Curriculum for the Master of Science Programme in Information Technology at the IT University of Copenhagen, Games

Curriculum of 1 August 2026. Students enrolled in autumn 2026 and forward will study according to this curriculum.

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Background

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

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/candidata informationis technologiae (cand.it.) i spil.

Subsection 2. The title in English is Master of Science (MSc) in Information Technology, Games.

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:

- tools, methods and techniques applicable to the design, development, production, and understanding of games and other playful and engaging experiences, as well as their technological foundations, based on highest international research
- the scientific basis and scientific methods for reflecting on the design, development, production, and understanding of games and other playful and engaging experiences, as well as their technological foundations.

Subsection 2. The graduate will develop the skills to:

- design and develop innovative and creative technologies, products and concepts within games, based on scientific analysis and established design methods
- research, communicate and develop concepts, theories, methods, models and solutions based on scientific analysis of games, their design and development process, and their technological foundations
- analyse, communicate, evaluate and select scientific methods, tools and theories supporting the creation of games and other playful and engaging experiences.

- the graduate can apply programming and computational thinking competences to solve design-related technical challenges.

Subsection 3. The graduate will develop the competences to:

- initiate, manage, plan and participate in the complex and unpredictable production process of games within local and global multidisciplinary environments
- employ data-based and user research methods to evaluate, refine, assess and make decisions about prototypes and products
- reconcile the limitlessness of creative ideas with the limitations of system requirements based on established design, production and development practices
- further her skills, knowledge and competences concerning her specialisation in the field of games and other playful and engaging experiences independently and self-determinedly.

Subsection 4. Additional track specific competencies for graduates are:
Design track:

- the graduate can employ, select and adapt a range of design methods and processes to create innovative games and other playful and engaging experiences
- the graduate can apply programming and computational thinking competences to solve design-related technical challenges.

Technology track:

- the graduate can select, evaluate, discuss, apply, adapt and develop complex algorithmic and technological solutions in the field of games and game technologies.

Chapter 2

Programme Structure, Content and Tuition 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 encompassing a specialisation, 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 Technology track and Design track programme structure is found at ITU's online student handbook.

Section 5. The mandatory backbone of the MSc study programme Games, Design track, consists of modules corresponding to 45 ECTS points within the first three terms.

Subsection 2. The specialisation of the MSc study programme Games, Design track consists of study activities corresponding to 30 ECTS points within the first three terms.

Subsection 3. The optional study activities of the MSc study programme Games, Design track correspond to 15 ECTS points within the first three terms.

Subsection 4. The mandatory backbone of the Design track consists of three modules:

1. Programming (7.5 ECTS)
The module focuses on programming techniques applicable to computer games and other interactive systems

2. Development & Design (30 ECTS)
The module focuses on design and development methods for games and engaging experiences, including design, prototyping, development, project management, and user testing methods.

3. Research (7.5 ECTS)
The module focuses on research methods and the analysis of games, their history, social implications, and their culture on the basis of research-based studies.

Section 6. The mandatory backbone of the MSc study programme Games, Technology track, consists of modules corresponding to 45 ECTS points within the first three terms.

Subsection 2. The specialisation of the MSc study programme consists of modules corresponding to 30 ECTS points within the first three terms.

Subsection 3. The optional modules of the MSc study programme correspond to 15 ECTS points within the first three terms.

Subsection 4. The mandatory backbone of the Technology track consists of the following four

modules:

1. Programming (15 ECTS)
The module focuses on programming techniques applicable to computer games and other interactive systems.

2. Development & Design (22.5 ECTS)
The module focuses on design and development methods for games and engaging experiences, including design, prototyping, development, project management, and user testing methods.

3. Research (7.5 ECTS)
The module focuses on research methods and the analysis of games, their history, social implications, and their culture on the basis of research-based studies.

Tuition Language

Section 7. The MSc Games study programme is conducted in English.

Master Thesis

Section 8. The thesis is worth 30 ECTS points and must document skills in applying scientific theories and methods while working within the study programme's subject area.

Subsection 2. The thesis is placed on the final year of the programme. The student must have obtained 60 ECTS of the programme before writing the thesis.

Subsection 3. The abstract must be written in English.

Subsection 4. Intended learning outcomes for the Master thesis in Master of Science (MSc) in Information Technology, Games:

- To identify, formulate, address, and reflect on a research problem that relates to the study, design, and/or development of games and other playful and engaging experiences and/or their technological foundations and is relevant to the student's respective study track (Game Design or Game Technology).

- To identify and analyse relevant means for resolving the research problem, such as academic theories, methods, technology, programming and computational thinking competences, literature, tools, and other sources, as well as existing solutions to similar or the same problem.
- To combine the selected means, develop them further if necessary, and apply them towards the resolution or advancement of the research problem.
- To evaluate the achieved resolution.
- To report in a coherent and stringent way the research problem, the background research, the work towards the resolution, the achieved resolution, the evaluation, and other relevant material, while adhering to the academic standards.
- To critically reflect upon the research problem, the chosen approach, the achieved resolution, and other findings.

Subsection 5. Information on examination for Master theses can be found in ITU's Shared Curriculum.

Chapter 3

General Rules and Miscellaneous Regulation

Admission Requirements

Section 9. Admission requirements to the MSc in Games:

- A university bachelor's degree or a professional bachelor's degree.
- English corresponding to the Danish B-level with an average mark of at least 3.0 on the Danish 7-point marking scale.

Subsection 2. The MSc programme in Games has two different tracks. There are additional requirements for the Technology Track. For the Design Track only the requirements above apply.

*Subsection 3***.** The following BSc programmes give legal right (retskrav) to admission to MSc in Games:
Design Track

- Digital Design and Interactive Technology (ITU) only students admitted 2019 and before
- Technology Track
- Software Development (ITU) only students admitted 2024 and before

Subsection 4. The legal right to admission (retskrav) applies to applicants for an MSc-programme up to three (3) years after their BSc graduation.

Requirements for specific subjects or subject areas for the Technology Track

Section 10. To apply for admission to the Games Technology Track, you must hold a bachelor's degree in computer science, or something equivalent.

External Examiners Corps

Section 11. Examination is the responsibility of the board of external examiners for Computer Science (Datalogi) and the board of external examiners for Information Technologies and Interactive Media Studies (IIM)

Section 12 Furthermore, please refer to ITU's Shared Curriculum.

Chapter 4

Date of Commencement and Transitional Regulations

Section 12. This curriculum comes into force 1 August 2026 and applies to all students admitted to the programme from autumn 2026 and forward.

Subsection 2. Students, who are enrolled under previous curricula, may apply to the ITU Board of Studies 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.

Approved by the ITU Board of Studies 5 November 2025
Approved by Rector 11 November 2025