbokforlaget. (2.ed.).

AOS210 Political Structures and Processes

Credits: 10 **Course responsible/Department:** Frode Gundersen / IØR

Language: Norwegian

Start term: Autumn parallel

Terms: Autumn parallel

Contents: The course AOS210 is built up of a) Analytical perspectives on public political/administrative institutions, b) reviewing the central political administrative institutions in Norway with special emphasis on the relationship between politics and administration, connections between subject and politics, sector and coordination, c) reviewing the administrative political institutions at regional and municipal level in Norway with special emphasis on dimensions such as the relationship between politics and administration, connections between subjects and politics, sector and coordination, d) relations between central, regional and municipal levels.

Development

trends in municipalities, county government and administration, e) towards the end of the course, the growth of and experiences with new governing models at central, regional and municipal levels will be covered.

Teaching goals: The course aims to:

- 1) give a survey of theoretical-analytical perspectives on political institutions,
- 2) provide knowledge of the structure of our political/administrative apparatus at central, regional and local levels and
- 3) provide knowledge of how the political system works, with special emphasis on relations between central, regional and municipal levels. The course aims to give students knowledge of and an understanding of analytical perspectives on public political/administrative institutions, decision theories, subject and politics, sector and coordination, relations between central, regional and
- 4) municipal levels. Development trends of municipal and county-level administration.

This course gives students a viewpoint when developing their understanding of society, especially the administrative political institutions in society. The skills gained in the course can, among other things, be used if working in public management and planning. The skills include being able to read scientific articles on public politics. It

is part of the subject called political science to work with different approaches and for students to learn to give reasons for their choices and make these clear to others as one does when practicing the subject. This also applies to moral questions and it is therefore that ethics is part of the subject political science.

Form of Exam: Continuous **Grading:** A-F

Syllabus: Christensen and Egeberg, Forvaltningskunnskap, Rønning, Vårt politiske Norge. Compendium.

AOS230 The Psychology of Organisation and Leadership

Credits: 5 **Course responsible/Department:** Gro Ladegård / IØR

Course contributor: External teacher.

Language: Norwegian

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

Mandatory activities: Written reports from two case studies.

Prerequisites: AOS130.

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

Teaching goals: 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 cross-disciplinary knowledge.

Form of Exam: Final Written **Grading:** A-F

Syllabus: Given at course start.

AOS232 Strategic Management and Organisation Design

Credits: 10 **Course responsible/Department:** Carl Brønn / IØR

Language: English upon request

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

Prerequisites: AOS120, AOS130, BUS100.

Preferred prerequisites: AOS230.

Reduction of credits for overlapping courses: AOS233: 10 credits.

Contents: The course presents an integrated treatment of organisation design and strategic management. The topics covered in the course include: sense-making and the role of cognition in strategic decision making; issues in organisation design as they relate to strategy; types of strategising; internal and external analyses; the dynamic resource based view; systems thinking and strategic modelling in complex environments; strategic communications - reflection, inquiry and advocacy; scenarios and strategic conversations.

Teaching goals: The course has the following objectives: ·To enable the student to explain how cognition influences the strategic decision making process and to identify actions for overcoming these effects in a strategic analysis. ·To identify and explain

the distinguishing characteristics of the main organisation structure types and to discuss their relative strengths and weaknesses. ·To be able to diagnose an organisation and its environment and to make recommendations for an appropriate structure. ·To explain the important characteristics of the main schools of strategic thought. ·To be able to conduct internal and external strategic analyses. ·To use the language of systems thinking to represent organisational processes and structures for strategic analysis, decision making and implementation.

Form of Exam: Continuous **Grading:** A-F

Syllabus: Stacey, R.D. (2002). Strategic Management and Organisational Dynamics: The Challenge of Complexity. Essex: Pearson Educational. Selected articles will be completed.

AOS233 Strategic Processes and Decision-Making

Credits: 10 **Course responsible/Department:** Carl Brønn / IØR

Language: English

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

Course frequency: Odd years

Prerequisites: General knowledge of economics and organisation theory concepts.

Reduction of credits for overlapping courses: AOS232: 10 credits.

Contents: Definition of strategy and a historical perspective.

Strategy and issues in development studies - the case of unintended consequences.

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.

Teaching goals: The objectives in this course are threefold. First, we review the impact of the cognitive dimension on strategic diagnosis and decision-making. We investigate how this dimension influences the activities that affect the organisation in developing strategy. The second objective is to provide a conceptual framework for understanding complex organisational structures as systems. This involves a review of different perspectives on strategic decision-making and the factors that influence the process. The two theoretical platforms that support this second objective are information feedback theory and behavioural decision theory. These theories provide insights into the different possible perceptions of the strategic development problem and serve as valuable learning and communication tools.

These views are combined into the unified approach called systems thinking. This perspective gives the decision maker a powerful method for investigating and communicating the long-term consequences of strategic planning activities.

Form of Exam: Continuous **Grading:** A-F

Syllabus: Selected articles.

AOS234 Leadership - Course for Student Representatives

Credits: 10 **Course responsible/Department:** Per Ove Røkholt / IØR

Course contributor: Svein Ole Borgen

Language: Norwegian

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

Course frequency: Other - 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.

Preferred prerequisites: AOS130.

Contents: The course is built 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.

Teaching goals: 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. **Form of Exam:** Continuous **Grading:** A-F

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

AOS237 Business Strategy

Credits: 10 **Course responsible/Department:** Kjell Gunnar Hoff / IØR

Course contributor: Rolf Qvenild

Language: Norwegian

Start term: Autumn parallel

Terms: Autumn parallel

Last time the course is offered:

Course frequency: Other - Gis ikke i 2008 Gis ikke i 2008

Prerequisites: Marketing, Organisation Theory, Managerial Economics

Contents: Strategies and the strategic planning processes linked to changes in the environment and competitive position

- *internal analyses # different methods to evaluate the strengths and weaknesses of a company, including sustainable competitive advantage and core competencies
- * external analyses # different methods for analyzing how changes in the environment might influence the development of the company and the chosen strategies
- * functional strategies # which of its functions (marketing, product development, etc.) should a company pursue to maintain its competitive advantage
- company strategies # which generic strategy should the company choose
- *corporate and international strategies # diversification, acquisitions and establishing high Tec international value chains, with examples from the automotive and oil and gas industries
- * strategic change # different management styles for different types of strategic change
- * strategy in action # choosing the appropriate organization, processes and management style for having management control with the implementation process and to achieve the financial targets. A company visit is also part of the course.

Teaching goals: The course objective is to enable the students to actively participate in developing,

discussing, and recommending suitable strategies for a given company, including choosing suitable

methods and organizational solutions when implementing the strategies.

Form of Exam: Continuous **Grading:** A-F

Syllabus: Will be provided at the start of the course

AOS240 Research in Social Sciences

Credits: 5 **Course responsible/Department:** Frode Alfnes / IØR

Language: Norwegian

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

Preferred 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.

Teaching goals: To plan and conduct social science and marketing studies.

Form of Exam: Continuous **Grading:** A-F

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

AOS310 Environmental Politics and Management

Credits: 10 **Course responsible/Department:** Frode Gundersen / IØR

Language: Norwegian

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

Prerequisites: Fundamental knowledge about political structures and processes, AOS210.

Contents: 1) General information on environmental problems and policies, central theories on environmental policies. The contents of the term environmental policy, the link between environmental problems, management structure and public control.

2) The development of various viewpoints in the modern debate on environmental policies. 3) Ideological traditions in Norwegian nature and environmental protection.

4) The development of voluntary nature protection organisations and environment protection organisations in the Scandinavian countries.

5) Environmental policies and institutional structure in the Scandinavian countries.

6) The shaping of policies and institutional structure.

7) The implementation of environmental policies. Implementation structure, tools.

Teaching goals: The course has two aims. Firstly, to present and analyse some central elements of and different positions on political theory that have been developed in connection with environmental problems and the environmental movement. These are to be related to older and more established forms of political thinking. Relevant ecopolitical challenges are to be discussed in light of various theoretical approaches.

Secondly, the course aims to give an overview and an analysis of environmental protection policies and environmental protection management as a public policy field in the Scandinavian countries. Central questions will be linked to the growth of environmental protection policies, its participants, management and implementation. This will be covered: The course aims to give students knowledge and an understanding of: a) the central elements of and different views on political theory that have been developed in connection with the environmental problems and the environmental movement, b) environment protection policies and environmental protection management as a an area of public politics in the Scandinavian countries. This course gives students a viewpoint when it comes to developing an understanding of the environmental problems and how these are presented and treated, especially by the administrative political institutions in society. Skills in the course may, among other things, be used when writing a Master's or a Ph.D. In addition, the skills will make students capable of working with and writing reports on environmental management and environmental policies. It is part of the subject of political science to work with different approaches and for the students to learn to give reasons for the choices made when practising the subject and explain these reasons clearly to others. Therefore, moral questions and ethics are part of the course and of the subject of political science. This course will also be arranged so that it is complementary to the course in environmental philosophy, and students will be encouraged to take both courses.

