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# MASTER (M.SC.) DEVOPS AND CLOUD COMPUTING 120 ECTS

The need for new IT professionals continues to rise. Work as a liaison between software development and IT operations to accelerate the building and delivery of software and system updates. By doing so, you can assist companies in effectively maintaining operational stability.

Smart IT infrastructure is crucial for today's modern workplace. Every business would ideally prefer to have a future-proof IT infrastructure. With a Master's degree in DevOps and Cloud Computing from IU, you can do just that. Your master's degree will focus on areas of DevOps – i.e. the integration of software development (development) and IT operations (ops) – and cloud computing. Using your newly acquired knowledge, you can ensure that your IT department supports and even strengthens your business's overall goals by aligning its goals with yours.



## Degree

Master of Science (M.Sc.)



## Electives

In the DevOps and Cloud Computing online programme, you can choose electives worth 20 ECTS and focus on interesting practical areas.



## Study model and accreditation

- Online
- German accredited institution, recognised by ZFU (German Central Office for Distance Learning)



## Study start and duration

Official start date: September 1<sup>st</sup>, 2023\*

Afterwards: Anytime

Duration: 24, 36, 48 months



## Credits

120 ECTS

\*This programme is still in the process of accreditation and recognition. We expect approval from the relevant ministry by the programme's official start date. So far, all IU programmes have been accredited and approved successfully and on time.

## Study Content (120 ECTS)

MODULE TITLE	SEMESTER	CREDITS (ECTS)	TEST TYPE
<b>1</b>			
Agile Software Development Techniques and Methods		5 ECTS	WACS
IT Service Management		5 ECTS	E
DevOps		5 ECTS	WACS
Advanced Research Methods		5 ECTS	WAWA
Introduction to Cloud Computing and Serverless Computing		5 ECTS	E
Project: Cloud Computing		5 ECTS	WAPR
<b>2</b>			
Product Development		5 ECTS	E
Design Thinking		5 ECTS	WARE
Cyber Security and Data Protection		5 ECTS	OA
Seminar: Applying Threat Intelligence		5 ECTS	WARE
Container Orchestration		5 ECTS	E/CS
Project: Container Orchestration		5 ECTS	WAPR
<b>3</b>			
Cyber Risk Assessment and Management		5 ECTS	E
Seminar: Computer Science and Society		5 ECTS	WARE
Electives A		10 ECTS	
Electives B		10 ECTS	
<b>4</b>			
Master Thesis & Colloquium		15 ECTS	WAMT & PC

## CHOOSE YOUR ELECTIVES

### Choose one elective from

#### “Electives A” list:

- Audit- and Security Testing
- IT Governance, Compliance and Service Management
- Prerequisites for Machine Learning
- Secure Software Entwicklung
- Sustainable Corporate Development

### Choose one elective from

#### “Electives B” list:

- Aspects of Modern Business Communication
- E-Commerce
- Internet of Things and Ethical Reflection in Management
- IT Services and Architecture Management
- Machine Learning and Deep Learning
- Management Consulting
- Process Management with Scrum
- Project Management within Operations
- IT Law for IT Security

## ELECTIVES

### PROCESS MANAGEMENT WITH SCRUM

With Process Management with Scrum, you'll learn how scrum enables software development organizations to prioritize the workload and break it down into manageable chunks. By gaining scrum skills, you can ensure your business is able to increase value by ensuring customers get what they really want.

### IT SERVICES AND ARCHITECTURE MANAGEMENT

The term "IT Services and Architecture Management" refers to all of the tasks carried out by a company to develop, plan, deliver, run, and manage the information technology (IT) services offered to customers. Architecture blueprints are very important for IT organizations. Understanding IT architecture management will help you ensure that your IT department is supporting and even improving your organization's overall mission by aligning their goals with those of your business.

## CAREER OUTLOOK

The IT sector offers a variety of work opportunities with competitive pay. You could, for instance, act as an expert in Cloud Lifecycle for companies. As a cloud engineering consultant, you will provide guidance to diverse businesses on the execution of their cloud strategy. You can also serve as a driving force behind the development of IT structures in various businesses thanks to your expertise in the DevOps field (Strategic IT Service Manager with DevOps orientation). Alternately, as a Cloud Solution Architect, you can guarantee the creation of cloud architectures that are solution-oriented. In doing so, you always make sure that this is done in accordance with IT security guidelines.

## ADMISSION

### ADMISSION REQUIREMENTS FOR 120 ECTS

- Completed undergraduate degree with 180 ECTS with a focus on **Business informatics or computer science**
- Your degree must be from a state or state-recognised higher education institution/university
- You must have achieved a final grade of at least "satisfactory" or Grade C equivalent in your previous undergraduate degree

