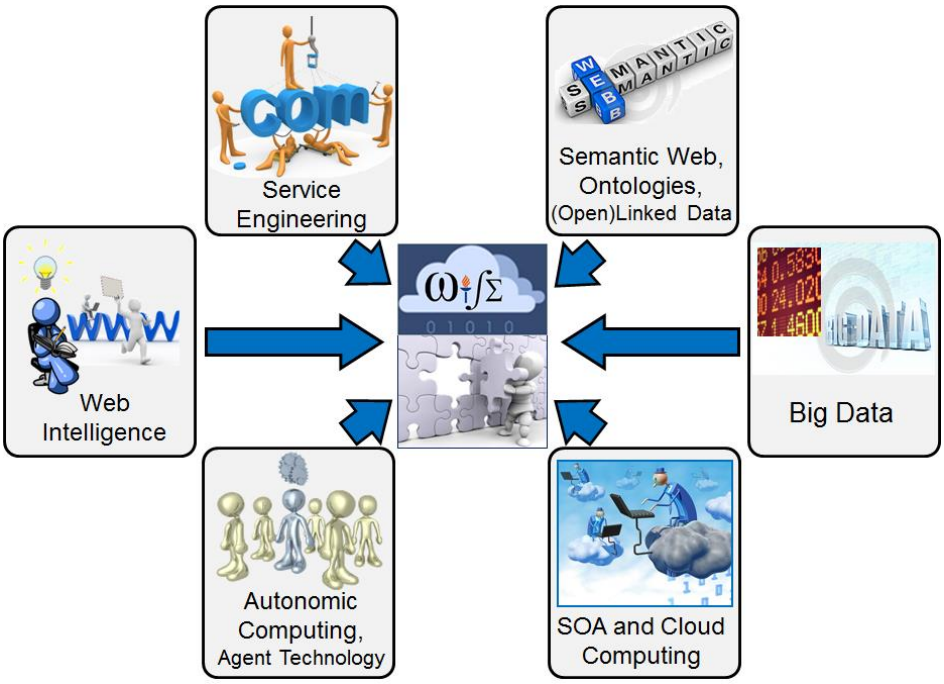
WISE: "Web Intelligence and Service Engineering"

International Master Program

Department of Mathematical Information Technology,
University of Jyväskylä, Finland



5 reasons why WISE has to be chosen:

1. **Free education (study at our master program is free of any charges);**
2. **Finland has excellent international reputation for its educational system and internationally recognized high(est) standards of quality in education;**
3. **Finland in general and Jyväskylä in particular is an excellent, friendly, safe and extremely beautiful place to stay for studies, working and living;**
4. **WISE program will share with you unique experiences, knowledge and skills you will need in your business, industrial or academic career not only in near future but even far beyond;**
5. **Our curriculum is designed and implemented by a multinational and multicultural team and therefore each international student will feel comfortable with us.**

Contents:

Program Mission and Learning Outcomes	3
Degree Structure	4
Assessment of Learning Outcomes	5
Description of Courses	6
Schedule of Courses and Individual Study Plans	10
WISE Team	10
Career Opportunities	11
What is the need for WISE specialists?	11
WISE Program within the Faculty Roadmap	13
How to apply (needed documents, application process and selection criteria)	14
How to Contact us?	16
Decided to Apply? Welcome! We are waiting for you …	17

Download pdf-file with this brochure here:

http://www.mit.jyu.fi/ai/WISE.pdf

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Key Objective: Everything-as-a-Service Engineering: Designing intelligent software applications for the *web-based service economy* [1].

Program Mission (in achieving **major learning outcomes**): on completion of the programme, the graduates will be able to use and design complex self-managed Web-based public and industrial systems, *digital ecosystems* [2], platforms, services and applications; will be able to connect their designs with publicly available data and Web-based capabilities as services; will be able to figure-out and approach various challenging aspects of wicked problems world-wide, which require self-managed service-based architectures for their solutions; understand and professionally utilize for that purpose knowledge on enabling technologies and tools; perform academic doctoral level studies; will be skilful in international communication due to the integrated language and communication studies. Students, who will graduate from the programme with a Master of Science in Natural Sciences from the Department of Mathematical Information Technology, will think beyond the routine and will be able not just to adapt to a change but to help to create and control it.

There are **three major aspects of the "Everything-as-a-Service Engineering" and corresponding learning outcomes:**

1. Everything as a Service Provider

Here the knowledge and abilities of the graduates will target the question: What (infrastructure, platforms, software, interfaces, data, etc.) should be additionally provided to make some product or system capable of performing its functionality (data or capability) as a service for external users, businesses or systems through the Web?

2. Everything as a Service Consumer

Here the knowledge and abilities of the graduates will target the question: How to design products and systems so that they will be capable of automatic real-time discovery, query and utilization of external data and capabilities for better meeting their design objectives and beyond?

3. Everything as a Self-Service

Here the knowledge and abilities of the graduates will target the question: How to make systems self-aware, context-aware and capable of self-configuration, self-optimization, self-protection and self-healing while adapting their design objectives in real time to changing execution environments according to the "Open World assumption" (i.e., a system should be able to handle new situations, which were not known during its design time).

[1] *Web-based service economy*: emerging service industry on top of the Internet of Services with global service delivery platforms, which utilizes and expands Web 2.0 and future network infrastructure (Internet of Things) [SAP, Amazon, eBay, Google, Siemens, Philips, etc.]. According to SAP vision, the Web-based service economy in the Internet of Services will likely be an integral part of future economic innovation, value creation, growth, and employment [http://en.sap.info/vision-of-a-web-based-service-society/11099].

[2] *Digital ecosystem* is a distributed adaptive open socio-technical system with properties of self-organization, scalability and sustainability inspired from natural ecosystems. For example, digital ecosystems are extending Service-Oriented Architectures with distributed evolutionary computing, allowing services to recombine and evolve over time, constantly seeking to improve their effectiveness for the users. The digital ecosystem is a pervasive ICT infrastructure with a particular architecture and framework, which exhibits some characteristics of the natural ecosystems. It is considered a step forward of internet, which instead of dealing with packets, carry knowledge and services. For example a knowledge ecosystem is considered as a kind of digital ecosystem and it is an alternative to the traditional knowledge management approach (directive management) towards enabling self-organization and dynamic evolution of knowledge interaction between entities (interlinked knowledge resources, databases, human experts, and artificial knowledge agents) in response to changing environments.

