Contents

37C00100 Management Information Systems (6 cr)
Responsible teacher: Johanna Bragge
Status of the Course: Bachelor's programme, Specialization area in Information and Service Management, elective AALTO course
Level of the Course: Bachelor's level course
Teaching period: IV Spring (2018-2019) Otaniemi campus IV Spring (2019-2020) Otaniemi campus
Workload: - Contact teaching 24h
- Independent work 133 h
- exam 3h
Total 160h (6 ECTS)
Learning Outcomes: Information technology and data have changed how businesses operate and succeed in today's global economy. Organizations can now use IT and data to transform themselves and achieve a tremendous competitive advantage. On the other hand, those organizations that are not mastering these assets might not exist in the near future. This course highlights how new technologies and data are changing the current business environment and what effect it has on today's students. The course addresses the major principles of Management Information Systems (MIS) in order to prepare managers to understand the strategic role of information technology and data in the digital economy. This course aims to give students what they need to succeed in the current digital economy.
Content: 1. Information Systems and the Role of General and Functional Managers
2: Information Systems Defined
3: Organizational Information Systems and Their Impact
4: The Changing Competitive Environment
5: Electronic Commerce: New Ways of Doing Business
6: Strategic Information Systems Planning
7: Value Creation and Strategic Information Systems
8: Value Creation with Information Systems
9: Appropriating IT-Enabled Value Over Time
10: Funding and Governance of Information Systems
11: Creating Information Systems
12: Information Systems Trends
13: Security, Privacy, and Ethics
Assessment Methods and Criteria:
40% assignments
60% exam
Study Material: Piccoli, Gabriele and Pigni, Federico (2017) INFORMATION SYSTEMS FOR MANAGERS without Cases, Edition 3.1, ISBN: 978-1-943153-07-7 (paperback), 978-1-943153-06-0 (eTextbook) http://prospectpressvt.com/titles/piccoli-3e/
Course Homepage: https://mycourses.aalto.fi/course/search.php?search=37C00100
Evaluation: 0-5
Registration for Courses: Via WebOodi
Language of Instruction: English
Further Information: Maximum number of students admitted is 130. Priority list for selection of students:
1. ISM BSc students
2. ISM Minor students
3. Other BSc students
4. Exchange students
5. Other BIZ students
6. Other Aalto students

37C00400 Programming I (6 cr)
Responsible teacher: Virpi Tuunainen
Status of the Course: Bachelor's programme, Specialization area in Information and Service Management, elective
Level of the Course: Bachelor's level course
Teaching period:
I (2018-2019) Otaniemi campus
I (2019-2020) Otaniemi campus
Workload: Opening lecture 2h
weekly help sessions 10h
independent work 145
exam 3h
Total 160h (6 ECTS)
Learning Outcomes: Students learn to understand the software development process. They are familiar with the core set of algorithms and data structures. They are able to program medium sized applications with graphics and master a modern programming language.
Content: Control structures; Designing and using data types; Designing data types; Testing; Maintaining collections; Recursion; Data structures; Sorting and Searching
Assessment Methods and Criteria: mandatory passed self paced MOOC assignments
100% exam
Study Material: MOOC, the link published at the course home page
Course Homepage: https://mycourses.aalto.fi/course/search.php?search=37C00400
Evaluation: 0-5
Registration for Courses: Via Weboodi
Language of Instruction: English

37C00450 Programming II (6 cr)
Responsible teacher: Virpi Tuunainen
Status of the Course: Elective studies in the degree
Level of the Course: Bachelor's degree
Teaching period:
II (2018-2019) Otaniemi campus
II (2019-2020) Otaniemi campus
Workload: Opening lecture 2h
weekly help sessions 10h
independent work 145
exam 3h
Total 160h (6 ECTS)
Learning Outcomes: Students will become familiar with further aspects of the world of object-oriented programming through the utilization of comprehensive course materials and completion of programming exercises.
Content: HashMap data structures, Interfaces, Exceptions, Reading from and writing to files, Inheritance, Graphical user interface (GUI), Regular expressions, and Iterators.
Assessment Methods and Criteria: mandatory passed self paced MOOC assignments
100% exam
Study Material: MOOC, the link published at the course home page
Course Homepage: https://mycourses.aalto.fi/course/search.php?search=37C00450
Prerequisites: 37C00400 Programming I, or equivalent programming experience.
Evaluation: 0-5
Registration for Courses: Via Weboodi
Language of Instruction: English

