Høgskolen i Innlandet

Studieplan 2021/2022

Master of Science in Business Administration - majoring in Business Analytics

Studiepoeng: 120

Studiets nivå og organisering

Master of Science in Business Administration, majoring in Business Analytics, is a course-based master's degree programme at Lillehammer of 120 ECTS, with a duration of two years for full-time students, and with a duration of four years for part-time students, cf. Section 3 of the "Regulations relating to master's degree requirements" laid down by the Ministry of Education and Research on 01 December 2005.

Bakgrunn for studiet

Upon completing the two-year programme, the students earn the degree Master of Science in Business Administration. Provided certain admission requirements are met, students also earn the right to use the supplementary title "Siviløkonom" (a supplementary title used in Norway and some other countries). The programme prepares students for management and research responsibilities at a high organizational level in both the private and public sectors. The programme's structure complies with the recommendations of the Universities Norway (UHR) – Economics and Administration for two-year master's programmes [1], including requirements for both academic specialization and competence.

All students completing the programme will have a high-level competence in strategic management, marketing and financial management. The programme provides the student with a versatile competence that prepares him or her for challenging positions in the industry, and for the public and private sectors as a leader, specialist or an advisor. The programme, which has a strong foundation in research-based knowledge, qualifies students for doctoral studies and a career in research.

The programme posits that the enterprise is forever faced with two central issues related to external and internal efficiency, i.e., doing the right things and doing things right.

By “doing the right things”, one questions whether the enterprise is appropriately positioned, given its competition and market developments, as well as whether collaborations in existing value constellations and systems yield the desired results. “Doing things right” focuses on achieving the vision or goals the enterprise has established for itself. This promotes a long-term strategic focus within the enterprise, making sure it is adaptable in response to ever-changing external circumstances. In short, doing the right things is a recipe for how to succeed in the market.

By “doing things right”, one focuses on the value-creation process itself—maximizing creation at the desired quality using a minimum of resources. In this process, it is important to focus on managing and controlling all processes and resources used by the enterprise in its value-creation.

To succeed, the enterprise must strike a good balance between the two; it must do the right things and do things right.

The programme provides specialized competence through its main profile—Business Analytics—which gives students specialized insights into the financial incentives and mechanisms that affect a company. Further, the programme will provide necessary competence within analytics which enables students to perform key tasks in an enterprise. With this competence, a graduate can provide analytical insights that the company can utilize to best profit from the surrounding economic environment. Some examples of analytical skills include:

- providing reports including descriptive analyses and visualisation of historical data important to the company,
- developing models to support policy makers in the company, e.g., within investment analysis, financial analysis or demand analysis and
- deciding the optimal size of the input mix in production, prices or other relevant variables in the company’s operations.

In addition, the programme will focus particularly on analytical skills in an innovative perspective, such as determining how new enterprises can be funded and analytical methods be utilised in financial decisions for entrepreneurs, and on innovation processes in general. A key aspect in the context of innovations is that decisions are made under uncertain conditions.

The programme also offers three other majors (in Norwegian): “Digital ledelse og Business Analytics”, “Markedsføringsledelse” and “Økonomistyring”. These are

described in a separate programme description.

[1] Adopted by the Universities Norway (UHR) – Economics and Administration, 6 June 2016. This plan complements relevant laws and regulations, including the Regulations Relating to Master's Degree Programme Requirements, laid down by the Ministry of Education and Research on 01 December 2005, the Regulations Relating to Standards and Criteria for Programme Accreditation and Criteria for Institutional Accreditation in Norwegian Higher Education, established by NOKUT on 25 January 2006, and the Qualifications Framework for Higher Education, cf. a letter from the Ministry of Education and Research, dated 21 December 2015.

Læringsutbytte

Successful candidates will have acquired the following overall learning outcomes, categorized as knowledge, skills and general competence by the end of the programme.

Knowledge

By the end of the programme, the candidate has:

- advanced knowledge of strategic management, marketing and management accounting seen in a service perspective and will be able to combine this knowledge to achieve a better understanding of firms value creation and organizational management (K1),
- specialized insight into a business' economic growth through detailed knowledge of theories, models and methods used within Business Analytics and, in combination with economic competence, turn this into an essential understanding of the business' tasks, situations and environment (K2),
- thorough knowledge of scientific theories, research processes and methods customized to issues within Business Analytics such as making decisions under uncertainty (K3) and

- the knowledge of new topics within the disciplines of Business Administration and can analyse academic issues based on the history, traditions, characteristics and foundation of the society through Business Analytics (K4).

Skills

The candidate can:

- analyse and assess different sources of information, and analyse empirical data to structure and formulate academic arguments with the goal of planning long term strategies and efficiency within management and control (S1),
- analyse and relate critical to existing theories, methods and interpretations within strategic management, marketing and management accounting and control (S2),

- utilize relevant research methods independently to facilitate business economic growth by the development of strategies, management systems, market relations and new business opportunities (S3),
- relate the issue at hand, context and data to the choice of method and carry out an independent, limited research or development project under supervision and in line with current research ethics norms within Business Analytics (S4) and
- apply the analytical perspective in practical and theoretical solutions within Business Analytics (S5).

General competence

The candidate can:

- analyse relevant academic, professional and research ethical issues, and relate to ethical issues tied to business' strategic and tactical choices (G1),
- apply achieved knowledge and skills in performing management tasks, and conduct advanced studies, analyses and projects, alone and in collaboration with others (G2),
- convey comprehensive, independent work both orally and in writing, and master the forms of expressions that apply within economics and management (G3),
- communicate about professional issues, analyzes and conclusions in business administration with stakeholders and the general public and has the prerequisites to work in an international context (G4) and

- take advantage of opportunities that lie in digital development and contribute to business change and innovation processes (G5).

