Qualification goals
Bachelor Health Informatics

Faculty European Campus Rottal-Inn

of the Deggendorf Institute of Technology

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Gender neutrality

The use of double forms or other markings of female, male and diverse gender is largely avoided in order to maintain legibility and clarity. All titles for the various groups of members of the university refer equally to members of all genders of the groups concerned.

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1 Objectives of the programme

In the Bachelor programme Health Informatics, students acquire comprehensive specialist knowledge in the field of health informatics, which enables them to solve problems directly and to perform management tasks in facilities, institutions and organisations in the healthcare sector. They also acquire social skills and methods expertise, which enable them to work confidently and competently in a complex, multi-professional and inter-cultural environment.

The training is offered by Faculty European Campus Rottal-Inn.

Graduates of the Bachelor programme of Health Informatics can carry out both scientifically founded and ethically insightful work on the basis of a systematic approach. The integrated practical study semester, which takes place in selected healthcare institutions, organisations and businesses in close coordination with the DIT, helps to achieve this goal. In achieving the outlined qualification goals, the programme's applied orientation is of special importance. The application and transfer of scientific knowledge to concrete, current issues in the field of health informatics will be ensured through the programme's focus on various fields of application. The content and structure of the course opens up the opportunity for students to gain in-depth, interdisciplinary and process-oriented insights into an area of application from early on in their studies.

2 Learning outcomes of the programme

The course provides students with a broad basic qualification in the essential functions of applied informatics, programming techniques and network administration. Contents related to information technology and programming, such as "Foundation of Informatics", "Software Development", "Databases", "Foundations of Health Informatics" and "Practice of Programming", teach methods for developing modern software applications for web and applications using common programming languages, taking into account network-technical framework conditions in the health context. They also teach methods for the systematic analysis of problems and their transfer into models. They enable students to competently participate in IT decision-making and workflow processes and actively help shape IT projects. Furthermore, students receive well-founded insights into the operational processes of IT projects as well as the associated and necessary specialist knowledge and expertise. In addition to IT and programming functions, the aspects of data protection, data analysis and the use of

IT systems in organisations of the health sector (including "Compliance and Risk Management", "Information Systems in Health Care", "ERP Systems", "Knowledge-based Systems", "IT Organisation and Computer Centre") form a central part of the curriculum. This should enable students to develop and implement security-relevant medical products and IT applications. This is essential especially in the health industry, with the increasing need for security of citizens.

In addition to the IT and security-relevant content, students are taught the structure and interaction in the health industry within the framework of "Foundations of Law", "Innovation and Complexity Management", "General Business Management and Accounting" and "Health Economics". In addition to the basics of business administration, students are enabled to understand the complexity of the health industry and to identify individual stakeholders. They are encouraged to critically approach the different cultural manifestations of the health industry and to analyse and understand the interdependencies between institutional and private-sector actors and, in particular, to derive implications for their own economic activity.

Building on the IT modules, the health-relevant modules (including "Medical Documentation", "Application Systems of Health Informatics", "Medical Technology", "Logistics and Healthcare", "Managed Care") form a solid basis for the broad education of students and open up numerous employment opportunities. This specialisation must be seen as a special asset of the course: the focus on telemedicine and medical technology paired with international healthcare-related and regulatory frameworks reflects the international orientation of the European Campus Rottal-Inn and represents the uniqueness of the course.

3   Study objectives and qualification goals

Knowledge:

- Students have in-depth and application-relevant specialist knowledge of health informatics and medical technology.

- They acquire in-depth knowledge in the disciplines of information technology, healthcare and nursing as well as economic and normative disciplines such as medical technology, programming and health management.

- Students can assess their range of services, identify further training measures and work together internationally, even in large teams.

- They can analyse and evaluate healthcare and nursing related problems and develop solutions.

Skills:

- Students can research and interpret academic technical texts and apply them to situations in everyday work.

- They can solve problems in an application-oriented manner using basic methods.

- Students can present work results in a structured manner and discuss them in front of expert audience.

- Students learn to assess their strengths and weaknesses and their impact on others.

- They can contribute to conflict resolution and handle criticism constructively.

- Students recognise the need for lifelong learning and acquire the necessary skills.

Competencies:

Graduates acquire the competencies to

- They can think and act in an entrepreneurial way and formulate strategies.

- Students can express themselves clearly in writing and orally in English, German and, if required, in one more language.

- Students can implement theoretically acquired knowledge in a practical and solution-oriented manner.

- Students can organise themselves and show a capacity for teamwork and leadership skills during interdisciplinary cooperation.

- They can understand and design process models, develop telematics infrastructure as well as design and execute IT projects in the healthcare sector.

- Students can name stakeholders of companies and classify their relevance for product development and take their goals into account.

- They can reflect on their actions and adapt them to suit ethical, ecological, social and economic requirements.

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4 Learning outcomes of modules/module objectives/matrix of objectives

Individual modules, their detailed objectives and competencies to be acquired by graduates are described in the module handbooks for the Bachelor programme. The following table shows the relationship between individual modules and objectives.

Matrix of objectives of the modules in the Bachelor programme of Health Informatics

Module	Knowledge				Skills				Competencies			
	Informatics	Mathematics/Sciences	Health	General Foundations	Informatics	Mathematics/Sciences	Health	General Foundations	Informatics	Mathematics/Sciences	Health	General Foundations
Semester 1												
Foundations of Medicine			xx				x				x	
Foundations of Mathematics and Statistics I		xx				xx				x		
Foundations of Informatics	xx				xx				xx			
Foundations of Sciences		xx				x				x		
General Business Administration and Accounting				xx				x				x
AWP (Foreign Language I)				xx				xx				xx
Semester 2												
Foundations of Law				xx				x				x
Software Development	xx				xx				xx			
Databases	xx				xx				xx			
Foundations of Health Informatics	xx				xx				xx			
Mathematics and Statistics II		xx				xx				x		
Compliance and Risk Management				xx				x				x
Foreign Language II / AWP				xx				xx				xx
Semester 3												
Medical Documentation			xx				x				xx	
Application Systems of Health Informatics			xx				xx				xx	
Information Systems in Health Care	xx				xx				xx			
Media Management	xx				x				x			
Innovation and Complexity Management				xx				x				x
AWP (Foreign Language III)				xx				xx				xx
Semester 4												
Medical Technology			xx				xx				xx	
ERP Systems	xx				x				x			
Operations Research	xx				x				x			
Practice of Programming	xx				xx				xx			
Current Aspects of Health Economy			xx				xx				xx	
Foreign Language IV /AWP				xx				xx				xx
Semester 5												
Internship				xx				xx				xx
Semester 6												
Social Processes and Communication				xx				xx				xx
Knowledge-based Systems	xx				xx				xx			

IT-Project Management	xx				xx				xx			
Logistics in Healthcare			xx				x				x	
Collaborative Systems	xx				x				x			
Semester 7												
FWP (subject oriented elective)	xx				xx				xx			
Managed Care			xx				xx				xx	
IT Organisation and Computer Centre Management	xx				xx				xx			
Management and IT Consulting in Health service	xx								xx			
Business Game: Medical Information Systems			xx				xx				xx	

Legend: xx strong relation; x   medium relation