



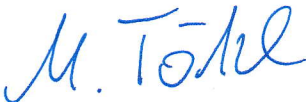
Diploma Supplement

This Diploma Supplement follows the model developed by the European Commission, Council of Europe and UNESCO / CEPES. The purpose of the supplement is to provide sufficient independent data to improve the international transparency and fair academic and professional recognition of qualifications (diplomas, degrees, certificates etc.). In addition to the certificates of the named person this supplement provides a description of the nature, level, context, content and status of the studies.

1	Information identifying the holder of the qualification	
1.1	Family name(s)	Hagn
1.2	Given name(s)	Maximilian
1.3	Date of birth (DD.MM.YYYY)	25.08.1997
1.4	Student identification number	11808237
2	Information identifying the qualification	
2.1	Name of qualification, title conferred *)	Bachelor of Science
2.2	Main field(s) of study for the qualification	Business Informatics
2.3	Name and status of awarding institution *)	Technische Universität Wien, österreichische staatliche Universität (TU Wien, Austrian public University)
2.4	Name and status of institution administering studies *)	Technische Universität Wien, österreichische staatliche Universität; Fakultät für Informatik (TU Wien, Austrian public University; Faculty of Informatics)
2.5	Language(s) of instruction / examination	German, English

3	Information on the level of the qualification					
3.1	Level of qualification	ISCED Code 0 ISCED Code 1 ISCED Code 2 ISCED Code 3 ISCED Code 4 ISCED Code 5A Bachelor Programme ISCED Code 5B ISCED Code 6				
3.2	Nominal length of program	6 semester				
3.3	Access requirement(s)	Secondary school leaving certificate or equivalent				
4	Information on the contents and results gained					
4.1	Mode of study	Full-time study				
4.2	Program requirements	Compulsory modules (150 ECTS Credits) Elective modules (12 ECTS Credits) Transferable Skills (18 ECTS Credits) Bachelor thesis See http://tiss.tuwien.ac.at				
4.3	Program details and individual grades	See "Transcript of Records"				
Course	Subject of Examination	Type	Semester hours	ECTS Credits	Date (dd.mm.yyyy)	Grade
330.259	Accounting	VU	1.5	2.0	22.01.2019	good
104.265	Algebra and discrete mathematics	VO	4.0	4.0	08.03.2019	sufficient
104.263	Algebra and Discrete Mathematics	UE	2.0	5.0	09.07.2019	good
186.866	Algorithms and Data Structures	VU	5.5	8.0	26.06.2020	satisfactory
104.261	Analysis for Computer Science	VO	2.0	2.0	26.11.2021	satisfactory
104.262	Analysis for Computer Science	UE	2.0	4.0	28.06.2019	satisfactory
184.716	Bachelor Thesis for Informatics and Business Informatics	PR	5.0	10.0	18.05.2022	excellent
265.076	Contract and liability law	VU	2.0	3.0	19.05.2021	excellent
330.229	Cost Accounting	VU	2.0	3.0	14.03.2019	good
107.A03	Data analysis	VU	2.0	3.0	24.02.2021	satisfactory
265.066	Data and Information Law	VU	2.0	3.0	25.01.2021	excellent
184.686	Data Base Systems	VU	4.0	6.0	10.03.2020	sufficient
184.167	Distributed Systems	UE	2.0	3.0	21.01.2021	excellent
184.237	Distributed Systems	VO	2.0	3.0	18.12.2020	sufficient
330.225	Enterprise Information Systems	VU	1.0	2.0	30.06.2021	excellent
188.517	Enterprise Modeling	VU	2.6	4.0	28.02.2020	satisfactory
015.110	Entrepreneurship for innovative corporations and high-tech start-ups	VO	2.0	3.0	06.06.2019	excellent

