

Opasraportti

OyKKK - Kauppatieteiden maisteri, taloustiede (2018 - 2019)

Tässä oppaassa esitetään kauppatieteiden maisterin (KTM) tutkintoon liittyvät opinnot, pääaineena taloustiede. Oulun yliopiston kauppakorkeakoulun yleisoppaassa on kuvattu yleiset opiskeluun liittyvät käytännöt ja periaatteet.

Oulun yliopiston kauppakorkeakoulun maisteriohjelmien yleiset osaamistavoitteet:

- Analyttinen ajattelu ja ongelmanratkaisu – opiskelijat kykenevät ratkaisemaan taloudellisia tai liiketoimintaan liittyviä ongelmia ja tekemään päätöksiä.
- Oman tutkimusalan tuntemus – opiskelijat osoittavat oman tutkimusalsansa syvällistä kokonaisvaltaista ymmärrystä.
- Liiketoimintaosaaminen – opiskelijoillamme on syvä ymmärrys heidän omasta ammatistaan ja he kykenevät käyttämään ja analysoimaan taloudellista ja/tai liiketoimintaan liittyvää tietoa.
- Globaali vastuullinen johtaminen – opiskelijamme osaavat rakentaa kestävän kehityksen mukaista arvoa liiketoiminnalle ja yhteiskunnalle globaalisti.
- Kommunikointitaidot – opiskelijoillamme on ammattimaiset liike-elämään soveltuvat suulliset ja kirjalliset viestintätaidot.

Maisteriohjelmien vastuhenkilö: KTT Sinikka Moilanen.

TALOUSTIETEEN MAISTERIOHJELMA

Taloustieteen maisteriohjelma antaa opiskelijalle vahvan taloustieteen teoria- ja menetelmäosaamisen. Taloustieteen opinnoissa uutta ymmärrystä rakennetaan aiemmin opitun pohjalta. Opintoihin kuuluu luentojen ohella laskuharjoituksia, harjoitustöitä ja esseitä. Taloustieteen kansainvälisiin julkaisuihin tutustuminen on myös olennainen osa opintoja.

Taloustieteen maisteriopinnot antavat yleisiä valmiuksia hyvin monenlaisiin työtehtäviin. Valmistuttuaan pääaineena taloustiede opiskelija saa käyttää nimekkää ekonomisti. Yhteiskunnallisen ja taloudellisen toimintaympäristön muutokset avaavat ekonomisteille koko ajan uusia tehtäviä, ja ekonomistin peruskoulutuksen sisällöllisessä päivytyksessä seurataan aktiivisesti näitä toimintaympäristön muutoksia.

Ammatillisen osaamisen ohella taloustieteen maisteriohjelman tavoitteena on antaa riittävät perusvalmiudet alan tieteellisiin jatko-opintoihin ja tutkimustyöhön.

Osaamistavoitteet

Taloustieteen pääaineessa maisterintutkinnon suorittuaan opiskelija

- osaa valita ja soveltaa taloustieteen teorioita
- osaa käyttää ja arvioida uusimpia tieteellisiä tutkimuksia ja tieteen suuntauksia omassa työssään
- osaa käyttää tarvittavia kvantitatiivisia menetelmiä itsenäisessä tutkimustyössä
- tunnistaa taloustieteen perinteiset ja uudet lähestymistavat sekä kykenee tulkitsemaan niiden empiirisiä sovelluksia
- osaa tulkita talouden toimintamekanismeja ja taloudellisten muuttujien syy- ja seuraussuhteita sekä vertailla taloustieteellisten mallien ominaisuuksia ja soveltuvuutta eri tilanteisiin
- kykenee asiantuntemuksella kirjoittamaan ja keskustelemaan taloudellisista ilmiöistä taloustieteellistä ajattelua soveltaen
- kykenee itsenäiseen tutkimustyöhön ja kirjallisen tutkielman laatimiseen osoittaen asiantuntemusta jollakin taloustieteen osa-alueella sekä esittelemään omaa tutkimusaihettaan yleisölle

Yleisen taloustieteen maisteriohjelman oppiainevastaava: KTT Jaakko Simonen.

KTM-tutkinnon kokonaisrakenne (pohjakoulutus KTK-tutkinto)

Opintojen sisältö KTM-tutkinrossa

a) Pääaineen opinnot, 120 op. Tutkintoon suoritetaan rahoituksen maisteriohjelman opinnot 120 op.

b) Muita yliopistotasoisia opintoja tarvittaessa siten, että KTM-tutkinnon laajuudeksi tulee 120 opintopistettä.

KTM-tutkinnon rakenne (pelkkää maisteritutkintoa suorittamaan siirtyvät opiskelijat)

Jokainen koulutukseen valittu laatii ohjaajien opastuksella henkilökohtaisen opintosuunnitelman, jossa määritellään yksityiskohtaisesti tutkintoa varten suoritettavat opinnot sekä opintojen suoritusaikataulu. Opintosuunnitelma laaditaan ottaen huomioon opiskelijan aikaisemmat opintosuoritukset, opintomenestys ja urasuunnitelmat.

Henkilökohtainen opintosuunnitelma ja täydentävät opinnot

HOPS tehdään aluksi itsenäisesti alla olevien ohjeiden ja opinto-oppaan avulla. Virallisesti HOPSin hyväksyy Oulun yliopiston kaupakorkeakoulu.

Tutkinnon laajuus on 120 opintopistettä (op), sisältäen pääaineen opintoja sekä kaikille yhteisiä opintoja, ohjelman rakenteen mukaisesti. Lisäksi voidaan vaatia suoritettavaksi kieliopintoja seuraavan taulukon mukaisesti, mikäli kielitaitovaatimukset eivät täyty aiemmin suoritettujen opintojen perusteella.

Täydentävät opinnot, vaadittava kielitaito:

Kielilain mukainen toisen kotimaisen kielen taito

Vähintään 1 vieraan kielen B2-taso

Tutkintoon kuuluvat kurssit ja niiden ajoitus on kuvattu opintojen [rakennekaaviossa](#).

Tutkintorakenteet

Taloustieteen maisteriohjelma (KTM)

Tutkintorakenteen tila: julkaistu

Lukuvuosi: 2018-19

Lukuvuoden alkamispäivämäärä: 01.08.2018

Pääaineen opinnot (120 - 130 op)

List of courses and teaching timetable is available in [Economics degree structure diagram](#).

The following courses belong to the core curriculum of the Economics M.Sc. programme: 721345S Intermediate Microeconomics, 721346S Intermediate Macroeconomics, 721338S Mathematical Economics, 721060S Principles of Econometrics, 721342S Economic Theory I, 721310S Economic Theory II and 721070S Globally Responsible Business. These courses (or courses with equivalent content offered by other universities) should be included in the student's study plan.

721336S Special Issue can be taken once, either in Module 2 or Module 3.

Finnish language studies (max 6 credits) can be taken by foreign degree students. These language studies can be included in Module 3, to replace one of the optional courses.

H631135: Taloustieteen maisteriohjelma, 120 - 130 op

Moduuli 1

- 721345A: Intermediate Microeconomics, 6 op
- 721346A: Intermediate Macroeconomics, 6 op
- 721320S: Economic Theory I, 6 op
- 721310S: Economic Theory II, 6 op
- 721066S: Principles of Econometrics, 6 op

Moduuli 2: Pakollinen opintojakso.

- 721338S: Mathematical Economics, 6 op

Moduuli 2. Valitse seuraavista 4 opintojaksoa.

