# Curriculum for the Master of Science Programme in Information Technology at the IT University of Copenhagen, Digital Design and Communication

Curriculum of 19 August 2015

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### Background

This curriculum for the Master of Science Programme in Information Technology, Digital Design and Communication, has been drawn up by the Board of Studies ITU at the IT University of Copenhagen (henceforth referred to as the IT University). The curriculum has been drawn up in compliance with the current Ministerial Order and legislation governing bachelor's and master's (Candidatus) programmes at the universities.

Students enrolled in the above MSc study programmes with study start from autumn of 2015 study according to this curriculum.

## Chapter 1

#### **Programme Title and Objectives**

#### Programme Title

**Section 1**. A student, who has completed the programme, has the right to use the title candidatus/candidate informationis technologiae (cand.it.) i digital design og kommunikation.

*Subsection 2*. The title in English is Master of Science (MSc) in Information Technology, Digital Design and Communication.

### Programme Objectives

**Section 2.** The purpose of the Master of Science Programme in Information Technology is to provide students with the scientific qualifications to identify, formulate, solve and reflect on complex problems relating to information technology.

*Subsection 2*. The programme prioritises the student's ability to assess, apply and develop the underlying technology as well as the scientific theories, methods and tools upon which it is based.

Subsection 3. The student must have the ability to independently initiate and carry out collaborative work in professional and multidisciplinary settings. Furthermore, the student must have the ability to engage in global and distributed interaction, drawing on research-based perspectives.

Subsection 4. On the background of the student's preceding bachelor's programme, the programme provides the student with the qualifications to define his or her own academic profile within the field of information technology and to take independent responsibility for his or her own professional development and specialisation.

*Subsection 5*. Within the framework of the programme, the student can acquire the requisite individual qualifications for specialised posts in business and industry as well as for research training programmes (PhD programme) in information technology.

### Objectives for Learning Output

Section 3. The graduate will develop knowledge and understanding of:

- the main principles and theories about digital communication and interaction design practices based on the highest level of international research, including scientific methods applied within digital communication and interaction design
- design processes aligned with digital media and communication
- how our society affects and is affected by digital media.

Subsection 2. The graduate will develop the following *skills*:

- The graduate can disseminate research-based knowledge about digital design and communication to non-specialists and specialists alike
- The graduate can develop digital design and communication concepts for a variety of digital platforms.
- The graduate can program at a basic level for digital communication platforms.
- The graduate can apply innovation and project management methodologies appropriate to digital design and communication
- The graduate can produce and analyse empirical material appropriate to digital design and communication.

Subsection 3. The graduate will develop the following competences:

- The graduate can design and create innovative digital communication solutions in complex and diverse work contexts, including collaboration with people with a variety of skills and backgrounds in teams situated locally or globally
- The graduate can reflectively consider, apply, and evaluate the central methodologies for the study of digital design and communication from a cross-disciplinary perspective

- The graduate can identify and critically evaluate emerging digital genres and technologies and their likely impact on society
- The graduate can successfully design to changing digital media platforms
- The graduate can communicate strategically in various digital media contexts
- The graduate can identify and critically evaluate digital communication in a local and global perspective with a special focus on social, cultural and institutional contexts.

## Chapter 2

#### **Programme Structure, Content and Programme Language**

#### Programme Structure

**Section 4**. The Master of Science programme requires passes in study activities corresponding to 120 ECTS points consisting of a mandatory backbone, a specialization, optional modules and a master's thesis.

Subsection 2. The study activities of the programme are composed of modules corresponding to 90 ECTS points and a concluding master's thesis corresponding to 30 ECTS points.

*Subsection 3*. Graphic overview of the programme structure is found at the IT University's online Study Guide.

*Subsection 4*. For students with a bachelor degree in Digital Media and Design or similar, a graphics overview of the programme structure is also found on the IT University's online Study Guide.

#### Programme Content

**Section 5**. The mandatory backbone of the MSc study programme Digital Design and Communication consists of study activities corresponding to 55 ECTS points within the first three terms.

Subsection 2. The specialization of the MSc study programme consists of study activities corresponding to 22.5 ECTS points including Thesis Preparation of 2.5 ECTS points within the first three terms.

*Subsection 3*. The optional study activities of the MSc study programme correspond to 15 ECTS points within the first three terms, however, up to 30 ECTS points for students having earned a bachelor's degree in Digital Media and Design or an equivalent degree.

*Subsection 4*. The mandatory backbone of the MSc study programme consists of the following modules:

1. Introduction to fields of study (15 ECTS)

The module provides students with an introduction to the academic platform of the programme: Interaction Design and Media and Communication.

The module's focus on interaction design includes application of key theories of interaction design, data collection methods, data analysis and development of ideas for the design of interactive products and planning and implementation of design research projects.

The module's focus on media and communication includes theories of communication and media, theories of digital-media communication and identification and analysis of topical phenomena and issues from a digital perspective. Students having earned a bachelor's degree in Digital Media and Design or an equivalent degree will be excused from any parts of this module included in their qualifying degree. See subsection 5.

2. Scientific methods and IT understanding (5 ECTS) The module focuses on basic theoretical understanding and practical application of scientific methods and tools for working with digital solutions.

3. Digital Media in Theory and Practice (10 ECTS) The theoretical focus of the module is theories on digital-media communication and historical as well as present-day conceptions of digital units and the communicative potential of platforms. The practical focus of the module is the design of communication and programming for digital communication platforms.

4. IT and Innovation (7.5 ECTS) The theoretical and practical focus of the module is the innovation process from idea to execution within advanced-level IT.

5. Communication Theories within IT (7.5 ECTS) The module focuses on the theoretical understanding of the special characteristics and conditions of digital media and the application of communication strategies on an advanced level.

#### 6. Global IT (7.5 ECTS)

The module focuses on interaction, culture and societal change processes from a global digital perspective in theory and practice.

*Subsection 5*. Students having earned a bachelor's degree in Digital Media and Design or an equivalent degree, who are excused from parts of or the entire module Introduction to fields of study, must take one or both of the following modules (depending on the proportion of the module Introduction to fields of study from which the relevant student is excused):

- 1. *Project (7.5 ECTS)*: The module focuses on targeted, independent learning under supervision, e.g. in relation to existing research projects at the IT University.
- 2. *Optional module (7.5 ECTS)*: The study activities of this module consist of activities offered at Master of Science level at the IT University or at other educational institutions.

### Programme Language

**Section 6.** *Digital Design and Communication* is conducted in Danish. However, some teaching and examinations may be conducted in English.

## Chapter 3

#### **General Rules and Miscellaneous Regulation**

**Section 8.** Furthermore, please refer to the IT University's rules and regulation, appendix to this curriculum.

## Chapter 4

### **Date of Commencement and Transitional Regulations**

**Section 9**. This curriculum comes into force 1 September 2015 and applies to all students admitted to the programme from autumn 2015.

*Subsection 2*. Students, who are enrolled under previous curriculums, may apply to the Board of Studies ITU to complete the programme under the present curriculum if this can be done within a maximum of 120 ECTS point.

*Subsection 3*. When a new curriculum is published, or in the event of significant changes to this curriculum, transitional regulations will be set out in the curriculum as appendix.

Approved by the Board of Studies ITU 12 June 2015

Mads loth

Approved by Vice Chancellor Mads Tofte 19 August 2015.