### FURTHER ADMISSION OPPORTUNITIES

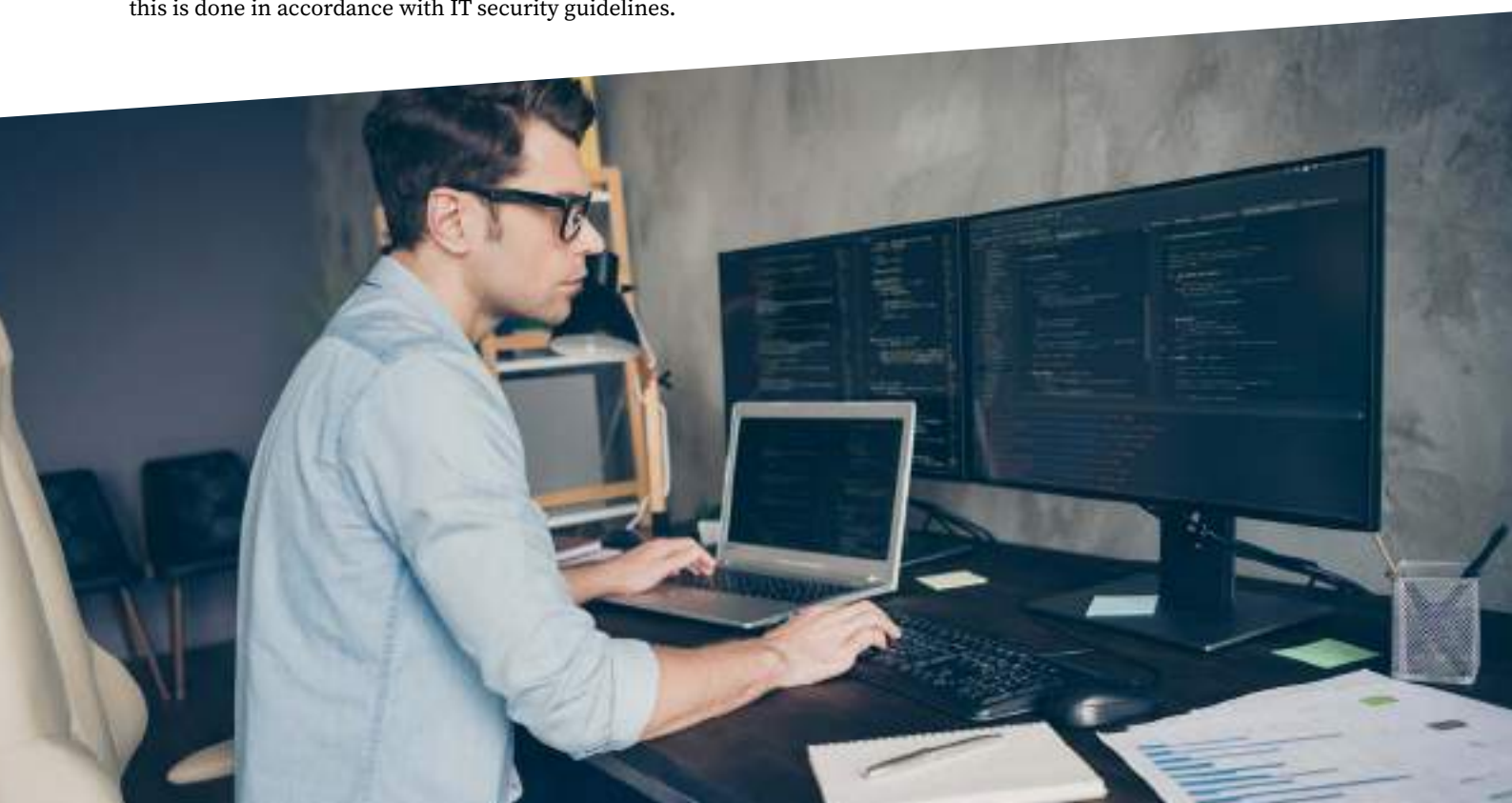
Is your undergraduate degree not in the required subject field for this programme's **120 ECTS points variation admission** requirements? You can still apply! You will have to take 2 specific courses at the start of your studies and pass them successfully in order to continue with your studies. That way, you don't have to take an entrance examination, and can prove your skills while earning ECTS points as part of your studies.

### SCHOLARSHIP PROGRAMME

Start your online degree with our Scholarship Programme and receive a scholarship up to 67%!

Start in our Scholarship Programme as a participant with immediate access to 50% of your courses. You can do this by taking our Entrance Examination which will be included in your course as part of the Scholarship Programme. Once you have handed in all admission documents and the courses are completed, you can go on to finish your degree.

**Questions?** Speak to one of our study advisors, they will guide you through every step of the process.



## ENGLISH SKILLS

At IU, we teach in English to prepare you for the international market. We therefore ask for proof of your English language skills\*. If English is your native language or you graduated from an English-speaking school/university, you don't need to prove your English skills.

Accepted certifications:

- English Courses (complimentary when signing up with IU)\*\*
- TOEFL (min. 80 points) or
- IELTS (min. Level 6.0 out of 9 points) or
- Duolingo English test (min. 95 points) or
- Cambridge Certificate (min. B grade overall) or
- Equivalent proof

# 8 STEPS TO COMPLETE YOUR STUDIES

1

Register and apply online

2

Choose your course

3

Download your study scripts

4

Work independently with study scripts

5

Take part in Q&A sessions

6

Prepare for exams and take them either:

- directly online, or
- at an IU examination centre (remember to register in time).

7

Master thesis and colloquium

8

Complete your studies with certificate

\*Proof must be provided before the start of the study and must not be older than five years.

\*\*Please note that English Courses aren't accepted as a language certificate for on campus study programmes.