Opasraportti

Courses in English for Exchange Students, 2016-17: Industrial Engineering and Management (2016 - 2017)

This WebOodi Course Catalogue lists the courses in the study field of **Industrial Engineering and Management that** are available **in English for exchange students** during the Academic Year **2016-2017** at the **Faculty of Technology, University of Oulu**.

NB! Course availability: Most of the listed **courses** are available for all **exchange students hosted by the Faculty of Technology** (study fields of process engineering, environmental engineering, mechanical engineering, and industrial engineering and management), **if they have the previous knowledge requirements** of the course (see "Prerequisites and co-requisites" in the course's description).

If you wish to do an **internship or a final thesis project** during your exchange at our Faculty, you need to **contact the Faculty Coordinator** already when planning the exchange.

Exchange students hosted by other University of Oulu faculties have to contact the Coordinator of the Faculty of Technology (see below) to ask if it is possible to participate to the courses, but also they must have the previous knowledge required for the course in question.

When planning your exchange studies and the required **Learning Agreement**, please **use the information provided under the Courses tab** in this Catalogue.

Please read carefully the provided information for each course you wish to take (cource description, language of instruction, target group, course content, timing, preceding studies = requiered previous studies, additional information, etc.).

All incoming exchange students must submit their Exchange Application online through the University of Oulu SoleMOVE system, and you will **also need to submit a course plan** to that application and **enclose the respective Learning Agreement signed** by you and your home coordinator.

Further information on application process for incoming exchange students is available at http://www.oulu.fi/english/studentexchange or at international.office@oulu.fi. **For more information about the courses,** please contact Faculty Coordinator (see contact info below).

After arrival, accepted exchange students are required to **register on-line in the WebOodi system to all courses** (**and** later, to the possible final course **exams** too). Course registration takes place via the WebOodi system once you have arrived in Oulu and received your University of Oulu login information. More information on registration will be provided during Orientation. When registering to a course you will be able to find detailed information on teaching and **schedules** here under the **Instruction** and **Examinations tabs**.

Course schedules: Detailed information on teaching and schedule can be found under the **Instruction** and **Examinations tabs**. Our courses' schedules are based on so-called **periodical schedules***.* Courses which are organised during **periods 1-2** are given on the **autumn** term (September-December), and respectively the **periods 3-4** refer to courses given during the **spring** term (January-May).

On the Academic Year of 2016-2017 these periods are scheduled as follows:

Orientation week: Aug 22-26, 2016
Autumn term: Period 1: Aug 29 - Oct 21, 2016;
Period 2: Oct 24 – Dec 16, 2016

Orientation week: Jan 4 - Jan 5, 2017;
Spring Term: Period 3: Jan 9 – March 10, 2017;
Period 4: March 13 – May 12, 2017
(after period 4 there can possibly be some final exams, until the end of May)

Individual course codes include information on the level of course:

xxxxxY, xxxxxP, = basic introductory level courses, for 1st-2nd year students (basic Bachelor level)
xxxxxA = subject level introductory courses, mainly for 1-3 year students (advanced Bachelor level)
xxxxxS = advanced level courses, mainly for 4-5 year students (Master level courses)

Any questions about these courses should be addressed to:

Ms. M.Sc. Marita Puikkonen
Coordinator for Faculty of Technology Student Exchange (Incoming & Outgoing Mobility) for
Process, Environmental and Mechanical Engineering, and Industrial Engineering and Management
Faculty of Technology, University of Oulu, Finland
Eddress: firstname.surname@oulu.fi

Tutkintorakenteisiin kuulumattomat opintokokonaisuudet ja -jaksot

555351S: Advanced Course in Product Development, 5 op
555391S: Advanced Course in Project Management, 5 op
555371S: Human Resource Management, 5 op
555375S: Lab to Market, 5 op
555313S: Management, 5 op
555226A: Operations and Production, 5 op
555376S: Organisational development, 5 op
555343S: Product Data management, 5 op
555242A: Product development, 5 op
555346S: Product management, 5 op
555333S: Production Management, 5 op
555382S: Project Business, 5 op
555377S: Risk Management, 5 op
555378S: Seminar in industrial engineering and management, 5 op
555370S: Strategic Management, 5 op
555350S: Technology Management, 5 op

