

Admission Exams

Master of Digital Innovation Management (MSc)

One admission criterion for the study program are sufficient skills in the areas of IT management, information technology (IT) as well as business administration. You proof those skills with courses of at least 5 ECTS per field (a total of 15 ECTS). The courses need to be part of a previous higher education program (usually your Bachelors program) at a state or state-recognized German or foreign higher education institution.

Specifically, we expect the following skills:

- Knowledge of fundamental concepts of information technology (IT, computers, software, networks, databases)
- Basic knowledge of essential concepts of information and IT management (information systems, business processes, modeling, integration concepts, application systems, IT strategy and IT governance, IT sourcing)
- Knowledge of basic concepts of business administration (constitutive decisions, value creation, financing, accounting, marketing)

If you cannot prove your competencies in one or more fields through ECTS from previous university studies, we offer a preliminary oral examination.

The exam will be an oral exam via Zoom and will approx. 30 minutes per field. We will offer two dates for the admission exams, one mid-July and one End of August.

You will need approx. 120 hours preparation time per field (equals approx. 5 ECTS) to pass the exam.

To have enough time to prepare, **you should notify us as early as possible if you would like to take the preliminary exam.**

You can only register for the examination if the preparation time is sufficient, so for one field you must register four weeks in advance, for two fields eight weeks, for three fields 12 weeks.

International applicants: Please also consider the time you need to apply for the visa. The lectures are partly held in presence. Therefore, you must be able to be in Neu-Ulm at the end of September.

Below we outline the contents of those exams in more detail and provide materials to prepare for the exam.

Information Technology

The goal of the **IT** exam is to prove that you have sufficient understanding of the technical foundations of digital innovations.

Focus topics:

- Types and classification of computer systems
- General architecture of computers and networks
- Relevance and functioning of technical protocols (TCP/IP), particularly for data transfer (OSI reference model, TCP/IP)
- Types and specifics of software systems (operating systems, application systems)
- Basics of computer programming and languages (algorithms, flowcharts, programming paradigms, particularly object-oriented programming)
- Database fundamentals (data concepts — entity, attribute, relationship; database management systems — need, benefits, components; database models — ERM, relational database model; normalization)
- Role of IT in industries

Example questions

Why is TCP/IP a core technology of the Internet? What does an ERM show and what is its purpose? What are advantages of object-oriented programming?

Recommended read:

Brylow, D., Brookshear, J. G. (2018). Computer Science: An Overview. UK: Pearson.

Recommended courses for preparation:

- <https://www.edx.org/microbachelors/wgux-introduction-to-information-technology>

IT-Management

The goal of the **IT-management** exam is that you show your understanding of some basic concepts related to managing IS in contemporary firms (information system types, use and impacts of IT on contemporary enterprises, challenges, and management approaches etc.) and can apply and transfer them to practical problems.

(Focus) topics:

- Necessity, contents, and objectives of IT management
- Definition, nature and benefits of information and information systems (IS) in contemporary organizations
- Relationship between IT and corporate performance
- Use of IT in companies (e.g., integration)
- Types of IS
- Implementation of IS (approaches, challenges)
- Sourcing of IS
- Business-IT alignment

Example questions:

What would you look at when selecting a standard software package? Explain the concept of Business-IT alignment.

Recommended read:

Laudon, K. C., & Laudon, J. P. (2022). Management information systems: Managing the digital firm. 17th Edition. UK: Pearson Education.

Additional courses for preparation:

- <https://www.edx.org/course/digital-technology-and-innovation>
- <https://www.edx.org/course/introduction-to-management-information-systems-mis>

Business Administration

The goal of the **business administration** exam is that you show your understanding of some basic concepts of managing a business. Imagine, you found a new business. Which decision do you need to make (e.g., related to the organizational form, financing, strategy, marketing) and what should keep an eye on (e.g., assets, costs, revenues, etc.)?

Recommended courses for preparation:

- <https://www.edx.org/course/operations-management>
- <https://www.edx.org/course/people-management>
- <https://www.edx.org/course/corporate-finance-2>
- <https://www.edx.org/course/strategic-management>
- <https://www.edx.org/course/accounting-for-decision-making>
- <https://www.edx.org/course/marketing-management>

Example questions:

Which legal form would you choose if you want to limit liability? What is the difference between fixed and variable costs?