Back to Contents

Degree Structure:

I. MAJOR

Mandatory Courses (25 ECTS):

1. Everything-to-Everything Interfaces – 5
2. Semantic Web and Ontology Engineering (Part-I: Semantic Web and Ontology Engineering) - 5
3. Design of Agent-Based Systems (Part-I: Introduction to Agent Technologies) - 5
4. SOA and Cloud Computing (Part-I: Introduction to SOA and Cloud Computing) – 5
5. SOA and Cloud Computing (Part-II: SOA and Cloud Computing for Developers) – 5
6. Self-Assessment on Study Progress - 0

Elective Courses (20 ECTS):

1. Semantic Web and Ontology Engineering (Part-II: Practical Introduction to Semantic Technologies) - 5
2. Design of Agent-Based Systems (Part-II: Agent Technologies for Developers) - 5
3. Future Internet – 5
4. Radio Networks and Self-Organization – 5
5. Big Data Engineering – 5
6. Selected Topics on Soft Computing – 5
7. Simulations for Modeling Decision Support and Optimization (Part-I: Simulations for Modeling) - 5
8. Simulations for Modeling Decision Support and Optimization (Part-II: Simulations for Decision Support and Optimization) – 5

Seminar (5 ECTS)

M.Sc. Thesis (30 ECTS)

Maturity Test (0 ECTS)

TOTAL MAJOR: (80)

II. OTHER STUDIES

Multidisciplinary Group-Based Service Development Project (15)

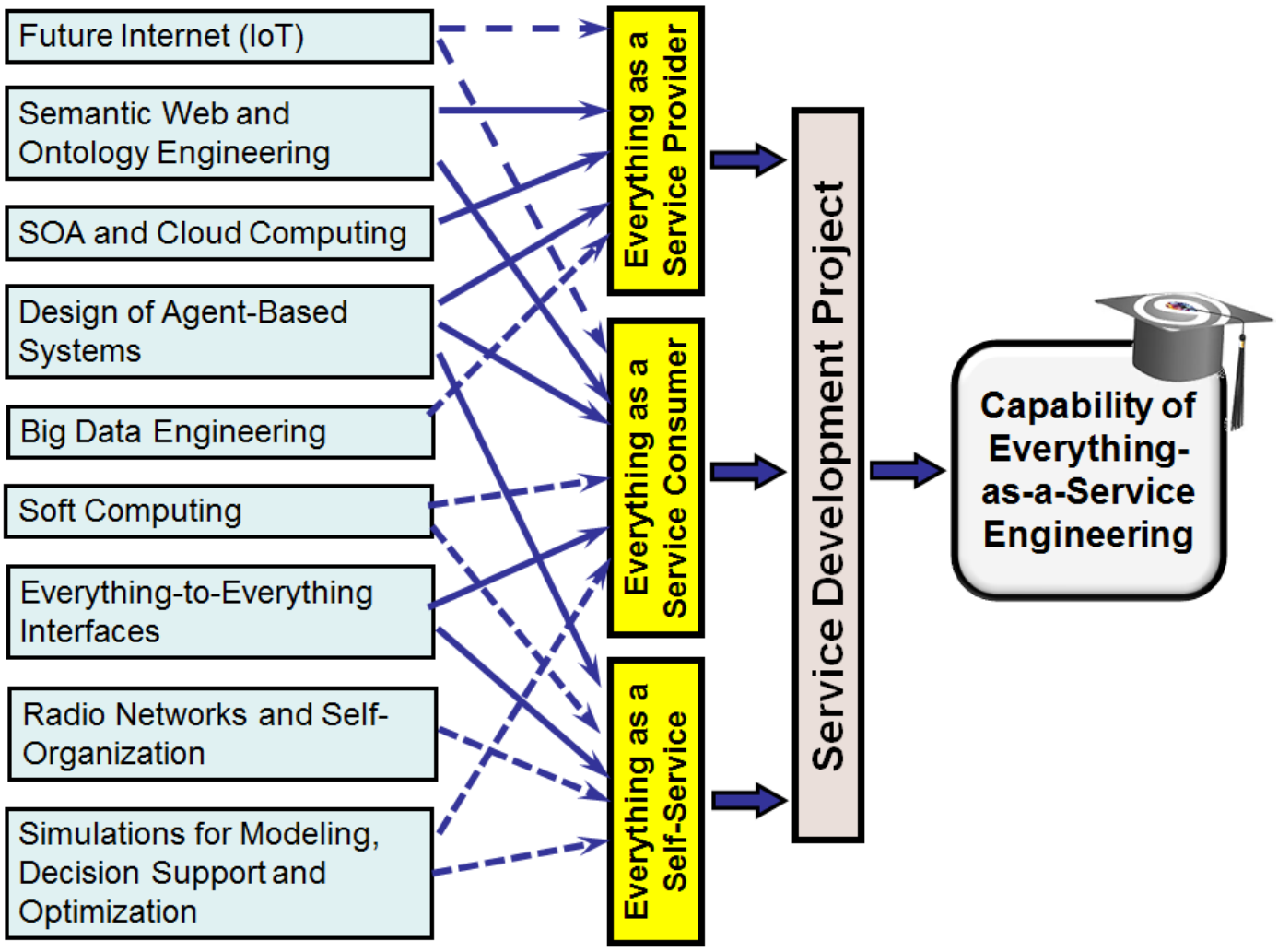
Language Studies (10): **[English] Integrated Research Communication (5); [Finnish] Suomi-1 (5).**

Other Optional (15)

TOTAL OTHER STUDIES (40)

Back to Contents

Assessments of major groups of learning outcomes by courses:



Other assessments:

Self-assessment of own study progress as an obligatory course during whole period of study;

Multidisciplinary Group-Based Service Development Project;

Assignments regarding knowledge collection and analysis within "Semantic Web and Ontology Engineering", "Design of Agent-Based Systems", "SOA and Cloud Computing" courses;

Assignments regarding figuring-out and approaching various challenging aspects of wicked problems in students' home countries within "Semantic Web and Ontology Engineering", "Design of Agent-Based Systems", "SOA and Cloud Computing" courses;

Exercises with final assignments regarding practical designs within "Semantic Web and Ontology Engineering", "Design of Agent-Based Systems", "SOA and Cloud Computing" courses.