Opintojaksojen kuvaukset

Tutkintorakenteisiin kuulumattomien opintokokonaisuuksien ja -jaksojen kuvaukset

555351S: Advanced Course in Product Development, 5 op

Voimassaolo: 01.08.2015 -
Opiskelumuoto: Advanced Studies
Laji: Course
Vastuuyksikkö: Field of Industrial Engineering and Management
Arvostelu: 1 - 5, pass, fail
Opettajat: Haapasalo, Harri Jouni Olavi
Opintokohteen kielet: English
Leikkaavuudet:

555345S Advanced Course in Product Development 6.0 op

ECTS Credits:
5 ECTS credits.
Language of instruction:
English.
Timing:
Period 2.
Learning outcomes:
Upon completion of the course the student understands the objectives of requirements engineering in order to develop sustainable products. The course familiarizes the student to requirements engineering process and its key activities. After finishing the course, the student will be able to analyze requirements engineering in product development processes. The student knows Design for Excellence (DfX) practice. The student can recognize different stakeholder specific requirements and their diversity.
Contents:
The concepts of requirements management, requirements engineering process, requirement prioritization and valuation, Design for Excellence (DfX), different stakeholders and their requirements for product development.

Mode of delivery:
The tuition will be implemented as face-to-face teaching.

Learning activities and teaching methods:
Lectures 20 h / group work and self-study 114 h.

Target group:
Industrial Engineering and Management and Master’s Programme in Product Management students.

Prerequisites and co-requisites:
555242A Product development, 555350S Technology management.

Recommended optional programme components:
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Recommended or required reading:
Will be defined at the beginning of the course.

Assessment methods and criteria:
Group work, exam.

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

Person responsible:
Professor Harri Haapasalo.

Working life cooperation:
No.

Other information:
Substitutes course 555345S Advanced Course in Product Development.

555391S: Advanced Course in Project Management, 5 op

Voimassaolo: 01.08.2015 -
Opiskelumuoto: Advanced Studies
Laji: Course
Vastuuyksikkö: Field of Industrial Engineering and Management
Arvostelu: 1 - 5, pass, fail
Opettajat: Kirsi Aaltonen
Opintokohteen kielet: English
Leikkaavuudet:

555381S Project Leadership 5.0 op

ECTS Credits:
5 ECTS credits.

Language of instruction:
English.

Timing:

Period 1.

Learning outcomes:
After the course, the student has an in-depth understanding of the most important project management areas, competences to identify and evaluate the most applicable managerial approaches for different types of projects and capabilities to develop project management processes in an organization.

Contents:
different type of projects and industry specific approaches to project management, managing large international projects, managing projects' external environment, project governance, project risk management, project time and schedule management

Mode of delivery:
The tuition will be implemented as blended teaching (web-based teaching and face-to-face teaching).

Learning activities and teaching methods:
Lectures, web-based-lectures and workshops 36h, group exercises 36h, self-study 62h

Target group:
Industrial Engineering and Management and Master's Programme in Product Management students.

Prerequisites and co-requisites:
555285A Basic course in project management.

Recommended optional programme components:
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Recommended or required reading:
Lecture and exercise material.

Assessment methods and criteria:
This course utilizes continuous assessment. The grading is based on case assignments solved in groups and discussed during the lecture (30% of the grade), group exercise presented and discussed in the workshops (30% of the grade), and exam (40% of the grade).

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

Person responsible:
Assistant professor Kirsi Aaltonen

Working life cooperation:
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Other information:
Substitutes course 555381S Project Leadership.

555371S: Human Resource Management, 5 op

Voimassaolo: 01.08.2015 -
Opiskelumuoto: Advanced Studies
Laji: Course
Vastuuyksikkö: Field of Industrial Engineering and Management
Arvostelu: 1 - 5, pass, fail
Opintokohteen kielet: English
Leikkaavuudet:

555360S Administration, Organization and Education in Working Life 5.0 op

555375S: Lab to Market, 5 op

Voimassaolo: 01.08.2015 -
Opiskelumuoto: Advanced Studies
Laji: Course
Vastuuyksikkö: Field of Industrial Engineering and Management
Arvostelu: 1 - 5, pass, fail
Opettajat: Jukka Majava
Opintokohteen kielet: English
Leikkaavuudet:

555327S Seminar in Production Management : Lab to Market 5.0 op

ECTS Credits:
5 ECTS credits.