Form of Exam: Final **Grading:** A-F

Syllabus: Beck, Ulrick (2001) Risiko og frihet. Ch. 1 and 4. Christiansen (1996) (ed) Governing the Environment: Politics, Policy and Organization in the Nordic Countries, Nord 1996:5 Eckersley, Robin (1992) Environmentalism and political theory. Towards an ecocentric approach. Jansen, Alf Inge (1989) Makt og miljø. Universitetsforlaget, Ch. 1.2.3.4.7.

AOS330 Leadership, Project

Credits: 5 **Course responsible/Department:** Gro Ladegård / IØR

Language: Norwegian

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

Prerequisites: AOS130, AOS230, AOS232/AOS237, AOS240, AOS331.

Contents: Leadership performance. Topic of own choice. Qualitative methods. Writing of report.

Teaching goals: The aim of the course is to provide a deeper insight into modern organisations and leadership. Further, a learning objective is to train the students in defining, analysing and discussing central problems related to management and leadership in organisations. It includes a practical case study, and thus provides training in accomplishing projects and writing project reports.

Form of Exam: Continuous **Grading:** A-F

Syllabus: 200 pages of own choice, preferably articles in scientific journals

AOS331 Leadership and HRM

Credits: 10 **Course responsible/Department:** Gro Ladegård / IØR

Language: Norwegian

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

Mandatory activities: The students are organised into groups, and each group will hand in a term paper. The paper must be approved to be eligible for the final exam.

Prerequisites: Introduction to organisation theory (AOS130). The psychology of organization and leadership AOS230). Strategic management and organisation design (AOS232) or AOS237. Research methods in the social sciences (AOS240).

Preferred prerequisites: AOS233.

Contents: Themes:

Power and trust - the basis for leadership

Leadership challenges in knowledge intensive organisations

Leadership and ethics

Human resource management

Leadership development

The course starts with a discussion of the general basis for executive leadership in organisations. Based on this discussion, we introduce theories of leadership under different contingencies, particularly focusing on leader behaviours. Further, we discuss ethical aspects of leadership, primarily regarding internal issues in the organisation. We also present recent research on human resource management, and discuss how this field is related to general theories of leadership.

Teaching goals: 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.

Form of Exam: Continuous **Grading:** A-F

Syllabus: Yukl, Gary (2005): Leadership in Organizations (6.ed.). Upper Saddle River, NJ: Prentice-Hall. Kuvaas, Bård (red.): Lønnsomhet gjennom menneskelige ressurser. Bergen: Fagbokforlaget. A compendium comprising scientific articles.

AOS335 Organisation and Management

Credits: 10 **Course responsible/Department:** Bernt Aarset / IØR

Language: Norwegian

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

First time the course is offered: AUTUMN

Contents: In this course the foundation is theories and perspectives on the relationship between the individual actor and the firm, organisations and society, but with its main focus on business organisation. The course will provide knowledge in

modern organisations, the management of such organisations, and in the field of management and organisation in general. The course is based on theory as means to analysis and understanding. Further, the course will provide training in the definition, analysis, and discussion of core issues related to management of organisations. The development of critical analytical capabilities in the approach to the study of practical within commerce and public management questions are emphasised. Core issues will also be change, strategy, management of organisations, firm responsibilities, challenges associated with globalisation, and new management principles (New Public management).

Teaching goals: Superior goals is to achieve a theory based insight in modern organisations, within commerce as well as in public management, and the management principles of these, in relation to internal and external actors and stakeholders.

Specific goals are:

1. Be familiar with the core theories for management of organisations
2. Demonstrate analytical capabilities and the use of theories in the processes of questions related to management
3. Express critical thought and original ideas on issues related to management

Form of Exam: Continuous **Grading:** A-F

Syllabus: Tim Hannagan (2008): Management. Concepts & Practices. 5th ed. Essex: Pearson Education Limited.

AOS340 Qualitative Methods

Credits: 5 **Course responsible/Department:** Bernt Aarset / IØR

Language: Norwegian

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

First time the course is offered: SPRING

Prerequisites: AOS240 - Research in Social Sciences or equivalent

Contents: The course will provide the student with an introduction to qualitative method. 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 is the 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 for research, knowledge and knowledge development. Choice of method will be based on research question, theoretical perspectives, analysis, and the direction of the project.

Teaching goals: This course will provide the students with the necessary tools to conduct the master thesis as 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.

Form of Exam: Final **Grading:** A-F

Syllabus: Silverman, D. (2005). Doing qualitative research: A practical handbook . second edition ed. Sage: London. Selected chapters. Selected articles will be handed out.

BUS100 Managerial Economics, Introduction

Credits: 5 **Course responsible/Department:** Svein Kolstad Hansen / IØR

Course contributor: Svein Kolstad Hansen, Kjell Gunnar Hoff.

Language: Norwegian

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

Course frequency: Other - Given twice a year - spring and autumn.

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.

Teaching goals: The course is a foundation course in Cost Accounting.

Form of Exam: Continuous **Grading:** A-F

Syllabus: Hoff, Kjell Gunnar: Grunnleggende bedriftsøkonomisk analyse, Universitetsforlaget 2005. Hoff: Kjell Gunnar og Velvin, Jan: Oppgaver og løsningsforslag til Grunnleggende bedriftsøkonomisk analyse, Universitetsforlaget 2005.

BUS110 Accounting - Financial Reporting

Credits: 10 **Course responsible/Department:** Svein Kolstad Hansen / IØR

Course contributor: Svein Kolstad Hansen and Kjell Gunnar Hoff.

Language: Norwegian

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

Mandatory activities: One compulsory assignment.

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.

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

Form of Exam: Final Written **Grading:** A-F

Syllabus: Voldsund, Vågsether, Hoff; Hansen: Grunnleggende regnskap, Universitetsforlaget 2007 Hansen, Hoff; Voldsund: Analyse av finansregnskapet, Universitetsforlaget 2007

BUS111 Accounting and Computing

Credits: 5 **Course responsible/Department:** Ole Gjølberg / IØR

Course contributor: Guest lecturers from the software provider. Contact person: Inger-Lise Labugt, Department of Economics and Natural Resource Management.

Language: Norwegian

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

Course frequency: Other - The course may not be given in June 2009.

Mandatory activities: Participation in seminar groups.

Prerequisites: Preferably some knowledge of accounting (BUS110).

Reduction of credits for overlapping courses: BUS112 (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.

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

Form of Exam: Final Written **Grading:** A-F

Syllabus: Information at the start of the course.

BUS112 Accounting and Computing

Credits: 5 **Course responsible/Department:** Ole Gjølberg / IØR

Course contributor: Guest lecturers from the software provider (Daldata). Contact person: Inger-Lise Labugt, Department of Economics and Resource Management.

Language: Norwegian

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

Last time the course is offered:

Course frequency: Other - The course will not be given in August 2008.

Prerequisites: Preferably some knowledge of accounting (BUS110).

Preferred prerequisites: BUS110 or equivalent.

Reduction of credits for overlapping courses: 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.

Teaching goals: The student shall acquire qualifications in accounting and balance of independent businesses based on the software 'Duett'. 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.

Form of Exam: Final Written **Grading:** A-F

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

BUS133 Excel for Business

Credits: 5 **Course responsible/Department:** Kolbjørn Christoffersen / IØR

Language: Norwegian

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

Contents: A detailed plan for the course will be presented in the first lecture.

Teaching goals: 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.

Form of Exam: Final Written **Grading:** A-F

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

BUS150 Aquaculture Economics

Credits: 5 **Course responsible/Department:** Atle Guttormsen / IØR

Language: Norwegian

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

Course frequency: Odd years Will not be given if too few students are joining the course..

Mandatory activities: Compulsory assignments for submission may be required, together with attending guest lectures.

Prerequisites: BUS100.

Preferred prerequisites: Introductory course in Aquaculture.

Contents: History of the production of farmed fish. Structure of the industry. Cost calculations, analysis of company behaviour. Production planning, budgeting and control. Markets for farmed fish. Legal framework for the fish farming industry.

Teaching goals: Provide insight and skills in economic analysis, planning and control of aquaculture enterprises. Give insight into the organisational and social framework of the aquaculture industry.

Form of Exam: Final Written **Grading:** A-F

Syllabus: The syllabus will be distributed at the start of the course (accessible on the Internet before the start of the course).