Back to Contents

Course Descriptions:

TIES-410 - Future Internet – (5 ECTS, Prof. Tapani Ristaniemi)

Information and telecommunication technologies are proceeding toward the era of "Future Internet (FI)", which is a commonly used term to describe all the developments for the current Internet. These developments are due to many shortcomings foreseen, both from technical and economical points of view. The "Internet of Things (IoT)" is yet another area within the context of FI. IoT refers to uniquely identifiable objects and their virtual representations in an Internet-like structure with built-in information processing capabilities. The IoT will make it possible for objects to get information about their position, to actively interact with other objects and to have access to information for data gathered in their vicinity and create services without direct human intervention by embedded intelligence and adaption. This course will concentrate on these areas of research and state-of-the-art solutions to overcome various problems within.

Semantic Web and Ontology Engineering (package of 10 ECTS, Prof. Vagan Terziyan, Dr. Oleksiy Khriyenko)

- ***Part I:*** **ITKS-544 – Semantic Web and Ontology Engineering (5 ECTS, Prof. Vagan Terziyan)**
  - The *Semantic Web* is an evolving development of the World Wide Web in which the meaning (semantics) of information and services published on the Web and their inter-relationships are explicitly defined, making it possible for the Web-based software tools, agents, applications and systems to discover, extract and "understand" Web information resources and capabilities and automatically utilize it. Related to these, the *Linked Data* activity aims to expose, share, and connect distributed pieces of data, information, and knowledge; to extend the Web by publishing various open datasets and by setting semantic links between data items from different data sources. The Semantic Web vision assumes annotating Web resources with machine-interpretable descriptions (*metadata*) referred to shared conceptual vocabularies (*ontologies*), and provides mechanisms for automated reasoning about them. This course includes an introduction and practical tutorial on the RDF-based semantic annotation of Web resources and services for the Semantic Web, ontology engineering; and also review some modern applications of these methods and techniques for Web-based intelligent applications and services.

- ***Part II:*** **TIES-452 – Practical Introduction to Semantic Technologies (5 ECTS, Dr. Oleksiy Khriyenko)**
  - *Semantic Technologies* are designed to standardize and support interoperability and integration of information content and capabilities (services) of Web-based systems and components at local and global scale. As a *software technology*, semantic technology encodes meanings separately from data and from application code to enable machines to understand, share and reason with them at execution time. This course is natural continuation of the ITKS-544 as it provides practical introduction on storing, querying, merging, matchmaking and reasoning with the metadata and ontologies for the semantic applications and provides some basics on semantic programming.

Design of Agent-Based Systems (package of 10 ECTS, Prof. Vagan Terziyan, Michael Cochez)

- ***Part I:*** **TIES-453 – Introduction to Agent Technologies (5 ECTS, Prof. Vagan Terziyan)**
  - The course focuses on the use of Distributed Artificial Intelligence methods, and more specifically of Intelligent Agents Technologies, for development of complex distributed software systems. Intelligent software agents are such self-managed (autonomic) software entities that are capable to carry out some goal-driven and knowledge-based behavioral activities on behalf of a user or some other software application, which created it. This theory-oriented course reviews appropriate AI methods and technologies needed to enable intelligent agents. It provides knowledge about autonomous intelligent agents, agent technologies, mobility of agents, agent platforms, multi-agent systems, agent communication, agent coordination, agent negotiation, agent intelligence, agent-based industrial applications and systems.

- ***Part II:*** **TIES-454 – Agent Technologies for Developers (5 ECTS, Michael Cochez)**
  - This practice-oriented extension of the TIES-453 course focuses on autonomous agents and multi-agent systems as a novel software development paradigm (also known as agent-oriented software engineering), one especially suited for distributed systems. Technical students will get a hands-on experience and program with an agent platform. Business-oriented students will study how agent-based systems can be applied in business contexts.

SOA and Cloud Computing (package of 10 ECTS, Michael Cochez)

- ***Part I:*** **TIES-456 – Introduction to SOA and Cloud Computing (5 ECTS, Michael Cochez)**
  - *Service-Oriented Architecture* (SOA) is the practice of sequestering the core business functions into independent services that don't change frequently. SOA is a tool for software (as a service) integration. Rather than defining an API, SOA defines the interface to remote Web-based services in terms of protocols and functionality. SOA enables coupling or decoupling the functionality of a system without impacting other parts of the system and architecture and makes possible to orchestrate processes in a consistent and clear manner. *Cloud Computing* is known to be an abstracted, highly scalable, and managed computational infrastructure capable of hosting end-customer applications and billed by consumption. Major segments of cloud computing include: SaaS (Software and Storage as a Service); PaaS (Platform as a Service) and IaaS (Infrastructure as a Service). If the SOA is fundamentally about loose coupling (i.e., when the components of the system are not much dependent and aware about each other) across applications, the Cloud Computing is primarily about loosening the coupling between hardware and software (by means of virtualization, multitenancy and elastic data centers). This course prepares for the practical TIES-532 course by reviewing current state-of-the art within the domains of SOA and Cloud Computing and indicates the open issues and emergent challenges of the related technologies.

- ***Part II:*** **TIES-532 – SOA and Cloud Computing for Developers (5 ECTS, Michael Cochez)**
  - This practice-oriented extension of the TIES-456 course focuses on practical introduction and demo sessions related to service-oriented and cloud computing technologies, needed APIs, service coordination, and orchestration techniques, RESTful web services, IaaS (Amazon AWS and Eucalyptus), JAX-WS technology, Web-service composition techniques, practical use of BPEL (Business Process Execution Language) in Apache ODE + Eclipse, creation of RESTful web services using Jersey library, etc.