Language of instruction:
English.

Timing:
Period 2.

Learning outcomes:
Upon completion of the course the student should be able to analyze an industry to identify viable business ideas and opportunities. He/she can use different frameworks including scenario planning, customer driven analysis, user needs analysis, and technology evolution analysis. The student can apply frameworks and methods to distinguish interesting and promising ideas from viable opportunities, utilize frameworks and methods to evolve the ideas into viable products and businesses, and determine what business models are most effective. The student can also present and defend own ideas, and critically examine and discuss the recommendations of others.

Contents:
Industry analysis, scenario planning, customer driven analysis, user needs analysis, technology evolution analysis, opportunity identification, business models.

Mode of delivery:
The tuition will be implemented as face-to-face teaching.

Learning activities and teaching methods:

Lectures 28 h / self-study and group work 106 h.

Target group:
Industrial Engineering and Management and Master's Programme in Product Management students.

Prerequisites and co-requisites:
B.Sc. in Industrial Engineering and Management or equivalent.

Recommended optional programme components:
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Recommended or required reading:
Lecture materials. Other materials will be defined at the beginning of the course.

Assessment methods and criteria:
This course utilizes continuous assessment. During the course, there are mandatory individual assignments (75 % of the grade) and a group work (25 % of the grade).

Grading:
1-5.

Person responsible:
D.Sc. Jukka Majava.

Working life cooperation:
No.

Other information:
Substitutes course 555327S Lab to Market.

555313S: Management, 5 op

Voimassaolo: 01.08.2015 -
Opiskelumuoto: Advanced Studies
Laji: Course
Vastuuyksikkö: Field of Industrial Engineering and Management
Arvostelu: 1 - 5, pass, fail
Opettajat: Kess, Pekka Antero
Opintokohteen kielet: Finnish

ECTS Credits:
5 ECTS credits.

Language of instruction:
English

Timing:
Period 1.

Learning outcomes:
Upon completion of the course the student understands the key concepts of general management. After completing the course the student knows the historical developments in the management thought. The student has an understanding about the qualifications of a manager in a modern organization. The student understands the principles of the managerial decision making. The student can distinguish between the terms management and leadership. The student has an understanding about good managerial practices.

Contents:
Managers and Managing, The Evolution of Management Thought, Values, Attitudes, Emotions, and Culture: The Manager as a Person, Ethics and Social Responsibility, Managing Diverse Employees in a Multicultural

Environment, Decision Making, The Manager as a Planner and Strategist, Managing Organizational Structure and Culture, Organizational Control and Change, Motivation and Performance, Leadership, Effective Groups and Teams, Promoting Effective Communication, Managing Conflict, Politics, and Negotiation.

Mode of delivery:
The tuition will be implemented as blended teaching (face-to-face teaching and a supervised group work).

Learning activities and teaching methods:
Lectures 10 h, case examples 10 h, self-study 115 h.

Target group:
Industrial Engineering and Management students.

Prerequisites and co-requisites:
B.Sc. in Industrial Engineering and Management or equivalent.

Recommended optional programme components:
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Recommended or required reading:
Jones G. R. & George J.M (2014) Contemporary Management. McGraw-Hill. Case descriptions.

Assessment methods and criteria:
The assessment is based on the exam.

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

Person responsible:
Professor Pekka Kess

Working life cooperation:
No.

555226A: Operations and Production, 5 op

Voimassaolo: 01.08.2015 -
Opiskelumuoto: Intermediate Studies
Laji: Course
Vastuuyksikkö: Field of Industrial Engineering and Management
Arvostelu: 1 - 5, pass, fail
Opettajat: Jukka Majava
Opintokohteen kielet: English
Leikkaavuudet:

555222A	Demonstration in Industrial Engineering and Management	2.0 op
555223A	Introduction to Production Control	3.0 op

ECTS Credits:
5 ECTS credits
Language of instruction:
English.
Timing:
Periods 1-2.