Course	Subject of Examination	Type	Semester hours	ECTS Credits	Date (dd.mm.yyyy)	Grade
183.231	ERP Systems	VU	2.0	3.0	07.07.2021	excellent
185.A06	Formal Modelling	VU	2.0	3.0	21.11.2019	satisfactory
330.001	Fundamentals of Business Management	VO	2.0	3.0	25.01.2019	good
185.A74	Fundamentals of Computer Engineering for Business Informatics	VU	2.0	3.0	05.07.2019	excellent
330.200	Fundamentals of Work Science	VU	2.0	3.0	14.06.2021	good
188.917	Information Design and Visualization	VU	2.0	3.0	23.06.2021	good
330.199	Innovation Management and Marketing	VU	2.0	3.0	03.02.2021	good
185.A91	Introduction to Programming 1	VU	4.0	5.5	24.01.2019	good
185.A92	Introduction to Programming 2	VU	3.0	4.0	24.10.2019	satisfactory
183.594	Introduction to Security	VU	2.0	3.0	15.01.2021	good
192.071	Introduction to Theoretical Computer Science and Logics	VU	2.0	3.0	30.07.2021	excellent
330.224	Investment and Financing 1	VU	2.0	3.0	30.06.2020	satisfactory
183.251	IT Strategy	VU	2.0	3.0	18.02.2021	good
188.391	Object-oriented modeling	VU	2.0	3.0	26.06.2019	good
185.A01	Object-oriented Programming Techniques	VU	2.0	3.0	27.04.2022	good
182.711	Operating Systems	VO	2.0	2.0	11.02.2021	excellent
182.709	Operating Systems	UE	2.0	4.0	28.01.2021	satisfactory
330.227	Optimization in Business and Economics	VU	2.0	3.0	13.10.2021	satisfactory
330.189	Organization	VU	2.0	3.0	04.06.2019	satisfactory
180.766	Orientation Informatics and Business Informatics	VU	1.0	1.0	09.02.2019	successfully completed
105.621	Principles of Microeconomics	UE	2.0	3.0	06.03.2020	satisfactory
105.704	Principles of Macroeconomics	VO	2.0	3.0	17.03.2021	sufficient
105.620	Principles of Microeconomics	VO	2.0	3.0	04.03.2020	good
280.195	Private Law	VU	2.0	3.0	29.06.2021	good
280.122	Public Finance and Infrastructure Policy	VO	3.0	3.0	22.09.2021	good
193.052	Scientific Research and Writing	SE	2.0	3.0	03.02.2021	excellent
184.705	Semistructured Data	VU	2.0	3.0	03.12.2020	good
187.272	Social issues in computing	VU	2.0	3.0	28.02.2022	excellent
183.239	Software Engineering and Project Management	VO	2.0	3.0	03.03.2021	excellent
183.241	Software Engineering and Project Management	PR	4.0	6.0	30.06.2020	excellent
107.254	Statistics and Probability Theory	VO	2.0	3.0	05.02.2020	sufficient
107.369	Statistics and Probability Theory	UE	2.0	3.0	28.01.2020	satisfactory
183.123	Usability Engineering	VU	2.0	3.0	17.06.2021	good
187.B12	ways of thinking in informatics	VU	4.0	5.5	28.02.2019	excellent
188.951	Web Engineering	VU	2.0	3.0	07.07.2020	good

4.4	Grading scheme and grade distribution guidance	<i>Austrian Grading:</i> "excellent" (1) "good" (2) "satisfactory" (3) "sufficient" (4) "insufficient" (5)	<i>Assessment:</i> Excellent performance (ECTS-Grade A) Generally good, some mistakes (ECTS-Grade B) Balanced, number of substantial mistakes (ECTS-Grade C) Performance corresponding to minimal criteria (ECTS-Grades D/E) Requirement of further work (ECTS-Grades FX/F)
4.5	Overall classification of the qualification *)	"bestanden" (pass)	
5	Information on the function of the qualification		
5.1	Access to further study	Master program	
5.2	Professional status conferred	Bachelor of Science, Access to academic professions according to professional regulations, diploma in the sense of the directive on the recognition of professional qualifications, 2005/36/EC.	
6	Additional information		
6.1	Additional information	not applicable	
6.2	Further information sources	http://www.tuwien.ac.at http://www.bmwf.gv.at	
7	Certification of the supplement		7.4 Official stamp
7.1	Date	18.05.2022	
7.2	Signature / name	 Martina Tötzel	
7.3	Capacity	By order of the Vice Rector for Academic Affairs	
* in original language (German)			