TIES-437 – Everything-to-Everything Interfaces (5 ECTS, Dr. Oleksiy Khriyenko)

The course will address the challenge related to the Everything-as-a-Service-Consumer vision. In addition to a traditional GUI, where a user of some application is assumed to be a human, this course concerns interfaces needed if a user of the application happens to be not a human but some other application, service, software process, software agent or anything else. Such Everything-to-Everything interfaces in addition to the traditional APIs have to enable "understanding" among interacting entities, which requires either sharing common ontology or the support for the ontology alignment process followed by semantically enhanced interaction. The course will review available techniques and tools for practical design of such interfaces.

Simulations for Modeling, Decision Support and Optimization (package of 10 ECTS, Prof. Timo Tiihonen)

- ***Part I:*** **TIES-481 – Simulations (Simulations for Modeling) (5 ECTS, Prof. Timo Tiihonen)**
  - The course will address simulation of discrete event systems. Many systems of interacting services can be studied as discrete event systems and often simulation is the only available tool to study systems that are just being designed or are to be changed. The course will cover the basic approaches for designing simulators and simulation experiments (different paradigms for simulation modeling).
- ***Part II:*** **TIES-488 – Advanced course of simulation (Simulations for Decision Support and Optimization) (5 ECTS, Prof. Timo Tiihonen)**
  - The second part of course will address the use of simulation as a tool to infer knowledge for decision making and optimization (the statistical analysis of simulation experiments and inference of higher level models based on designed series of experiments). Basic knowledge of Java/object oriented programming and elementary statistics are required.

TIES-438 – Big Data Engineering (5 ECTS, Michael Cochez)

Recent years we observe a dramatic increase in our ability to collect data from various sensors, devices, in different formats, from different users, applications and services. The amounts of these data are already such that it is beyond our capability to successfully process, store and understand it. The major challenge would be to find balance between two evident statements: (a) the more data is available, the more potentially useful patterns it may include; (b) the more data is available, the less hope that any sophisticated machine-learning algorithm will be capable to discover these patterns in acceptable time frame. The Big Data concept is applied to data sets with sizes beyond the ability of commonly-used software tools to capture, curate, manage, and process the data within a tolerable elapsed time. According to Gartner study, the Big Data are high-volume, high-velocity, and/or high-variety information assets that require new forms of processing to enable enhanced decision making, insight discovery and process optimization. Big data sizes are a constantly moving target, as of 2012 ranging from a few dozen terabytes to many

petabytes (1 petabyte = 10^{15} bytes = 10^{6} gigabytes = 1 000 terabytes) of data in a single data set. With this difficulty, a need for new platforms (such as, e.g., the Apache Hadoop Big Data Platform) and tools has arisen to handle large quantities of data. This course will review challenges and current state-of-the-art related to the Big Data and will introduce major available, technologies, platforms and tools, including data-intensive computing, noSQL databases, the Apache Hadoop platform, etc.

TIES-451 – Selected Topics on Soft Computing (5 ECTS, Dr. Karthik Sindhya)

Evolutionary computation is one of the most important components in soft computing. They draw inspiration from nature's problem solving tools and evolution in specific. In this course we shall take a journey through different aspects of evolutionary computation and explore different important algorithms proposed by various researchers from all over the world. Evolutionary computations are widely used for both search and optimization. In particular it is widely used to solve optimization problems (single and multi-objective) when no explicit gradient information is available. This course lays foundation to more advanced study in evolutionary computation and their applications in optimization of large scale industrial optimization problems, designing AI for games, self-management, robotics etc.

TIES-435 – Radio Networks and Self-Organization – (5 ECTS, Prof. Tapani Ristaniemi)

In this course the student get familiar with different mobile wireless communication standards and especially their radio resource management. The main focus is in Long Term Evolution, LTE and its future enhancements. In addition, a special emphasis is put on self-organizing radio networks (SON). SON concept has emerged in the last years, with the goal to foster automation and to reduce human involvement in management tasks. It implies autonomous configuration, optimization, and healing actions which would result in reduced operational burden and improve the experienced end user quality-of-service.

TIES-457 – Service Development Project – (15 ECTS, Dr. Olena Kaikova, Dr. Oleksiy Khriyenko)

Multidisciplinary Group-Based Service Development Project meant to get practical experience on real service development as teamwork going from the business idea of a new service through its design and implementation to actual launching the service in the Web. Project work is assumed to be performed in groups, which can be multidisciplinary (potentially involve students from different lines with different skills, e.g., service developers, analysts, managers, domain experts, etc.). Group work assumes also internal service audit and intra-group cross-validation and testing of the results during the whole lifecycle of the service development.

COURSES FOR LANGUAGE STUDIES:

XENX009 – [English] Integrated Research Communication – (5 ECTS, Language Center)