BUS160 Tax Law for Economists

Credits: 5 **Course responsible/Department:** Ole Gjølberg / IØR

Course contributor: David Eilertsen, Østfold County Tax Office.

Language: Norwegian

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

Contents: Income and wealth taxation of SMEs after new tax reform.

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

Form of Exam: Final Written **Grading:** A-F

Syllabus: Ole Gjems-Onstad (red.) Skattelovsamlingen 2006-07. Studentutgave. Oslo: Gyldendal akademisk. Fallan, Lars (2007). Innføring i skatterett 2007-2008. 25. utg. Oslo: Gyldendal akademisk.

BUS210 Managerial Accounting and Budgeting

Credits: 10 **Course responsible/Department:** Kjell Gunnar Hoff / IØR

Course contributor: Svein Kolstad Hansen, Kjell Gunnar Hoff.

Language: Norwegian

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

Prerequisites: BUS100.

Reduction of credits for overlapping courses: BUS250: 10 credits.

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, semester assignment.

Teaching goals: 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 and projects.

Form of Exam: Continuous **Grading:** A-F

Syllabus: Hoff, Kjell Gunnar: Driftsregnskap og budsjettering, Universitetsforlaget 2005. Hoff, Kjell Gunnar: Driftsregnskap og budsjettering. Oppgaver og løsningsforslag, Universitetsforlaget 2005.

BUS220 Finance and Investment

Credits: 10 **Course responsible/Department:** Atle Guttormsen / IØR

Course contributor: Ole Gjølberg.

Language: Norwegian

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

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

Reduction of credits for overlapping courses: 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.

Teaching goals: 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.

Form of Exam: Final Written **Grading:** A-F

Syllabus: Distributed at the start of the course.

BUS230 Management Science – Principles

Credits: 10 **Course responsible/Department:** Marie Steen / IØR

Course contributor: Teaching assistants. Guest lecturers.

Language: English upon request

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

Mandatory activities: A case must be handed in and approved in order to take the final exam.

Prerequisites: Introductory courses in mathematics, statistics and microeconomics.

Reduction of credits for overlapping courses: 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.

Teaching goals: 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 formulation and solution of 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.

Form of Exam: Final Written **Grading:** A-F

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

BUS231 Management Science – Principles

Credits: 10 **Course responsible/Department:** Marie Steen / IØR

Course contributor: Teaching assistants. Guest lecturers.

Language: English

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

Mandatory activities: A case must be handed in and approved in order to get the course approved.

Prerequisites: Introductory courses in mathematics, statistics and microeconomic theory.

Reduction of credits for overlapping courses: BUS230 - 10 credits, BUS232 - 5 credits.

Contents: Introduction to models and modelling, spreadsheet modelling, linear programming, integer programming, network models, non-linear programming, multi-objective programming.

Teaching goals: The course shall give the students a solid basis for the use of important quantitative decision methods, where linear programming is the most important, to analyse economic and business problems. The main emphasis will be on formulating and solving different types of problems. Furthermore, the economic interpretations of the results are central. The importance of the strengths and weaknesses of the different methods will be discussed, as well as the fact that a model will always be a limited representation of reality. The course will to a certain degree be aimed towards agriculture and resource management problems.

Form of Exam: Final Written **Grading:** A-F

Syllabus: Parts of Hillier, F. S. and M. S. Hillier, 2. ed.: 'Introduction to Management Science', or a similar textbook. A compendium with selected material from other textbooks.

BUS232 Management Science – Fundamentals

Credits: 5 **Course responsible/Department:** Marie Steen / IØR

Course contributor: Teaching assistants. Guest lecturers.

Language: English

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

Mandatory activities: A case must be handed in and approved in order to get the course approved.

Prerequisites: Introductory courses in mathematics, statistics and microeconomic theory.

Reduction of credits for overlapping courses: BUS230 - 5 credits, BUS231 - 5 credits.

Contents: Introduction to models and modelling, spreadsheet modelling, linear programming, multi-objective programming.

Teaching goals: The course shall give the students a basis for the use of important quantitative decision methods, where linear programming is the most important, to analyse economic and business problems. The main emphasis will be on formulating and solving different types of problems. Furthermore, the economic interpretations of the results are central. The importance of the strengths and weaknesses of the different methods will be discussed, as well as the fact that a model will always be a limited representation of reality. The course will to a certain degree be aimed towards agriculture and resource management problems.

Form of Exam: Final Written **Grading:** A-F

Syllabus: Parts of Hillier, F. S. and M. S. Hillier, 2. ed.: 'Introduction to Management Science', or a similar textbook. A compendium with selected material from other textbooks.

BUS233 Management Information Systems

Credits: 5 **Course responsible/Department:** Ole Gjøølberg / IØR

Course contributor: Joe Valacich is the George and Carolyn Hubman Distinguished Professor of MIS at Washington State University. His teaching interests include systems analysis and design, IT project management, and the management of information systems..

Language: English

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

First time the course is offered: SPRING

Course frequency: Even years

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.

Teaching goals: 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 fuelling 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.

Form of Exam: Continuous **Grading:** A-F

Syllabus: Leonard Jessup & Joesph Valacich: Information Systems Today; why IS matters, Pearson Prentice Hall International edition

BUS240 Operations Management

Credits: 10 **Course responsible/Department:** Kolbjørn Christoffersen / IØR

Language: Norwegian

Start term: Autumn parallel

Terms: Autumn parallel

Mandatory activities: Excursion.

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.

Teaching goals: 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.

Form of Exam: Final Written **Grading:** A-F

Syllabus: Slack, Chambers, Johnston: Operations Management, 5th edition. Financial Times/Prentice-Hall. 2007.

BUS271 Business Start-Up

Credits: 5 **Course responsible/Department:** Anders Lunnan / IØR

Course contributor: Svein Kolstad Hansen.

Language: Norwegian

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

Mandatory activities: Submission of project plan.

Preferred 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 find an idea that they can work on to make a business plan.

Reduction of credits for overlapping courses: 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.

Teaching goals: 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 commercialised at UMB.

Form of Exam: Continuous **Grading:** A-F

Syllabus: 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.

BUS290 Business Experience

Credits: 5 **Course responsible/Department:** Ole Gjøølberg / IØR

Course contributor: IOR faculty members

Language: Norwegian

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

First time the course is offered: SPRING

Prerequisites: Most of the mandatory courses in the bachelor program in Business Administration

Preferred prerequisites: Norwegian or other Nordic language, English or German

Contents: The course is an internship of minimum five consecutive weeks in a private business or a public office or in an organization. The choice of place for the internship must be accepted by the Department prior to the internship period. The Department may assist in finding a place for the internship. However, it is the student's own responsibility to find an employer. If the student shall be given credits for the internship, a written agreement between him/her, the Department and the employer must be prepared before the internship period starts. This agreement shall specify what the student shall do during the internship period. The Department may refuse to sign an agreement draft if it is not clearly documented that the internship will be relevant to the student's studies.

In order to gain credits for the internship, the students must submit a report from the internship period no later than four weeks after the internship according to the contract is completed. The report must be related to the work the student has been involved in during the internship. The subject-matter of the report may be within business economics or administration in a broad sense (accounting, finance, marketing, organization, logistics etc.). Its point of departure shall be established theory and methods, which then is applied to the internship situation.

The report shall be written by the student alone. No joint authorships allowed. The student must present the report to his/her employer during the internship and the latter must report back to the Department.

Teaching goals: The students shall after the course be in a better position when it comes to applying basic theories and methods in business economics and administration.

Form of Exam: Final **Grading:** Passed/Not passed

Syllabus:

BUS310 Strategy Implementation

Credits: 5 **Course responsible/Department:** Kjell Gunnar Hoff / IØR

Language: Norwegian

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

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

Contents: The course focuses on strategic positioning based on industry analyses and strategy implementation. Balanced goal-oriented management as a strategic tool is a central topic in the course. The theory will be supplemented with both written and oral case discussions. In addition, a company visit will be arranged, where relevant topics will be illustrated.

Teaching goals: The aim of the course is to give students qualifications within strategic positioning and skills to implement strategy in real situations.

Form of Exam: Continuous **Grading:** A-F

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

BUS311 Strategic Cost Management

Credits: 5 **Course responsible/Department:** Kjell Gunnar Hoff / IØR

Course contributor: Guest lecturers

Language: Norwegian

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

First time the course is offered: AUTUMN

Prerequisites: BUS310

Contents: Strategic profitability analyses 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, valued based performance management and incentive programs.

Teaching goals: The aim of the course is to understand how companies can achieve sustainable competitive advantage through strategic profitability analyses, and to get increased knowledge of relevant strategic tools for performance management.

