Linnæus University

Jnr: FAK 2012/474

Programme syllabus

Faculty Board of Science and Engineering
School of Computer Science, Physics and Mathematics

IT-tekniker, 120 högskolepoäng
IT Technician, 120 credits

Level
First Level

Establishment of Programme
Established by Faculty of Science and Engineering 2009-03-26

Date of Ratification
Approved by Committee for First and Second Cycle under the Faculty Board of Science and Engineering 2009-09-15
The programme syllabus is valid from autumn semester 2013

Revised 2012-11-27

Prerequisites
General entry requirements.

Description of Programme

IT Technician is a broad computer programme, focusing on network and server systems where security is permeate throughout the programme. A large part of the programme is conducted in project form to get a modern computer programme that focuses on the needs of tomorrow. After completion of the programme the student can work as an IT Technician in both large and small companies and organizations. In addition, students have the skills for further studies in the subject.

Objectives

Knowledge and understanding
For a Higher education diploma the student shall have:

- demonstrated knowledge and understanding in the principal area (main field of study) of the study programme, including awareness of the disciplinary foundation of the field and knowledge of some applicable methodologies in the field.

Competence and skills
For a Higher education diploma the student shall have:

- demonstrated the ability to search for, gather and critically interpret the relevant information in order to formulate answers to well defined issues in the main field of study
- demonstrated the ability to present and discuss his or her knowledge with different audiences, and
- demonstrated the skills required to work autonomously with specific tasks in the

main field of study.

Judgement and approach
For a Higher education diploma the student shall have:

- demonstrated knowledge about and be equipped to deal with ethical issues in the main field of study.

Programme-specific objectives
In order to reflect the progression of the programme, students must:

- account for network and server systems from an operational and security perspective
- setting up and deploying secure network and server systems
- present information, ideas, problems and solutions in the subject
- work and participate in computer science projects, and
- model, install, maintain and manage network and server systems.

Content

Programme Overview
IT Technician is a broad computer programme, focusing on network and server systems where security is permeate throughout the programme.
Databases, hardware and automation of administrative tasks are other vital elements of education.
This is combined with network projects to get a modern programme focused on the needs of tomorrow.

The intention is that the student after this training will be offered the opportunity to complete his university degree to a degree in engineering and/or bachelor degree. Student should be able to study further education and/or completed advanced education in a forthcoming work.

Programme courses
First semester

- Introduction to information technology 7,5 credits, Informatics, G1N. The purpose of this course is to give an introduction to what IT is and how it can be studied.
- Network Technology I 7,5 credits, Computer Science, G1N, mandatory.* The purpose of this course is to give an introduction to computer networks.
- Operating Systems 7,5 credits, Computer Science, G1N.* The purpose of this course is to give an introduction to how an operating system is built and manages resources.
- Windows Administration I 7,5 credits, Computer Science, G1F, mandatory.* The purpose of this course is to give an introduction to the Microsoft Windows operating system and the opportunities it offers.

Second semester

- Linux Administration I 7,5 credits, Computer Science, G1N, mandatory.* The purpose of this course is to give an introduction to operating systems based on GNU/Linux works and what possibilities they offer.
- Starting Out with C# 7,5 credits, Computer Science, G1N.* The purpose of this course is to provide an introduction to programming.
- Network Technology II 7,5 credits, Computer Science, G1N, mandatory.* The purpose of this course is to give an introduction to LAN and WAN.
- System administration with PowerShell 7,5 credits, Computer Science, G1F.* The

purpose of this course is to give an introduction to the PowerShell scripting language and how it can be used to automate administrative tasks in Windows-based systems.

Third semester

- Project managment 7,5 credits, Informatics, G1N, mandatory. The purpose of this course is to give an introduction to project managment.
- Linux Administration II 7,5 credits, Computer Science, G1F.* The purpose of this course is to deepen the student's knowledge on network-based services in GNU/Linux.
- Advanced LAN Technologies 7,5 credits, Computer Science, G1F.* the purpose of this course is to deepen the student's knowledge of how local area networks can be designed to provide high availability.
- Database Engineering and Database Administration 7,5 credits, Computer Science, G1F.* The purpose of this course is to give an introduction to how databases work and how they can be administered.

Fourth semester

- Network Security 7,5 credits, Computer Science, G1F, mandatory.* The purpose of this course is to give an introduction to the security problems that exist in modern computer networks.
- Windows Administration II 7,5 credits, Computer Science, G1F.* The purpose of this course is to deepen students' understanding of the services that can be offered in Windows based network systems.
- Computer Hardware Technology 7,5 credits, Computer Science, G1F, mandatory.* The purpose of this course is to give an introduction to the more hardware related problems and issues facing today's IT infrastructures.
- Diploma Thesis in Computer Science 7,5 credits, Computer Science, G1E, mandatory.* The purpose of this course is for the students to demonstrate that he or she has achieved the objectives set for a degree in the subject area.

* Course in the main area.

The courses in the program may change places.

Work Experience
To provide the students with an insight into his future professional role, businesses are involved primarily in the form of guest lecturers.

Studies Abroad
Study abroad is done in consultation with the programme coordinator and in year two. The courses to be read abroad must be equivalent or relevant in relation to the education profile. These may be either broadening or advanced courses.

Scope of Programme
The programme works with sustainable development by ensuring that the training of students is modern and placed on learning from the historical developments in the field. This means that students gain knowledge that will be relevant and applicable over a longer period of time. Sustainable development is focused on the human and his needs and how the technology can ensure that those needs continue to be met.

The education and the courses included in the program are always aimed to be gender-neutral where the emphasis is on human rather than the sex that is.

The education uses in the marketplace commonly used techniques but also options are highlighted to show the diversity that exists within the area.

Constantly monitoring the world, both nationally and internationally is the basis for the areas addressed in the education.

Quality Development

The programme has a programme coordinator who ensures that education is of good quality with good progression and ensures that communication between teachers and students works in a good way. Quality and progression is maintained through continuous dialogue with the subject coordinator.

In addition, program committees are held at least twice per academic year. The program committee consists of the program coordinator, at least one student representative from each grade and the teachers and other stakeholders in the programme.

Continuous evaluation and improvement of the program is done in consultation with students in the form of programme committee, through academic evaluations, through collaboration with businesses and other stakeholders, and by benchmarking against other universities.

Degree Certificate

After completing programme studies, corresponding to the requirements expressed in the Higher Education Ordinance Degree Ordinance as well as Linnaeus University Local Degree Ordinance, the student may apply for a degree.
Those who have completed the IT Technician Programme 120 credits may obtain the following degree:

Högskoleexamen för IT-tekniker
(Huvudområde: Datavetenskap)
University Diploma for IT Technician
(Main field of study: Computer Science)

The degree certificate is bilingual (in Swedish/English). The Degree Certificate is accompanied by a Diploma Supplement (in English).