Learning outcomes:
Upon completion of the course the student should be able to describe different production types. He/she can apply different forecasting methods, plan needed production capacity, and apply location and transportation decisions related methods. The student can master common inventory management methods and aggregated and short-term scheduling. The student can also create a sales and operations plan for a company.
Contents:

Production types, forecasting methods, capacity planning and queuing models, location and transportation decisions, inventory management systems, aggregate scheduling, MRP & ERP, short-term scheduling, linear programming.

Mode of delivery:
The tuition will be implemented as blended teaching (web-based teaching and face-to-face teaching).

Learning activities and teaching methods:
Lectures 20 h / self-study (web-based exercises) 60 h / group work 54 h.

Target group:
Industrial Engineering and Management and Master's Programme in Product Management students.

Prerequisites and co-requisites:
555225P Basics of industrial engineering and management or similar knowledge.

Recommended optional programme components:
Industrial Engineering and Management students will complete 902143Y English course simultaneously.

Recommended or required reading:
Lecture and exercise materials. Heizer, J. & Render, B. (2014) Operations management: sustainability and supply chain management, 11th ed. Pearson. Krajewski, L.J. et al. (2012) Operations management: processes and supply chains, 10th ed. Pearson.

Assessment methods and criteria:
This course utilizes continuous assessment. During the course, there are mandatory weekly assignments. At least half of the assignments must be passed. 40 % of the grade is based on the group work.

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

Person responsible:
D.Sc. Jukka Majava.

Working life cooperation:
No.

Other information:
Substitutes course 555222A Demonstration in Industrial Engineering and Management 2 ECTS cr and 555223A Introduction to Production Control 3 ECTS cr.
Course name from 1.8.2017 is 'Operations and Supply Chain Management'.

555376S: Organisational development, 5 op

Voimassaolo: 01.08.2015 -

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Field of Industrial Engineering and Management

Arvostelu: 1 - 5, pass, fail

Opintokohteen kielet: Finnish

Leikkaavuudet:

555360S Administration, Organization and Education in Working Life 5.0 op

ECTS Credits:
5 ECTS credits.

Language of instruction:
Finnish. English material is also used (the course can be completed in English as a book examination).

Timing:
Period 1.

Learning outcomes:
After completing the course student is able to explain the general models regarding organisational development and is able to adapt the most central ones to the work organisations. Student can also choose the most suitable models for different situations and can interpret the results gained from different approaches. The student is able

to explain the most important quantitative and qualitative variables that are either preconditions or results of the operation of the organisation. He is able to identify development needs and opportunities in companies and other organisations. The student also knows the basics of applying new research results in practical settings.
Contents:
The development of organisation is examined through e.g. the following concepts: productivity, well-being at work, quality control, quality of working life, security, and responsibility. Different types of indicators and applications will be discussed, such as occurrence, frequency indicators, economic indicators, and scales. Various concepts will be discussed, for example, in relation with change processes (e.g. strategy, owner, partnerships, sizes of operations and personnel), implementation, participation, intervention, action research, and learning organization.

Mode of delivery:
The tuition will be implemented as blended teaching (face-to-face teaching and web-based teaching).
Learning activities and teaching methods:
Lectures 22 h / self-study 100 h / group work & exercises 12 h.

Target group:
Industrial Engineering and Management and Master's Program in Product Management students.
Prerequisites and co-requisites:
555265P Occupational safety and health management, 555264P Managing well-being and quality of working life, 555371S Human resource management.

Recommended optional programme components:
Human resource management, 555370S Strategic management, 555377S Risk Management. Research project in industrial engineering and management related to Organisation and knowledge management topic and Faculty of Education's Organisational psychology course can be conducted to complement this course.

Recommended or required reading:
Applicable parts of: Hatch, M. J. and Cunliffe A.N. (2013) Organization Theory, Modern, Symbolic, and Postmodern Perspectives. Third Edition, Oxford University Press. Väyrynen, S., Häkkinen, K., Niskanen, T. (Eds.) (2015). Integrated Occupational Safety and Health Management - Solutions and Industrial Cases. Springer, Production & Process Engineering. 248 p. Other literature will be informed at the beginning of the course.
Assessment methods and criteria:
This course utilizes continuous assessment including exercises during the lectures (weight 20 %), seminar work (weight 30 %) and examination (50 % weight).
Grading:
The course utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.