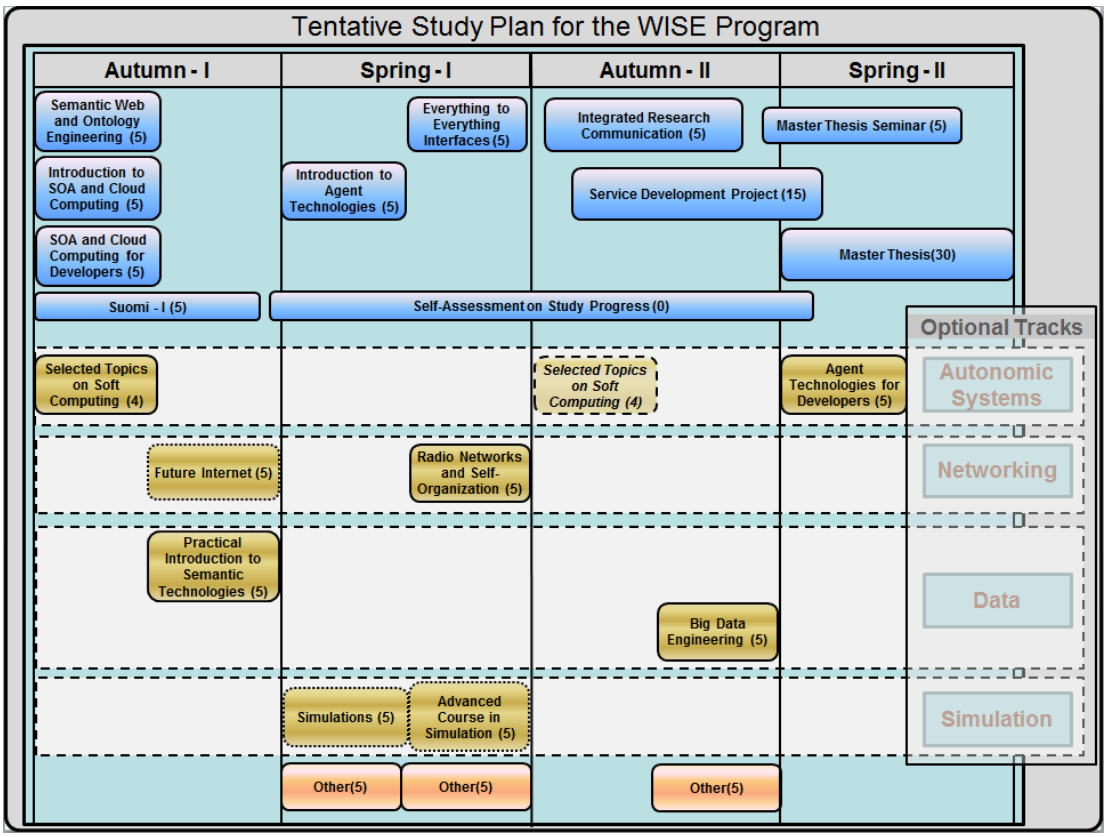
The course provides support for research and the thesis writing processes, from the establishment of research focus to synthesizing, writing and presenting a research plan in the thesis seminar.

XSU0005 – [Finnish] Suomi-I – (5 ECTS, Language Center)

The aim of the course is to provide students with basic-level language skills that enable them to cope in simple everyday situations. (For native Finnish speakers, optional language courses will be offered).

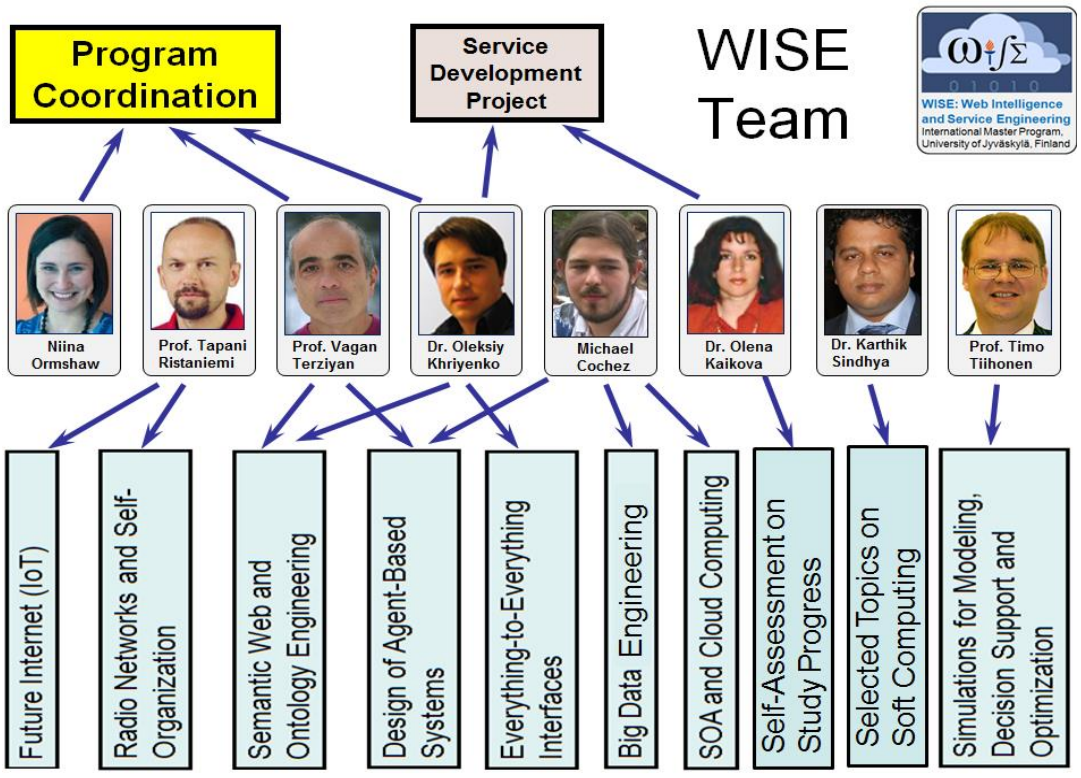
Back to Contents

Tentative Schedule for the Courses and Options for the Individual Study Plans



Back to Contents

Our Team



Back to Contents

Career Opportunities:

- Software (Cloud) Service architects: designing the technical infrastructures of service enabled applications.
- Enterprise architects: architecting and aligning enterprises processes, structure, data and control.
- Web Service (IT) professionals: experts in the development and composition of Web services into enterprise applications.
- Big Data and Knowledge engineers, architects, modelers and analysts: experts in Big Data, metadata and ontology engineering, knowledge management, data and knowledge integration and evolution, in constructing data-as-a-service solutions, data-intensive applications, expert-systems and knowledge based-systems.
- Scientists (PhD program): graduates are well-prepared to successfully pursue a career in academia.

Back to Contents

Why WISE specialists are and will be needed?

Consider the following trends and indicators:

It is well known that "Information Technology is concerned with technology to treat information towards user needs". We have 3 major keywords here (information, technology and user) and with each of them the new challenging trends (confirmed by the presentations from invited experts) are associated as follows:

Information (data, knowledge) becoming huge (in size and dimension), globally distributed (by location), heterogeneous (by nature of the source), dynamic (changing with space-time and other contexts) and multi-disciplinary (by scope).