Form of Exam: Continuous **Grading:** A-F

Syllabus: To be decided

BUS312 Advanced Management Accounting

Credits: 10 **Course responsible/Department:** Kjell Gunnar Hoff / IØR

Language: Norwegian

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

First time the course is offered: AUTUMN

Contents: The course comprises discussions of organizational design, including responsibility centres, management information systems and various tools and methods for planning, decision making and control, like rolling budgets and the use of forecasts.

Teaching goals: The aim of the course is to understand how the right organizational set up can help increase the competitive strength and how various management systems and tools can contribute to better decisions and control.

Form of Exam: Continuous **Grading:** A-F

Syllabus: To be decided

BUS320 Empirical Analyses of Financial and Commodity Markets II

Credits: 5 **Course responsible/Department:** Ole Gjølberg / IØR

Course contributor: Ole Gjølberg, Atle Guttormsen

Language: Norwegian

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

Prerequisites: BUS321

Contents: Students are expected to invest a significant amount of individual work in the term paper.

Teaching goals: The aim of the course is to develop the student's ability to conduct econometric analyses of financial and commodity markets.

Form of Exam: Final **Grading:** A-F

Syllabus: Relevant articles from the scientific journals.

BUS321 Empirical Analyses of Financial and Commodity Markets – Theory

Credits: 5 **Course responsible/Department:** Ole Gjølberg / IØR

Course contributor: Prof. Frank Asche; Assoc. Prof. Olvar Bergland; Prof. Alan Love

Language: English

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

Prerequisites: ECN202 or equivalent

Preferred prerequisites: BUS220; ECN212 or equivalent

Reduction of credits for overlapping courses: 5 credits 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, bio energy), soft commodities, metals etc. The course includes the following activities: 1. Lectures. 2. Econometric exercises.

Teaching goals: The aim of the course is to develop the student's 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.

Form of Exam: Final Written **Grading:** A-F

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

BUS322 Investment Analysis and Financial Risk Management

Credits: 10 **Course responsible/Department:** Ole Gjøølberg / IØR

Language: English upon request

Start term: Spring parallel

Terms: Spring parallel

First time the course is offered: SPRING

Contents:

Form of Exam: Final Written **Grading:** A-F

Syllabus:

BUS323 Commodity Market Analysis

Credits: 5 **Course responsible/Department:** Atle Guttormsen / IØR

Language: English upon request

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

First time the course is offered: SPRING

Course frequency: Other - The course may be postponed to 2010.

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

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.

Teaching goals: The aim of the course is to develop the student's ability to understand international commodity markets. This aim shall be accomplished through combining economic theory with institutional knowledge about these markets.

Knowledge about important commodity markets, trade issues, supply and

demand and market issues will be presented in the lectures.

Form of Exam:Continuous **Grading:** A-F

Syllabus:

BUS331 Business Management Science: Methods and techniques

Credits: 10 **Course responsible/Department:** Marie Steen / IØR

Course contributor: Ole Gjølborg and Carl Brønn

Language: English upon request

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

First time the course is offered: SPRING

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

Prerequisites: Introductory Management Science

Preferred prerequisites: Introductory statistics, financial accounting, cost accounting, micro economics, finance and investment.

Reduction of credits for overlapping courses: BUS330: 5 ECTS reduction.

Contents: The course will be given as a 'smorgasbord' 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/CPM-models
- * Decision analysis
- * Waiting lines and queuing theory
- * Logistics
- * Advanced linear programming
- * Nonlinear programming
- * Transportation and assignment problems
- * Markov analysis
- * Peak-load pricing

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

Form of Exam:Final Written **Grading:** A-F

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

BUS340 Supply Chain Management

Credits: 5 **Course responsible/Department:** Kolbjørn Christoffersen / IØR

Language: Norwegian

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

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

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.

Teaching goals: 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.

Form of Exam: Final Written **Grading:** A-F

Syllabus: Chopra, Meindl: Supply Chain Management. Prentice-Hall. 3rd ed. 2007.

BUS370 Economic Development and Entrepreneurship

Credits: 10 **Course responsible/Department:** Anders Lunnan / IØR

Course contributor: Eystein Ystad

Language: Norwegian

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

Mandatory activities: Compulsory excursion. Presentation and discussion of cases.

Prerequisites: ECN262, BUS210, AOS120 or equivalent

Preferred prerequisites: AOS232, ECN200, BUS220, BUS230, AOS110, AOS200, AOS220, AOS240, BUS271.

Contents:

1. The theoretical basis for economic development. Actors within economic development.
2. Economic development and rural development.
3. Local economic policies and strategies for action. Own resources, mobilisation, attraction, network, existing businesses (business retention and expansion).
4. Innovation system, knowledge and competence, policies for innovation and entrepreneurship, commercialisation.
5. Entrepreneurship and entrepreneurship processes.
6. Financing of new business, business angles, venture capital.
7. Growth phases of an entrepreneurial venture.
8. Entrepreneurship and transition in agriculture.
9. Business visits to confront theory with practice.
10. Seminar/discussions of articles.
11. Assignments

Teaching goals: Through the study of theory, literature and assignments, insight is given into current problems connected with economic development and entrepreneurship in Norway today. The students should: - Become familiar with the main challenges within rural development and differences between economic and rural development. - Become familiar with the main theories within local and national economic development policies, and be able to use these theories in practical problem solving, for example readjustments within agriculture and commercialisation of

research results. - Become familiar with theories and how they can be used in practical analysis within entrepreneurship. - Become familiar with scientific journals and current research within the subject.

Form of Exam: Continuous **Grading:** A-F

Syllabus: David Deakins and Mark Freel: Entrepreneurship and Small Firms, 4th edition McGraw Hill Companies, 289 pages. The entire book is part of the curriculum. Other textbooks are under consideration. A collection of articles that can be obtained at the UMB Bookstore. Information about additional literature can be found on the course web site.

ECN110 Introduction to Economics – Micro

Credits: 5 **Course responsible/Department:** Mette Wik / IØR

Course contributor: Per Gunnar Hanssen.

Language: Norwegian

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

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

Reduction of credits for overlapping courses: ECN111

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.

Teaching goals: 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.

Form of Exam: Final Written **Grading:** A-F

Syllabus: Frank/Bernanke: Principles of Microeconomics

ECN111 Introduction to Economics – Micro

Credits: 5 **Course responsible/Department:** Sigurd Rysstad / IØR

Course contributor: Department teachers

Language: English

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

Preferred prerequisites: It is an advantage for students to have a fair background in mathematics.

Reduction of credits for overlapping courses: ECN110 - 5 ECTS.

Contents: The course consists of the following subjects: Consumer theory. Producer theory. Perfect competition. Comparative advantage and International trade. The

course also cover market failures such as monopoly, oligopoly (analyzed by using game theory) and externalities.

Teaching goals: This is an introductory course in microeconomics. The aim of the course is to give the students (i) an overview of the most important concepts and models in microeconomics, ii) the first training in formulating and solving microeconomic problems and (iii) good qualifications for further studies in economics.

Form of Exam: Final Written **Grading:** A-F

Syllabus: Frank/Bernanke: Principles of Microeconomics

ECN120 Introduction to Economics – Macro

Credits: 5 **Course responsible/Department:** Per Halvor Vale / IØR

Language: Norwegian

Start term: January block

Terms: January block

Prerequisites: ECN110.

Preferred prerequisites: Students with a more comprehensive background in mathematics from high school will have an advantage. It is also possible to take additional courses in mathematics in parallel with this course (for example UMB's introductory mathematics course).

Reduction of credits for overlapping courses: ECN121

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

Teaching goals: The student is to gain the knowledge needed to take a medium-level course in macroeconomics. Students should be able to apply simple macroeconomic planning 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.

After the course has been completed, students should be familiar with the main issues of welfare theory and market economic theory.

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) learn to see the difference between case and person in discussions.
- v) develop an academic attitude, i.e. that the opinions are based on knowledge and logical thinking.

Form of Exam: Final Written **Grading:** A-F

Syllabus: Will be provided at course start

ECN121 Introduction to Economics – Macro

Credits: 5 **Course responsible/Department:** Ragnar A. Øygard / IØR

Course contributor: Department teacher

Language: English

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

Prerequisites: Higher education entrance qualification in Norway and ECN111 (Introduction to economics, micro) or similar.

Reduction of credits for overlapping courses: ECN120 - 100%.

Contents:

Teaching goals: Students are expected to learn and be able to utilise central terminology and theories within macro economics, including how these can be used to analyse the effects of economic policy and other influences on the economy. Among the topics covered are: the national accounts; what factors determine macro economic variables such as production, unemployment, inflation, interest rates, and exchange rate; simple Keynes models; effects of economic policies; budgets and saving; economic growth. The theories will be applied in the context of current policy issues, in both OECD countries and developing countries.