Målgruppe

The target group for this programme are individuals with a bachelor's degree or another equivalent background, with a specialization in Economics and Business Administration, who want a strong second degree in Business Administration. This programme is

suitable for students who want to qualify for administrative or research and development positions at a high organizational level in private or public sectors, or who want to complete a doctorate and pursue a career in research.

Relevans for arbeidsliv og videre studier

Upon completion of the programme, successful students earn the degree Master of Science in Business Administration, or in Norwegian, “Master i økonomi og ledelse”.

The programme provides the student with a versatile competence that prepares him or her for challenging positions in the industry, such as a leader, a specialist or an advisor in public and private sectors. Upon completion of the programme, students qualify for the PhD programme “Innovation in Services in the Public and Private Sectors” at Inn University and for other PhD programmes within Business Administration. Acceptance to doctoral programmes are handled by the various institutions offering such programmes.

Opptakskrav og rangering

An eligible student must have a bachelor’s degree or an education recognized as being equivalent to a Norwegian bachelor degree (a minimum of 180 ECTS), specializing in Business Administration. The specialization must consist of a minimum of 120 ECTS within Business Administration. The programme will comply with requirements for at least 102.5 ECTS of the following subjects:

- Business Analysis (30 ECTS): Financial Accounting, Financial Management, Investment and Financing
- Administrative subjects (30 ECTS): Marketing, Organization and Management, Business Strategy
- Economics (15 ECTS): Macroeconomics, Microeconomics
- Methods (20 ECTS): Business Mathematics, Business Statistics, Research Methods for Social Sciences
- Ethics, Social Responsibility and Sustainability (7.5 ECTS)

To reach 120 ECTS in total within Business Administration, the last subjects must be within Business Analysis, Administrative subjects, Economics or Methods.

All the subcategories must be fulfilled. If you have completed a bachelor’s degree in Business Administration from a Norwegian institution, these are fulfilled.

Your average grade must be C or better.

(Note that the last bullet point in the list above was included in the revised plan from

November 2018. This means that for students finishing their bachelor's programmes who have not implemented this new requirement, can still, for some time ahead, apply and be admitted to the master's programme.)

Up to 50% of the places at the programme are reserved for Norwegian applicants.

English language requirements:

Applicants must provide documentation of their proficiency in English to a certain specified level.

The English language requirements apply to all, except to applicants native to UK, Canada, Ireland, New Zealand, Australia or the Nordic countries, who are not required to document any language proficiency.

You will find the list of accepted courses and minimum scores accepted here.

If you are not a Norwegian citizen, a copy of your passport must be provided with your application.

Arbeids- og undervisningsformer

For students actively working on problems relevant to the field, the programme promotes student ownership in the learning process and an approach to studying that is transferable to the students' future careers.

Teaching is based on a combination of lectures, assignments, case studies and discussions. In the Method subjects, practical exercises are implemented to teach the students various software used in Business Analytics. Various forms of ICT-supported teaching are an integral part of the educational toolbox.

Case studies are used as a method to achieve learning outcomes such as applying theories and methods on practical problems and displaying training skills on reflection

and analysis. The term “case” has a broad meaning here and can vary from real to constructed examples for case studies developed specifically for the analyses of complex issues.

The programme requires that students spend time to work individually on assignments and on the syllabus’ literature. Through group activities, their skills on cooperation, presentation and constructive feedback are developed. Group activities can be through both digital communication and physical meetings. All subjects have mandatory hand-ins, through written, exercise and/or practical tasks.

Compulsory coursework requirements ensure that students acquire the specified learning outcomes. These coursework requirements serve to provide the individual student with continuous academic progress throughout the semester and is a basis for reflection, dialogue and discussion of various problems during sessions. The coursework requirements include written assignments and oral presentations. The various forms of assessment and coursework requirements improve the student’s capacity for independent work, ability to work with others, and oral and written communication skills.

The programme consists of 120 ECTS and the workload for a full-time student is estimated to be between 1500–1800 work hours per year. These include personal study time and organized work for the programme.

Organisation of teaching

The programme starts with a joint compulsory start-up event. Students will work in groups on cases. The purpose of the start-up event is to introduce the Business Analytics programme to them and to secure a good student environment and culture.

Each subject in the programme consists of approximately 30 hours of teaching. Some subjects may have some additional hours of teaching, e.g., for subjects which require training in software tools. Most of the teaching will be on campus, but some subjects may also use digital teaching methods. Each subject requires that the student attend 50% of the classes to be allowed to take the exam in the subject.

Full time students: In each semester, the teaching will be carried out between 8–10 weeks across the semester, where each of these weeks will consist of 2–3 days of teaching.

Part time students: In each semester, the teaching will be carried out between 4–5 weeks across the semester, where each of these weeks will consist of 2–3 days of teaching.

The first semester offers an introduction to sources and referencing, searching for relevant literature, lines of argumentation and discussion, teamwork, presentation

techniques and the use of electronic tools used in the programme.

Praksis

Vurderingsformer

The programme makes use of various forms of assessment to test the student's skills and knowledge, both individually and as a part of a group, including through the use of written examinations and larger assignments over time. The different forms of assessments were selected on the basis of the nature of the courses with an overall goal of ensuring that the general learning outcomes for the programme are properly assessed.

The following forms of assessment are used in the programme:

- Individual written examination, 4 hours.
- Individual home examination, 2 days.
- Individual home examination, 1 week.
- Semester paper, individual and in groups of up to three students.

