# Coursework requirements (Curriculum 2017- 2020)

These are the coursework requirements for the Doctoral Programme in Information Technology, according to the curriculum 2017-2020.

Doctoral degree in the Faculty of Information Technology includes doctoral dissertation and 40 credits (ECTS) of coursework. If a doctoral student has two previous master's degrees or a previous doctoral degree, the requirement may be decreased to 30 credits (in such case, please contact the doctoral school coordinator).

Structure for the coursework is quite flexible and the studies are individually planned with supervisors. However, there are some compulsory parts and guidelines that should be followed in planning the coursework. Below are the requirements for each research area of the faculty.

# 1. Information Systems (PhD or D.Sc. (Econ. & Bus. Adm.))

#### 1. Discipline specific skills (min. 24 cr)

#### **Obligatory studies**

TJTJ701 or TJTJ7700 Postgraduate Seminar, 4 cr

TJTJ7710 Theory Development in Information Systems or TJTJ7720 Theory in Information Systems, 3 cr \*

TJTJ7701 Qualitative Research Methods in Information Systems, 3 cr \*

TJTJ7702 Quantitative Research Methods in Information Systems, 3-6 cr \*

TJTJ7703 Design Science Research in Information Systems, 3 cr \*

#### **Optional studies**

TJTJ774 or TJTJ7704 Information Systems Research, 3 cr

TJTJ772 or TJTJ7705 How to publish in Top Information Systems Journals, 2-5 cr

TJTJ7711 The Success of Science and IS Research, 3 cr

Book exams

Scientific reports not included in the dissertation, 0-6 cr

Scientific conference presentation (one presentation = 2 cr), 0-6 cr

Research visit or scientific work abroad (1 month = 2 cr), 0-6 cr

Program responsibilities in international conferences (e.g. review of the proposed articles), 0-6 cr

Other master's or doctoral level courses in the discipline (e.g. INFORTE, summer schools).

<sup>\*</sup> Can be substituted with other similar courses (e.g. INFORTE, IHME, or international courses).

#### 2. Transferable skills (min. 6 cr)

#### **Obligatory studies**

Theory of Science / Philosophy of Science, 3 cr Optional research methods (e.g. INFORTE, IHME), 2 cr

#### **Optional studies**

Communication and language studies (e.g. Movi courses for doctoral researchers) Other courses that support general research skills (e.g. research ethics)

Other courses that support working life skills

Pedagogical studies, 0-10 cr

Relevant teaching work in the discipline, 0-6 cr

Relevant studies from other scientific fields, 0-10 cr

### 3. Doctoral thesis (0 cr)

Doctoral thesis (for the degree of Doctor of Philosophy) or Doctoral thesis (for the degree of D.Sc. (Econ. & Bus. Adm.))

# 2. Software and Communications Engineering (Ph.D. or D.Sc. (Tech.))

#### 1. Discipline specific skills (min. 24 cr)

#### **Obligatory studies**

TIEJ601 Postgraduate Seminar, 4 cr

### **Optional studies**

Advanced master's level courses, postgraduate courses, and seminars in the discipline

Book exams

Scientific reports not included in the dissertation, 0-6 cr

Scientific conference presentation (one presentation = 2 cr), 0-6 cr

Research visit or scientific work abroad (1 month = 2 cr), 0-6 cr

#### 2. Transferable skills (min. 6 cr)

#### **Obligatory studies**

Communication and language studies (e.g. Movi courses for doctoral researchers), 3 cr

#### **Optional studies**

Research methods (e.g. INFORTE, IHME)

Theory of Science / Philosophy of Science

Other courses that support general research skills (e.g. research ethics)

Other courses that support working life skills

Pedagogical studies, 0-10 cr

Relevant teaching work in the discipline, 0-6 cr

Relevant studies from other scientific fields, 0-10 cr

## 3. Doctoral thesis (0 cr)

# 3. Applied Mathematics and Computational Sciences (Ph.D.)

### 1. Discipline specific skills (min. 24 cr)

### **Obligatory studies**

TIEJ601 Postgraduate Seminar, 4 cr

#### **Optional studies**

Advanced master's level courses, postgraduate courses, and seminars in the discipline

Book exams

Scientific reports not included in the dissertation, 0-6 cr

Scientific conference presentation (one presentation = 2 cr), 0-6 cr

Research visit or scientific work abroad (1 month = 2 cr), 0-6 cr

### 2. Transferable skills (min. 6 cr)

#### **Obligatory studies**

Communication and language studies (e.g. Movi courses for doctoral researchers), 3 cr

#### **Optional studies**

Research methods (e.g. INFORTE, IHME)

Theory of Science / Philosophy of Science

Other courses that support general research skills (e.g. research ethics)

Other courses that support working life skills

Pedagogical studies, 0-10 cr

Relevant teaching work in the discipline, 0-6 cr

Relevant studies from other scientific fields, 0-10 cr

#### 3. Doctoral thesis (0 cr)

# 4. Educational Technology (Ph.D.)

#### 1. Discipline specific skills (min. 20 cr)

#### **Obligatory studies**

TIEJ601 Postgraduate Seminar, 4 cr Theories in Educational Technology, 5 cr

#### **Optional studies**

Advanced master's level courses, postgraduate courses, and seminars in the discipline

Book exams

Scientific reports not included in the dissertation, 0-6 cr

Scientific conference presentation (one presentation = 2 cr), 0-6 cr

Research visit or scientific work abroad (1 month = 2 cr), 0-6 cr

#### 2. Transferable skills (min. 11 cr)

### **Obligatory studies**

Research methods (e.g. INFORTE, IHME), 5 cr Communication and language studies (e.g. Movi courses for doctoral researchers), 3 cr Theory of Science / Philosophy of Science, 3 cr

#### **Optional studies**

Other courses that support general research skills (e.g. research ethics)
Other courses that support working life skills
Pedagogical studies, 0-10 cr
Relevant teaching work in the discipline, 0-6 cr
Relevant studies from other scientific fields, 0-10 cr

## 3. Doctoral thesis (0 cr)

# **5.** Cognitive Science (PhD)

#### 1. Discipline specific skills (min. 20 cr)

### **Obligatory studies**

Postgraduate Seminar, 4 cr Theory of cognitive science, 2-5 cr Theory studies relevant to the research problem, 2-5 cr

### **Optional studies**

Advanced master's level courses, postgraduate courses, and seminars in the discipline

Book exams

Scientific reports not included in the dissertation, 0-6 cr

Scientific conference presentation (one presentation = 2 cr), 0-6 cr

Research visit or scientific work abroad (1 month = 2 cr), 0-6 cr

#### 2. Transferable skills (min. 11 cr)

### **Obligatory studies**

Research methods (e.g. INFORTE, IHME), 5 cr Communication and language studies (e.g. Movi courses for doctoral researchers), 3 cr Theory of Science / Philosophy of Science, 3 cr

#### **Optional studies**

Other courses that support general research skills (e.g. research ethics)
Other courses that support working life skills
Pedagogical studies, 0-10 cr
Relevant teaching work in the discipline, 0-6 cr
Relevant studies from other scientific fields, 0-10 cr

## 3. Doctoral thesis (0 cr)