37E00100 Information Economy (6 cr)
Responsible teacher: Virpi Tuunainen
Status of the Course: Master's programme in Information and Service Management programme, common advanced course CEMS course
Level of the Course: Master's level course
Teaching period: IV Spring (2018-2019) Otaniemi campus IV Spring (2019-2020) Otaniemi campus
Workload: Contact teaching 24h
independent work 133h
exam 3h
Total 160h (6 ECTS)
Learning Outcomes: The objective of this course is to give the students an in-depth understanding of different issues related to digital economy. The main focus is on digital goods and services and platform mediated networks that enable or support the production and delivery of these. This integrating advanced level course is accomplished through readings and discussion, and independent studying is of great importance.
Content: Digital Economy; Platform mediated networks
Assessment Methods and Criteria: 30% exam
70% assignments
Study Material: Reading list is published in the course website.
Course Homepage: https://mycourses.aalto.fi/course/search.php?search=37E00100
Prerequisites: Recommended prerequisites: 37C00100 Management Information Systems
Evaluation: 0-5
Registration for Courses: via WebOodi
Language of Instruction: English

37E00200 Strategic Information Technology Management (6 op)
Responsible teacher: Esko Penttinen
Status of the Course: Master's Programme in Information and Service Management, elective
Level of the Course: Master's level course
Teaching period: Period II (2018-2019) Töölö campus Period II (2019-2020) Otaniemi campus
Workload: Contact teaching 30h
Independent work 127h
Exam 3h
Total 160h (6 ECTS)
Learning Outcomes: 1. Understand the key concepts, structures, processes, and cooperative mechanisms relevant for corporate governance of IT and for the effective alignment of business and IT, at both strategic and operative levels.
2. Become familiar with the profession of IT management in key IT decisions and processes such as organizing the IT function, managing IT Services, IT sourcing and outsourcing, enterprise and IT architecture management, IT portfolio management, IT risk management, the business value of IT, and IT performance management.
3. Learn how IT enabled innovations and emerging technologies are managed as a part of enterprise strategic management.
4. Recognize and learn the key issues and methods in the IT governance and IT management research.
Content: The themes of the lectures are: Contemporary strategy concepts and strategy analysis applied to; Corporate and IT governance; Alignment of business and IT; Organization principles of the IT function; IT service management; IT decision making; IT risk management; IT performance management; Evaluation of business value of IT; The role of the CIO in an enterprise; IT portfolio management; Management of firm-wide IT infrastructure; IT architecture management; Outsourcing of IT services; Management of IT-enabled innovations and emerging technologies.
Assessment Methods and Criteria: Assessment:
40% exam
60% assignments
Study Material: Materials to be handed out through the webpages.
Substitutes for Courses: This course partly overlaps with the discontinued 37E00300 ICT Enabled Business Process Development course.
Course Homepage: https://mycourses.aalto.fi/course/search.php?search=37E00200
Evaluation: 0-5
Registration for Courses: Via WebOodi.
Language of Instruction: English.