- Oral examination.
- A master's thesis, in groups of up to two students (or, in rare cases, individually), with a final oral examination.

(Individual written exams can be under attendance or a home exam. Further, all written exams can also be digital.)

Forskningsbasert undervisning

The programme has several approaches to research-based teaching:

Research-based content

This is based on a combination of conceptual and empirical scientific papers and other research literature used in the lectures. The academic staff own relevant publications that are included in the syllabus.

Research-based teaching focusing on research processes and scientific thinking

Early in the first semester, students will go through training in how scientific papers are

written. For the different subjects, the students will write content according to scientific standards. The academic staff and their research partners will give the students insight into their own research by presenting ongoing research. The students' understanding of the research processes and methods will be further developed through method subjects and the work on the master's thesis. The academic staff also consist of PhD students who will share their experiences from working within research.

Research-based student activities

A discussion of different theoretical perspectives, methods and research results are implemented in the different subjects and will have a strong focus in lectures and exercises. Through working on mandatory hand-ins, exams and term papers and discussions on lectures, the students will discuss conceptual and practical issues based on research results.

Research-based student inclusion in investigative learning processes

Some of the subjects have quite extensive term papers structured as a research process. In writing the master's thesis, the students will conduct an independent research project within Business Analytics under the supervision of a supervisor. The programme is embedded into the department's research strategy and, thus, also the research area. Hence, master's students can be involved in the department's research activities while working on their thesis. These students may also be engaged as scientific assistants.

Internasjonalisering

Internationalisation plays a key role in the programme within Business Analytics. The programme is meant to provide an international environment for both Norwegian and foreign master's students within Business Analytics. The programme is organised for both foreign and Norwegian students who are to be admitted to the two-year full-time master's programme.

International relationships affect business' conditions such as resources, markets, networks and relations. To provide the students with an international environment, all subjects and communication with the students, written and oral, will be in English.

Students may complete one semester in an exchange programme abroad in the third semester. It will also be possible for them to complete an individual course (elective course) in the form of summer courses as exchange students.

Students completing courses at institutions abroad must ensure that their selected courses contribute to the overall learning outcome of the programme. Students

planning to include courses completed from institutions abroad toward their degree, must obtain advance approval of their planned exchange from the profile coordinator on the basis of course descriptions and reading lists from the foreign institution, as well as statements from course coordinators on the relevant subjects at Inland Norway University of Applied Sciences. The following criteria are to be met for the foreign exchange to be approved:

- Total ECTS for the semester must equal 30 ECTS or more at the second cycle level.
- Sufficient overlap in content and scope of compulsory courses must be achieved.
- The student must complete the same number of ECTS within the programme's main and supplementary profiles as the total specified in the programme description.

Studiets oppbygging og innhold

The programme consists of four compulsory subjects that provide students with a strong foundation in Business Administration. Strategy and Leadership, and Marketing Theory are two subjects that teach the basics of management while Economics of Organizations and Management Accounting and Control teach the basics of economics.

In accordance with Universities Norway (UHR) – Economics and Administration's recommendations for two-year master's degree programmes, this programme offers both comprehensive and in-depth knowledge, consisting of a specialization within Business Analytics.

Major subjects, which are compulsory in the programme, consist of 37.5 ECTS, and compulsory method subjects consist of 15 ECTS. Major subjects, which are electives, consist of 15 ECTS. Minor subjects, which are compulsory, consist of 15 ECTS, and minor subjects, which are electives, consists of 7.5 ECTS. All subjects consist of 7.5 ECTS. The master's thesis within Business Analytics will account for 30 ECTS.

Kull

2021

Emnestruktur:

Emnekode	Emnets navn	S.poeng	O/V *)	Studiepoeng pr. semester			
				S1(H)	S2(V)	S3(H)	S4(V)
xxx1	Economics of Organizations	7,5	O	7,5			
xxx2	Management Accounting and Control	7,5	O	7,5			
xxx3	Strategy and Leadership	7,5	O	7,5			
xxx4	Marketing Theory	7,5	O	7,5			
xxx5	Data protection and Ethics	7,5	O		7,5		
xxx6	Applied Data Analytics	7,5	O		7,5		
xxx7	Economics of Business and Innovation	7,5	O		7,5		
xxx8	Business Performance	7,5	O		7,5		
xxx9	Business Forecasting	7,5	V			7,5	
xxx10	Financing Innovative Ventures	7,5	V			7,5	
xxx11	Financial Modelling	7,5	V			7,5	
xxx12	Behavioural Analytics	7,5	V			7,5	
xxx	Master Thesis	30	O				30
			Sum:	30	30	30	30

*) O - Obligatorisk emne, V - Valgbare emne

Emneoversikt

xxx1 Economics of Organizations

Emnekode: xxx1

Studiepoeng: 7,5

Semester

Autumn

Språk

English

Krav til forkunnskaper

None

Læringsutbytte

Knowledge

Upon completion of the course, the student will have:

- profound knowledge on theories on how economical transactions can be coordinated through markets, organisations and networks (K1),
- profound knowledge on economic theories that explain business' boarders, and why some financial transactions are in a market while others are within the business (K2),
- profound knowledge on how organisational economics can explain competitive advantages based on the business' resources, and how businesses can co-create, change and expand through relations and
- an overview of the history of organisational economics and its theoretical

contribution to strategic and financial management (K4).

Skills

Upon completion of the course, the student can:

- apply and relate critical organisational economics and research results within this field (f1) and
- structure and formulate academic arguments on organisation and management, and suggest solutions to practical and theoretical problems based on independent analysis (f2).