Person responsible:
Professor Seppo Väyrynen
Working life cooperation:
No.

Other information:
Substitutes course 555360S Administration, Organization and Education in Working Life.

555343S: Product Data management, 5 op

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Field of Industrial Engineering and Management

Arvostelu: 1 - 5, pass, fail

Opettajat: Arto Tolonen

Opintokohteen kielet: English

Voidaan suorittaa useasti: Kyllä

Status:
5 ECTS credits.

ECTS Credits:
English.

Language of instruction:
Period 3-4.

Timing:
The course familiarizes a student with the product processes of an enterprise and specifically the meaning of product data in different stages of product process. After finishing the course, a student knows what product data is and how it can be used for business purpose. A student is familiar with the basic concepts of product data management (PDM) and is aware of the basic tools used for PDM. After finishing the course, a student will be able to analyze existing and future products from product structure viewpoint. Students will be able to analyze the company's product data management as a whole and to give suggestions based their analysis.

Learning outcomes:
Product information management concepts, its history and challenges, PDM-processes: managing product models, managing documents and configurations as well as tracing information, PDM-system and its functions, PDM-project and implementation of the system.

Contents:
The tuition will be implemented as face-to-face teaching.

Mode of delivery:
Lectures 16 h / group work and self-study 118 h.

Target group:
Industrial Engineering and Management and Master’s Programme in Product Management students.

Prerequisites and co-requisites:
555242 Product development.

Recommended optional programme components:
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Recommended or required reading:
Lecture materials and selected articles. Saaksvuori A & Immonen A. (2008) Product lifecycle management, 8 ed. pages 1-65 and 91-176.

Assessment methods and criteria:
Group work report and exam.

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

Person responsible:
Professor Harri Haapasalo.

Working life cooperation:
No.

Other information:
Course name from 1.8.2017 is 'Product Data and Product Life Cycle Management'

555242A: Product development, 5 op

Voimassaolo: 01.01.2014 -
Opiskelumuoto: Intermediate Studies
Laji: Course
Vastuuyksikkö: Field of Industrial Engineering and Management
Arvostelu: 1 - 5, pass, fail
Opettajat: Haapasalo, Harri Jouni Olavi
Opintokohteen kielet: English
Leikkaavuudet:

ay555242A Product development (OPEN UNI) 5.0 op
555240A Basic Course in Product Development 3.0 op

ECTS Credits:
5 ECTS credits**.**

Language of instruction:
English.

Timing:
Period 1.

Learning outcomes:
This course introduces product development and innovations management in a company environment. The course provides fundamental understanding over tools and frameworks that can be used for analysing and managing products, innovations, and technology development. The aim is to create a connection between product development and other company functions. Upon completion of the course a student is capable of explaining the role of product development as a company function. The student understands the difference between innovation activities and systematic product development, and knows the difference between different phases of product development process and its activities. Student learns how to transform customer needs into requirements for product development process and finally into product features. Additionally, the student is able to define the meaning of other company functions to product development activities.

Contents:
Meaning of products for the operations of an industrial enterprise, product development paradigm and defining relevant concepts, realising product development methodologically (U&E model, Cooper's stage-gate model, QFD), managing innovations, and product development success factors.

Mode of delivery:
The tuition will be implemented as blended teaching.

Learning activities and teaching methods:
Lectures 20 h / exercises 6 h / group work and self-study 108 h.

Target group:
Industrial Engineering and Management students and other students taking Industrial Engineering and Management as minor.

Prerequisites and co-requisites:
555226A Operations and production.

Recommended optional programme components:
This course is part of the 25 ECTS module of Industrial engineering and management that also includes 555225P Basics of industrial engineering and management, 555285A Project management, 555264P Managing well-being and quality of working life, and 555286A Process and quality management..

Recommended or required reading:
Handouts, course work, and a collection of articles. Ulrich, K. & Eppinger, S. (2008) Product Design and Development. McGraw-Hill. 358 p.

Assessment methods and criteria:
Assignment and final exam.

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

Person responsible:
Professor Harri Haapasalo.