37E01000 Current Topics in Information Systems Science (6 cr)
Responsible teacher: Virpi Tuunainen
Status of the Course: Master's programme in Information and Service Management, elective
Level of the Course: Master's level course
Teaching period: TBA, this course can be taught by a visiting lecturer
Workload: Contact teaching 30h
Independent work 130h
Learning Outcomes: The student will learn about an advanced current topic in information systems practice.
Content: This intensive course consists of lectures, articles and/or seminar presentations on current and emerging topics in information systems science. The course is usually lectured by a visiting lecture and the topic varies semester by semester.
Assessment Methods and Criteria: 100% assignments
Study Material: Reading list published on the course website
Course Homepage: https://mycourses.aalto.fi/course/search.php?search=37E01000
Prerequisites: Recommended prerequisites: 37C00100 Management Information Systems
Evaluation: 0-5
Registration for Courses: via WebOodi
Language of Instruction: English

37E01400 Essential Literature in Information Systems Science (Book Exam) (6 cr)
Responsible teacher: Johanna Bragge
Status of the Course: Master's programme in Information and Service Management, elective
Level of the Course: Master's level course
Teaching period: Periods I, II, IV (2018-2019) Töölö/Otaniemi campus (exams in periods I and II are held in Töölö, exam in the IV period is held in Otaniemi) Periods I, II, IV (2019-2020) Otaniemi campus
Workload: Preparing and reading for an exam:
- Independent studying 156h
- Exam 4h
Total 160h (6 ECTS)
Learning Outcomes: To achieve a better understanding on the some of the key areas in Information Systems Science.
Content: The book exam provides a package of essential literature on a defined Information Systems Science area, which is Digital transformation in 2018-2020.
Assessment Methods and Criteria: Exam 100%
Study Material: McAfee, Andrew & Brynjolfsson, Erik (2017), Machine, platform, crowd: harnessing our digital future, W.W. Norton & Company. ISBN: 978-0-393-25429-7
Westerman, George, Bonnet, Didier and McAfee, Andrew (2014), Leading Digital. Turning Technology into Business Transformation, Harvard Business Review Press. ISBN 978-1-62527-247-8
Morabito, Vincenzo (2016), e-book, The Future of Digital Business Innovation: Trends and Practices, SpringerLink online service. Availability
Course Homepage: https://mycourses.aalto.fi/course/search.php?search=37E01400
Evaluation: 0-5
Registration for Courses: Registration to the exam via WebOodi. No registration for the course, as there are no lectures in the book exam.
Language of Instruction: English

37E01500 Project Management and Consulting Practice (6 cr)
Responsible teacher: Matti Rossi
Status of the Course: Master's programme in Information and Service Management, elective
Master's Programme in Service Design and Engineering (Aalto Sci/CS)
Level of the Course: Master's level course
Teaching period: III Spring (2018-2019) Otaniemi campus III Spring (2019-2020) Otaniemi campus
Workload: Lectures = 24 hours
Class preparation = 20 hours
Exercises = 116 hours
Total = 160 hours (6 credits)
Learning Outcomes: The students will have both theoretical and practical knowledge of consulting and project management. The students learn how to work on a real world assignment and how to manage a small consulting project and present the project results to clients.
Content: Roughly 50 % of the lectures deal with issues in project management and 50 % about consulting. The project management part deals with advanced issues of project work.
The students are expected to actively participate in classes and assignments during the course. All the assignments will be done in groups.
A project management software is used in the exercises to manage the consulting assignment.
Assessment Methods and Criteria: The course evaluation contains of several assignments, such as a project status report, a final project report, a consulting assignment report, learning diary and peer review reports on two other groups' assignments.
Weights
50 % assignments and final report
45 % learning diary
5%   peer review reports
Study Material: Materials on the course home pages in MyCourses.
Course Homepage: https://mycourses.aalto.fi/course/search.php?search=37E01500
Evaluation: 0-5
Registration for Courses: Via WebOodi, maximum number of students admitted is 80.
Language of Instruction: English
Further Information:
Students are required to be present in the final presentations of the course results.
A maximum number of 80 students are admitted to the course. Students are prioritized:
1. ISM master's students
2. All other students