Form of Exam: Final Written **Grading:** A-F

Syllabus: Frank, Robert H, and Ben S Bernanke. 2007. Principles of macroeconomics. 3rd ed. Boston: McGraw Hill Irwin. (or the same chapters in: Frank, Robert H, and Ben S Bernanke. 2007. Principles of economics. 3rd ed. Boston: McGraw Hill Irwin.) plus some supplementary material

ECN140 Economic History

Credits: 5 **Course responsible/Department:** Ole Gjøølberg / IØR

Course contributor: Department teacher.

Language: Norwegian

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

Course frequency: Even years

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.

Teaching goals: 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.

Form of Exam: Final Written **Grading:** A-F

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

ECN150 Introduction to Development Economics

Credits: 5 **Course responsible/Department:** Mette Wik / IØR

Course contributor: Arild Angelsen, Stein Holden.

Language: English upon request

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

Mandatory activities: Writing of one semester assignment. This paper will not be graded.

Prerequisites: ECN110 or ECN111.

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.

Teaching goals: 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.

Form of Exam: Final Written **Grading:** A-F

Syllabus: Todaro, M. P. and S. C. Smith. Economic Development. 9th Edition. Addison Wesley 2006.

ECN170 Environmental and Resource Economics

Credits: 5 **Course responsible/Department:** Ståle Navrud / IØR

Course contributor: Arild Vatn, Arild Angelsen

Language: Norwegian

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

Mandatory activities: Optional exercises will be reviewed. It is possible that compulsory assignments will be given.

Prerequisites: ECN110 or ECN 111 or an equivalent introductory course in economics (with focus on microeconomics).

Reduction of credits for overlapping courses: ECN270 - 3 credits.

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 (bio economic models). – ii) Non-renewable resources - oil, gas, minerals.

3) Regulatory tools (environmental taxes, tradable 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.

Teaching goals: 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.

Form of Exam: Final Written **Grading:** A-F

Syllabus: - B. C. Field & M. K. Field (2002): Environmental Economics. An Introduction. McGraw-Hill, New York, 3. edition -Selected journal articles and book chapters, collected in the ECN170 Compendium.

ECN201 Econometrics

Credits: 10 **Course responsible/Department:** Kyrre Rickertsen / IØR

Language: English

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

Mandatory activities: Compulsory term paper. Students must receive a passing grade for the term paper to be allowed to take the final exam.

Prerequisites: Mathematics (MAT100), statistics (STAT100), and microeconomics (ECN210/ECN212).

Preferred prerequisites: Macroeconomics and courses in applied economics.

Reduction of credits for overlapping courses: 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 semester assignment.

Teaching goals: 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 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.

Form of Exam: Final Written **Grading:** A-F

Syllabus: Demodar N. Gujarati (2002). Basic Econometrics, fourth edition, McGraw-Hill. Introduction, Chapters 1 - 13 (pp. 1 - 559) and Appendix A (pp. 869 - 912) are required readings. The textbook used in the course may be changed.

ECN202 Introduction to Econometrics

Credits: 5 **Course responsible/Department:** Frode Alfnes / IØR

Language: Norwegian

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

Mandatory activities: Compulsory assignments

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

Preferred prerequisites: Courses in macroeconomics and applied economics.

Reduction of credits for overlapping courses: ECN200- 5 credits, 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), ECN310 (Market Analysis) and ECN300 (Applied Econometrics).

Teaching goals: 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.

Form of Exam: Final Written **Grading:** A-F

Syllabus: Demodar N. Gujarati (2002). Essentials of Econometrics, third edition, McGraw-Hill. Might be updated before the course begins.

ECN210 Microeconomics- Consumers, Producers, Market and Welfare

Credits: 10 **Course responsible/Department:** Sigurd Rysstad / IØR

Language: Norwegian

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

Prerequisites: MATH100 Introductory Mathematics. It is an advantage but not required to have some background in microeconomics, for instance equivalent to ECN110/ECN111.

Preferred 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.

Reduction of credits for overlapping courses: ECN212 - 5 credits.

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.

Teaching goals: 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.

Form of Exam: Final Written **Grading:** A-F

Syllabus: Varian, Hal: Intermediate Microeconomics. A Modern Approach.

ECN211 Microeconomics - Institutions, Games and Market Failures

Credits: 10 **Course responsible/Department:** Sigurd Rysstad / IØR

Language: Norwegian

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

Prerequisites: ECN210

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.

Teaching goals: To be able to understand and analyse market behaviour and market organisation, and why and how government should regulate business behaviour.

Form of Exam: Final Written **Grading:** A-F

Syllabus: Schotter: Microeconomics. A Modern Approach.

ECN220 Economics II

Credits: 10 **Course responsible/Department:** Per Halvor Vale / IØR

Language: Norwegian

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

Mandatory activities: Compulsory assignments

Prerequisites: ECN120 or an equivalent course.

Contents:

Part 1: Discussion of economic stabilization, based on different models as: - the IS-LM model. - the IS-LM-BP. model. - the AD-AS model.

Part 2: Discussion of economic growth and development, based on: - Solow's growth model. - Endogenous growth theory.

Teaching goals: The aim of the course is to give: - The competence in macroeconomics required for a Bachelor's degree in Business Administration. - Competence in macroeconomics that gives a foundation for admission to a Master's degree programme in economics. - 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.

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. The course is to 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.

Form of Exam: Final Written **Grading:** A-F

Syllabus: Main Textbook M. Gartner: Macro Economics, Pearson Education, 2006.
Book to supplement: P.H. Vale: Macroeconomics, Abstrakt forlag, 2005.

ECN230 International Economics

Credits: 5 **Course responsible/Department:** Roberto J. Garcia / IØR

Language: English

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

Mandatory activities: Exercises, which can be either optional or compulsory, requiring a passing grade.

Prerequisites: Basic knowledge in macro- and microeconomics ECN120, ECN220 and ECN210.

Preferred 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.

Teaching goals: 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.

Form of Exam: Final Written **Grading:** A-F

Syllabus: · Appleyard and Field (A+F), International Economics (International Edition), 4th edition 2006. · Houck, J.P. (Houck), Elements of Agricultural Trade Policies, 1986. · Supplementary reading on web.

ECN260 Agricultural Policy

Credits: 5 **Course responsible/Department:** Normann Aanesland / IØR

Language: Norwegian

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

Prerequisites: Fundamental knowledge in Microeconomics, ECN210.

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.

Teaching goals: 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.

Form of Exam: Final Written **Grading:** A-F

Syllabus: 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

Credits: 5 **Course responsible/Department:** Sigurd Rysstad / IØR

Course contributor: Economics teacher.

Language: Norwegian

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

Prerequisites: ECN110 and ECN120.

Preferred prerequisites: ECN110 - 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.

Teaching goals: 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.

Form of Exam: Final Written **Grading:** A-F

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

ECN270 Resource and Environmental Economics

Credits: 5 **Course responsible/Department:** Arild Angelsen / IØR

Course contributor: Ståle Navrud, Ragnar Øygard.

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.

Reduction of credits for overlapping courses: ECN170, ECN273 and EDS240 reduced respectively with 3, 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 non-renewable resources, pollution, biodiversity conservation, land degradation and deforestation, valuation of environmental

resources and accounting for the environment, international environmental agreements. The course will emphasise issues, cases and perspectives of particular relevance to developing countries.

Teaching goals: 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.

Form of Exam: Final Written **Grading:** A-F

Syllabus: 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

Credits: 10 **Course responsible/Department:** Ståle Navrud / IØR

Language: English upon request

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

Prerequisites: ECN170 (or ECN270), ECN210 and ECN202 or ECN201; or similar introductory courses in environmental and resource economics, econometrics and 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.

Teaching goals: 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.

Form of Exam: Final **Grading:** A-F

Syllabus: - Boardman, A. E, D. H Greenberg, A. R. Vining & D. L. Weimer: 2001: Cost-Benefit Analysis. Concepts and Practice. Prentice Hall, Inc., Upper Saddle River, New Jersey, USA. - Selected journal papers (ECN271 Compendium).

ECN280 Energy Economics

Credits: 10 **Course responsible/Department:** Torstein Bye / IØR

Language: Norwegian

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

Prerequisites: Microeconomics.

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.

Teaching goals: 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.

Form of Exam: Final Written **Grading:** A-F

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

ECN301 Econometric Methods

Credits: 10 **Course responsible/Department:** Olvar Bergland / IØR

Language: English

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

Mandatory activities: Compulsory exercises and project work involving econometric analysis using computers.

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

Reduction of credits for overlapping courses: 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.

Teaching goals: 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.

