

Study and examination regulations for the Bachelor's degree programme Digital Technology and Management at the Ostbayerische Technische Hochschule Amberg-Weiden

from 02.06.2021

(these study and examination regulations are subject to the General Study and Examination Regulations (ASPO) of the East Bavarian Technical University of Applied Sciences Amberg-Weiden from 27 May 2020)

(consolidated version of the 1st amendment statutes dated 27/05/2024)

Based on para. 2 sentence 1 of the Bavarian Higher Education Innovation Act (BayHIG) of 5 August 2022 (GVBl. p. 414, BayRS 2210-1-3-WK), as amended, the East Bavarian Technical University of Applied Sciences Amberg-Weiden issues the following statutes:

§ 1

Purpose of the study and examination regulations

The Study and Examination Regulations serve to complete and supplement the General Study and Examination Regulations of the Ostbayerische Technische Hochschule Amberg-Weiden of 27 May 2020 in the currently valid version.

§ 2

Study objective

- (1) 1The Digital Technology and Management degree programme comprises an interdisciplinary, international education at the intersection of information and communication technology, operational value creation processes and management in international companies and serves to acquire specialist and interdisciplinary skills. 2The professional and interdisciplinary competence-oriented qualification objectives are the ability to actively, critically, integratively and responsibly participate in the planning, development, realisation, implementation, marketing and procurement processes of digital technologies in internationally active manufacturing companies and in the service sector, intercultural sensitisation and the ability to work multilingually in English, German and, if necessary, in another language area. 3In addition, the qualification for a relevant Master's degree programme is taught.
- (2) Graduates of the degree programme have a broad and integrated knowledge as well as a critical and application-oriented understanding of the most important theories, principles, methods and tools of product, innovation and lifecycle management, the core elements of smart products and basic IIoT technology, communication technology, sensor technology, computer science, algorithms, databases and information systems, an object-oriented programming language, agile development methods and digital development tools as well as project management.

- (3) Graduates also have a broad and integrated knowledge and understanding of the functions, interfaces and interactions of the operational value chain and the application and optimisation possibilities of digital technologies and are able to evaluate these economically with the help of the most important theories, principles, methods and tools of general business administration, business process management, internal and external accounting, logistics, industrial engineering and digital marketing.
- (4) ¹ Graduates are able to bring together concepts and methods from various specialist areas and thus combine economic, technical, social and ethical aspects and processes across disciplines and functions. ² They are able not only to deepen this knowledge in an interdisciplinary manner, but also to develop and implement solutions for specific, company-internal and external digitalisation-related problems and integrate them into innovative business models. ³ In addition, graduates have their own initial research experience.
- (5) ¹ Graduates are able to work both individually and as members of international and interdisciplinary groups, organise projects effectively and carry them out in an agile manner, and grow into corresponding management responsibility. ² They are able to communicate and cooperate with other representatives of the subject as well as with people from other disciplines, taking into account cultural differences, at a language level appropriate to the target group in a technical, business and academic context in English and have German language skills at a level of at least B2 according to the Common European Framework of Reference for Languages or comparable. ³ Alternatively, ^{graduates} of double degree programmes have basic knowledge of German and the language of the partner country.
- (6) ¹ Due to the interdisciplinary nature of the degree programme and typical digitalisation issues, the professional field extends to all corporate functions in the value chain of manufacturing companies, from research, development and engineering, through production and logistics to marketing, sales and service and support functions. ² ^{Graduates} of the degree programme will therefore find a wide range of job opportunities if they choose the right modules, especially in the areas of digitally supported or data-based after sales, key account management or sales of digital solutions, technology purchasing and, in particular, in interface areas such as project management, product management and corporate development.
- (7) In addition to specialist and methodological skills, the degree programme aims to convey the joy of learning and the creative application of knowledge, promote the ability to criticise and reflect and encourage an attitude of responsibility in the profession and society.