Working life cooperation:
No.

Other information:

Substitutes course 555240A Basic Course in Product Development.

555346S: Product management, 5 op

Opiskelumuoto: Advanced Studies
Laji: Course
Vastuuyksikkö: Field of Industrial Engineering and Management
Arvostelu: 1 - 5, pass, fail
Opettajat: Arto Tolonen
Opintokohteen kielet: English
Voidaan suorittaa useasti: Kyllä

Required proficiency level:

ECTS Credits:
5 ECTS credits.

Language of instruction:
English.

Timing:
Periods 3-4.

Learning outcomes:
The course familiarizes students with the broad concepts of product management. After finishing the course, the student understands central principles and contents of product management and product portfolio management. Student knows the basic steps of the product portfolio management development and understands the ways to analyse and manage products and product portfolios. A student learns to see product and product portfolio management as strategic targets, performance indicators, governance models, process and product information management over horizontal and technical portfolios over product life cycle phases and product structure levels. The student can apply the learned things and methods in different industries in order to develop systematic product and product portfolio management processes.
Contents:
Basic issues in product and product portfolio management performance management, governance models, horizontal and vertical portfolios, processes, tools and product information.
Mode of delivery:
The tuition will be implemented as face-to-face learning and practical assignments.

Learning activities and teaching methods:
Will be defined at the beginning of the course.
Target group:
Industrial Engineering and Management and Master's Programme in Product Management students.
Prerequisites and co-requisites:
555242A Product development, 555350S Technology management.
Recommended optional programme components:
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Recommended or required reading:
Will be defined at the beginning of the course.

Assessment methods and criteria:
Will be defined at the beginning of the course.

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

Person responsible:
Dr Arto Tolonen.

Working life cooperation:

No.

Other information:
Course name from 1.8.2017 is 'Product Portfolio Management'

555333S: Production Management, 5 op

Voimassaolo: 01.08.2015 -
Opiskelumuoto: Advanced Studies
Laji: Course
Vastuuyksikkö: Field of Industrial Engineering and Management
Arvostelu: 1 - 5, pass, fail
Opettajat: Kess, Pekka Antero
Opintokohteen kielet: English
Leikkaavuudet:

555322S Production Management 3.0 op

ECTS Credits:
5 ECTS credits.

Language of instruction:
English

Timing:
Period 2.

Learning outcomes:
Upon completion of the course the student understands the key concepts of operations and production management. The student should know the essential production strategies. The student should also understand the principles of the supply chain management, and should be able to apply JIT, Lean and TOC methods in analyzing and constructing development plans for production organizations. Upon completion of the course the student can apply the management methods also in service systems. The student also understands the principles of the sustainable development in production.

Contents:
Production strategies, sustainable development, Supply Chain Management, Just-In-Time (JIT), Theory of Constraints (TOC), Lean, Toyota Production System (TPS), management of the production of services.

Mode of delivery:
The tuition will be implemented as blended teaching (face-to-face teaching and a supervised group work).

Learning activities and teaching methods:
Lectures 20 h, assignment guidance 20 h, group work 95 h.

Target group:
Industrial Engineering and Management and Master’s Programme in Product Management students.

Prerequisites and co-requisites:
B.Sc. in Industrial Engineering and Management or equivalent.

Recommended optional programme components:
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Recommended or required reading:
Liker J (2004) The Toyota Way: 14 Management Principles from the World's Greatest Manufacturer. Goldratt, E. M. (2012) The Goal: A Process of Ongoing Improvement. Material delivered during the lectures.

Assessment methods and criteria:
The assessment is based on the group work.

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

Person responsible:
Professor Pekka Kess

Working life cooperation:
No.

Other information:
Substitutes course 555322S Production Management.

555382S: Project Business, 5 op

Opiskelumuoto: Advanced Studies
Laji: Course
Vastuuyksikkö: Field of Industrial Engineering and Management
Arvostelu: 1 - 5, pass, fail
Opettajat: Jaakko Kujala
Opintokohteen kielet: Finnish
Voidaan suorittaa useasti: Kyllä

ECTS Credits:
5 ECTS credits.

Language of instruction:
English.

Timing:
Period 4.