General competence

Upon completion of the course, the student can:

- identify ethical issues and discuss corporate social responsibility in relation to the financial organisation (g1).

Innhold

The following topics are covered.

- Neoclassical theory
- Transaction costs, bounded rationality and opportunism
- Vertical integration, risk diversification, incentives, contracts and trust
- Resource based theories and dynamic capabilities
- Behavioural economic theory

- Agent theory
- Actor/player- network theory
- Institutional theory
- Inter-organisational theory
- Economic organisation, ethical issues and social responsibility

Arbeids- og undervisningsformer

The following teaching methods are used.

- Lectures

- Problem solving
- Tutorial videos
- Case studies

Obligatoriske krav som må være godkjent før eksamen kan avlegges

- Students must pass three out of four mandatory course requirements to be allowed to take the exam.
- 50% attendance in classes is required.

Eksamen

- 48-hours individual home exam.

Tillatte hjelpemidler til eksamen

- All resources.

Ansvarlig fakultet

Handelshøgskolen Innlandet - Fakultet for økonomi og samfunnsvitenskap

xxx2 Management Accounting and Control

Emnekode: xxx2

Studiepoeng: 7,5

Semester

Autumn

Språk

English

Krav til forkunnskaper

None

Læringsutbytte

Knowledge

Upon completion of the course, the student will have:

- profound knowledge on traditional approaches to management accounting and control (K1),
- profound knowledge in the criticism of traditional management models (K2),
- profound knowledge on the transition from traditional management accounting to innovative models on management, control and performance measurement (k3),
- profound knowledge on the theoretical foundation and properties in economic and business management (K4),
- profound knowledge about the connection between management models and strategies for implementation (k5) and

- the skills to discuss and analyse developments from traditional management accounting to business management (k6).

Skills

Upon completion of the course, the student can:

- relate critically to theories in management accounting (f1) and
- analyse basic preconditions in management accounting and control in relation to the needs in business' current situations (f2).

General competence

Upon completion of the course, the student can:

- identify ethical issues within management accounting and control (g1) and
- communicate how management models can contribute to business' strategic implementation (g2).

Innhold

The following topics are covered.

- Traditional approaches to management accounting and control
- The criticism against traditional economic management models
- Overview of the latest models for economic and business management

- The need for holistic perspectives in management accounting as a foundation for developing business management
- Performance measurement
- Business management and management philosophy
- Management control as part of business management
- Business management, organisational structure and strategy implementation

- Digitalisation, management and control

Arbeids- og undervisningsformer

The following teaching methods are used.

- Lectures

- Problem solving
- Tutorial videos
- Case studies

Obligatoriske krav som må være godkjent før eksamen kan avlegges

- Students must pass three out of four mandatory course requirements to be allowed to take the exam.
- 50% attendance in classes is required.

Eksamen

- 48-hours individual home exam.

Tillatte hjelpemidler til eksamen

- All resources.

Ansvarlig fakultet

Handelshøgskolen Innlandet - Fakultet for økonomi og samfunnsvitenskap

xxx3 Strategy and Leadership

Emnekode: xxx3

Studiepoeng: 7,5

Semester

Autumn

Språk

English

Krav til forkunnskaper

None

Læringsutbytte

Knowledge

Upon completion of the course, the student will have:

- profound knowledge of the term “strategy” and key elements within strategic management (k1),
- profound knowledge of the basic premise for an organisation to create endorsement for business’ fundamental ambitions and visions (k2),
- advanced knowledge on how each business and its network can identify, develop and utilize the resources that we distribute strategically (k3),
- profound knowledge of the board, head management and other stakeholders’ roles in strategic development (k4) and
- knowledge of the perspectives on strategy as an academic field (k5).

Skills

Upon completion of the course, the student can:

- relate critical to internal and external factors that affect the strategic outcome in developing an overall and detailed coherent strategy for the business (f1),
- apply instruments to defend the best possible market and competition positions for the business and can strategize the design of management systems to implement sub strategies (f2) and
- understand the importance of methodical and analytical approaches to strategic questions within a business culture (f3).

General competence

Upon completion of the course, the student can:

- convey problems from ethics, attitudes and social responsibilities to design the foundation for a culture of reflection where these attitudes are debated and tested against practical challenges in the business (g1),
- know the principles to convey the business strategy internally to the employees and externally to the stakeholders that, in a broad sense, creates the conditions for the business operations (g2),
- understand the necessity of developing a safe culture in the organisation and its consequences, such as converting disagreements and constructive arguments on strategic choices to a foundation for rethinking and innovative processes (g3),

- refer to and display the complex combination of knowledge, skills, attitudes and abilities to act which is needed in management on all levels in comprehensive strategic developing processes in the organisation (g5) and
- display the prerequisites to turn thoughts about the most important challenges from the business into action, and can implement strategy and development processes within the business.

Innhold

The following topics are covered.

- Theoretical development perspectives on strategy as an academic field
- Strategic processes – different perspectives
- Digital influence on strategic processes
- The business' market and competition position
- Generic competition strategies

- Competitor and environmental analyses
- Scenario development and analysis
- Network theories and network strategies—collaboration or competition?

- Internal analysis and recourse-based theory
- Development of structure, business culture and competence which support the business' goals

- Efficiency goals, incentive systems, measurement parameters, rewards on individual and group levels
- Social responsibilities and normative and empirical ethics

Arbeids- og undervisningsformer

The following teaching methods are used.