- 721334S: Environmental Economics, 6 op
- 721317S: International Macroeconomics, 6 op
- 721344S: Urban and Regional Economics, 6 op
- 721333S: Industrial Organization, 6 op
- 721336S: Erikoisaihe, 6 op

Moduuli 3

- 721070S: Globally Responsible Business, 6 op

Moduuli 3: Valitse seuraavista 4 opintojaksoa:

- 721954S: Financial Econometrics, 6 op
- 721961S: Entrepreneurial Finance, 6 op
- 721128S: Corporate Governance, 6 op
- 721957S: Fundamentals of Finance, 6 op
- 721559S: Venture Growth Strategies, 6 op
- 488501S: Smart Grid I: Integrating renewable energy sources, 5 op
- 488502S: Smart Grid II: Smart buildings/smart customers in the smart grid, 5 op
- 488503S: Smart Grid III: Smart energy networks, 5 op
- 721065S: Internship, 6 op

Moduuli 4

- 721330S: Taloustieteen pro gradu -tutkielma, 30 op

Tutkintorakenteisiin kuulumattomat opintokokonaisuudet ja -jaksot

721342S: Game Theory, 6 op

Opintojaksojen kuvaukset

Tutkintorakenteisiin kuuluvien opintokohteiden kuvaukset

H631135: Taloustieteen maisteriohjelma, 120 - 130 op

Voimassaolo: 01.08.2015 -

Opiskelumuoto: Syventävät opinnot

Laji: Kokonaisuus

Vastuuyksikkö: Oulun yliopiston kauppakorkeakoulu

Arvostelu: 1 - 5, hyv, hyl

Opintokohteen kielet: suomi

Moduuli 1

721345A: Intermediate Microeconomics, 6 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Aineopinnot

Laji: Opintojakso

Vastuuyksikkö: Oulun yliopiston kauppakorkeakoulu

Arvostelu: 1 - 5, hyv, hyl

Opettajat: Mikko Vaaramo

Opintokohteen kielet: englanti

Leikkaavuudet:

721345S Intermediate Microeconomics 6.0 op

721216A Mikrotaloustieteen perusteet 5.0 op

Voidaan suorittaa useasti: Kyllä

Laajuus:

6 credits / 160 hours of work

Opetuskieli:

English

Ajoitus:

Period 1A

Osaamistavoitteet:

Upon complementing the course, the student will be able to explain the main features of consumer and firm behavior. The student recognizes different market environments and their effect on optimal decision making. In addition to this, the student will be able to use the concept of social welfare.

Sisältö:

The basic concepts of consumer and firm theory, market equilibrium, uncertainty and risk, intertemporal choice.

Järjestämistapa:

Face-to-face teaching.

Toteutustavat:

36 lectures and 18 hours of exercises, exam 3 hours, preparing for the lectures, exercises and exam 103 hours.

Kohderyhmä:

The first year Master's students

Oppimateriaali:

[Varian, H.: Intermediate Microeconomics, A Modern Approach, 8th \(or older\) edition](#) and other material delivered in class.

Suoritustavat ja arviointikriteerit:

Written exam.

Arviointiasteikko:

The course utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Vastuuhenkilö:

Professor (acting) Jaakko Simonen, Doctoral student Hannu Huuki

Työelämäyhteistyö:

Students learn relevant skills to analyse the operation of markets and relevant competitive situations for firms and their decision making.

Lisätiedot:

The number of students is limited.

721346A: Intermediate Macroeconomics, 6 op

Voimassaolo: 01.08.2017 -

Opiskelumuoto: Aineopinnot

Laji: Opintojakso

Vastuuyksikkö: Oulun yliopiston kauppakorkeakoulu

Arvostelu: 1 - 5, hyv, hyl

Opettajat: Matti Koivuranta

Opintokohteen kielet: englanti

Leikkaavuudet:

721346S Intermediate Macroeconomics 6.0 op

721215A Makrotaloustieteen perusteet 5.0 op

Voidaan suorittaa useasti: Kyllä

Laajuus:

6 credits / 160 hours of work

Opetuskieli:

English

Ajoitus:

Period 1B.

Osaamistavoitteet:

After completing the course the student is familiar with aggregate economic phenomena and their thorough measurement. He/she is able to use simple macroeconomic models to understand economic issues such as growth and business cycles. The student is also able to analyze the effects of different economic policies with simple economic models.

Sisältö:

The course covers national income accounting, economic growth, business cycles, determinants of inflation and unemployment and basic concepts of open economy macroeconomics. Additional topics include the effects of monetary and fiscal policy.

Järjestämistapa:

Face-to-face teaching

Toteutustavat:

36 lectures and 18 hours of exercises, exam 3 hours, preparing for the lectures, exercises and exam 103 hours.

Kohderyhmä:

First year Master's students

Oppimateriaali:

[Williamson, Stephen D.D.: Macroeconomics, 4th ed., Pearson/Prentice Hall 2011](#)

Suoritustavat ja arviointikriteerit:

Written exam.

Arviointiasteikko:

The course utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Vastuhenkilö:

Professor Mikko Puhakka, Doctoral student Matti Koivuranta.

Työelämäyhteistyö:

Students learn relevant skills to analyse the operation of aggregate economy especially from the point of firms.

Lisätiedot:

The number of students is limited.

721320S: Economic Theory I, 6 op

Opiskelumuoto: Syventävät opinnot

Laji: Opintojakso

Vastuuyksikkö: Oulun yliopiston kauppakorkeakoulu

Arvostelu: 1 - 5, hyv, hyl

Opettajat: Jaakko Simonen

Opintokohteen kielet: englanti

Voidaan suorittaa useasti: Kyllä

Laajuus:

6 credits / 160 hours of work

Opetuskieli:

English

Ajoitus:

Period 1C

Osaamistavoitteet:

The student should learn rigorously the basic concepts and analytical tools of modern microeconomic theory. He/she should be able to apply those tools in the thesis work. Upon completing the required coursework the student is able to formulate and solve objective based optimization problems of households and firms. The student masters and knows how to interpret the general equilibrium results. The student is able to judge and interpret the role of uncertainty in decision making. He/she knows the basic theorems of welfare economics. The student is able to formulate and interpret the basic models of strategic behavior. Students are also able to express their ideas analytically and effectively in written form.

Sisältö:

Constrained optimization problems of economic agents, market analysis, general equilibrium analysis, welfare economics, decision making under uncertainty, information economics.

Järjestämistapa:

Face-to-face teaching.

Toteutustavat:

36 hours of lectures, 18 hours of exercises, exam 3 hours, preparing for the lectures, exercises and exam 103 hours.

Kohderyhmä:

The first year Master's students

Esitietovaatimukset:

Intermediate micro and macroeconomics, mathematical economics.

Yhteydet muihin opintojaksoihin:

Oppimateriaali:

[Cowell, F. \(2006\): Microeconomics. Principles and Analysis;](#)

[Gravelle, H. & Rees, R. \(2004\): Microeconomics,](#)

and required readings from a list of readings for the course. Active following of current topics e.g. from the Economist or Financial Times.

Suoritustavat ja arviointikriteerit:

Written exam and a short term paper

Arviointiasteikko:

The course utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Vastuuhenkilö:

Professor (acting) Jaakko Simonen

Työelämäyhteistyö:

Students learn relevant analytical and quantitative skills to analyse the operation of markets and relevant competitive situations for firms and their decision making. The required short term paper enhances further their ability to write concisely about the functioning of markets.

Lisätiedot:

The number of students is limited.

721310S: Economic Theory II, 6 op

Opiskelumuoto: Syventävät opinnot

Laji: Opintojakso

Vastuuyksikkö: Oulun yliopiston kauppakorkeakoulu

Arvostelu: 1 - 5, hyv, hyl

Opettajat: Puhakka Mikko

Opintokohteen kielet: englanti

Voidaan suorittaa useasti: Kyllä

Laajuus:

6 credits / 160 hours of work

Opetuskieli:

English

Ajoitus:

Period 2B.

Osaamistavoitteet:

Student is able to apply dynamic models in the analysis of aggregate economy. He/she can also use these models in empirical analyses, and is well prepared to write a Master's thesis. Students are also able to express their ideas analytically and effectively in written form.

