

| Chemistry BSc | | | | | | | | | | | | | | | |
|--|--|---------|---------------------------------------|-------------------------------------|-----------------|--|------------|-------------|--|---------|------------------------------------|--------------------|-----------------|---|-----|
| Matriculation Fall 219 | | | | | | | | | | | | | | | |
| 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 Chemistry program.²</i> | | | | | | <i>Take the mandatory CHOICE modules listed below. This is a requirement for the Chemistry 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 (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) | | | | | | | | | | | | | | | |
| 1/2 | | | | | | 15 | | | | | | | | | |
| <i>Take two further CHOICE modules from those offered for all other study programs.³</i> | | | | | | <i>Take two further CHOICE modules from those offered for all other study programs.³</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 | presentation | During the semester | | | 2.5 | | | | | | | | 5 |
| CO-441 Module: Industrial Biotechnology (default minor) | | | | | | JTMS-SCI-18 Module: Plant Metabolites and Natural Products | | | | | | | | | |
| CO-441-A | Industrial Biotechnology | Lecture | Written examination | Examination period | m | 3 | 5 | JTMS-18 | Plant Metabolites and Natural Products | Lecture | Written examination | Examination period | me ³ | 4 | 5 |
| CO-442 Module: Advanced Inorganic Chemistry (default minor) | | | | | | | | | | | | | | | |
| CO-442-A | Advanced Inorganic Chemistry | Lecture | Written examination | Examination period | m | 4 | 5 | | | | | | | | |
| Unit: Organic and Analytical Chemistry (shared with MCCB) | | | | | | Unit: Language | | | | | | | | | |
| CO-423 Module: Advanced Organic Chemistry | | | | | | German is default language. Native German speakers take modules in another offered language. | | | | | | | | | |
| CO-423-A | Advanced Organic Chemistry | Lecture | Written examination | Examination period | m | 3 | 5 | JTLA-xxx | Module: Language 3 | | | | m | 3 | 2.5 |
| CO-443 Module: Scientific Software and Databanks | | | | | | JTLA-xxx Language 3 | | | | | | | | | |
| CO-443-A | Scientific Software and Databanks | Seminar | Reports | During the semester | me ³ | 4 | 5 | JTLA-xxx | Language 3 | Seminar | Various | Various | | | me |
| CO-424 Module: Advanced Organic and Analytical Chemistry Lab | | | | | | JTLA-xxx Module: Language 4 | | | | | | | | | |
| CO-424-A | Advanced Organic Chemistry Lab | Lab | Lab report | During the semester | m | 3 | 5 | JTLA-xxx | Language 4 | Seminar | Various | Various | | | me |
| CO-424-B | Analytical Chemistry Lab | Lab | Lab report | During the semester | | | 2.5 | | | | | | | | 2.5 |
| Unit: Advanced Chemistry and Biotechnology | | | | | | | | | | | | | | | |
| CO-444 Module: Bioprocess Engineering | | | | | | | | | | | | | | | |
| CO-444-A | Bioprocess Engineering | Lecture | Written examination | Examination period | m | 4 | 5 | | | | | | | | |
| CO-445 Module: Advanced Biotechnology Lab | | | | | | | | | | | | | | | |
| CO-445-A | Advanced Biotechnology Lab | Lab | Lab Report | During the semester | m ¹ | 3 | 5 | | | | | | | | |
| CO-446 Module: Inorganic and Physical Chemistry Lab | | | | | | | | | | | | | | | |
| 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/Business Plan and Presentation | During the 5 th semester | m | 4/5 | 15 | JTBQ-BQ-003 | Module: Ethics in the Sciences and Technology | | | | m | 5 | 5 |
| CA-CBT-800 Module: Thesis / Seminar | | | | | | JTBQ-003 Module: Ethics in the Sciences and Technology | | | | | | | | | |
| CA-CBT-800-T | Thesis Chemistry | 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 |
| CA-CBT-800-S | Seminar Chemistry | Seminar | Presentation | During the semester | | | 3 | | | | | | | | 5 |
| Unit: Specialization Chemistry (at least one specialization module from Biotechnology) | | | | | | Take a total of 5 CP of further Big Questions modules (each 2.5 or 5 CP) as mandatory elective | | | | | | | | | |
| 15 CP of specialization modules | | | | | | Unit: Community Impact Project | | | | | | | | | |
| CA-S-CBT-801 Specialization Module: | | | | | | JTCL-CI-950 Module: Community Impact Project | | | | | | | | | |
| CA-S-CBT-801 | 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: | | | | | | | | | | | | | | | |
| CA-S-CBT-802 | Organometallic Chemistry | Lecture | Oral examination | Examination period | me | 5 | 5 | | | | | | | | |
| CA-S-CBT-804 Specialization Module: | | | | | | | | | | | | | | | |
| CA-S-CBT-804 | Environmental Microbiology and Biotechnology | Lecture | Written examination | Examination period | me | 5 | 5 | | | | | | | | |
| 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 | | | | | | | | | |

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