- Lectures
- Problem solving
- Tutorial videos
- Case studies

Obligatoriske krav som må være godkjent før eksamen kan avlegges

- Students must pass three out of four mandatory course requirements to be allowed to take the exam.
- 50% attendance in classes is required.

Eksamen

- 7 days individual home exam.

Tillatte hjelpemidler til eksamen

- All resources.

Ansvarlig fakultet

Handelshøgskolen Innlandet - Fakultet for økonomi og samfunnsvitenskap

xxx4 Marketing Theory

Emnekode: xxx4

Studiepoeng: 7,5

Semester

Autumn

Språk

English

Krav til forkunnskaper

None

Læringsutbytte

Knowledge

Upon completion of the course, the student will have:

- profound knowledge on the background and perquisition of marketing theory (k1),
- profound knowledge on how the understanding, theories and dominant thinking within marketing has changed over time and on the current standing of marketing (k2),

- profound knowledge on how the business' market functions, and how customer behaviour is affected by market orientation, network and relations (k3),
- the ability to contribute to systematically and scientifically increasing knowledge on the business marketing function (k4) and
- profound knowledge about the market and how social challenges and conditions the business faces affects the development within marketing (k5).

Skills

Upon completion of the course, the student can:

- critically analyse and relate to the description of marketing functions, theoretical positions and challenges in the research literature (f1),
- analyse existing marketing theory and interpret and apply this in the independent work of practical and theoretical problem solving (f2) and
- identify and conduct activities that increase the business value (f3).

General competence

Upon completion of the course, the student can:

- critically reflect on the importance of marketing for businesses and society (g1) and
- convey knowledge on marketing conditions in writing (g2).

Innhold

The following topics are covered.

- Market philosophy and the dominating market perspectives
- Markets, market surroundings and business conditions
- Customer behaviour
- Market strategy and the organisation of the marketing
- Market orientation and results

- Relations and network

Arbeids- og undervisningsformer

The following teaching methods are used.

- Lectures

- Problem solving
- Tutorial videos
- Case studies

Obligatoriske krav som må være godkjent før eksamen kan avlegges

- Students must pass three out of four mandatory course requirements to be

allowed to take the exam.
- 50% attendance in classes is required.

Eksamen

- A four-hour individual exam under attendance (60%).
- Term paper based on case (40%).

Tillatte hjelpemidler til eksamen

- A calculator that meets the requirements of the master's programme.

Ansvarlig fakultet

Handelshøgskolen Innlandet - Fakultet for økonomi og samfunnsvitenskap

xxx5 Data protection and Ethics

Emnekode: xxx5

Studiepoeng: 7,5

Semester

Spring

Språk

English

Krav til forkunnskaper

None

Læringsutbytte

Knowledge

Upon completion of the course, the student can:

- identify the risk of collecting and using data,
- identify and define special categories of personal data (formerly known as “sensitive data”),
- relate issues on using data to the relevant regulations that are in force and
- understand how to secure data in relation to regulations and ethical considerations.

Skills

Upon completion of the course, the student can:

- employ data in analysis within the current regulations and ethical standards,
- differentiate between different types of data,

- design analysis using data such that it is in line with desired ethical standards and within regulations and
- assess the risk of using data.

General competence

Upon completion of the course, the student can:

- question the use of data and methods in various businesses and organizations,
- compose suggestions for securing data in their collection, analysis and presentation,
- propose changes in businesses and organizations to improve data security
- manage data within relevant regulations and desired ethical standards.

Innhold

This course provides students with a solid foundation within data protection and ethics. The following topics are covered.

- Classifications of data
- The relevant regulations
- Ethical considerations when applying data

- Combining data and the effect on classification, application and security
- Data security

Arbeids- og undervisningsformer

The following teaching methods are used.

- Lectures
- Problem solving
- Tutorial videos
- Case studies

Obligatoriske krav som må være godkjent før eksamen kan avlegges

- Students must pass three out of four mandatory course requirements to be allowed to take the exam.

- 50% attendance in classes is required.

Eksamen

- 4-hour individual exam under attendance.

Tillatte hjelpemidler til eksamen

- None.

Ansvarlig fakultet

Handelshøgskolen Innlandet - Fakultet for økonomi og samfunnsvitenskap

xxx6 Applied Data Analytics

Emnekode: xxx6

Studiepoeng: 7,5

Semester

Spring

Språk

English

Krav til forkunnskaper

None

Læringsutbytte

Knowledge

Upon completion of the course, the student can:

- describe the process of gathering and sampling data from various data sources,
- define data types and structures and explain their uses in data analysis,
- define conditional statements and loops and explain their use in data analysis,
- interpret selected descriptive statistics and data visualizations,

- explain elements of algorithmic thinking and
- discuss key findings from research on the relation between business/data analytics and business value.

Skills

Upon completion of the course, the student can:

- access and collect local and web-based data,

- create and manipulate data sets and shape them for further analyses,
- analyse the prepared data using descriptive statistics, visualizations, regression models and various business intelligence tools for data analysis and
- summarize key insights from data analyses into user-friendly reports.

General competence

Upon completion of the course, the student can:

- plan and manage data analytics projects which involve the topics covered in the course and
- recommend computing tools and techniques for efficient implementation of such projects.

Innhold

This course provides students with a solid foundation within applied data analytics and programming. The following topics are covered.

- Data sources and data types
- Data organization and descriptive statistics
- Data visualization
- Probability and statistical interference
- Linear regression

- Business intelligence tools for data analysis

Arbeids- og undervisningsformer

The following teaching methods are used.