Form of Exam: Final Written **Grading:** A-F

Syllabus: M. Verbeek (2004): 'Modern Econometrics', 2nd edition. Chapters 1-7, 10. Handouts. (This is may change.)

ECN302 Mathematics for Economists

Credits: 5 **Course responsible/Department:** Kyrre Rickertsen / IØR

Course contributor: Dadi Kristofersson

Language: English

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

Prerequisites: Mathematics on the level of MATH100.

Preferred prerequisites: Microeconomics on the level of ECN210/ECN212.

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.

Topic 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.

Teaching goals: 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.

Form of Exam: Continuous **Grading:** Bestått/ikke bestått

Syllabus: 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 and other handouts.

ECN311 Microeconomics

Credits: 10 **Course responsible/Department:** Kyrre Rickertsen / IØR

Language: English

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

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

Prerequisites: Microeconomics on the level of ECN210/ECN212. Mathematics on the level of ECN302 (Mathematics for economists).

Preferred prerequisites: Intermediate courses in economics.

Reduction of credits for overlapping courses: 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, the theory of the producer, and behavior under uncertainty.

Teaching goals: 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.

Form of Exam: Final Written **Grading:** A-F

Syllabus: 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

Credits: 5 **Course responsible/Department:** Olvar Bergland / IØR

Language: English

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

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

Preferred prerequisites: Coursework at the intermediate level in economics.

Reduction of credits for overlapping courses: ECN213

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

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

Form of Exam: Final Written **Grading:** A-F

Syllabus: Cabral (2000): '\Introduction to Industrial Organization\'. Handouts and journal articles. (This may change.)

ECN320 Macroeconomics III

Credits: 10 **Course responsible/Department:** Ragnar A. Øygard / IØR

Language: English

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

First time the course is offered: SPRING

Prerequisites: Bachelor in economics or an intermediate course in macroeconomics (e.g. ECN220).

Reduction of credits for overlapping courses: ECN352: 10 ECTS

Contents: Topics in the course include:

1. Growth theory.
2. The relationship between growth and development
3. poverty problems in the world
4. Stabilization policy.

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

Form of Exam: Continuous **Grading:** A-F

Syllabus: Selected sections of textbooks and articles.

ECN330 Economic Integration and Trade Liberalization

Credits: 10 **Course responsible/Department:** Roberto J. Garcia / IØR

Language: English

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

Mandatory activities: There are between 4-6 exercises related to the course modules.

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.

Teaching goals: 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).

Form of Exam: Continuous **Grading:** A-F

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

ECN331 International Economics and Finance

Credits: 5 **Course responsible/Department:** Roberto J. Garcia / IØR

Language: English

Start term: August block

Terms: August block

Mandatory activities: 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

Teaching goals: The course is designed to complete the students's understanding of the basic economics of trade through a formal treatment of the international macro economy 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.

Form of Exam: Final Written **Grading:** A-F

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

ECN350 Development and Environment Economics

Credits: 15 **Course responsible/Department:** Stein Terje Holden / IØR

Language: English

Start term: Autumn parallel

Terms: Autumn parallel

Mandatory activities: Compulsory exercises. Group work/presentations.

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

Preferred prerequisites: ECN271, ECN272, ECN273, ECN351, ECN352, ECN370.

Reduction of credits for overlapping courses: ECN450, 15 credits.

Contents: Quantitative Development Policy Analysis. Economics of rural organisation. Environment and development.

Teaching goals: 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.

Form of Exam: Continuous **Grading:** A-F

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

ECN351 Research in Development Economics

Credits: 5 **Course responsible/Department:** Arild Angelsen / IØR

Course contributor: Stein Holden, Mette Wik, Ragnar Øygard.

Language: English

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

Mandatory activities: Students must attend lectures and exercises and pass compulsory assignments in order to pass the course.

Prerequisites: ECN212 Microeconomics or ECN211 Microeconomics II and ECN220 Economics II, ECN200 Econometrics or ECN201 Econometrics.

Reduction of credits for overlapping courses: It is not possible to earn credits for both ECN351 and previous ECN250, as these courses overlap considerably.

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, surveys and analysis;
- Impact studies; and
- Introduction to the STATA statistical package.

Teaching goals: In this course, students should be able to find and present a researchable topic within development 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; - locate economic data and/or plan how to collect their own field data; and understand the methods used to compile and analyse the data.

Form of Exam: Continuous **Grading:** Passed/Not passed

Syllabus: Wyrick, Thomas L. 1994. The Economist's Handbook: A Research and Writing Guide. Other relevant literature.

ECN353 Development Economics, Micro

Credits: 5 **Course responsible/Department:** Mette Wik / IØR

Language: English

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

First time the course is offered: SPRING

Mandatory activities: Compulsory assignments.

Prerequisites: Microeconomics on level II

Preferred prerequisites: Microeconomics on level III

Reduction of credits for overlapping courses: With ECN251, 5 ECTS

Contents: The course studies 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 and how government and trade interact with the economics of rural households.

Teaching goals: 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 than the behaviour of firms and markets in developed countries.

Form of Exam: Final Written **Grading:** A-F

Syllabus: 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

Credits: 5 **Course responsible/Department:** Arild Angelsen / IØR

Course contributor: Gerald Shively, Ian Coxhead, Ragnar Øygard

Language: Norwegian

Start term: Spring parallel

Terms: Spring parallel

Last time the course is offered:

Form of Exam: Continuous **Grading:** A-F

Syllabus:

ECN355 Research in Development Economics II

Credits: 10 **Course responsible/Department:** Ragnar A. Øygard / IØR

Course contributor: Arild Angelsen, Stein Holden, Mette Wik

Language: English

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

First time the course is offered: SPRING

Mandatory activities: Students must attend lectures and exercises and pass compulsory assignments in order to pass the course.

Prerequisites: ECN212 Microeconomics or ECN211 Microeconomics II and ECN220 Economics II, ECN200 Econometrics or ECN201 Econometrics.

Reduction of credits for overlapping courses: ECN250: 5 credits. ECN351: 5 credits.

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, surveys and analysis;
- Impact studies; and
- Introduction to the STATA statistical package.
- Completing data collection through field work in a developing country

Teaching goals: In this course, students should be able to find and present a researchable topic within development 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; - locate economic data and/or plan how to collect their own field data; and understand the methods used to compile and analyse the data.

Students will generate an original data set on which their Master thesis can be based.

Form of Exam: Continuous **Grading:** Passed/ Not passed

Syllabus: Wyrick, Thomas L. 1994. The Economist's Handbook: A Research and Writing Guide.

Other relevant literature.

ECN356 Issues in Development Economics: Institutions

Credits: 5 **Course responsible/Department:** Arild Angelsen / IØR

Course contributor: Stein Holden, Ragnar Øygard

Language: English

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

Mandatory activities: Class presentation

Prerequisites: Intermediate knowledge of micro- and development economics.

Contents: The course will review 10 key articles within on development and institutions. The class will meet once a week (2h) and review one article. The course ends with a written take-home exam.

Teaching goals: Give insights into key contributions within the field of institutions and development, e.g., related to agriculture and common property resources.

Form of Exam: Continuous **Grading:** A-F

Syllabus: Selected journal articles.

ECN360 Agricultural Policy and Resource Management

Credits: 15 **Course responsible/Department:** Normann Aanesland / IØR

Language: Norwegian

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

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.

Teaching goals: 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.

Form of Exam :Continuous **Grading:** A-F

Syllabus:

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

Credits: 10 **Course responsible/Department:** Eirik Romstad / IØR

Course contributor: Eirik Romstad.

Language: English upon request

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

Mandatory activities: Work on and presentation of case studies.

Prerequisites: Resource economics courses at the intermediate level, ECN271. For students without any previous courses in environmental and resource economics from their BSc, ECN270 is recommended.

Preferred prerequisites: RØP210, 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.

Teaching goals: Students shall acquire an understanding of how to create more environmentally friendly behaviour 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 behaviour, the students will be educated in game theory and institutional behavioural theory. Within game theory (principal-agent models) the concept of resource allocation mechanisms and uncertainty will be emphasized. In the institutional part cooperative behaviour, 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.

Form of Exam: Final Written **Grading:** A-F

Syllabus: Main text book: Sterner, Thomas (2003): Policy Instruments for Environmental and Natural Resource Management, Resources for the Future, Washington DC. (selected chapters).

Compendium with selected articles. The choice of the main textbook is subject to continual evaluation.

ECN372 Environment and Resource Economics

Credits: 10 **Course responsible/Department:** Ståle Navrud / IØR

Course contributor: S. Navrud, O. Bergland, E. Romstad.

Language: English upon request

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

Mandatory activities: Seminars with presentations.