37E01600 Data Resources Management (6 cr)
Responsible teacher: Yong Liu
Status of the Course: Master's programme in Information and Service Management, elective
Level of the Course: Master's level course
Teaching period: III Spring (2018-2019) Otaniemi campus III Spring (2019-2020) Otaniemi campus
Workload: Lectures = 12 h
Hands-on sessions = 12 h
Preparation for lectures = 12 h
Assignment and exercises = 121 h
Exam 3 h presence
Total 160 h
Learning Outcomes: The student taking this course learns about data management using database language – MySQL. Students are expected to become skillful with manipulating different kinds of business data for different types of business analytics. Data manipulation and data management skills are necessary prerequisites for being able to use business analytics.
Content: This course provides students with a comprehensive overview of MySQL. Core MySQL commands, skills and examples of applying MySQL to really-life business analytics are the key content. A number of databases are provided as the materials to practice the database language and skills. Hands-on sessions provide the opportunity to practice MySQL with the assistance of lecturer.
Assessment Methods and Criteria: 50% Exam
50% Assignment
Study Material: Key course materials will be offered by the lecturer.
Course book: Pratt, P.J. and Last, M.Z. (2005). A guide to MySQL, Thomson. It is not compulsory to read the course book.
Course Homepage: https://mycourses.aalto.fi/course/search.php?search=37E01600
Prerequisites: No prerequisite for participating in the course.
Students with no programming background can attend the course.
Evaluation: 0-5
Registration for Courses: Via WebOodi. A maximum of 70 participants will be admitted to the course. Given an insufficient amount of PCs available in the computer lab, participants are encouraged to bring their own laptop for the hands-on sessions.
Language of Instruction: English
Further Information: A maximum of 70 participants will be admitted to the course.
1. Aalto ISM MSc students (i.e. who have graduated as B.Sc.)
2. Aalto Analytics and Data Science minor students
3. Other Aalto MSc students
4. Aalto ISM BSc students
5. All other students

37E44000 Critical Issues in Information Systems Research (6 cr)
Responsible teacher: Virpi Tuunainen
Status of the Course: Doctoral program, disciplinary studies Master's Programme in Information and Service Management, elective
Level of the Course: Advanced/Doctoral
Teaching period: TBA, this course is taugh by a visiting lecturer
Workload: Contact teaching 30h
Independent work 130h
Learning Outcomes: The course deepens participants' knowledge of key issues and paradigms in the IS field and explores the state-of-the-art of IS research findings in relation to the respective topic(s) of the course.
Content: This is an advanced course in information systems research issues aimed to both IS doctoral students and M.Sc. students. The course consists of lectures, articles and/or seminar presentations on chosen topics of information systems. The topic varies semester by semester.
Assessment Methods and Criteria: 100% assignments
Study Material: Reading list published on the course website
Course Homepage: https://mycourses.aalto.fi/course/search.php?search=37E44000
Prerequisites: Recommended prerequisites: 37C00100 Management Information Systems
Evaluation: 0-5
Registration for Courses: Via WebOodi
Language of Instruction: English