Technology provides capabilities (in forms of applications (as products or as services with more shift towards services)) to manipulate Information. The capabilities are also becoming huge (in number and complexity), globally distributed (by location), heterogeneous (by nature of developer or provider), dynamic (configurable adapting to space-time change and other contexts) and multidisciplinary (by scope).

User is also becoming "huge" (in number and social interconnections), globally distributed (by location), heterogeneous (by nature ("Everything-as-a-User") and experience), dynamic (profiles and preferences are space-time and other contexts dependent) and multidisciplinary (by scope of interest).

Therefore if to name major aspects of the solution to meet all these challenges:

Self-management (self-configuration, self-optimization, self-protection, self-healing, etc., features of autonomic computing) will be needed to handle huge scale complexity (volumes of information, numbers of technology capabilities, variety of users and all related interactions).

Semantics (according to Semantic (Web) Technology) will be needed to enable self-management and to handle heterogeneity of information, technology capabilities and users.

Smart Integration (of information, capabilities, or users) will be needed to enable interoperability among all "actors" and "components" and to enable seamless and automated compilation of new complex systems from available components.

Context-Awareness (including context modeling and computing) will be needed to handle dynamic aspect of current IT trend (e.g., word "mobile" has now wider meaning, like "changing in context").

Architectures related to SOA and Cloud Computing may serve as technological and business ecosystems for multidisciplinary domains.

Therefore: the major emergent knowledge and skills that industries around Information Technology will require addressing the current IT challenges would be knowledge and skills in:

- Self-management;
- Big and Linked Data, Semantics;
- Interoperability and Integration;
- Service-Oriented Architectures and Cloud Computing, etc., …

… with the general slogan: "Everything-as-a-Service-for-Everything!"

Currently popular slogan "Everything-as-a-Service" (EaaS, XaaS, *aaS) is a concept of being able to call up re-usable, fine-grained software components across a network. It is usually associated with the cloud computing. The most common and successful example is software as a service (SaaS), but the term as a service has been associated and used with many core components of cloud computing including communication, infrastructure, data and platforms. A number of vendors including Google, Microsoft, and Hewlett Packard have been associated with the "everything as a service" trend [see more in Wikipedia].

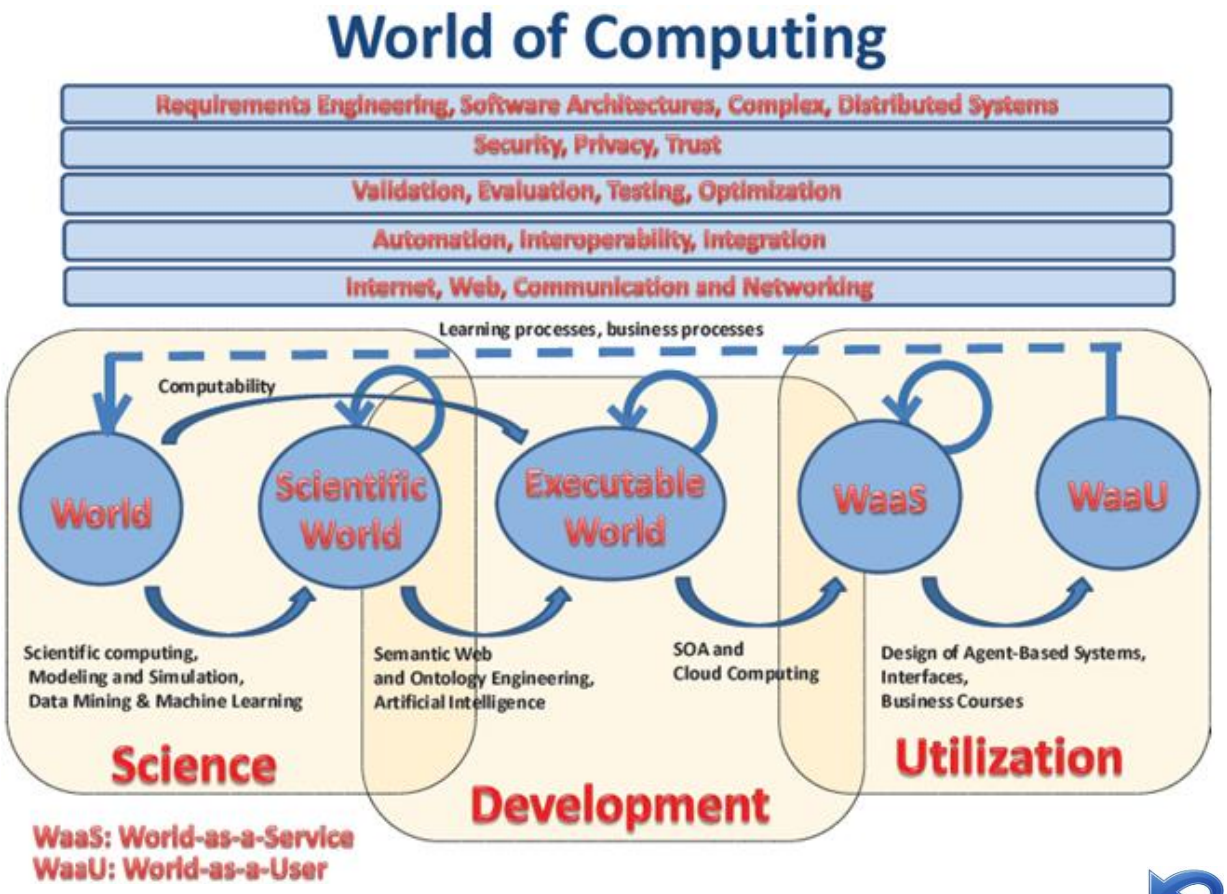
We are offering an upgraded vision needed for Everything-as-a-Service Engineering, which is "Everything-as-a-Service-for-Everything". It goes beyond the Cloud Computing boundaries to a more generic Internet of Services and has 3 dimensions: Everything as a Service Provider, Everything as a Service Consumer, and Everything as a Self-Service.