- Lectures

- Problem solving sessions
- Tutorial videos
- Case studies
- Quizzes

Obligatoriske krav som må være godkjent før eksamen kan avlegges

- Students must pass three out of four mandatory course requirements to be allowed to take the exam.
- 50% attendance in classes is required.

Eksamen

A four-hour individual exam under attendance.

Tillatte hjelpemidler til eksamen

- Open book: The use of all software and programming tools used in the course and installed on the student's computer is permitted.

Ansvarlig fakultet

Handelshøgskolen Innlandet - Fakultet for økonomi og samfunnsvitenskap

xxx7 Economics of Business and Innovation

Emnekode: xxx7

Studiepoeng: 7,5

Semester

Spring

Språk

English

Krav til forkunnskaper

None

Læringsutbytte

Knowledge

Upon completion of the course, the student can:

- describe the theories and empirical methods for analyzing business innovation,
- explain the economics of different stages of innovation processes from basic research to commercialization,
- recognize firms' considerations and trade-offs in innovation investment decisions, including responsible innovation issues,

- describe and identify the relationships between characteristics of sectors and products (e.g., firm concentration, value chain organization, product differentiation, etc.) and innovation incentives and behavior,
- discuss the role of innovation and policies in sustainable development, including global climate and environmental challenges and
- review the most important findings from research of some topics from the course.

Skills

Upon completion of the course, the student can:

- analyse the innovation processes and decide whether they are risky investment projects,
- investigate the relationships between market structure characteristics and innovation,
- estimate and interpret relationships between firms' economic performance in terms of productivity, profitability and innovation using econometric techniques on real data,
- formulate economic and financial advice for the management of a firm's innovation processes and
- formulate advice for policy makers and the public sector in designing regulations and instruments that can influence R&D, innovation and productivity of firms, irrespective of whether they were initially intended for these very purposes or were designed primarily for other purposes.

General competence

Upon completion of the course, the student can:

- manage innovative possesses based on state-of-the-art theories and methods and
- use analytical tools for firms making decisions on investments in innovation or when they significantly change their business

Innhold

The following topics are covered.

- Microeconomics of technical change
- Market failure (public goods, externalities, asymmetric information, etc.)
- Monopoly power and intellectual property rights

- Innovation and productivity growth
- Innovation and profitability
- Innovation and sustainability
- Agglomeration economies
- Geography of innovation

- The diffusion of new technology
- Energy and natural resource markets

Arbeids- og undervisningsformer

The following teaching methods are used.

- Lectures
- Seminars that also include student presentations and discussions. Each student will be required to give at least one seminar presentation.
- Self-study

Obligatoriske krav som må være godkjent før eksamen kan avlegges

- Students must pass three out of four mandatory course requirements to be allowed to take the exam.
- 50% attendance in classes is required.

Eksamen

- Term paper (80%).
- Oral defence / examination (20%).

Tillatte hjelpemidler til eksamen

- Term paper: All resources.
- Oral defence / examination: None.

Ansvarlig fakultet

Handelshøgskolen Innlandet - Fakultet for økonomi og samfunnsvitenskap

xxx8 Business Performance

Emnekode: xxx8

Studiepoeng: 7,5

Semester

Spring

Språk

English

Krav til forkunnskaper

None

Læringsutbytte

Knowledge

Upon completion of the course, the student can:

- describe the factors used to measure the performance of a business,
- distinguish between different tools and methods used in analyzing data,
- discuss the properties of different methods in relation to the data available,
- report the results from performance analysis and
- describe relevant actions that should be taken in a business to improve the performance.

Skills

Upon completion of the course, the student can:

- identify relevant data to perform analysis,
- define determinants and/or environmental variables to capture heterogeneity,

- conduct productivity and efficiency analyses using parametric or non-parametric methods,
- use indices in measuring business' performances,
- perform different types of benchmarking analysis and
- interpret the results from business performance analysis.

General competence

Upon completion of the course, the student can:

- design and conduct a proper analysis to measure business performance relevant for the current situation,
- assess the results from the performance analysis to recommend suitable actions to improve performance and
- propose changes in business' operations to improve performance.

Innhold

The following topics are covered.

- Collecting, adjusting and using data
- Identifying the main inputs and outputs

- The use of determinants to describe changes and differences in business performance
- The use of environmental variables to describe heterogeneity between firms
- Efficiency analysis using both parametric and non-parametric methods
- Optimization methods
- Productivity analysis and the use of indices

- Benchmarking

Arbeids- og undervisningsformer

The following teaching methods are used.

- Lectures

- Problem solving
- Tutorial videos
- Case studies

Obligatoriske krav som må være godkjent før eksamen kan avlegges

- Students must pass three out of four mandatory course requirements to be allowed to take the exam.
- 50% attendance in classes is required.

Eksamen

- 48-hour individual home exam.

Tillatte hjelpemidler til eksamen

- All resources.

Ansvarlig fakultet

Handelshøgskolen Innlandet - Fakultet for økonomi og samfunnsvitenskap

xxx9 Business Forecasting

Emnekode: xxx9

Studiepoeng: 7,5

Semester

Autumn

Språk

English

Krav til forkunnskaper

Recommended: Applied Data Analytics or an equivalent course

Læringsutbytte

Knowledge

Upon completion of the course, the student can:

- discuss the importance and potential business value of accurate forecasts within a range of industries,
- describe the key findings from recent research on the accuracy of various forecasting techniques and combinations of techniques,
- identify various time series components from visual inspection and descriptive and modelling outputs,
- describe how the various forecasting techniques generate predictions and how accuracy can be assessed and
- review the most important findings from research within some topics of the course.