Sisältö:

A review of ISLM and ADAS models. Two-period models, introduction to dynamic programming, economic growth, new keynesian macro, fiscal policy, search theory.

Järjestämistapa:

Face-to-face teaching.

Toteutustavat:

36 lectures and 18 hours of exercises, exam 3 hours, preparing for the lectures, exercises and exam 103 hours.

Kohderyhmä:

The second year Master's students.

Esitietovaatimukset:

Intermediate micro and macroeconomics, mathematical economics, and preferably Economic Theory I.

Yhteydet muihin opintojaksoihin:

Active following of current topics e.g. from the Economist or Financial Times.

Oppimateriaali:

[P. Minford and D. Peel, Advanced Macroeconomics. Edvard Elgar 2002. M. Puhakka, "Lecture Notes on Two-Period Models in Macroeconomics" \(2005\)](#), and required readings from a list of readings for the course.

Suoritustavat ja arviointikriteerit:

Written exam and a concise term paper.

Arviointiasteikko:

The course utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Vastuuhenkilö:

Professor Mikko Puhakka

Työelämäyhteistyö:

Students learn relevant analytical and quantitative skills to prepare useful (for decision makers) reports on the state of the economy, say at the levels required in central banks and ministries of finance. The required short term paper enhances further their ability to write concisely about the state of the economy.

Lisätiedot:

The number of students is limited.

721066S: Principles of Econometrics, 6 op

Voimassaolo: 01.08.2014 -

Opiskelumuoto: Syventävät opinnot

Laji: Opintojakso

Vastuuyksikkö: Oulun yliopiston kauppakorkeakoulu

Arvostelu: 1 - 5, hyv, hyl

Opettajat: Sanna Huikari

Opintokohteen kielet: englanti

Leikkaavuudet:

721060A Taloustieteiden tilastolliset perusmenetelmät 5.0 op

Voidaan suorittaa useasti: Kyllä

Laajuus:

6 credits / 160 hours of work

Opetuskieli:

English

Ajoitus:

Period 1B.

Osaamistavoitteet:

After completing the course the student is familiar with the standard methods used in empirical analyses and with regression analysis relevant for analyzing economic data. In addition, the student can interpret and evaluate the outcomes of empirical analysis. Furthermore, he/she has basic knowledge of using statistical software in econometric analyses

Sisältö:

Statistical basics of econometrics and the use of basic econometric models in the analysis of different economic phenomena. The main focus is on dealing with the basic regression models adapted to cross-section data and familiarizing with the use of statistical software.

Järjestämistapa:

Face-to-face teaching.

Toteutustavat:

36 hours of lectures, 18 hours of exercises, exam 3 hours, preparing for the lectures, exercises and exam 103 hours.

Kohderyhmä:

First year Master's students in Economics, Accounting and Finance.

Esitietovaatimukset:

It is highly recommended that the student has already passed the course 806116P Basic Methods in Statistics 1 (in Finnish: 806116P Tilastotiedettä kauppatieteilijöille, previously: 806109P Tilastotieteen perusmenetelmät 1) or has elementary knowledge of statistics and probability theory.

Oppimateriaali:

[Stock James H., Watson Mark W.: Introduction to Econometrics, 2. or 3. edition](#). Other material announced during the lectures.

Suoritustavat ja arviointikriteerit:

Written exam.

Arviointiasteikko:

The course utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Vastuuhenkilö:

Professor Rauli Svento, Doctoral student Sanna Huikari

Työelämäyhteistyö:

In working life, when the skills of analyzing data are required, the skills learned during the course help a student in summarizing and interpreting the results of empirical studies. He/she can compare the results of various empirical studies and evaluate those critically. Student is able to independently carry out a small-scale econometric study by putting in practice the econometric methods (e.g. linear regression model and various statistical tests) discussed during the course.

Lisätiedot:

The number of students is limited.

Moduuli 2: Pakollinen opintojakso.

721338S: Mathematical Economics, 6 op

Voimassaolo: 01.08.2014 -

Opiskelumuoto: Syventävät opinnot

Laji: Opintojakso

Vastuuyksikkö: Oulun yliopiston kauppakorkeakoulu

Arvostelu: 1 - 5, hyv, hyl

Opettajat: Matti Koivuranta

Opintokohteen kielet: englanti

Leikkaavuudet:

721220A Matemaattinen taloustiede 5.0 op

Voidaan suorittaa useasti: Kyllä

Laajuus:

6 credits / 160 hours of work.

Opetuskieli:

English.

Ajoitus:

Period 1A.

Osaamistavoitteet:

Upon completion of the course, the student will be able to apply mathematical methods needed in the courses in the Economic Theory module.

Sisältö:

The course introduces frequently used mathematical methods in the economic literature. Applicable parts from linear algebra, differential and integral calculus, mathematical optimization and dynamic analysis are covered.

Järjestämistapa:

Face-to-face teaching.

Toteutustavat:

36 hours of lectures, 18 hours of exercises, exam 3 hours, preparing for the lectures, exercises and exam 103 hours.

Kohderyhmä:

First year Master's students in Economics and Finance.

Oppimateriaali:

[Chiang A.C: Fundamental Methods of Mathematical Economics, 4th edition, McGraw-Hill. New York, NY, 2005.](#)

Suoritustavat ja arviointikriteerit:

Written exam. Mandatory exercises.

Arviointiasteikko:

The course utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Vastuuhenkilö:

Professor Mikko Puhakka, Doctoral student Matti Koivuranta.

Työelämäyhteistyö:

Students learn relevant mathematics and applications to analyse various types of economic situations.

Lisätiedot:

The number of students is limited.

Moduuli 2. Valitse seuraavista 4 opintojaksoa.

721334S: Environmental Economics, 6 op

Opiskelumuoto: Syventävät opinnot

Laji: Opintojakso

Vastuuyksikkö: Oulun yliopiston kauppakorkeakoulu

Arvostelu: 1 - 5, hyv, hyl

Opettajat: Juutinen, Artti Markus Tapani

Opintokohteen kielet: englanti

Leikkaavuudet:

721248S Ympäristö- ja luonnonvaratalous 6.0 op

721248A Ympäristötalous 5.0 op

Voidaan suorittaa useasti: Kyllä

Laajuus:

6 credits / 160 hours of work.

Opetuskieli:

English

Ajoitus:

Period 1D

Osaamistavoitteet:

Student is able to graphically and mathematically describe the socially optimal level of pollution and define the efficiency conditions of the crucial policy instruments of pollution control. Moreover, student identifies comparative merits of different policy instruments. He/she can apply the most important methods for monetary valuation of environmental benefits and empirically examine the demand of environmental commodities. In addition, student is able to formally present the models describing optimal use of natural resources and apply these models in practical decision making. Students are also able to act professionally in teams, express their ideas analytically and effectively both in written and oral form.

Sisältö:

Sustainability problem, externalities, socially optimal pollution level, command-and-control regulation of pollution, pollution taxes, marketable permits, demand for environmental commodities, hedonic pricing methods, travel cost method, contingent valuation, and choice experiments. Regarding natural resources, the course covers topics on the optimal use of minerals (the Hotelling rule), the problem of open access in fishery, and forest rotation models.

Järjestämistapa:

Face-to-face teaching.

Toteutustavat:

24 hours of lectures, 9 hours of exercises, 50 hours of individual homework, and independent reading of study materials, preparing for the lectures and exercises 77 hours.

Kohderyhmä:

First year Master's students.

Oppimateriaali:

[Perman, Ma, Common, Maddison & Mcgilvray \(2011\). Natural Resource and Environmental Economics \(4th Ed or newer\).](#) (The required sections of the books and the other material will be informed later.)

Suoritustavat ja arviointikriteerit:

Lecture specific problem questions, final essay and exercises.