§ 3

Admission, standard period of study, start and structure of the degree programme

- (1) ¹ Applicants with a school-leaving qualification from a foreign school are recommended to submit a letter of recognition of the school-leaving qualification issued by a certified institution (e.g. uni-assist) by the end of the application period. ² The decision on admission to the degree programme is made by the examination board.
- (2) ¹ ^{Students} who have not obtained their higher education entrance qualification in German should be given the subject and language skills in the first two study sections to enable them to enter the German labour market at the start of the practical semester and to be able to complete the third study section partly in German if they choose appropriate specialisation modules. ² To this end, they use the Basic Electives 1-4 specified in more detail in the module handbook. ³ In ^{order to} acquire these competences

within the first two study phases, sufficient knowledge of the German language must be demonstrated at the beginning of the programme by means of a language certificate corresponding to level A2 according to the Common European Framework of Reference for Languages. 4 Proof is not required if the higher education entrance qualification or an existing higher education degree was obtained in German. 5 Prior knowledge of German is not an admission requirement for students on double degree programmes.

- (3) 1 All applicants must also provide proof of English language proficiency at B2 level according to the Common European Framework of Reference for Languages at the start of their studies. 2 This proof can be provided by German students through the Abitur grade in English, alternatively by international applicants through a valid/current proof of sufficient knowledge of the English language in accordance with § 3 para. 6 sentence 2 of the statutes on the enrolment, leave of absence, re-registration and de-registration procedure of OTH Amberg-Weiden. 3 Proof is not required if the university entrance qualification or a university degree already obtained was obtained in English.
- (4) 1 This Bachelor's degree programme is offered as a full-time course. 2 The programme comprises a standard period of study of seven semesters with a total of 210 ECTS credits. 3 It includes a practical semester.
- (5) It is possible to start the programme in both the winter and summer semesters.
- (6) The study programme is divided into
 - the first study phase with semesters 1 to 2,
 - the second study phase with semesters 3 to 4,
 - the third study phase with semesters 5 to 7.
- (7) Detailed information on the structure of the degree programme and the timetable (study plan) can be found in the module handbook.

§ 4

Curricular structure, modules and certificates of achievement

- (1) The programme has the following curricular structure:

Mathematics, computer science and basic research methods	approx. 14%
Basic modules Digital Technology	approx. 14%
Basic modules Management	approx. 12%
Integrative modules	approx. 17%
Languages and soft skills	approx. 17%
Specialisation modules	approx. 9%
Practice	approx. 12%
Bachelor thesis	approx. 5%

- (2) 1 The modules, their ECTS credits and number of hours, the type of courses as well as the examinations and course-related assessments are set out in the annex to these statutes. 2 The corresponding regulations for the compulsory elective modules are set out in the module handbook.
- (3) 1 The learning objectives and content of the compulsory modules and the practical semester

are set out in the module handbook. 2The compulsory elective modules serve to deepen the content of the compulsory modules.

- (4) 1There is no entitlement to all compulsory elective modules and elective modules being offered. 2Similarly, there is no entitlement to courses being offered if the number of participants is insufficient.
- (5) One ECTS point generally corresponds to 30 hours of work.

§ 5

Practical semester

- (1) 1The practical semester is the fifth semester of study and includes 20 weeks of practical work experience. 2 It is supervised by the university and supplemented by practical courses. 3It is successfully completed if
 1. the completion of the practical training in the company is evidenced by a certificate from the training centre that corresponds to the model specified by the university, and
 2. the required practical report has been submitted.
- (2) Students who have obtained their higher education entrance qualification outside Germany are recommended to complete their internship in Germany, ideally in a company with an international focus. German students are recommended to complete the internship in a non-German-speaking country.

