

Chemistry and Biotechnology BSc															
Matriculation Fall 2021															
Program-Specific Modules							Jacobs Track Modules (General Education)								
Type	Assessment	Period	Status ¹	Sem.	CP	Type	Assessment	Period	Status ¹	Sem.	CP				
Year 1 - CHOICE						Year 1 - CHOICE									
45						15									
<i>Take the mandatory CHOICE modules listed below. This is a requirement for the CBT program.²</i>						<i>Take the mandatory CHOICE modules listed below. This is a requirement for the CBT program.²</i>									
Unit: Chemistry and Biotechnology (default minor)						Unit: Methods / Skills									
CH-120 Module: General and Inorganic Chemistry (default minor)						JTMS-MAT-07 Module: Mathematical Concepts for the Sciences									
CH-120-A	General and Inorganic Chemistry	Lecture	Written examination	Examination period	m	1	7.5	JTMS-07	Mathematical Concepts for the Sciences	Lecture	Written examination	Examination period	m	1	5
CH-120-B	General and Inorganic Chemistry Lab	Lab	Lab report	During the semester			2.5								5
CH-121 Module: Introduction to Biotechnology: Microbiology and Genetics (default minor)						JTMS-SCI-17 Module: Physics for the Natural Sciences									
CH-121-A	Introduction to Biotechnology	Lecture	Written examination	Examination period	m	2	7.5	JTMS-17	Physics for the Natural Sciences	Lecture	Written examination	Examination period	m	2	5
CH-121-B	Biotechnology Lab	Lab	Written examination	Examination period			2.5								5
Unit: Mixed unit (BCCB and MCCB)						Unit: Language									
CH-100 Module: General Biochemistry						German is default language. Native German speakers take modules in another offered language.									
CH-100-A	General Biochemistry	Lecture	Written examination	Examination period	m	1	7.5	JTLA-xxx Module: Language 1					m	1	2.5
CH-100-B	General Biochemistry Lab	Lab	Lab report	During the semester			2.5	JTLA-xxx	Language 1	Seminar	Various	Various			me
CH-111 Module: General Organic Chemistry						JTLA-xxx Module: Language 2									
CH-111-A	General Organic Chemistry	Lecture	Written examination	Examination period	m	2	7.5	JTLA-xxx	Language 2	Seminar	Various	Various			me
CH-111-B	General Organic Chemistry Lab	Lab	Lab report	During the semester			2.5								2.5
Unit: CHOICE (own selection)						Unit: CHOICE (own selection)									
1/2						15									
<i>Take two further CHOICE modules from those offered for all other study programs.²</i>						<i>Take two further CHOICE modules from those offered for all other study programs.²</i>									
Year 2 - CORE						Year 2 - CORE									
45						15									
<i>Take all modules listed below or replace mandatory elective ("me") CORE/Methods modules (15 CP) by suitable CORE modules from other study programs.²</i>						<i>Take all modules listed below or replace mandatory elective ("me") CORE/Methods modules (15 CP) by suitable CORE modules from other study programs.²</i>									
Unit: Inorganic and Physical Chemistry and Industrial Biotechnology						Unit: Methods / Skills									
CO-440 Module: Physical Chemistry (default minor)						JTMS-SCI-16 Module: Analytical Methods									
CO-440-A	Physical Chemistry I	Lecture	Written examination /	Examination period	m	3+4	5	JTMS-16	Analytical Methods	Lecture	Written examination	Examination period	m	3	5
CO-440-B	Physical Chemistry II	Lecture	Lab report	During the semester			2.5	JTMS-SCI-18	Module: Plant Metabolites and Natural Products				me ³	4	5
CO-441 Module: Industrial Biotechnology (default minor)						JTMS-18									
CO-441-A	Industrial Biotechnology	Lecture	Written examination	Examination period	m	3	5		Plant Metabolites and Natural Products	Lecture	Written examination	Examination period			
CO-442 Module: Advanced Inorganic Chemistry (default minor)						Unit: Language									