Arviointiasteikko:

The course utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Vastuhenkilö:

Professor Artti Juutinen and Doctoral student Enni Ruokamo.

Työelämäyhteistyö:

Students improve their skills regarding the use of software that are widely applied in working life (MsExell, MsWord, MsPowerPoint). Students also improve their presentation and co-operation skills.

721317S: International Macroeconomics, 6 op

Opiskelumuoto: Syventävät opinnot

Laji: Opintojakso

Vastuuyksikkö: Oulun yliopiston kauppakorkeakoulu

Arvostelu: 1 - 5, hyv, hyl

Opettajat: Marko Korhonen

Opintokohteen kielet: englanti

Voidaan suorittaa useasti: Kyllä

Laajuus:

6 credits / 160 hours of work

Opetuskieli:

English

Ajoitus:

Period 1C.

Osaamistavoitteet:

Student is familiar with topics in international macroeconomics as well as to theories trying to account for the basic stylized facts in the field.

Sisältö:

Advanced theoretical and empirical analysis of contemporary international macroeconomic policy issues in both industrialized and developing economies. The topics covered include current account balance, dynamics of small open economy, real exchange rate and the terms of trade, uncertainty and international financial markets.

Järjestämistapa:

Face-to-face teaching.

Toteutustavat:

12hours of lectures, 12 hours of student presentations, exercises 8h, exam 4 hours, preparing for the lectures, exercises and exam 124 hours.

Kohderyhmä:

First year Master's students.

Esitietovaatimukset:

Economic Theory I and Principles of Econometrics.

Yhteydet muihin opintoihin:

Oppimateriaali:

Obstfeld and Rogoff (1996): Foundations of International Macroeconomics
 De Grauwe(2014): Economics of Monetary Union
[Check the availability of course material from this link.](#)

Suoritustavat ja arviointikriteerit:

Written exam and student presentations

Arviointiasteikko:

The course utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Vastuhenkilö:

University lecturer Marko Korhonen

Työelämäyhteistyö:

No

Lisätiedot:

The number of students is limited.

721344S: Urban and Regional Economics, 6 op

Voimassaolo: 01.08.2014 -

Opiskelumuoto: Syventävät opinnot

Laji: Opintojakso

Vastuuyksikkö: Oulun yliopiston kauppakorkeakoulu

Arvostelu: 1 - 5, hyv, hyl

Opettajat: Jaakko Simonen

Opintokohteen kielet: englanti

Voidaan suorittaa useasti: Kyllä

Laajuus:

6 credits / 160 hours of work

Opetuskieli:

English

Ajoitus:

Period 2A.

Osaamistavoitteet:

Student is familiar with how firms' and people's decisions on a micro-level affect the macro-level phenomena in cities and regions. He/she will understand the broad range of relationships between economics and geography. Students are also able to express their ideas analytically and effectively in written form.

Sisältö:

Agglomeration of economic activities, regional input-output analysis, analysis of some essential features of spatial labor markets and interregional immigration flows. Current topics of urban and regional economic development and policy.

Järjestämistapa:

Face-to-face teaching.

Toteutustavat:

24 hours of lectures, 12 hours for computer lab exercises, preparing for the lectures, exercises and individual/group assignments 124 hours.

Kohderyhmä:

Second year master's students.

Oppimateriaali:

[McCann, P.: Urban and Regional Economics. New York: Oxford University Press.2001 or 2013;](#)

[Armstrong, H. & Taylor, J.: Regional Economics and Policy, 3 rd ed. Oxford: Blackwell. 2000.](#)

Other material to be shared on lectures.

Suoritustavat ja arviointikriteerit:

Assessment will be based on two individual written reports/essays and two computer lab exercises and written reports conducted either independently or in a small group.

Arviointiasteikko:

The course utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Vastuhenkilö:

Professor (acting) Jaakko Simonen

Työelämäyhteistyö:

Student understands how the activities of people and firms affect the evolution of regional economy. Student is also familiar with the background of current regional economic phenomena.

Lisätiedot:

The number of students is limited.

721333S: Industrial Organization, 6 op

Opiskelumuoto: Syventävät opinnot

Laji: Opintojakso

Vastuuyksikkö: Oulun yliopiston kauppakorkeakoulu

Arvostelu: 1 - 5, hyv, hyl

Opettajat: Maria Kopsakangas-Savolainen

Opintokohteen kielet: englanti

Voidaan suorittaa useasti: Kyllä

Laajuus:

6 credits/160 hours of work

Opetuskieli:

English

Ajoitus:

2A

Osaamistavoitteet:

Upon successful completion of this course, student is be able to analyze and evaluate models of competitive, oligopolistic, and monopoly markets and understand how price and non-price competition among firms affect economic welfare. He/she should be able to understand the market conditions where regulation is needed and analyze different form of regulation methods. He/she should be also able to use game theory in analyzing firms' strategic decisions and be able to intelligently speculate the motives of real world pricing and other decisions of the firms. Student understands the effect of asymmetric information on the optimal agreements. Students are also able to express their ideas analytically and effectively in written form.

Sisältö:

Functioning of imperfect competition, monopoly, cartel, price discrimination, non-linear pricing, product differentiation, principles of game theory, strategic behavior, role of market entrance , innovations and research and development, optimal agreements in situations of asymmetric information.

Järjestämistapa:

Face-to-face teaching

Toteutustavat:

24 hours of lectures, 12 hours for home assignments (including problem sets and essay), exam 3 hours, preparing for the lectures, exercises and exam 121 hours.

Kohderyhmä:

Second year Master's students

Esitietovaatimukset:

Intermediated Microeconomics, Mathematical economics

Yhteydet muihin opintojaksoihin:

-

Oppimateriaali:

[Cabral, L.M.B. Introduction to Industrial Organization. MIT Press. 2000;](#)
[Shy, Oz: Industrial Organization. Theory and Applications. MIT Press. 1995;](#)
[Kopsakangas-Savolainen and Svento, Modern Energy Markets. Springer 2012;](#)
 other literature announced later.

Suoritustavat ja arviointikriteerit:

Home assignments, written examination.

Arviointiasteikko:

The course utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Vastuuhenkilö:

Professor Maria Kopsakangas-Savolainen

Työelämäyhteistyö:

Students learn relevant analytical and quantitative skills to analyse different types of competitive situations in markets.

Lisätiedot:

The number of students is limited.

721336S: Erikoisaihe, 6 op

Opiskelumuoto: Syventävät opinnot

Laji: Opintojakso

Vastuuyksikkö: Oulun yliopiston kauppakorkeakoulu

Arvostelu: 1 - 5, hyv, hyl

Opintokohteen kielet: suomi

Voidaan suorittaa useasti: Kyllä

Laajuus:

6 credits / 160 hours of work

Opetuskieli:

Varies depending on the way of completion.

Ajoitus:

Free.

Osaamistavoitteet:

If taken as an individual research assignment, upon completion the students demonstrate knowledge of the theories, concepts, frameworks and empirical findings of chosen discipline and they are able to identify and solve relevant problems, and make critical judgments based on them.

Sisältö:

Varies depending on individually agreed on assignment.

Järjestämistapa:

It may be, but is not limited to (1) An advanced level course passed in another university having different contents than those courses offered in the student's program, but otherwise fitting the structure of the studies. If necessary the course may be supplemented with additional tasks. (2) An essay/learning diary of about 20 pages, the requirements of which are agreed on in advance with the person responsible of the course within the major subject. (3) Ad hoc –course organized by OBS (4) A discipline-based business development case or other relevant project (e.g. Demola/Business Kitchen).

Toteutustavat:

Varies on the basis of individually agreed on assignment.