Prerequisites: Students taking this course must have taken ECN371.

Preferred prerequisites: A good understanding of natural science subjects.

Reduction of credits for overlapping courses: ECN370: 10 credits.

Contents: ECN372 is the project part of ECN370 and can therefore not be taken separately without having taken ECN371. The course is split into two parts: A) A theory part focusing on the integration of previous knowledge as well as learning to prepare decision support. B) A practical part where a project report is to be produced. Part A will focus on: sustainable resource management, conducting economic analyses as decision support and the treatment of environmental impacts, uncertainties and discounting, environmental regulation and management of natural resources under uncertainty and irreversibility, and the role of economists in the decision processes. The topic for part B) will vary from year till year. Previous topics include: environment and climate, environment and energy, biodiversity preservation, large predators, environmental aspects of agricultural production, environment and transport, and management of marine resources/coastal zone management.

Teaching goals: Students are to acquire a deeper insight into environmental and resource-economic theory and methods as well as become trained in its application. Moreover, students shall learn to evaluate the relevance of various theories and methods taught in earlier courses and how these can be combined in the study of practical environmental issues. The interaction between complex economic and ecological processes, and the role of economic analyses in the decisionmaking process will be focused. The same goes for economic valuation of environmental impacts, practical regulatory tools, uncertainty and irreversibility in natural resource management; and discounting and impacts on future generations. Environmental and resource economics questions concerning the management of common resources both within and between generations. Students shall conduct project analyses where, in

addition to the professional analysis, writing abilities and formal aspects are given weight.

Form of Exam: Continuous **Grading:** A-F

Syllabus: Selected articles, together with materials that are relevant for the project topic, which is chosen for that year.

ECN373 Environmental Accounting and Management

Credits: 5 **Course responsible/Department:** Ståle Navrud / IØR

Course contributor: Carl Brønn.

Language: English upon request

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

Prerequisites: ECN170 or ECN270, or an equivalent introductory course in environmental and resource economics.

Contents: The course consists of three main parts:

i) Environmental accounting:

The course begins with a model of the environmental requirements that private and public enterprises are faced with and the alternative strategies that they may follow in order to fulfil these requirements from various stakeholders. Basic concepts such as sustainable development, ecological efficiency, eco-efficiency are reviewed, as well as the three bottom lines: economics, environment and corporate social responsibility, CSR. Social responsibility implies that existing and new enterprises take into consideration the rights and needs of the local population and that employees work under safe conditions with regards to health, environment and security. Then various methods for environmental accounting, life cycle assessment (LCA), environmental product declarations as well as systems for environmental labelling and certification are described, 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 organisational structures as systems. In this way, the course gives an introduction to the method for thinking in systems, and shows how this can be applied to an organisation using the Balance Score Card (BSC) method.

iii) Sustainable development for private and public enterprises:

The course seeks to show how knowledge of environmental accounting, systems thinking, the Balanced Score Card (BSC) method and Corporate Social Responsibility (CSR) can be used as management tools for environmentally friendly and sustainable public and private enterprises.

Teaching goals: 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.

Form of Exam: Continuous **Grading:** A-F

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

ECN374 Dynamic Optimisation

Credits: 5 **Course responsible/Department:** Olvar Bergland / IØR

Language: English

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

Prerequisites: ECN302, ECN311, STAT100.

Preferred prerequisites: Finance and investment (BUS220), natural resource economics (ECN270), cost-benefit analysis (ECN271).

Contents: The following tools for dynamic optimization will be covered: non-linear programming, optimal control theory, and deterministic and stochastic dynamic programming. These tools will be applied to such topics as capital, time, and interest rate; efficient intertemporal resource allocation; optimal investment programs; economic growth; extraction of non-renewable resources; harvesting of renewable resources; and irreversibility and uncertainty. Computer models will be used extensively.

Teaching goals: The students should state, solve and interpret common dynamic optimisation problems encountered in economics; and apply this knowledge and skills to independent economic analysis.

Form of Exam: Final Written **Grading:** A-F

Syllabus: Adda and Cooper (2003): 'Dynamic Economics'. Handouts and journal articles. (This may change.)

ECN380 Energy Economics II

Credits: 10 **Course responsible/Department:** Olvar Bergland / IØR

Course contributor: Torstein Bye, Ole Gjøølberg.

Language: English upon request

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, ECN211, ECN280, ECN312.

Preferred prerequisites: ECN271, ECN301, ECN302, ECN311, ECN374, BUS320.

Contents: The subject covers central issues concerning economic regulation, and economic analysis of energy projects. 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) investment in transmission networks, 4) stochastic production in hydropower systems, 5) investments under uncertainty.

Teaching goals: 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.

Form of Exam: Final Oral **Grading:** A-F

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

ECN450 Development Economics: Methods and Policy Analysis

Credits: 20 **Course responsible/Department:** Stein Terje Holden / IØR

Course contributor: Arild Angelsen.

Language: English

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

Course frequency: Other - Scheduled in 2008/2009. Planlagt gitt i 2008/2009 Scheduled in 2008/2009. Planlagt gitt i 2008/2009

Mandatory activities: Exercises, group work, presentations.

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

Preferred prerequisites: As ECN350.

Reduction of credits for overlapping courses: ECN350 - 15 credits.

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. - Policies for poverty reduction. Environment and development. - Market imperfections and the environment. - Poverty and land degradation. - Population, agriculture and deforestation.

Teaching goals: Application of economic theory and methodology on development policy issues in developing countries. Combination of theory and methodology. Use of computer/software tools for policy analysis. Training in scientific writing.

Form of Exam: Continuous **Grading:** A-F

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

ECN451 Institutions, Property Rights and Development

Credits: 10 **Course responsible/Department:** Arild Angelsen / IØR

Language: English

Start term: Spring parallel **Terms:** August block Autumn parallel Spring parallel
Course frequency: Even years The course is offered in even-numbered years, given sufficient interest. Emnet gis annet hvert år (2006, 2008 etc.), dersom det er nok påmeldte studenter.

Mandatory activities: Class presentation.

Prerequisites: Intermediate knowledge of microeconomic theory, including basic game theory and farm household models.

Contents: The course is, firstly, about institutional change: how do institutions emerge and change? The focus is on one particular set of institution, namely property rights, and more specifically property rights which govern the use of natural resources in developing countries. Secondly, the course looks into how property rights affect decisions regarding input use, investments, and use/management of natural resources. The course consists of six parts:

1. Introduction: Historical overview of the field, definitions of institutions, and the role of institutions in economic development.
2. Theories on the evolution of property rights.
3. Case studies of the evolution of individualised property rights, land reforms and the impact on resource management. Research methods.
4. A game-theoretic approach to collective action and common property resource management (CPRM).
5. Applications and cases of CPRM. Research methods.
6. Presentation and discussion of ideas for the semester assignment.

Teaching goals:

(1) To get an understanding and be able to critically analyse: (i) how institutions evolve and change, and (ii) how institutions determine economic behaviour and management of natural resources, with particular emphasis on property rights in developing countries.

(2) To be able to do own research on institutional issues based on current theories and methodologies.

Form of Exam: Continuous **Grading:** Passed/Not passed

Syllabus: The reading consists of a set of journal articles and book chapters (approx. 5-6 for each of the 5 main topics).

ECN452 Topics in Development Economics I

Credits: 5 **Course responsible/Department:** Ragnar A. Øygaard / IØR

Language: Norwegian

Terms: By demand **Course frequency:** Other - Scheduled in 2008/2009.

Form of Exam: Continuous **Grading:** A-F

Syllabus:

ECN453 Topics in Development Economics II

Credits: 10 **Course responsible/Department:** Ragnar A. Øygard / IØR

Course contributor: Arild Angelsen, Gerald Shively, Ian Coxhead

Language: English

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

First time the course is offered: SPRING

Course frequency: Other - The course is offered provided sufficient demand

Prerequisites: Graduate level economics

Contents: Topics and literature will vary from year to year.

Teaching goals: 1. To get deeper insights into key areas of development economics.

2. To be able to actively use the theories and methodologies in own research.

Form of Exam: Continuous **Grading:** Passed/ Not passed

Syllabus: To be provided at the start of the course.

ECN454 Topics in Development Economics III

Credits: 5 **Course responsible/Department:** Ragnar A. Øygard / IØR

Course contributor: Arild Angelsen, Carl-Erik Schulz, Gerald Shively, Ian Coxhead

Language: English upon request

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

First time the course is offered: SPRING

Course frequency: Other - Depends on how many students sign up for the course.

Will probably not be given in 2008/2009.

Prerequisites: Graduate level economics

Contents: Course contents vary from year to year.

