

## Programme-specific rules for the MSc programme in Internet and Software Technology (K-INT)

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### Background

This document contains the programme-specific rules for the study programme *Internet and Software Technology*. The rules are part of the curriculum for the MSc programme in Information Technology at the IT University in Copenhagen in compliance with the Ministry of Science, Technology and Innovation's Transitional rules for the Master of Science programme in Information Technology and the Master's programmes in Information Technology at the IT University of Copenhagen of 12 August 2003 (henceforth referred to as the MSc in Information Technology Executive Order).

## Chapter 1

### *Objectives*

#### **Section 1.** The Internet and Software Technology study programme

As per the general objectives of the MSc programme, cf. section 1 of the curriculum, at the end of the programme, the student is able to apply and develop the scientific theories and

methods of the discipline. The student is able to design and develop efficient, secure and correct software. The student is furthermore able to analyse and evaluate software and its applications, with focus on distributed and mobile systems. Emphasis is placed on the student's ability to apply the necessary formal methods.

## Chapter 2

### *Admission requirements*

**Section 2.** Admission to the study programme presupposes knowledge of mathematics corresponding to Level A at a Danish upper secondary school.

*Subsection 2.* Admission to the study programme presupposes written and oral proficiency in English.

## Chapter 3

### *Subject areas*

**Section 3.** The Internet and Software Technology study programme covers the following subject areas: *Distributed Systems*, *Software Technology* and *Internet Technology in Products and Organisations*. In all subject areas emphasis is placed both on basic problems, methods and techniques, and on cutting-edge technologies and tools.

*Subsection 2.* The subject area *Distributed Systems* covers communication between processes, middleware, resource sharing and data security, including construction and organisation of networks, network protocols, cryptographic techniques and standards, as well as architectures and models for distributed systems. The objective of the study activities covered by the subject area *Distributed Systems* is that, at the end of the programme, the student is able to design, analyse and develop software infrastructure for communication in closed as well as open distributed IT systems, with focus on efficiency, security and accuracy, and is able to understand future methods, techniques and standards.

*Subsection 3.* The subject area *Software Technology* covers construction of software, including databases, parallel and distributed systems, embedded and mobile systems, algorithms and data structures, domain-specific language as well as the accuracy and efficiency of programmes. The objective of the study activities covered by the subject area *Software Technology* is that, at the end of the programme, the student is able to design, analyse, implement and develop software with focus on efficiency, security and accuracy, and is able to understand future methods, techniques and programming language.

*Subsection 4.* The subject area *Internet Technology in Products and Organisations* covers applications for network-based information technology in products and organisations, including IT-supported collaboration, 'human/machine' interaction, as well as financial, legal and organisational aspects of IT projects. The objective of the study activities covered by the subject area *Internet Technology in Products and Organisations* is that, at the end of the programme, the student is able to analyse, assess or develop applications for network-based in-

formation technology in products and organisations, with focus on, for example, IT-supported collaboration, 'human/machine' interaction or financial, legal and organisational aspects of IT projects.

## Chapter 4

### *Titles*

**Section 4.** Successful completion of the study programme entitles students to use the title *candidatus/candidata informationis technologiae (cand.it.)* with the addition of the designation *Internet- og softwareteknologi* or, in English, *Master of Science (MSc) in IT, Internet and Software Technology*.

## Chapter 5

### *Composition requirements*

**Section 5.** To be entitled to add *Internet and Software Technology* to the degree title, the student must, in addition to the general rules for the MSc programme, meet the following requirements:

1. The subject area *Distributed Systems* must be covered by study activities (courses and projects) worth a minimum of 15 ECTS points (not including the thesis).
2. The subject area *Software Technology* must be covered by study activities (courses and projects) worth a minimum of 15 ECTS (not including the thesis).
3. The subject area *Internet Technology in Products and Organisations* must be covered by study activities (courses and projects) worth a minimum of 7.5 ECTS points (not including the thesis).
4. A programming project corresponding to a minimum of 7.5 ECTS points is required.

## Chapter 6

### *Board of Studies*

**Section 6.** The study programme belongs under the Board of Studies ITU.

Approved by Vice Chancellor Mads Tofte, 13 November 2003.