Kohderyhmä:

Students of OBS's Master's Programs

Esitietovaatimukset:

No

Yhteydet muihin opintojaksoihin:

No

Oppimateriaali:

To be agreed on with the person responsible of the course within the major subject

Suoritustavat ja arviointikriteerit:

Assessment is based on the learning outcomes of the course and the Master's program. Method varies depending on the individually agreed on assignment.

Arviointiasteikko:

The course can utilize a numerical grading scale 1-5 or be evaluated as pass/fail. In the numerical scale zero stands for fail.

Vastuhenkilö:

To be named by major subjects.

Työelämäyhteistyö:

Depends on the individually agreed on assignment.

Lisätiedot:

The number of students is limited.

Moduuli 3

721070S: Globally Responsible Business, 6 op

Voimassaolo: 01.08.2014 -

Opiskelumuoto: Syventävät opinnot

Laji: Opintojakso

Vastuuyksikkö: Oulun yliopiston kauppakorkeakoulu

Arvostelu: 1 - 5, hyv, hyl

Opettajat: Anne Keränen

Opintokohteen kielet: englanti

Leikkaavuudet:

ay721070S Globally Responsible Business (AVOIN YO) 6.0 op

Voidaan suorittaa useasti: Kyllä

Laajuus:

6 credits / 160 hours of work

Opetuskieli:

English

Ajoitus:

Period C.

Osaamistavoitteet:

Upon completion of the course, students are able to demonstrate detailed knowledge of responsible behaviors in global and local business from the viewpoint of their major discipline. The students are able to work in multidisciplinary groups and create a collective approach for uniting economic with socially and environmentally responsible bottom lines within a global business context. Students are also able to express their ideas in written and oral form and communicate them online.

Sisältö:

The course deals with the diversity of contemporary business issues related to sustainability and responsibility when operating in the global marketplace. Based on the triple-bottom-line concept students are introduced to theoretical and practical perspectives from the disciplines of accounting, economics,

finance, management/international business and marketing. Students learn to detect, analyze, and create different approaches of how to globally and locally achieve social and environmental goals in addition to economic objectives of a business.

Järjestämistapa:

Online study methods.

Toteutustavat:

Independent study of the given material 70h, online discussions and groupwork 70h, and conducting individual assignments and learning reports 20h.

Kohderyhmä:

Students from all OBS Master's programmes.

Esitietovaatimukset:

30 ects (5 Master level courses).

Yhteydet muihin opintojaksoihin:

-

Oppimateriaali:

Course Book (to be announced later), articles and materials provided by the course instructors.

Suoritustavat ja arviointikriteerit:

Individual contributions (reports, video, online exam) count for 60% and group contributions (blogpost, case report) 40%.

Arviointiasteikko:

The course utilizes a numerical grading scale 1-5. The course consist of five different parts and students acquire a grade by passing the five different parts in numerical order.

Vastuhenkilö:

Anne Keränen, Jan Hermes and Prof. Pauliina Ulkuniemi

Työelämäyhteistyö:

The course includes global and local real life case examples and analyses. Course learning methods advance modern communication and interaction methods relevant in work life. Students gain abilities to perceive and develop responsibility in business.

Lisätiedot:

The course is available and obligatory for OBS Master level students.

Moduuli 3: Valitse seuraavista 4 opintojaksoa:

721954S: Financial Econometrics, 6 op

Opiskelumuoto: Syventävät opinnot

Laji: Opintojakso

Vastuuyksikkö: Oulun yliopiston kauppakorkeakoulu

Arvostelu: 1 - 5, hyv, hyl

Opintokohteen kielet: englanti

Laajuus:

6 ECTS credits / 160 hours of work.

Opetuskieli:

English.

Ajoitus:

Period C.

Osaamistavoitteet:

Upon completion of the course, the student is able to conduct empirical analyses of financial data using econometric methods. Students are also able to act professionally in teams.

Sisältö:

Properties of financial data, linear regression models, maximum likelihood estimation, risk and volatility (multivariate GARCH), factor models (principal components and Kalman-filters), option markets (estimating and testing Black-Scholes and its extensions, panel data models.

Järjestämistapa:

Face-to-face teaching.

Toteutustavat:

36 hours lectures and 14 hours of optional tutorials, tutorial assignments using open-source R, and a group project. Independent studying and group work 124 hours.

Kohderyhmä:

Major students in finance. Elective for major students in economics. The course is also available for the students, who need to complete their 60 ECTS credits minor in finance.

Esitietovaatimukset:

Prerequisites and co-requisites: 721066S Principles of Econometrics, 721958S Empirical Research in Finance I (recommended), Empirical Research in Finance II (recommended)

Yhteydet muihin opintojaksoihin:

-

Oppimateriaali:

[Hurn, Martin, Philips and Young: Financial Econometric Modelling](#) (forthcoming), lecture notes and the material provided by instructor.

Suoritustavat ja arviointikriteerit:

Midterm test (10%), tutorials (20% bonus), group work (20%) and final exam (70%).

Arviointiasteikko:

1-5.

Vastuhenkilö:

Hannu Kahra

Työelämäyhteistyö:

The course introduces the main econometric techniques that are frequently applied in both academic research and financial services industry

Lisätiedot:

The number of students is limited.

721961S: Entrepreneurial Finance, 6 op

Voimassaolo: 01.08.2014 -

Opiskelumuoto: Syventävät opinnot

Laji: Opintojakso

Vastuuyksikkö: Oulun yliopiston kauppakorkeakoulu

Arvostelu: 1 - 5, hyv, hyl

Opettajat: Andrew Conlin

Opintokohteen kielet: englanti

Leikkaavuudet:

721371A Entrepreneurial Finance 5.0 op

Voidaan suorittaa useasti: Kyllä

Laajuus:

6 credits / 160 hours of work

Opetuskieli:

English

Ajoitus:

Period B

Osaamistavoitteet:

Upon completion of the course, the student will understand the issues faced when financing entrepreneurial ventures. The student will also understand the interaction between the strategy and the financing of a start-up venture. The course will focus on the decisions from the entrepreneur's point of view, while also exposing students to the financier's point of view.

Sisältö:

Entrepreneur vs self-employed, the amount, timing, and source of funding, the structure of the funding, agency issues.

Toteutustavat:

36 hours of lectures and 124 hours of independent studying

Kohderyhmä:

Major students in finance. The course is also available for the students, who need to complete their 60 ECTS credits minor in finance.

Oppimateriaali:

Materials provided by instructors

Suoritustavat ja arviointikriteerit:

Final exam

Arviointiasteikko:

1-5

Vastuhenkilö:

Juha Joenväärä

Työelämäyhteistyö:

The understanding of the special issues facing entrepreneurial ventures is essential for the development of successful financing practices of small and medium-sized enterprises.

Lisätiedot:

The number of students is limited.

721128S: Corporate Governance, 6 op

Voimassaolo: 01.08.2010 -

Opiskelumoto: Syventävät opinnot

Laji: Opintojakso

Vastuuyksikkö: Oulun yliopiston kauppakorkeakoulu

Arvostelu: 1 - 5, hyv, hyl

Opettajat: Kallunki Juha-Pekka

Opintokohteen kielet: englanti

Laajuus:

6 ECTS credits.

Opetuskieli:

English.

Ajoitus:

Period B. It is recommended to complete the course during the Master's programme's 1st Fall semester.

Osaamistavoitteet:

After passing the course, students are familiar with the agency theory and its various research and practical implications. They are also familiar with the elements of the governance system of the firm, are able to recognize the warning signs of the potential collapse of the governance system, can assess the features of different executive incentive system, and are able to recognize situations of likely accounting fraud. Students can act responsibly in difficult situations of being asked to act dishonestly. Finally, students are familiar with the practices of societally and environmentally sustainable business conduct and able to act professionally in teams, express their ideas analytically and effectively both in written and oral form.

Sisältö:

Lectures, case discussions and presentations, and videos simulating governance-related decisions.

