

Dual Degree MSc Programme in Computer Science between EKCUC (Eger) and JKU (Linz)

The joint dual-degree programme of Eszterházy Károly Catholic University of Eger and Johannes Kepler University of Linz aims to train IT professionals who, based on a theoretical foundation that ensures the long-term development of their knowledge, are able to perform the development, creation, application, implementation, operation and maintenance of IT systems, both independently and in teams, at a high level. They also have the necessary cooperation and modelling skills to solve IT tasks in their field of application and are able to carry out and coordinate IT-related research tasks.

Form of the programme:

- full-time
- only in English

Duration of the training: **4 semesters.**

Specializations:

Specializations of the programme:

- **Software Engineering (specialization)**
 - Programme location in the 1st semester: EKCUC
 - Programme location in the 2nd semester: EKCUC
 - Programme location in the 3rd semester: JKU
 - Programme location in the 4th semester: EKCUC or JKU
- **Data Science (specialization)**
 - Programme location in the 1st semester: EKCUC
 - Programme location in the 2nd semester: JKU
 - Programme location in the 3rd semester: JKU
 - Programme location in the 4th semester: EKCUC or JKU



Admission and input requirements

- Language examination: **English B2** or higher (**internationally accredited**, „C” type (**complex**), preferably not older than 2 years)
- Bachelor's degree in Computer Science, Computer Science Engineering or Business Informatics with full credit recognition
- Choosing **specialization** during the enrolment procedure
- Successful admission based on points scored in an admission interview
- Enrolment for the Computer Science MSC programme at EKCÚ
- Enrolment for the Computer Science Master Programme at JKU during the Linz semester at the latest

Scholarships

Erasmus scholarship

Erasmus scholarships are available for semesters spent in Linz. At JKU, Erasmus scholarship holders can also apply for dormitory places.

Other training data

Credits to be obtained in Master's programme: **120 ETCS**

Duration of **internship**: **6 weeks**

To obtain a double degree, 40 credits are compulsory at the partner university.

Internship locations:

ZF Hungária Kft.

Emerson Automation FCP Kft.

Dynatrace Austria GmbH

Programme coordinator: Dr. Gergely Kovásznai (associate professor, PhD, habil.)

Curriculum

Core subjects

Number of hours per week

Name of the course	Credit	Requirement	Lecture	Practice	Semester	Type of the course
Machine Learning: Supervised Techniques	3	Colloquium	2	0	1	Compulsory
Machine Learning: Supervised Techniques (practice)	2	Practice mark	0	2	1	Compulsory
Principles of Programming Languages	3	Colloquium	2	0	1	Compulsory
Software Architectures	4	Practice mark	0	2	1	Compulsory
Machine Learning and Pattern Classification	5	Practice mark	0	2	2	Compulsory
System Software	3	Colloquium	2	0	3	Compulsory
Thesis Seminar 1	10	Practice mark	0	0	3	Compulsory
Thesis Seminar 2	20	Practice mark	0	0	4	Compulsory
Professional practice I.	8	Signature	0	0	3	Compulsory
Professional practice II.	5	Signature	0	0	4	Compulsory

Software Engineering specialization

Number of hours per week

Name of the course	Credit	Requirement	Lecture	Practice	Semester	Type of the course
Data Warehousing	3	Colloquium	2	0	1	Compulsory elective
Data Warehousing (practice)	3	Practice mark	0	2	1	Compulsory elective
Cryptography	3	Colloquium	2	0	2	Compulsory elective

Software Testing	3	Practice mark	0	2	1	Compulsory
Software Engineering Seminar	3	Practice mark	0	2	1	Compulsory
Web Engineering	3	Practice mark	0	2	1	Compulsory
Network Development	3	Practice mark	0	2	1	Compulsory elective
Security Models in Information Systems	3	Practice mark	0	2	2	Compulsory elective
Integrated Information Systems	3	Practice mark	0	2	2	Compulsory
Mobile Computing	3	Practice mark	0	2	2	Compulsory
Model-Driven Engineering	3	Colloquium	2	0	2	Compulsory
Software Processes and Tools	3	Colloquium	2	0	2	Compulsory
Project in Software Engineering	8	Practice mark	0	4	2	Compulsory
Formal Methods in Software Development	4	Colloquium	3	0	3	Compulsory
Requirements Engineering	3	Colloquium	2	0	3	Compulsory
Model Checking	5	Colloquium	3	0	3	Compulsory elective
Computer Forensics and IT Law	3	Colloquium	2	0	3	Compulsory elective
Web Usability	2	Practice mark	0	1	3	Compulsory elective
Secure Code	3	Colloquium	2	0	4	Compulsory elective
Web Information Systems	4	Colloquium	3	0	4	Compulsory elective

Data Science specialization

Number of hours per week

Name of the course	Credit	Requirement	Lecture	Practice	Semester	Type of the course
Data Warehousing	3	Colloquium	2	0	1	Compulsory
Data Warehousing (practice)	3	Practice mark	0	2	1	Compulsory
Data Science Seminar	3	Practice mark	0	2	1	Compulsory
Mathematical foundations of Graphics and Visualisation	3	Colloquium	2	0	1	Compulsory elective

Big Data Management and Processing	3	Practice mark	0	2	1	Compulsory
Project in Data Science	8	Practice mark	0	4	2	Compulsory
Integrated Information Systems	3	Practice mark	0	2	2	Compulsory elective
Mobile Computing	3	Practice mark	0	2	2	Compulsory elective
Computational Data Analytics	3	Colloquium	2	0	2	Compulsory
Computational Data Analytics (practice)	2	Practice mark	0	1	2	Compulsory elective
Learning from User-generated Data	3	Colloquium	2	0	2	Compulsory elective
Learning from User-generated Data (practice)	1	Practice mark	0	1	2	Compulsory elective
Web Information Systems	4	Colloquium	3	0	2	Compulsory elective
Web Search and Mining	3	Colloquium	2	0	2	Compulsory elective
Machine Learning: Unsupervised Techniques	3	Colloquium	2	0	3	Compulsory elective
Machine Learning: Unsupervised Techniques (practice)	2	Practice mark	0	1	3	Compulsory elective
Probabilistic Models	3	Colloquium	2	0	3	Compulsory
Probabilistic Models (practice)	1	Practice mark	0	1	3	Compulsory elective
Visual Analytics	3	Colloquium	2	0	3	Compulsory
Visual Analytics (practice)	1	Practice mark	0	1	3	Compulsory elective
Web Engineering	3	Practice mark	0	2	3	Compulsory elective
Statistical Principles of Data Science	6	Colloquium	3	0	2	Compulsory
Information Visualization	4	Colloquium	3	0	4	Compulsory elective