The strategy towards this vision should enhance and combine various aspects of Multidisciplinary Domain Modeling and Integration, Artificial Intelligence, (Open)Linked and Big Data, Agent Technologies, Context Modeling and Computing, SOA and Cloud Computing, Semantic Modeling and Simulation, Autonomic Computing including Self-Management (self-configuration, self-protection, self-optimization and self-healing) and Evolution, etc. Here Artificial Intelligence refers to a new area (Web Intelligence) which goes slightly beyond the traditional AI and includes brain informatics, human level AI, intelligent agents, social network intelligence, self-management, etc., to the classical areas such as knowledge engineering, representation, planning, discovery and data mining. Combined with the Advanced Information Technology (e.g. wireless networks, ubiquitous devices, social networks, data/knowledge grids, SOA and Cloud Computing, etc) the Web Intelligence is becoming a powerful tool to manage the emerging changes and challenges within the ICT domain, which will be very useful for educating skillful service engineers.

Back to Contents

WISE Program within the Faculty Roadmap

The WISE Master Program fits well the generic roadmap of master programs from the Faculty of Information Technology as can be seen from the following Figure, taken from: Jyväskylän yliopisto. Informaatioteknologian tiedekunnan opinto-opas 2011-2012. Opetussuunnitelma lukuvuosiksi 2011-2014, p. 59 (Kuva 9: Tietotekniikan maisteriopintojen tiedollinen kokonaisuus).

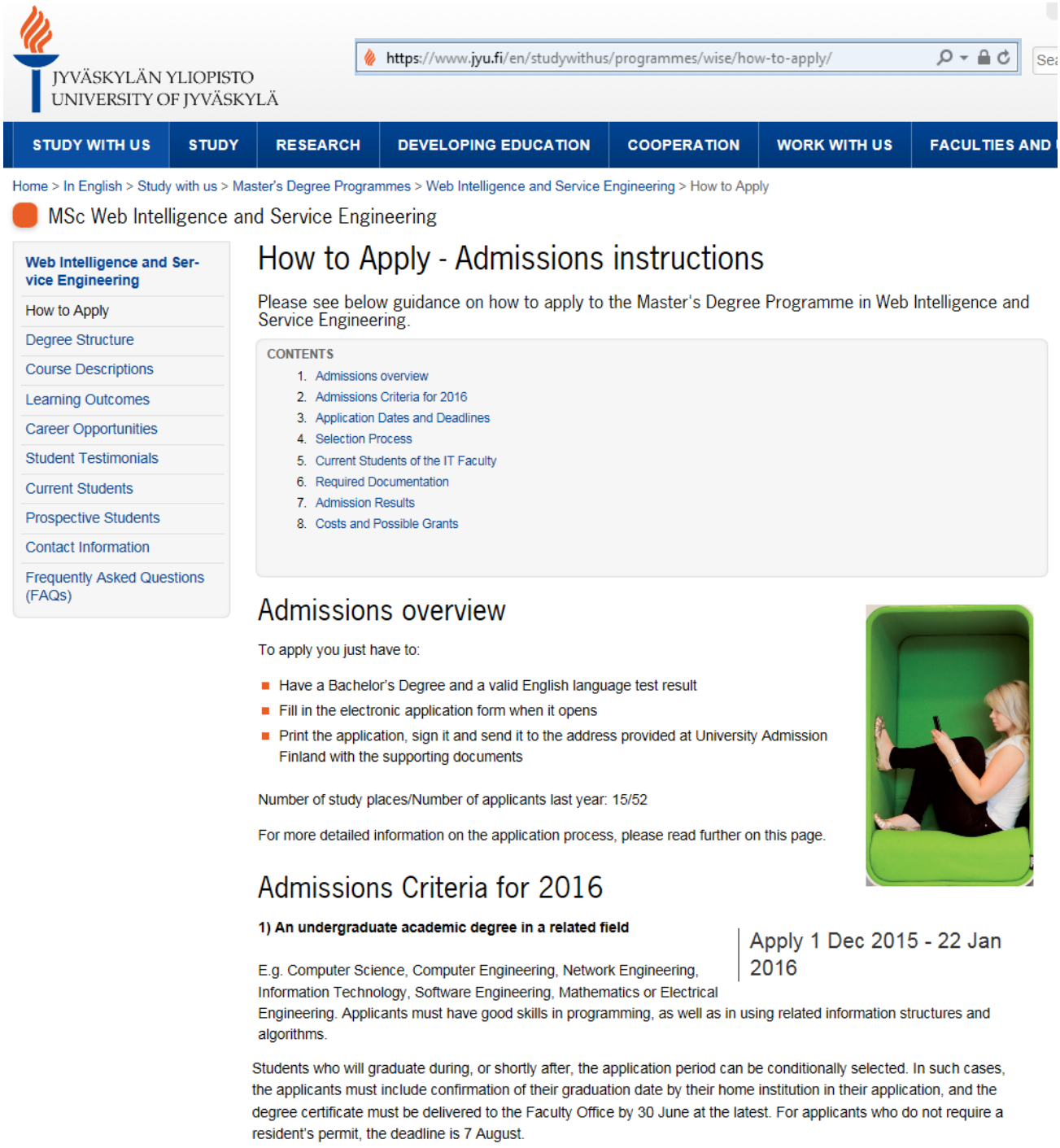


Back to Contents

How to apply (admissions overview)

For the detailed information on the application process, please follow the link:

https://www.jyu.fi/en/studywithus/programmes/wise/how-to-apply



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UNIVERSITY OF JYVÄSKYLÄ

https://www.jyu.fi/en/studywithus/programmes/wise/how-to-apply/

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Home > In English > Study with us > Master's Degree Programmes > Web Intelligence and Service Engineering > How to Apply

MSc Web Intelligence and Service Engineering

Web Intelligence and Service Engineering
- How to Apply
- Degree Structure
- Course Descriptions
- Learning Outcomes
- Career Opportunities
- Student Testimonials
- Current Students
- Prospective Students
- Contact Information
- Frequently Asked Questions (FAQs)

How to Apply - Admissions instructions

Please see below guidance on how to apply to the Master's Degree Programme in Web Intelligence and Service Engineering.