Järjestämistapa:

Face-to-face –teaching, case presentations and discussions.

Toteutustavat:

36 h of lectures, 6 h of class discussions/student, case works 50 h, self-study 70 h.

Kohderyhmä:

Major students.

Esitietovaatimukset:

Not applicable.

Yhteydet muihin opintojaksoihin:

Not applicable.

Oppimateriaali:

[Kenneth Kim, John Nofsinger and Derek Mohr \(2010\), 'Corporate Governance', 3rd Edition, Pearson Prentice Hall](#); lecture notes; research articles; and cases.

Suoritustavat ja arviointikriteerit:

Exam and case works.

Arviointiasteikko:

The course utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Vastuhenkilö:

Professor Juha-Pekka Kallunki.

Työelämäyhteistyö:

Lecturer of Practice Pertti Huuskonen teaches a part of the course. Visiting Professor Henrik Nilsson (Stockholm School of Economics) teaches another part of the course. The course focuses heavily on working life skills on how students should react in challenging corporate governance situations in organizations.

Lisätiedot:

The number of students is limited.

721957S: Fundamentals of Finance, 6 op

Voimassaolo: 01.08.2014 -

Opiskelumuoto: Syventävät opinnot

Laji: Opintojakso

Vastuuyksikkö: Oulun yliopiston kauppakorkeakoulu

Arvostelu: 1 - 5, hyv, hyl

Opettajat: Perttunen, Jukka Olavi

Opintokohteen kielet: englanti

Voidaan suorittaa useasti: Kyllä

Laajuus:

6 credits / 160 hours of work

Opetuskieli:

English

Ajoitus:

Period A

Osaamistavoitteet:

Upon completion of the course, the student understands the basic concepts of finance and is capable of applying them in financial problem solving. Students are also able to express their ideas analytically and effectively in written form.

Sisältö:

Interest rates and discounting, asset pricing, fixed-income securities, derivative securities, portfolio performance evaluation, corporate cash flows, firm valuation.

Järjestämistapa:

Face-to-face teaching.

Toteutustavat:

36 hours lectures and exercises, including two mandatory intermediate exams. Independent studying 124 hours.

Kohderyhmä:

Major students in finance. Elective for major students in accounting. The course is also available for the students, who need to complete their 25/60 ECTS credits minor in finance.

Oppimateriaali:

Lecture notes.

Suoritustavat ja arviointikriteerit:

During the course, there are two mandatory intermediate exams. In addition, the student has to complete a course project which includes a written report with a strict deadline. The final grade is assigned on the basis of the intermediate exams (50%) and the course project (50%).

Arviointiasteikko:

1-5

Vastuuhenkilö:

Jukka Perttunen

Työelämäyhteistyö:

The course introduces the basic concepts and approaches which are necessary for any career in financial industry.

Lisätiedot:

The number of students is limited.

721559S: Venture Growth Strategies, 6 op

Voimassaolo: 01.08.2010 -

Opiskelumuoto: Syventävät opinnot

Laji: Opintojakso

Vastuuyksikkö: Oulun yliopiston kauppakorkeakoulu

Arvostelu: 1 - 5, hyv, hyl

Opettajat: Sakari Sipola

Opintokohteen kielet: englanti

Leikkaavuudet:

ay721559S Venture Growth Strategies 6.0 op

Voidaan suorittaa useasti: Kyllä

Laajuus:

6 credits / 160 hours of work

Opetuskieli:

English.

Ajoitus:

Period A. It is recommended to complete the course at the 1st autumn semester of the Master's program.

Osaamistavoitteet:

After the course, the student is able to tackle business development challenges both within existing companies and new firms. The student can exploit a series of frameworks and tools for (1) building market

understanding and a match between the developed offering and market needs, and (2) organizing the needed resources and competencies for scaling the business at international markets. Students are also able to express their ideas analytically and effectively both in written and oral form.

Sisältö:

The course focuses on building and managing new high-growth ventures by applying the most recent advancements in the field. Practically orientated concepts like lean startup, customer development, design thinking and business model innovation are covered together with different forms of entrepreneurial finance such as angel investing and venture capital.

Järjestämistapa:

Face-to-face teaching, online activity.

Toteutustavat:

Blended teaching method of 36 hours of lectures and online material with reflection (72 h), reading the course literature (50 h), writing the report (38 h). The responsible person will provide further details in the first session.

Kohderyhmä:

Students of the Master's program in International Business Management

Esitietovaatimukset:

Basic and intermediate studies in international business management

Yhteydet muihin opintojaksoihin:

No

Oppimateriaali:

Article collection and online material.

Suoritustavat ja arviointikriteerit:

Assessment will be based on individual written report and lecture activity.

Arviointiasteikko:

The course utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Vastuhenkilö:

Sakari Sipola

Työelämäyhteistyö:

Visiting industry experts provide real-life cases and examples.

Lisätiedot:

The number of students is limited.

488501S: Smart Grid I: Integrating renewable energy sources, 5 op

Voimassaolo: 01.08.2016 -

Opiskelumoto: Syventävät opinnot

Laji: Opintojakso

Vastuuyksikkö: Prosessi- ja ympäristötekniikan ala

Arvostelu: 1 - 5, hyv, hyl

Opettajat: Eva Pongracz

Opintokohteen kielet: englanti

Laajuus:

5 cr/150 hours of work

Opetuskieli:

English

Ajoitus:

Period 2

Osaamistavoitteet:

The student is able to explain the concept of smart grids, the evolution of smart grids from electricity power grids, the information technology requirements as well as the economic, environmental and social implications of smart grids. The student will know the expectations from smart grids and is able to outline the future perspectives of smart grid-based energy systems.

Sisältö:

Multidisciplinary course, offered in cooperation of the Faculty of Technology (Energy and Environmental Engineering Research Unit - EEE), Oulu Business School (OBS, Department of Economics) and the Faculty of Information Technology and Electrical Engineering (Centre of Wireless Communication - CWC). After an introductory presentation on the requirements, the background is set on the energy and environmental crisis, the co-evolution of energy and information systems and outlining the transition to a smarter system. Further, lectures on smart grids will be provided from an electrical engineering and information technology view on the evolution of electricity power grids, power generation transmission and distribution; distributed generation and futures of smart grids. From an environmental engineering point of view, lectures will be delivered on energy systems fundamentals, climate goals and decarbonization, as well as on the sustainability of smart grids will in particular the environmental and social impacts of smart grids. From economics points of view, lectures will be given on the liberalization and deregulation of the electricity market, electricity pricing, transmission and distribution as natural monopolies, smart grids and new market mechanisms, and the economic impacts of large scale integration of renewable energy sources. Participation on lectures is not compulsory, but students are to answer to problem questions. As an exercise, students will be given a group work assignment that they are to work with throughout the duration of the course with the help of mentors. The subjects of the exercise is achieving climate goals and the future of energy systems.

Järjestämistapa:

Implemented as face-to-face teaching and student seminar. The course largely relies on participatory learning, therefore, there are compulsory participation requirements.

Toteutustavat:

Lectures 32 h / student presentations 8 h, Guided group work: 8 h, individual homework 60 h/group work 42 h.

Kohderyhmä:

Master's students of environmental engineering, especially of energy and environmental engineering orientation; Master's students in economics; Master's students of Electrical Engineering and Information Technology.

Esitietovaatimukset:

For Environmental Engineering students, admission to the Master's programme, for which minimally a former bachelor's degree is required. For other students the Bachelor level studies. A minimum of 10 ECTS worth of prior energy studies, bachelor level studies are acceptable. For example at Oulu: Sähkö- ja magnetismioppi, Production and use of energy, Fundamentals of nuclear energy.

Oppimateriaali:

Will be provided during the course by the lecturers.