Skills

Upon completion of the course, the student can:

- analyse time series data and its various components using the techniques covered in the course,
- evaluate the performance of various forecasting techniques by calculating a range of accuracy measures,
- classify categorical outcomes,

- evaluate the classification accuracy using confusion matrix,
- perform data reduction using principal component analysis,
- estimate forecasts using machine learning techniques and
- estimate and calculate forecasts based on combinations of individual techniques.

General competence

Upon completion of the course, the student can:

- plan and manage forecasting projects which involve the topics covered in the course,
- recommend forecasting techniques that are suited to a range of business applications and
- report general findings from the comparison of forecasting techniques on specific business problems.

Innhold

The following topics are covered.

- The business value of forecasting
- Time series components (trend, seasonality, cycles and random movements)
- Loss functions and forecast accuracy

- Moving averages, exponential smoothing and regression-based forecasting methods
- Causal forecasting methods
- Principal component analysis
- Statistical-/ machine learning methods
- Forecast combinations and forecast optimality

Arbeids- og undervisningsformer

The pedagogic approach is fully interactive and illustrated with relevant data from business, economics and finance. The focus will be more on the empirical implementation of the techniques than on their theoretical underpinnings. The

techniques will be illustrated with several empirical applications, and then implemented using state-of-the-art software.

The following teaching methods are used.

- Lectures

- Problem solving sessions
- Tutorial videos
- Case studies
- Quizzes

Obligatoriske krav som må være godkjent før eksamen kan avlegges

- Students must pass three out of four mandatory course requirements to be allowed to take the exam.
- 50% attendance in classes is required.

Eksamen

- 48-hour individual home exam.

Tillatte hjelpemidler til eksamen

- All resources.

Ansvarlig fakultet

Handelshøgskolen Innlandet - Fakultet for økonomi og samfunnsvitenskap

xxx10 Financing Innovative Ventures

Emnekode: xxx10

Studiepoeng: 7,5

Semester

Autumn

Språk

English

Krav til forkunnskaper

None

Læringsutbytte

Knowledge

Upon completion of the course, the student can:

- explain the guiding principles for financial decision making for new ventures,
- review the important elements of financing innovative start-ups and small businesses,
- describe the most important sources in the financing of new ventures,
- describe the basic principles of new venture valuation,
- discuss how to develop an integrated innovative business strategy and account for uncertainty and dynamic aspects and

- demonstrate the influences of risk and uncertainty on new venture success and investment performance.

Skills

Upon completion of the course, the student can:

- forecast revenues for a new venture and, subsequently, cash flows from operations,
- use simulation in business planning under uncertainty,

- use decision trees and analyze real options in strategic planning,
- estimate how much money a venture needs and at what point in time and
- value a new venture using several approaches and identify the pros and cons of each.

General competence

Upon completion of the course, the student can:

- advise and assist start-ups and small businesses that play a key role in innovation and
- compose plans for funding and strategies for entrepreneurs.

Innhold

The following topics are covered.

- New venture financing
- Venture capital
- New venture strategy and real options
- Developing business strategy using simulation
- Methods of financial forecasting

- Assessing financial needs
- Foundations of new venture valuation
- Valuation in practice

Arbeids- og undervisningsformer

The following teaching methods are used.

- Lectures
- Seminars that also include student presentations and discussions. Each student will be required to give at least one seminar presentation.
- Self-study

Obligatoriske krav som må være godkjent før eksamen kan

avlegges

- Students must pass three out of four mandatory course requirements to be allowed to take the exam.
- 50% attendance in classes is required.

Eksamen

- 48-hour individual home exam.

Tillatte hjelpemidler til eksamen

- All resources.

Ansvarlig fakultet

Handelshøgskolen Innlandet - Fakultet for økonomi og samfunnsvitenskap

xxx11 Financial Modelling

Emnekode: xxx11

Studiepoeng: 7,5

Semester

Autumn

Språk

English

Krav til forkunnskaper

None

Læringsutbytte

Knowledge

Upon completion of the course, the student can:

- review the characteristics of a good risk and return model,
- describe and compare models for measuring market risk and return,
- explain the principles of portfolio management,
- review various debt, equity and hybrid financing options available to firms,

- summarize the main financial risk management instruments,
- explain key concepts of the term “structure of interest rates” and
- review the most important findings from research within some topics in the course.

Skills

Upon completion of the course, the student can:

- use simulations to model unknown multi-variate distributions,
- measure the risk of portfolios using a number of different approaches/measures,
- value a firm and its equity using different valuation methods,
- manage financial risk,
- price futures, options and other derivatives in accordance with the no-arbitrage principle,

- apply Monte Carlo simulation to compute option prices,
- implement trading strategies and
- demonstrate appropriate numeracy skills by doing applied research.

General competence

Upon completion of the course, the student can:

- advise and assist firms in their financing decisions,
- compose plans for funding and strategies for firms,
- assess, evaluate and apply the key features of different derivative/risk management instruments and
- debate findings from research on financial modelling with peers.

Innhold

The following topics are covered.

- Risk portfolio: Theory and risk diversification, CAPM, empirical tests of EMH and CAPM
- Capital structures: Type of financing, optimal financial mix
- Valuation: Principles and practice

- Risk management: Forwards, futures and options
- Modelling volatility and correlation: Implied volatility, realized volatility and correlation, volatility forecasting (ARCH, GARCH, HAR-RV), VaR forecasting (including the use of quantile regression)

Arbeids- og undervisningsformer

The following teaching methods are used,

- Lectures
- Exercise sessions
- Tutorial videos

- Case studies
- Quizzes

Obligatoriske krav som må være godkjent før eksamen kan avlegges

- Students must pass three out of four mandatory course requirements to be allowed to take the exam.
- 50% attendance in classes is required.