Post-secondary Education in Austria

- The Austrian post-secondary **university sector** (*Hochschulsektor*) consists of
 - Public universities (*Universitäten*), maintained by the state;
 - Private universities (*Privatuniversitäten*), operated by private organisations with state accreditation;
 - Maintainers of university of applied sciences degree programmes (*Fachhochschul-Studiengänge*) incorporated upon the basis of private or public law and subsidised by the state, with state accreditation (some of which are entitled to use the designation *Fachhochschule*);
 - University colleges of education (*Pädagogische Hochschulen*) maintained by the state or operated by private organisations with state accreditation;
 - The Institute of Science and Technology Austria;
 - Universities of philosophy and theology (*Philosophisch-Theologische Hochschulen*), operated by the Roman Catholic Church.
- The **non-university post-secondary sector** (*außeruniversitärer postsekundärer Sektor*) consists of
 - Military academies (*Militärische Akademien*);
 - Vienna School of International Studies (*Diplomatische Akademie*);
 - Certain training institutions for psychotherapists (*Psychotherapeutische Ausbildungseinrichtungen*);
 - Conservatories (*Konservatorien*).

The following text addresses exclusively the university sector.

Overall Structure of University Education

There are currently two different systems of degree programmes in Austria: an older system not based on the Bologna process and a newer one based on it.

- Under the auspices of the **older system** of diploma programmes (*Diplomstudien*), the first degree awarded is the diploma degree (*Diplomgrad*). An Austrian higher secondary school leaving certificate or its equivalent is the general qualification necessary for enrolling in a diploma programme; conclusion of a diploma programme entitles degree holders to enrol in doctoral programmes. A diploma degree (*Diplomgrad*) is awarded by Austrian universities after a course of study consisting of 240 to 360 ECTS credits. Full degree titles are gender specific designations: *Magister* for men; *Magistra* for women. Degree titles also include a general description of the field of study in which they were obtained, e.g. *Magister philosophiae*. In the fields of engineering, the degree titles are *Diplom-Ingenieur/in*. Degrees awarded in medicine and dentistry are exceptions to the above. The first degrees awarded after the completion of these degree programmes consisting of 360 ECTS credits are *Doctor medicinae universae* and *Doctor medicinae dentalis*, respectively.

Graduates of university of applied sciences programmes that consist of 240 to 300 ECTS credits are awarded, analogous to university studies, a university of applied science diploma degree (*Fachhochschul-Diplomgrad*) contingent upon discipline: either a *Diplom-Ingenieur/in (FH)* for fields of engineering or *Magister/Magistra (FH)* in other fields of study.

- The **new system** is based on the distinction between undergraduate and graduate studies. Upon completion of an undergraduate programme (*Bachelorstudium* at universities; *Fachhochschul-Bachelorstudiengang* at universities of applied sciences; *Studiengang* at university colleges of education; 180 ECTS credits), a bachelor's degree (designation: „Bachelor of/in ...“) is awarded. Upon completion of a graduate programme (*Masterstudium* at universities comprising 120 ECTS credits or, respectively, *Fachhochschul-Masterstudiengang* at universities of applied sciences comprising 60 to 120 ECTS credits), a master's degree (designation: „Master of/in ...“) is awarded. In the fields of engineering, the designation of the master's degree can also be „Diplom-Ingenieur/in“.

Recipients of these diploma degrees from the old system or master's degree from the new system (including the ones awarded in both cases by the universities of applied sciences) are entitled to enrol in doctoral programmes (*Doktoratsstudium*) at universities. A doctoral degree with the designation either „Doktor/in“ or „Doctor of Philosophy“ (PhD) is awarded upon completion of a doctoral programme with a minimum duration of three years.

In addition to the degree programmes (*ordentliche Studien*) described above, non-consecutive certificate programmes (*außerordentliche Studien*) are offered, for example in the form of university programmes for further education (*Universitätslehrgänge*) or individual units / modules in scientific subjects, both at universities; certificate university of applied sciences programmes for further education (*Lehrgänge zur Weiterbildung*) at universities of applied sciences; and certificate university college programmes for further education (*Hochschullehrgänge*) at university colleges of education.