Chen-Ching Liu, Stephern McArthur and Seung-Jae Lee (eds.)(2016) Smart Grids handbook, 3 volume set, and Stephen F. Bush (2014): Smart Grid: Communication-Enabled Intelligence for the Electric Power Grid. <http://onlinelibrary.wiley.com/book/10.1002/9781118820216>.

Suoritustavat ja arviointikriteerit:

Answering problem questions and group exercise. Compulsory requirements are completing learning portfolio, answering of at least 75% of problem questions, participation in 50% of intermediate presentations and compulsory participation in the final presentation.

Arviointiasteikko:

The course evaluation will be based on an on-line learning portfolio and performance in the exercise participation and exercise report. The course unit utilizes a numerical grading scale 1-5. In the numerical scale, zero stands for a fail.

Vastuhenkilö:

Docent Eva Pongrácz (EEE) and Prof. Maria Kopsakangas-Savolainen (OBS). Other lecturers: EEE: Dr. Antonio Caló, Dr. Jean-Nicolas Louis; OBS: Prof. Rauli Svento, Mari Heikkinen, Hannu Huuki, Santtu Karhinen, Enni Ruokamo; CWC: Dr. Pedro Nardelli.

Lisätiedot:

The number of students is limited. This course is a 5 credit course for engineering students, but economics students gain overall 6 credits by doing a mandatory extra assignment which corresponds to 1 credit.

488502S: Smart Grid II: Smart buildings/smart customers in the smart grid, 5 op**Voimassaolo:** 28.11.2016 -**Opiskelumuoto:** Syventävät opinnot**Laji:** Opintojakso**Vastuuyksikkö:** Prosessi- ja ympäristötekniikan ala**Arvostelu:** 1 - 5, hyv, hyl**Opettajat:** Eva Pongracz**Opintokohteen kielet:** englanti**Laajuus:**

5 cr/150 hours of work

Opetuskieli:

English

Ajoitus:

Period 3

Osaamistavoitteet:

The student is able to explain the concept of smart houses, and is able to demonstrate the optimization of smart house functions for energy efficiency, decarbonization and cost savings. Further, the student is familiar with the concepts and the technologies of smart house automation as well as other technologies used in smart houses such as smart appliances, smart metering and energy storage. The student will also understand the new role of consumers in the smart grid environment, their changing roles as well as current and future models of energy services. The student will also understand the risks of smart houses in terms of cyber security, data privacy and management. In addition, the student is able to outline the future perspectives of smart houses and smart consumers as part of the smart city framework and aiming toward eco-cities of the future.

Sisältö:

Multidisciplinary course, offered in cooperation of the Faculty of Technology (Energy and Environmental Engineering Research Unit - EEE), Oulu Business School (OBS, Department of Economics) and the Faculty of Information Technology and Electrical Engineering (Centre of Wireless Communication - CWC). After an introductory presentation on the course requirements, the basics are set in terms of defining smart houses as part of smart grids. Further the complementary roles of smart houses for energy efficiency, costs saving and decarbonization is explained. The key technologies of smart houses will be explained and demonstrated, including company presentations on existing commercial technologies and service models. In addition, the new role of consumers as prosumers and service users will be explained and demonstrated. There will be no exam, however, the students are to answer to problem questions related to the lectures and complete the exercises. There will be 4 exercises, concentrating on the 4 key themes of the course: smart house functions, smart house technologies, smart consumers, and energy services. Part of the exercises will be done as individual work that will be reported and some will be performed as group work. There will also be in-class guided exercises.

Järjestämistapa:

Implemented as face-to-face teaching, visiting lectures and student presentations. The course largely relies on participatory learning, therefore, there are compulsory participation requirements.

Toteutustavat:

Lectures 28 h, student presentations 4 h, guided exercise work 24 h, individual work 50 h, group work 38 h.

Kohderyhmä:

Master's students of environmental engineering, especially of energy and environmental engineering orientation; Master's students in economics; Master's students of Electrical Engineering and Information Technology. Doctoral students are also welcome to participate.

Esitietovaatimukset:

Completing Smart grids 1 course is preferred.

Oppimateriaali:

Will be provided during the course by the lecturers.

Chen-Ching Liu, Stephern McArthur and Seung-Jae Lee (eds.)(2016) Smart Grids handbook, 3 volume set, and Stephen F. Bush (2014): Smart Grid: Communication-Enabled Intelligence for the Electric Power Grid. <http://onlinelibrary.wiley.com/book/10.1002/9781118820216>.

Suoritustavat ja arviointikriteerit:

Answering problem questions, individual and group exercise. Compulsory requirements are completing learning portfolio, answering of at least 75% of problem questions, compulsory participation in the in-course exercises and participation in the student presentation.

Arviointiasteikko:

The course evaluation will be based on an on-line learning portfolio, exercise performance and exercise report. The course unit utilizes a numerical grading scale 1-5. In the numerical scale, zero stands for a fail.

Vastuuhenkilö:

Prof. Eva Pongrácz (EEE) and Prof. Maria Kopsakangas-Savolainen (OBS). Other lecturers: EEE: Dr. Jean-Nicolas Louis; Dr. Antonio Caló, OBS: Prof. Rauli Svento, Santtu Karhinen...; CWC: Dr. Pedro Nardelli, Dr. Jussi Haapola, MSc. Florian Kühnlenz.

Lisätiedot:

The number of students is limited. This course is a 5 credit course for engineering students, but economics students gain overall 6 credits by doing a mandatory extra assignment which corresponds to 1 credit.

488503S: Smart Grid III: Smart energy networks, 5 op

Voimassaolo: 28.11.2016 -

Opiskelumoto: Syventävät opinnot

Laji: Opintojakso

Vastuuyksikkö: Prosessi- ja ympäristötekniikan ala

Arvostelu: 1 - 5, hyv, hyl

Opettajat: Eva Pongracz

Opintokohteen kielet: englanti

Laajuus:

5 cr/135 hours of work

Opetuskieli:

English

Ajoitus:

Spring, period 4

Osaamistavoitteet:

The student is able to explain the concept of energy transition, and is able to outline the structure and functioning of smart energy networks. Further, the student is familiar with the concepts of multi-vector energy networks, networks flow analysis, integration and synergy of multiple energy networks and. The student will also understand the concept of swarms of distributed energy generation and the need for storage to ensure network stability. The student will also be able to outline the key energy storage methods and will be able to recommend them for distributed vs. centralized storage of both heat and electricity, for long term as well as short term. The student will also be able to use design tools for the planning and evaluation of future energy systems. The student will also be able to assess the dimensions of sustainability of smart energy networks.

Sisältö:

Multidisciplinary course, offered in cooperation of the Faculty of Technology (Energy and Environmental Engineering Research Unit - EEE), Oulu Business School (OBS, Department of Economics) and the Faculty of Information Technology and Electrical Engineering (Centre of Wireless Communication - CWC). After an introductory presentation on the course requirements, the basics are set in terms of defining energy transition to a carbon neutral energy future. Further the integration of multiple energy networks will be explained, as well as communication within multiple energy networks. The issue of swarms of distributed generation will be explained, as well as the economics of a system relying largely on renewables. The key storage technologies will be explained, demonstrating their use for heat or electricity storage, their effectiveness on small or large scale, as well as their purpose and economics of short and long term storage. Communication within the smart grid as well the economics of distributed generation in

a future carbon neutral energy system will be explained. Finally, the sustainability assessment of smart energy network performance will be explained.

There will be no exam, however, the students will need to answer to problem questions related to the lectures and complete exercises. There will be 3 exercises, concentrating on (1) evaluation of storage technologies, (2) simulation of future smart energy networks and (3) sustainability assessment. The simulation work will be done as group work using the HOMER Energy software, for which in-class guidance will be provided. The results of the simulation will have to be presented. The rest will be done as individual work.