§ 6

Curriculum and module handbook

- (1) 1In addition to the study and examination regulations, the Faculty of Business, Engineering and Health creates a module handbook and a study plan, which are adopted by the Faculty Council and publicised at the university. 2The announcement of new regulations shall be made at the latest at the beginning of the lecture period of the semester to which they apply for the first time.
- (2) 1The modules and the associated coursework and examinations are described in the module handbook. 2The module handbook contains in particular the following information on the individual modules:
 - a) Name/description of the module (German/English)
 - b) Frequency of the offer
 - c) ECTS points (incl. distribution of the workload)
 - d) Teachers/module leaders
 - e) Admission requirements
 - f) Learning objectives
 - g) Teaching content
 - h) Study and examination achievements
 - i) the language of instruction and examination in the individual modules (English or German)
 - j) Applicability in the further course of study or university-wide.
- (3) 1The study programme is described in the curriculum. 2The curriculum contains the following information:
 - a) Timing of the programme, chronological order of the modules
 - b) Number of attendance hours (SWS) per module
 - c) ECTS points per module

§ 7

Study progress

(1) 1The examinations in the following modules must be taken for the first time ^{by} the end of the second semester (basic and orientation examinations in accordance with Section 8 (2) sentence 1 of the Framework Examination Regulations for Universities of Applied Sciences):

- Algorithms and Data Structures
- IoT Technology
- Fundamentals of Business Administration

2If the aforementioned examinations ^{have} not been taken by this date, they shall be deemed to have been taken for the first time and failed.

- (2) 1 Entry to the third stage of the programme requires that all modules of the first stage of the programme have been passed. 2In ^{order to} ensure sufficient language skills to complete the practical semester within the meaning of Section 5 (2), sufficient knowledge of the German language must be demonstrated before commencing the internship by means of a language certificate corresponding to level B2 according to the Common European Framework of Reference for Languages. 3 Proof is not required if the higher education entrance qualification or the higher education degree was obtained in German. 4For students in double degree programmes, this advancement hurdle does not apply.
- (3) In justified exceptional cases, the Examination Board may make different arrangements upon request.

§ 8

Study counselling

Students who, at the end of the second semester, have not acquired at least the number of ECTS credits required for the first semester should visit the Student Advisory Service.

§ 9

Bachelor thesis

- (1) The Bachelor's thesis can be submitted in the first semester following the practical semester at the earliest and should be submitted no later than one month after the start of the second semester following the practical semester.
- (2) 1The processing time for the Bachelor's thesis is five months. 2It can be extended by two months by the examination board if the reasons for the extension are not the responsibility of the respective student.
- (3) The Bachelor's thesis must be written in German or English.

§ 10

Assessment of examination performance and overall examination grade

- (1) For each module that was graded at least "sufficient" and for the Bachelor's thesis that was graded at least "sufficient", the ECTS points are awarded in full in accordance with Annex 1.
- (2) The degree programme is successfully completed when all coursework and examinations have been successfully completed.

- (3) The overall grade is calculated as the weighted average of the individual module grades with the weights specified in Annex 1.

§ 11
Academic degrees

- (1) The academic degree "Bachelor of Science", abbreviated to "B.Sc.", is awarded on successful completion of the Bachelor's examination.

§ 12
Examination board

The examination board responsible for the degree programme is the examination board of the Faculty of Industrial Engineering and Health with a chairperson and two further members appointed by the Faculty Council.

§ 13
Entry into force

These study and examination regulations enter into force on 1 October 2021 and apply to students commencing their studies in the winter semester 2021/2022 or later.

Issued on the basis of the resolution of the Senate of the Ostbayerische Technische Hochschule Amberg-Weiden of 26 May 2021 and the legal supervisory approval by the President.

Amberg, 02.06.2021

Prof Dr Andrea Klug President

Appendix 1: Modules and examinations of the Bachelor's degree programme in Digital Technology and Management