Learning outcomes:
The course provides the student with the basic skills to manage a company practicing project business. Upon completion the student can explain the management areas of project business and their essential contents. The student can compare the specific features of project business in different business environments and analyse their effect on the business model of the company. The student can evaluate the significance of a single project and its management in reaching business goals.

Contents:
The specific features of project business, business models of a project company, project sales and marketing, contracting, negotiation analytic approach, project portfolio management, management of project networks.

Mode of delivery:
The tuition will be implemented as face-to-face teaching.

Learning activities and teaching methods:
Lectures 24h, self-study56h, group exercise 54h
Target group:
Industrial Engineering and Management and Master’s Programme in Product Management students.
Prerequisites and co-requisites:
B.Sc. in Industrial Engineering and Management or equivalent.
Recommended optional programme components:
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Recommended or required reading:
Lecture materials. Other materials will be defined at the beginning of the course.
Assessment methods and criteria:
The course utilizes continuous assessment. During the course, the students must write a learning diary for each lecture and participate actively in the lectures. 40% of the grade is based on the group work.

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

Person responsible:
Professor Jaakko Kujala

Working life cooperation:
No.

Other information:
Course name from 1.8.2017 is 'Management of a Project-based Firm'

555377S: Risk Management, 5 op

Voimassaolo: 01.08.2015 -
Opiskelumuoto: Advanced Studies
Laji: Course
Vastuuyksikkö: Field of Industrial Engineering and Management
Arvostelu: 1 - 5, pass, fail
Opettajat: Kirsi Aaltonen
Opintokohteen kielet: English
Leikkaavuudet:

555321S Risk Management 3.0 op

ECTS Credits:
5 ECTS credits.

Language of instruction:
English

Timing:
Period 2.

Learning outcomes:
The objective of the course is to provide a student an overall perspective to risk management in organizations. Upon completion the student can explain the key concepts of risk and uncertainty management, classify risks, conduct systematic risk analyses, apply risk management methods and tools and make informed improvement suggestions related to risk management in organizations. The student understands the role of risk management in organizations and can compare
Contents:
Definitions of risk and uncertainty, risk management standards, risk classification, systematic risk management process, methods of risk management, psychological aspects of risk management, ERM and organizing of risk management, risk management in different contexts, risk governance.

Mode of delivery:
The tuition will be implemented as face-to-face teaching.

Learning activities and teaching methods:
Lectures 26h, self-study 54h, group assignment 54h.

Target group:
Industrial Engineering and Management and Master’s Programme in Product Management students..

Prerequisites and co-requisites:
B.Sc. in Industrial Engineering and Management or equivalent.
Recommended optional programme components:
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Recommended or required reading:

Lecture materials and reading materials (articles, book chapters) related to each lecture. The materials will be defined at the beginning of the course.

Assessment methods and criteria:
Group assignment, in-class case assignments, exam. Course grading is based on exam and group assignment.

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

Person responsible:
Assistant Professor Kirsi Aaltonen

Working life cooperation:
No.

Other information:
Substitutes course 555321S Risk Management.

555378S: Seminar in industrial engineering and management, 5 op

Voimassaolo: 01.08.2015 -
Opiskelumuoto: Advanced Studies
Laji: Course
Vastuuyksikkö: Field of Industrial Engineering and Management
Arvostelu: 1 - 5, pass, fail
Opettajat: Jukka Majava
Opintokohteen kielet: Finnish
Leikkaavuudet:

555385S	Advanced Course in Quality Management	5.0 op
555386S	Advanced Course in Project Management	5.0 op
555347S	Seminar in Technology Management	5.0 op

ECTS Credits:
5 ECTS credits.

Language of instruction:
Finnish/English.

Timing:
Periods 1-4.

Learning outcomes:
Learning outcomes depend on the content of each seminar. The seminar topics are related to production management, product management, organization and knowledge management, project management, and process and quality management.

Contents:
Will be defined at the beginning of the course.

Mode of delivery:
Will be defined at the beginning of the course.

Learning activities and teaching methods:
Will be defined at the beginning of the course.

Target group:
Industrial Engineering and Management and Master’s Programme in Product Management students.

Prerequisites and co-requisites:

B.Sc. in Industrial Engineering and Management or equivalent.