CONTENTS

1. Admissions overview
2. Admissions Criteria for 2016
3. Application Dates and Deadlines
4. Selection Process
5. Current Students of the IT Faculty
6. Required Documentation
7. Admission Results
8. Costs and Possible Grants

Admissions overview

To apply you just have to:

- Have a Bachelor's Degree and a valid English language test result
- Fill in the electronic application form when it opens
- Print the application, sign it and send it to the address provided at University Admission Finland with the supporting documents

Number of study places/Number of applicants last year: 15/52

For more detailed information on the application process, please read further on this page.

Admissions Criteria for 2016

1) An undergraduate academic degree in a related field

Apply 1 Dec 2015 - 22 Jan 2016

E.g. Computer Science, Computer Engineering, Network Engineering, Information Technology, Software Engineering, Mathematics or Electrical Engineering. Applicants must have good skills in programming, as well as in using related information structures and algorithms.

Students who will graduate during, or shortly after, the application period can be conditionally selected. In such cases, the applicants must include confirmation of their graduation date by their home institution in their application, and the degree certificate must be delivered to the Faculty Office by 30 June at the latest. For applicants who do not require a resident's permit, the deadline is 7 August.

Application Dates and Deadlines

The application period is annually normally from around **late-November till mid-January**. Applications are not accepted outside the application period.

Next Application Period (opens/ends)	**1 December 2015 - 22 January 2016**
Degree Award	Master of Science in Natural Sciences
Credits	120 ECTS
Duration of Full-time Study	2 years
Language	English
Start Date	1 September
Tuition Fee	**Government-funded, i.e. free of tuition fees**
Entry Requirements	Bachelor's degree in a relevant field and proven proficiency in English
How to apply (detailed instructions and admission criteria)	https://www.jyu.fi/en/studywithus/programmes/wise/how-to-apply/

Student Testimonials

Henry Efor, Nigeria

"The thing I love most about the programme is the motto: "creating solutions to problems that do not yet exist"."

Alamzeb Nasar, Pakistan

"I would recommend anyone who wants to be innovative and creative and has a desire to be part of the future of IT to apply for the University of Jyväskylä WISE program because the knowledge gained here will give you a cutting edge advantage in the coming years."

Liu YanJun, China

"The true liberation of thoughts is a fortune to me for the rest of my life. No matter where I live in the future I wish to always keep this peace in my heart and it will lead me to the right path. I love Finland more than I can say."

Uzair Zafar, Pakistan

"The quality of the instruction is unparalleled; my professors not only have superb grasp of the issues raised by the respective courses, but also go to great lengths to provide me with extensive feedback on my ideas and work."

Back to Contents

Contact Information

Administrative Contact and General Enquiries:

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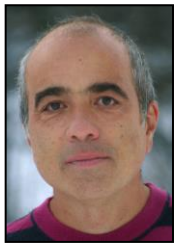

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Study Advisor
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Web Site of the WISE Program: https://www.jyu.fi/en/studywithus/programmes/wise
Advertisement Letter: http://www.mit.jyu.fi/ai/WISE_Letter.pdf
Brief Presentation: http://www.mit.jyu.fi/ai/WISE.ppt

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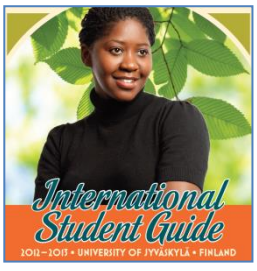

For more information on studying, please consult the web-pages http://www.jyu.fi/it/en/study and for detailed information on practical issues during your stay in Jyväskylä, please see the website of the International Office at: http://www.jyu.fi/en/study . If you want to know more about the Finnish culture, please take a virtual tour of Finland at *This is Finland* http://virtual.finland.fi/ or *Study in Finland* http://www.studyinfinland.fi/.

Next application period: starts 1 December 2015 with the deadline: 22 January 2016.

Back to Contents

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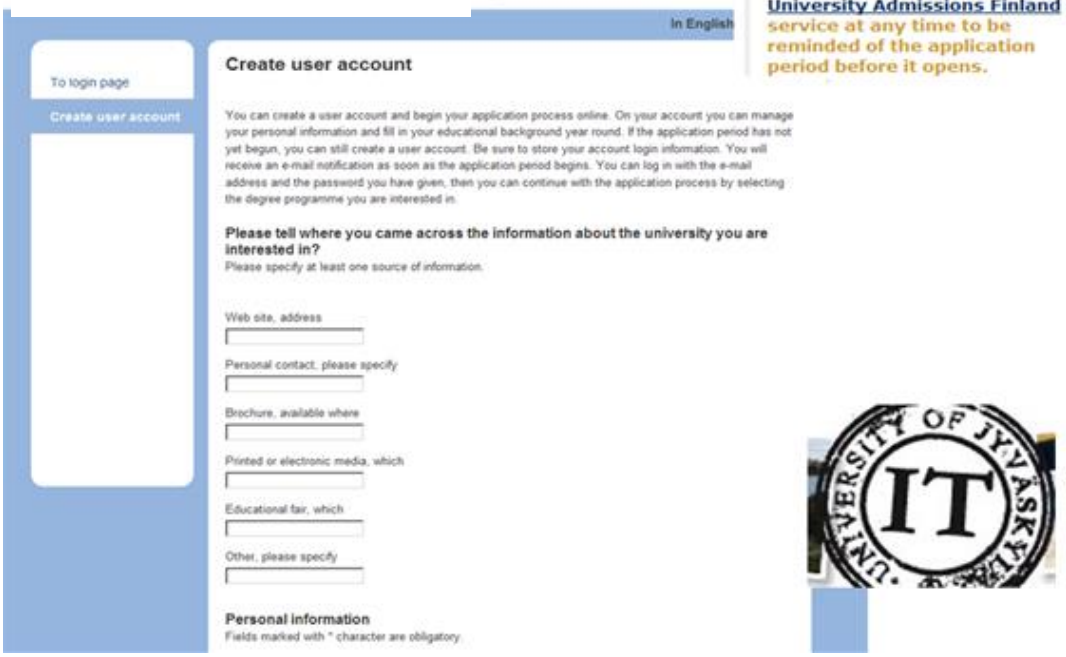

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Back to Contents