57E00700 Capstone: Digitalism Challenge (6 cr)
Responsible teacher: Johanna Bragge
Status of the Course:
Master's Programme in Information and Service Management, elective Capstone course
Elective capstone course for seven other BIZ MSc programmes
AALTO course
Level of the Course: Master's level course
Teaching period: II Autumn (2018-2019) Töölö & Otaniemi campus II Autumn (2019-2020) Otaniemi campus
Workload: - Contact teaching 45 hours
- Independent work 115 hours
Total 160h (6 ECTS)
Learning Outcomes: After the completion of this course, students can:
1. Apply the knowledge and skills they have accumulated during their studies for solving real-life problems
2. Understand the expectations of senior decision-makers and write executive reports to them
3. Collaborate with people with different backgrounds (students, customers, coaches)
4. Present and sell their ideas and solutions in compelling ways (requires understanding the basics of change management)
5. Learn to receive real feedback
6. Understand the nuances of the the client organization's field of industry
Content: This course is organized in collaboration with Accenture and selected organizations, and it is open to all Aalto Master's students. Also Bachelor's students can take the course given that they have sufficient background knowledge. All Aalto students can include the course in their studies as part of their elective courses. Business school students can include it either as an elective course or use the course to replace their MSc capstone course if they study in one of the following programs: Management & IB, Accounting, Marketing, Entrepreneurship, Finance, Business Law, ISM or Corporate Communications. The course is about solving a real problem in an organization. The work will be done in teams of 4-5, and it is not possible to complete the course as a distance learning project. Different teams will have different problems to solve.
Detailed contents:
1. Kick-off event
2. Lectures on key areas such as service design and presentation techniques and pitching.
3. Intensive 20-hour hackathon event
4. Coaching for the case
5. Final presentation
6. Writing executive-level reports
Assessment Methods and Criteria: Each student is graded on the 0-5 scale. Participation in the key events is obligatory to pass the course.
The grade is determined based on the project presentations and reports. Also peer-to-peer assessments will be used to ensure that each student's contribution to the final deliverables is visible.
Evaluation criteria:
- Assignments (presentations and reports) 100%
- Exam 0%
Study Material: Delivered at lectures and events.
Substitutes for Courses: 57E00600 Hackathon Project
Evaluation: 0-5
Registration for Courses: Via WebOodi
Language of Instruction: English
Further Information:
The exact number of students admitted will depend on the number of organizational clients joining the course. Altogether 100-150 students (including also other than Aalto students in case of special agreements).
Students are prioritized in the following order:
1. ISM MSc students
2. EIT Digital Data Science MSc students
(http://www.aalto.fi/fi/studies/education/programme/data_science/)
3. Students from partner universities (in case of special agreements)
4. Other Aalto MSc students
5. MSc level exchange students

6. Aalto BSc students
Participation in the key events is obligatory to pass the course (see details in the syllabus).
Lectures and events in Fall 2018:
Mon 29.10.2018 at 13-16 Lecture 1 (Ch-324)
Tue 30.10.2018 at 15-19 Kickoff (Dipoli)
Mon 5.11.2018 at 13-16 Lecture 2 (Ch-324)
Tue 6.11.2018 at 13-16 Lecture 3 (Ch-324)
Tue-Wed 13.-14.11.2018 at 9-19 The 20-hour hackathon event (Dipoli)
Mon 26.11.2018 at 13-16 Feedback cliniques (5 different lecture halls in Töölö e.g.: C-331, C-350, A-401, A-309 and A-308)
Tue 4.12.2018 at 13-18 Final presentations (Dipoli)

57E00500 Capstone: Business Intelligence (6 cr)

Responsible teacher: Jani Merikivi
Status of the Course: Master's programme in Information and Service Management, Capstone course
Level of the Course: Master's level course
Teaching period: IV Spring (2018-2019) Otaniemi campus IV Spring (2019-2020) Otaniemi campus
Workload: •   Contact teaching 36h
•   Independent work 124h
Total 160h (6 ECTS)
Learning Outcomes: The objective of the course is to give the students an understanding of the data informed decision-making. The focus is on business-oriented analytical skills, which enable the students to work with the data, to understand them and turn them into intelligence and actions.
Content: This course aims at providing an understanding of issues related to data informed decision-making and problem solving. To do this, it offers a balanced insight into the building blocks of business intelligence (BI), such as data management, data warehousing, reporting, and analytics. Besides a set of guest speakers representing academia and business life, a central feature of the course is a BI challenge, which students work in small groups. The course requires both independent learning skills and organizational skills.
Assessment Methods and Criteria: 50% assignments
50 % learning diary / Final exam
Study Material: Course book: Sharda, Ramesh – Delen, Dursun – Turban, Efraim (2014) Business Intelligence and Analytics (10th edition). Pearson, New York (NY).
Prerequisites: Before registration, one must have successfully completed the data resource management course (37E01600). Please contact the instructor for special inquiries.
Evaluation: 0-5
Registration for Courses: Via WebOodi
Language of Instruction: English