Järjestämistapa:

Implemented as face-to-face teaching, visiting lectures and student presentations. The course largely relies on participatory learning, therefore, there are compulsory participation requirements.

Toteutustavat:

Lectures 28 h, student presentations 4 h, guided exercise work 24 h, individual work 50 h, group work 38 h.

Kohderyhmä:

Master's students of environmental engineering, especially of energy and environmental engineering orientation; Master's students in economics; Master's students of Electrical Engineering and Information Technology. Doctoral students are also welcome to participate.

Esitietovaatimukset:

Completing the course 488501S is a prerequisite, completing the course 488502S prior to this course is also recommended.

Oppimateriaali:

Will be provided during the course by the lecturers.

Chen-Ching Liu, Stephern McArthur and Seung-Jae Lee (eds.)(2016) Smart Grids handbook, 3 volume set, and Stephen F. Bush (2014): Smart Grid: Communication-Enabled Intelligence for the Electric Power Grid. <http://onlinelibrary.wiley.com/book/10.1002/9781118820216>.

Suoritustavat ja arviointikriteerit:

Answering problem questions, individual and group exercise. Compulsory requirements are completing learning portfolio, answering of at least 75% of problem questions, compulsory participation in the in-course exercises and participation in the student presentation.

Arviointiasteikko:

The course evaluation will be based on an on-line learning portfolio, exercise performance and exercise report. The course unit utilizes a numerical grading scale 1-5. In the numerical scale, zero stands for a fail.

Vastuuhenkilö:

Prof. Eva Pongrácz (WE3) and Prof. Maria Kopsakangas-Savolainen (OBS). Other lecturers: WE3: Dr. Antonio Caló, Dr. Jean-Nicolas Louis; OBS: Enni Ruokamo; CWC: Doc. Jussi Haapola

Lisätiedot:

The number of students is limited. This course is a 5 credit course for engineering students, but economics students gain overall 6 credits by doing a mandatory extra assignment which corresponds to 1 credit.

721065S: Internship, 6 op

Voimassaolo: 01.08.2014 -

Opiskelumuoto: Syventävät opinnot

Laji: Työharjoittelu

Vastuuyksikkö: Oulun yliopiston kauppakorkeakoulu

Arvostelu: 1 - 5, hyv, hyl

Opintokohteen kielet: englanti

Laajuus:

6 credits / 160 hours of work

Ajoitus:

Free

Osaamistavoitteet:

The internship offers the students the opportunity to learn how to solve problems and to learn organizational tasks and responsibilities related to their major subject. Furthermore, the internship supports students to establish relationships to both working colleagues and business management and develops their communication skills within the organization and its network. The internship offers the students the possibility to develop their skills how to apply their knowledge in working environment and to increase their competence.

Sisältö:

The content is made up of the job description which is related to the student's major subject and which is provided by the organization where the internship will be accomplished. To be eligible for advanced level internship, the student should work either in a managerial position or as an independent specialist who has a responsible position with a possibility to use organizational resources.

Toteutustavat:

The student will work under the supervision of the internship instructor appointed by the company. First, student should contact lecturer Sauli Pajari to agree on the practicalities and documentation of the internship. Upon completion of the internship the student reflects and describes the internship period in the written report (8-10 pages) which will be returned with a weekly diary and a copy of the employment certificate to Sinikka Moilanen and Sauli Pajari.

The written report should be 8-10 pages and contain:

1. Description of the organization/company where the internship was completed
2. Description of the tasks, responsibilities and working methods during the internship
3. Description of how the tasks and responsibilities relate to the other functions of the organization
4. Description of how the internship relates to future career plans
5. Business development ideas for the Internship organization
6. Reflection on what was learned during the internship, how the learning relates to what has been learned earlier in the bachelor's and master's studies, and connecting the learning to theoretical concepts of the discipline.

- A description of the organization/company where the internship was completed.
- A detailed description of the tasks, responsibilities and working methods during the internship.
- Description of how the tasks and responsibilities relate to the other functions of the organization.
- Reflection on what was learned during the internship, how the learning relates to what has been learned earlier in the bachelor's and master's studies, and connecting the learning to theoretical concepts of the discipline.
- Description of how the internship relates to future career plans.

Kohderyhmä:

Students of the OBS Master's programmes

Esitietovaatimukset:

Completed bachelor's studies.

Yhteydet muihin opintojaksoihin:

No

Suoritustavat ja arviointikriteerit:

Written internship report

Arviointiasteikko:

Pass/Fail

Vastuhenkilö:

Sauli Pajari and Sinikka Moilanen

Työelämäyhteistyö:

The student will work in an organization improving professional skills related to the major subject and developing business knowledge (and personal network).

Lisätiedot:

The internship is an elective course. Internship may also be a business development case or other relevant project (e.g. Demola/Business Kitchen), which needs to be accepted following the general process described above.

Opiskelumuoto: Syventävät opinnot

Laji: Lopputyö

Vastuuyksikkö: Oulun yliopiston kauppakorkeakoulu

Arvostelu: 1 - 5, hyv, hyl

Opintokohteen kielet: suomi

Laajuus:

30 credits/ 800 hours

Opetuskieli:

English. Master's thesis can be written in Finnish or in English.

Ajoitus:

Periods A-D on the 2nd year of master's studies.

Osaamistavoitteet:

Upon completion of the thesis students can choose and apply appropriate research methods to produce new knowledge and to apply that knowledge to typical business decision-making problems. Students are able to conduct scientific research and make reasonable recommendations for solving business and economic problems. Furthermore, students demonstrate deep and coherent understanding of an academic field of study within their own major. They are able to demonstrate knowledge of the theories, concepts, frameworks and empirical findings of their discipline and understand the connections between various theories in the chosen discipline.

Students will demonstrate deep understanding of their own profession, and are able to use, process and analyze economic and/or business information. Students understand various business processes and operations, and causal connections between them. Finally, students are able to express their ideas effectively and analytically, both in oral and written form.

Sisältö:

Most of the work is independent writing of the thesis report, but during the master's thesis work students participate in seminar sessions in which they present and report the status and advancement of their work. In the seminars they receive guidance and feedback from their supervisor on how to proceed in and complete their research report. Description of the process and other relevant information are available at <http://www.oulu.fi/oulubusinessschool/mastersthesisprocess>

Järjestämistapa:

Face-to-face teaching in seminar sessions.

Toteutustavat:

Independent work and face-to-face teaching in seminar sessions. Students prepare and present three reports during the course: 1) Research plan, 2) Intermediate report and 3) Manuscript. The works starts with a kick-off session and the progress and timing of the sessions is agreed on in the kick-off session.

Kohderyhmä:

Students of the Master's program in Economics

Esitietovaatimukset:

723020A Bachelor's Thesis or another university degree.

Yhteydet muihin opintojaksoihin:

-

Oppimateriaali:

Scientific articles and other theoretical and empirical materials collected by the students for their individual study.

Suoritustavat ja arviointikriteerit:

Examination through written research report.

Arviointiasteikko:

The course utilizes a numerical grading scale 1-5. In the numerical scale zero stands for fail.

Vastuhenkilö:

Professors

Työelämäyhteistyö:

Working life cooperation is dependent on the particular project. However, the students will learn problem solving and analytical skills as well as oral and written presentation skills needed for a business graduate in working life. Students deepen their understanding of their own profession.

Lisätiedot:

Open only to students of the Master's program in Economics

Tutkintorakenteisiin kuulumattomien opintokokonaisuuksien ja -jaksojen kuvaukset

721342S: Game Theory, 6 op

Opiskelumuoto: Syventävät opinnot

Laji: Opintojakso

Vastuuyksikkö: Oulun yliopiston kauppakorkeakoulu

Arvostelu: 1 - 5, hyv, hyl

Opettajat: Marja-Liisa Halko

Opintokohteen kielet: englanti

Ei opintojaksokuvauksia.