1	2	3	4	5	6	7
No.	Module name	ECTS-Points	SWS	Type of course	Module examination ²⁾	Weight for overall examination grade
	Study section 1					
1.1	Mathematics	5	4	SU/Ü	CI 90	1
1.2	Algorithms and Data Structures	5	4	SU/Ü	CI 90	1
2.1	IoT Technology	5	4	SU/Ü	CI 90	1
2.2	Product Management	5	4	SU/Ü	ModA	1
3.1	Fundamentals of Business Administration	5	4	SU/Ü	CI 90	1
3.2	Principles of Accounting and Finance	5	4	SU/Ü	CI 90	1
3.3	Business Processes Management	5	4	SU/Ü	CI 90	1
5.1	English for Academic Purposes	5	4	SU/Ü	ModA	1
5.2	Technical English	5	4	SU/Ü	ModA	1
5.3	Intercultural Communication	5	4	SU/Ü	ModA	1
5.4+5.5	Basic Elective 1+2 (degree programme-specific compulsory elective catalogue) ³⁾	5 each	4 each	SU/Ü or Sem or Proj	KI or ModA or Präs or mdlP	1 each
	Total ECTS / SWS	60	48			

1	2	3	4	5	6	7
No.	Module name	ECTS-Points	SWS	Type of course	Module examination ²⁾	Weight for overall examination grade
	Study section 2					
1.3	Object-oriented Coding	5	4	SU/Ü	ModA	1
1.4	Statistics and Quantitative Methods	5	4	SU/Ü	CI 90	1
1.5	Information Systems and Databases	5	4	SU/Ü	CI 90	1
2.3	Sensors for Smart Systems	5	4	SU/Ü	CI 90	1
2.4	Communication Technology	5	4	SU/Ü	CI 90	1
2.5	Production Technology	5	4	SU/Ü	CI 90	1
3.4	Marketing and Sales	5	4	SU/Ü	CI 90	1
4.1	Project Management and Agile Methods	5	4	SU/Ü	ModA	1
4.2	Logistics 1	5	4	SU/Ü	CI 90	1
4.3	Industrial Engineering	5	4	SU/Ü	CI 90	1
5.6+5.7	Basic Elective 3+4 (degree programme-specific compulsory elective catalogue) ¹⁾	5 each	4 each	SU/Ü or Sem or Proj	KI or ModA or Präs or mdlP	1 each
	Total ECTS / SWS	60	48			

1	2	3	4	5	6	7
No.	Module name	ECTS-Points	SWS	Type of course	Module examination2)	Weight for overall examination grade
	Study section 3					
1.6	Research and Evaluation Methods	5	4	SU/Ü	ModA	1
2.6	Innovation and Technology Lifecycle Management	5	4	SU/Ü	ModA	1
3.5	Business Simulation	5	4	SU/Ü	ModA	1
4.4	Ethics in Business and Technology	5	4	SU/Ü	ModA	1
4.5	Entrepreneurial Project 1: Developing a Digital Solution	5	4	Proj	ModA	1
4.6	Entrepreneurial Project 2: Business Plan for a Digital Solution	5	4	Proj	ModA	1
4.7	Research Project	5	4	Proj	ModA	1
6.1-6.4	Specialisation Elective 1-4 (degree-specific compulsory elective catalogue) ¹⁾	5 each	4 each	SU/Ü or Sem or Proj	KI 90 or ModA or Präs or mdlP	1 each
7.1	Internship	25		PP	PrB	0
8.1	Bachelor Thesis	10		BA	BA	4
	Total ECTS / SWS	90	44			

¹⁾ Programme-specific compulsory elective modules:

This is a module group with several compulsory elective modules, for each of which ECTS points are earned upon successful completion of the respective module. In total, the ECTS points defined in the SPO must be earned for each group.

Compulsory elective modules for teaching specialist/methodological skills are closely related to the degree programme and serve to acquire specialist and methodological skills in selected areas (cf. HQR dated 16/02/2017). They are shown in the module catalogue, which is included in the module handbook and must be approved by the Faculty Council.

Compulsory elective modules for teaching social/self-competences serve to teach and deepen interdisciplinary skills and qualifications (cf. HQR of 16 February 2017).

The detailed qualification objectives of the compulsory elective modules can be found in the respective module descriptions.

²⁾ The module examinations can be supplemented on a voluntary basis via a bonus system (see General Study and Examination Regulations (ASPO) of OTH Amberg-Weiden).