Recommended optional programme components:
-

Recommended or required reading:
Will be defined at the beginning of the course.

Assessment methods and criteria:
Will be defined at the beginning of the course.

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

Person responsible:
-

Working life cooperation:
-

Other information:
Substitutes courses 555347S Seminar in Product Management, 555385S
Research Project in Quality Management and 555386S Research Project in Project Management.

555370S: Strategic Management, 5 op

Voimassaolo: 01.08.2015 -
Opiskelumuoto: Advanced Studies
Laji: Course
Vastuuyksikkö: Field of Industrial Engineering and Management
Arvostelu: 1 - 5, pass, fail
Opettajat: Jukka Majava
Opintokohteen kielet: English
Leikkaavuudet:

555320S Strategic Management 5.0 op

ECTS Credits:
5 ECTS credits.

Language of instruction:
English.

Timing:
Period 1.

Learning outcomes:
Upon completion of the course the student should be able to utilize strategic thinking, planning, and management. He/she can analyze and plan complex global business operations. After the course, the student can participate in strategic planning and strategy implementation in organizations. The student knows how to apply strategy analysis frameworks and analyze the implementation of the chosen strategy.

Contents:
Strategic thinking, strategic planning, strategic management, strategy analysis frameworks, strategy implementation with a simulation, analysis of the strategy implementation.
Mode of delivery:
The tuition will be implemented as blended teaching (web-based teaching and face-to-face teaching).
Learning activities and teaching methods:
Lectures 6 h / exercises 6 h / group work 122 h. Alternatively independent learning method: book examination 134 h.
Target group:

Industrial Engineering and Management and Master's Programme in Product Management students.
Prerequisites and co-requisites:
B.Sc. in Industrial Engineering and Management or equivalent.

Recommended optional programme components:
-
Recommended or required reading:
Isoherranen, V. (2012) Strategy analysis frameworks for strategy orientation and focus, University of Oulu, Faculty of Technology, Industrial Engineering and Management. Mintzberg, H. et al. (2009) Strategy safari: the complete guide through the wilds of strategic management, 2nd ed. Harlow, FT Prentice Hall.
Assessment methods and criteria:
This course utilizes continuous assessment. The group work includes the creation of strategic plan (10 % of the grade), business simulation (30 % of the grade), and the analysis of the strategy (60 % of the grade).

Grading:
The course utilizes a numerical grading scale 1-5. In the numerical scale zero stands for a fail.
Person responsible:
D.Sc. Jukka Majava.

Working life cooperation:
No.

Other information:
Substitutes course 555320S Strategic Management.

555350S: Technology Management, 5 op

Voimassaolo: 01.08.2015 -

Opiskelumuoto: Advanced Studies

Laji: Course

Vastuuyksikkö: Field of Industrial Engineering and Management

Arvostelu: 1 - 5, pass, fail

Opettajat: Haapasalo, Harri Jouni Olavi

Opintokohteen kielet: English

Leikkaavuudet:

555340S Technology Management 4.0 op

ECTS Credits:
5 ECTS credits.

Language of instruction:
English.

Timing:
Period 2.

Learning outcomes:
After finishing the course, the student will be able to differentiate product development and technology management in a company. The student will be able to piece together the development needs and cycles of technologies in an organization. In addition, the student will know how to combine technology development and technology management with strategic planning of a company.

Contents:
The course consists of defining technology and its role within an enterprise and within society. During the course we study the meaning of innovation in technological competition. The lifecycles of technology including development, acquirement, and movement are also covered.

Mode of delivery:
The tuition will be implemented as face-to-face teaching

Learning activities and teaching methods:
Lectures 21 h / exercises, group work and self-study 113 h.

Target group:
Industrial Engineering and Management and Master’s Programme in Product Management students.

Prerequisites and co-requisites:
555242A Product Development.

Recommended optional programme components:
-

Recommended or required reading:
Lecture materials and selected articles, will be defined at the beginning of the course.

Assessment methods and criteria:
Exam.

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

Person responsible:
Professor Harri Haapasalo.

Working life cooperation:
No.

Other information:
Substitutes course 555340S Technology Management.
Course name from 1.8.2017 is 'Research and Technology Management'