Diploma Programme (Diplomstudium = old system)

Admission to a diploma programme is granted upon the basis of the Austrian higher secondary school leaving certificate (*Reifezeugnis*), its foreign equivalent, or the successful completion of a special university entrance qualification examination (*Studienberechtigungsprüfung*). Students of compulsory lower schools who have completed additional schooling in the form of apprenticeships as skilled workers also may take a vocationally based examination acknowledged as equivalent to the higher secondary school leaving certificate (*Berufsreifeprüfung*). Admission to diploma programmes in the arts is based on aptitude ascertained by admission examinations. Admission to university of applied sciences diploma programmes may also take place upon the basis of previous vocational or technical experience and qualifications of applicants. In some fields of study (e.g. Human Medicine and Dentistry, and university of applied sciences diploma programmes) admission is based on a selective admission process.

A degree programme may be divided into stages (*Studienabschnitte*). The length of each stage of the degree programme as well as the areas of study (*Fächer*) and content required are articulated in curricula that distinguish between required subjects (*Pflichtfächer*) and electives (*Wahlfächer*). Each stage concludes with a diploma examination (*Diplomprüfung*). University of applied sciences diploma programmes and some diploma programmes at universities include an internship or practical training. The approval of a diploma thesis (*Diplomarbeit*) is a prerequisite for admission to the concluding diploma examination.

Bachelor Programme (Bachelorstudium)

Admission to a bachelor programme is granted upon the basis of the Austrian higher secondary school leaving certificate (*Reifezeugnis*), its foreign equivalent, or the successful completion of a special university entrance qualification examination (*Studienberechtigungsprüfung*). Students of compulsory lower schools who have completed additional schooling in the form of apprenticeships as skilled workers may take a vocationally based examination acknowledged as equivalent to the higher secondary school leaving certificate (*Berufsreifeprüfung*). Admission to bachelor programmes in the arts is based on aptitude ascertained by admission examinations. Admission to university of applied sciences bachelor programmes is also possible on the basis of previous vocational or technical experience and qualifications of the applicants. In some university bachelor programmes, in most university of applied sciences bachelor programmes and in study programmes at university colleges of education, admission is based on a selective admission process.

Areas/modules of study (*Fächer/Module*) are specified in curricula. As a rule, the completion of two substantial bachelor papers or projects (*Bachelorarbeiten*) are required for awarding the degree. University of applied sciences bachelor programmes and some bachelor programmes at universities include an internship or practical training. The programme can conclude with a bachelor examination (*Bachelorprüfung*).

Master Programme (Masterstudium)

Admission to a master programme is granted on the basis of the successful completion of an Austrian bachelor programme (*Bachelorstudium*), or a comparable post-secondary degree acknowledged as equivalent. In some master programmes admission is based on a selective admission process.

Areas/modules of study (*Fächer/Module*) are specified in curricula. A core requirement is the completion of a master thesis (*Masterarbeit*). The approval of the master thesis (*Masterarbeit*) is a prerequisite for admission to this examination. This degree programme concludes with a master examination (*Masterprüfung*).

At university colleges of education no master programmes are offered.

Doctoral Programme (Doktoratsstudium)

Admission to a doctoral programme at a university is granted on the basis of the successful completion of an Austrian diploma or master programme, or a comparable post-secondary degree acknowledged as equivalent.

Contents and requirements of study are specified in curricula with the focus on the doctoral thesis (*Dissertation*) as the result of independent research. This degree programme concludes with the approval of the dissertation and with a comprehensive doctoral examination (*Rigorosum*) or a *defensio*.

Evaluation of performance and grading system (Austrian grading scale)

According to the modalities for examinations outlined in the curricula, achievement may be assessed by oral and written exams or project related work. In principle oral examinations are open to the public.

Austrian Grading scheme	Definition
1	EXCELLENT
2	GOOD
3	SATISFACTORY
4	SUFFICIENT
sucessfully completed	Positive performance, where a strict differentiation is not adequate
5	FAIL
not completed	Negative performance, where a strict differentiation is not adequate

Grades for comprehensive examinations, i.e. examinations covering materials from various subjects:

positive: *mit Auszeichnung bestanden* (pass with distinction)
 mit Erfolg bestanden (pass with merit)
 bestanden (pass)

negative: *nicht bestanden* (fail)

Source:
Federal Ministry of Science and Research
Unit III/7
November 2011