Teaching goals: Course content will vary from year to year, depending on demand and supply

Form of Exam: Continuous **Grading:** Bestått/ikke bestått

Syllabus: Will vary from year to year.

INN200 Management Accounting

Credits: 10 **Course responsible/Department:** Svein Kolstad Hansen / IØR

Course contributor: Svein Kolstad Hansen and guest lecturers.

Language: Norwegian

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

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

Teaching goals: 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.

Form of Exam: Continuous **Grading:** A-F

Syllabus: Atrill, MacLaney: Accounting and finance for Non-specialists, Prentice Hall 2006

INN210 Innovation

Credits: 5 **Course responsible/Department:** Anders Lunnan / IØR

Course contributor: Eystein Ystad

Language: Norwegian

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

Mandatory activities: Written assignments, presentation of assignments

Contents: Introduction to innovation, definitions. Innovation in global context, economic importance of innovation. Sources of and models for innovation. Innovation, opportunities and entrepreneurship. Knowledge based innovation. Innovation management and learning organisations.

Teaching goals: 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. Knowledge based innovation will be in focus. They shall know about critical factors in innovation processes and be able to describe what a learning organisation is. Students should also know how small and large companies organise their innovation activities.

Form of Exam: Continuous **Grading:** A-F

Syllabus: Literature will be announced when the course starts.

INN220 Introduction to Entrepreneurship

Credits: 15 **Course responsible/Department:** Anders Lunnan / IØR

Course contributor: Jørg Negaard and others

Language: Norwegian

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

Mandatory activities: Participating in classes, groupwork and excursions.

Presentation of a business plan. Presentation of a given topic.

Prerequisites: Bachelor degree or equivalent

Contents: Entrepreneurship and innovation in practice - visits to businesses and research groups; Marketing and market strategies; Organisation of start-up businesses; How to develop new ideas; How to finance start-up businesses; Business plan; Activities initiated by the students; Seminars and workshops.

Teaching goals: The students shall learn about entrepreneurship and innovation within and outside of UMB; Networking; Acquire in depth knowledge within chosen themes in entrepreneurship and innovation. Learn to prepare a business plan.

Form of Exam: Continuous **Grading:** A-F

Syllabus: Hisrich and Peters: Entrepreneurship, McGraw-Hill, 7. edition 2008.

McKinsey & Company: Fra idé til ny virksomhet, Universitetsforlaget 2.edition 2007

INN230 Organisation and Leadership in Startup Company

Credits: 5 **Course responsible/Department:** Gro Ladegård / IØR

Language: Norwegian

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

Last time the course is offered:

Contents: The nature of an organisation; The organisation and the individual; Tasks, technology, objectives and efficiency in organisations; Organisational environments, Organisational learning, Organisational change, Organisational Culture, Leadership in Organisations.

Teaching goals: The aim is to provide an understanding of the basic concepts of organisation theory, as well as the role of these concepts as tools of analysis. The theoretical basis will be applied in practical analyses of organisations and their functioning.

Form of Exam: Continuous **Grading:** A-F

Syllabus: Literature will be announced when the course starts.

INN310 Intellectual Property Rights

Credits: 5 **Course responsible/Department:** Anders Lunnan / IØR

Course contributor: Ivar Wergeland and others

Language: English upon request

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

Mandatory activities: Case-study, presentation of case-study

Prerequisites: Students should have a B.Sc. 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.

Teaching goals: The course aims at giving the students the ability to read, analyse and practise the fundamental principles of intellectual property rights # IPR. The students should be able to handle the fundamental theory of trade marks, 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.

Form of Exam: Final Written **Grading:** A-F

Syllabus: Will be announced at start of course

INN320 Research Methods in Entrepreneurship and Innovation

Credits: 5 **Course responsible/Department:** Anders Lunnan / IØR

Course contributor: Frode Alfnes

Language: English upon request

Start term: Autumn parallel

Terms: Autumn parallel

First time the course is offered: AUTUMN

Contents: Research strategies and research design. Quantitative research, qualitative research. Writing up research and implementation of research projects. Research in entrepreneurship and innovation. Plan for master thesis.

Teaching goals: Research strategies and design. Quantitative research, sampling, surveys, statistical analysis. Qualitative research, interviews, focus groups, qualitative data analysis. Writing up research and implementation of research projects. Research and important journals in entrepreneurship and innovation.

Form of Exam: Continuous **Grading:** Passed/ Not passed

Syllabus: Literature will be announced when the course starts.

PHI100 Examen Philosophicum

Credits: 10 **Course responsible/Department:** Terje Kvilhaug / IØR

Course contributor: Anita Leirfall

Language: Norwegian

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

Course frequency: Other - The course is offered twice each year, in January + June block and in the Autumn parallel. PHI100 and PHI101 have the same lectures. The course is taught in ENGLISH in the January + June block every second year, i.e., in 2009.

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

Teaching goals: 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.

Form of Exam: Final Written **Grading:** A-F

Syllabus: The syllabus is defined by the topics, but a specific compendium and two textbooks are recommended:

Ariansen et al.: '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 block period.

PHI101 Examen Philosophicum – Seminar

Credits: 10 **Course responsible/Department:** Terje Kvilhaug / IØR

Course contributor: Anita Leirfall

Language: Norwegian

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

Course frequency: Other - The course usually is offered twice each year, in January+June block and in the Autumn parallel. The course is taught in ENGLISH every second year, that is in 2009.

Mandatory activities: In the block period, students are required to attend at least 70% of the lectures.

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

Teaching goals: The aim is to increase critical awareness within the student's academic field, regarding such aspects as history and social context, ethics, as well as the field's 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.

Form of Exam: Continuous **Grading:** A-F

Syllabus: The syllabus is defined by the topics, but a specific compendium and two textbooks are recommended: 'Exphil II. Tekster i etikk' (Unipub, Universitetet i Oslo); Ragnar Fjelland: 'Innføring i vitenskapsteori' (Universitetsforlaget, 1999). An alternative in English will be available for the block teaching.

PHI201 Bioscience, Ethics and Environmental Philosophy

Credits: 5 **Course responsible/Department:** Terje Kvilhaug / IØR

Course contributor: Anita Leirfall

Language: Norwegian

Start term: Autumn parallel

Terms: Autumn parallel

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. Biotechnology, including genetic modification. Views of nature with anthropocentrism and biocentrism as two extremes. Ethical relevant distinction between man-made and natural environments? Which parts of nature do we wish to preserve/conservate, and what is the justification for this? 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?

Teaching goals: 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.

Form of Exam: Final Written **Grading:** A-F

Syllabus: Compendium.

PHI301 Ethics in Business

Credits: 5 **Course responsible/Department:** Terje Kvilhaug / IØR

Course contributor: Anita Leirfall and others.

Language: Norwegian

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

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

Preferred prerequisites: Examen Philosophicum

Contents: The course is currently being developed. 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.

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

Form of Exam: Continuous **Grading:** A-F

Syllabus: Selection from Crane & Matten: 'Business Ethics' (Oxford University Press, 2007).

PHI400 Philosophy of Science and Research Ethics

Credits: 10 **Course responsible/Department:** Terje Kvilhaug / IØR

Course contributor: Anita Leirfall

Language: English

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

Mandatory activities: The students must attend at least 70% of lectures and seminars.

Preferred prerequisites: Examen Philosophicum or equivalent.

Contents: Two parts:

Part I: Philosophy of science.

This part deals with both natural and social sciences. Different views will be discussed - theories, methodology, modelling and theory formation, scientific progress, realism and relativism, what is characteristic of various sciences and what is the relation between them (including reductionism and interdisciplinary potential).

Part II: Research Ethics and the Social Responsibility of Science.

This part treats general ethical theories and more specifically norms and values that govern and legitimate scientific research. The relation between society, science and technology on the one hand, and between science, politics and expertise on the other, will be discussed. The course will also focus on issues concerning bioethics and legislation as well as environmental ethics and politics.

Teaching goals: The course takes science in practice as its point of departure, i.e. science as it is carried out and its diverse ways within the social and cultural sphere. The course looks at what is specific about scientific practice - its rationality and methods in different fields, how it is influenced by the surrounding society and how it in turn has consequences for society. The objective of the course is to stimulate students to reflect critically on their own field of research and their own research projects, in particular on methodological, social, political and ethical aspects of their own scientific activity. The objective is to increase critical awareness and sense of responsibility in the student, and to make her or him more informed on questions pertaining to philosophical and ethical questions concerning science and research.

Form of Exam: Final **Grading:** Passed/ Not passed

Syllabus: The textbook is Alan Chalmers: What is this Thing called Science? (Latest edition). In addition to the textbook, each participant is supposed to study closely a selection of no less than 400 pages from a compendium of articles (or from other sources deemed equivalent).