CO-442-A	Advanced Inorganic Chemistry	Lecture	Written examination	Examination period	m	4	5	German is default language. Native German speakers take modules in another offered language.							
Unit: Organic and Analytical Chemistry (shared with MCCB)						JTLA-xxx Module: Language 3									
CO-423	Advanced Organic Chemistry				m	3	5	JTLA-xxx	Language 3	Seminar	Various	Various			me
CO-423-A	Advanced Organic Chemistry	Lecture	Written examination	Examination period			2.5	JTLA-xxx	Module: Language 4				m	4	2.5
CO-443 Module: Scientific Software and Databanks						JTLA-xxx									
CO-443-A	Scientific Software and Databanks	Seminar	Reports	During the semester	me ³	4	5	JTLA-xxx	Language 4	Seminar	Various	Various			me
CO-424 Module: Advanced Organic and Analytical Chemistry Lab						CO-424									
CO-424-A	Advanced Organic Chemistry Lab	Lab	Lab report	During the semester			2.5								2.5
CO-424-B	Analytical Chemistry Lab	Lab	Lab report	During the semester			2.5								2.5
Unit: Advanced Chemistry and Biotechnology						Unit: Advanced Chemistry and Biotechnology									
CO-444 Module: Bioprocess Engineering						CO-444									
CO-444-A	Bioprocess Engineering	Lecture	Written examination	Examination period	m	4	5								5
CO-445 Module: Advanced Biotechnology Lab						CO-445									
CO-445-A	Advanced Biotechnology Lab	Lab	Lab Report	During the semester	m ¹	3	5								5
CO-446 Module: Inorganic and Physical Chemistry Lab						CO-446									
CO-446-A	Inorganic Chemistry Lab	Lab	Lab Report	During the semester			2.5								2.5
CO-446-B	Physical Chemistry Lab	Lab	Lab Report	During the semester			2.5								2.5
Year 3 - CAREER						Year 3 - CAREER									
45						15									
CA-INT-900 Module: Internship / Startup and Career Skills						Unit: Big Questions									
CA-INT-9000	Internship / Startup and Career Skills		Report and Presentation (Business Plan)	During the 5 th semester	m	4/5	15	German is default language. Native German speakers take modules in another offered language.							
CA-CBT-800 Module: Thesis / Seminar CBT						JTBQ-BQ-003 Module: Ethics in the Sciences and Technology									
CA-CBT-800-T	Thesis CBT	Thesis	Project/Thesis	15 th of May	m	6	15	JTBQ-003	Module: Ethics in the Sciences and Technology	Lecture	Written examination / presentation	Examination period	m	5	5
CA-CBT-800-S	Seminar CBT	Seminar	Presentation	During the semester			3	Take a total of 5 CP of further Big Questions modules (each 2.5 or 5 CP) as mandatory elective							
Unit: Specialization CBT (at least one specialization module from Biotechnology)						Unit: Community Impact Project									
15 CP of specialization modules						JTCL-CI-950 Module: Community Impact Project									
CA-S-CBT-801	Specialization Module: Chemical and Pharmaceutical Technology	Lecture	Written examination	Examination period	me	5	5	JTCL-950	Community Impact Project	Project	Project	Examination period	m	5	5
CA-S-CBT-802	Specialization Module: Organometallic Chemistry	Lecture	Oral examination	Examination period	me	5	5								5
CA-S-CBT-804	Specialization Module: Environmental Microbiology and Biotechnology	Lecture	Written examination	Examination period	me	5	5								5
Specialization electives from MCCB, EES and BCCB (see study program handbook for further information)						Specialization electives from MCCB, EES and BCCB (see study program handbook for further information)									
me						5/6 5/7.5									
Total CP						Total CP									
180						180									

¹ Status (m = mandatory, me = mandatory elective)

² For a full listing of all CHOICE / CORE / CAREER / Jacobs Track modules please consult the [CampusNet online catalogue](#) and/or the study program handbooks.

³ Module can be replaced with a CORE module from another study program in order to pursue a minor