Eksamen

- 4-hour individual exam under attendance.

Tillatte hjelpemidler til eksamen

- All resources.

Ansvarlig fakultet

Handelshøgskolen Innlandet - Fakultet for økonomi og samfunnsvitenskap

xxx12 Behavioural Analytics

Emnekode: xxx12

Studiepoeng: 7,5

Semester

Autumn

Språk

English

Krav til forkunnskaper

(recommended: Applied Data Analytics or an equivalent course

Læringsutbytte

Knowledge

Upon completion of the course, the student can:

- differentiate between the economic agent/decision maker in standard economics and the economic agent/decision maker within behavioural economics,
- explain how selected behavioural models of decision-making works and differs from the expected utility theory in standard economics,
- give examples of behavioural research evidence from academia and within business, economics and finance and

- summarize and critically assess the main findings of empirical research on behavioural evidence within business, economics and finance.

Skills

Upon completion of the course, the student can:

- plan a study using an experimental design,
- design and conduct an experimental study (e.g., a survey experiment) aiming to shed light on a causal question,

- analyse quantitative data from experimental designs and/or other data sources reflecting people's actual preferences, decision processes and choices and
- demonstrate professional reporting and writing skills by preparing a short academic paper of high quality on the topics covered in the course.

General competence

Upon completion of the course, the student can:

- complete a research project built on the analysis of behavioural evidence,

- debate findings from research on behavioural evidence with peers and
- critically assess the conclusions of prior behavioural research.

Innhold

The following topics are covered.

- Introduction: Studying behaviour as it is—and not as it should be—according to standard (i.e., normative) economic theory
- Foundations of behavioural economic analysis: A non-technical review of key concepts (e.g., bounded rationality) and empirical evidence from business, economics and finance
- The logic of experimental designs
- Supervised learning techniques (classification: logistic regression and related techniques)
- Unsupervised learning techniques (factor/cluster analysis and related techniques)

- Text mining and sentiment analysis
- Academic research project which involves data collection, analyses and reporting

Arbeids- og undervisningsformer

The use of real life data from a range of decision situations (e.g., experiments, transaction data on purchases, web browsing data, online gaming data on user trends and preferences) and the use of experimental research designs play a key role in the course. The following teaching methods are used.

- Lectures
- Tutorial videos
- Research-based teaching
- Case studies
- Project work in teams

Obligatoriske krav som må være godkjent før eksamen kan avlegges

- Students must pass three out of four mandatory course requirements to be allowed to take the exam.
- 50% attendance in classes is required.

Eksamen

- Group project (two students per group): The students shall plan, prepare and execute an experimental study (e.g., a survey experiment). The data collected shall be analysed and reported in a final written academic report.

Tillatte hjelpemidler til eksamen

- All resources.

Ansvarlig fakultet

Handelshøgskolen Innlandet - Fakultet for økonomi og samfunnsvitenskap

xxx Master Thesis

Emnekode: xxx

Studiepoeng: 30

Semester

Spring

Språk

English

Krav til forkunnskaper

Students must pass all required courses in the master's programme before submitting the thesis.

Læringsutbytte

Knowledge

Upon completion of the course, the student will have:

- specialized empirical and theoretical knowledge in an area related to problems under the programme's main profile (k1),
- advanced knowledge of theoretical and methodological approaches that highlight the student's chosen problem, which is relevant for the main profile (k2) and
- the ability to apply his or her knowledge to new areas within the main profile (k3).

Skills

Upon completion of the course, the student can:

- analyse and critically evaluate various sources of information and apply these in structured academic arguments, as well as define precise, researchable problems

(s1),
- analyse existing theories, methods and interpretations under the main profile (s2),
- apply relevant methods for research and academic development, enabling him or her to carry out studies in accordance with scientific principles (s3),
- carry out an independent, limited research or development project in accordance with ethical guidelines for research (s4) and
- reflect on and discuss central theoretical scientific dilemmas (s5).

General competence

Upon completion of the course, the student can:

- display familiarity with ethical problems and awareness of the requirements for honesty in scientific work (g1),
- complete a comprehensive research and development project, review scientific work and constructively contribute to discussions in a scientific forum (g2) and
- communicate the problems and results of the master's thesis both orally and in writing (g3).

Innhold

The master's thesis is a research report completed at the very end of the programme, and it must comply with ordinary scientific standards. This means that the thesis must be based on a clearly defined hypothesis, and the student is expected to make well-reasoned and independent method selections and be able to identify relevant theories. The thesis topic may address empirical, theoretical or normative issues related to problems under the programme's main profile. The topic may be defined by the student or it may be contract-based, either as an individual project or as part of a larger programme. The student is personally responsible for choosing a topic, developing a survey and executing the research.

Arbeids- og undervisningsformer

- Thesis seminars
- Supervision meetings

Obligatoriske krav som må være godkjent før eksamen kan avlegges

Students must pass mandatory course requirements to be allowed to take the exam.

- Submission of a project description
- Attending supervision meetings

- Attending thesis seminars

Eksamen

- A master's thesis, completed in pairs (or individually).
- Oral defence in pairs. The Oral defence can adjust the grade achieved on the master thesis (A - F) by one grade up or down individually.

Tillatte hjelpemidler til eksamen

- All resources.

Ansvarlig fakultet

Handelshøgskolen Innlandet - Fakultet for økonomi og samfunnsvitenskap