# Study and Examination Plan

## Medicinal Chemistry and Chemical Biology (MCCB)

**Matriculation Fall 2022**

| | Program-Specific Modules | Type | Assessment | Period | Status[1] | Sem. | CP |
|---|---|---|---|---|---|---|---|
| **Year 1 - CHOICE** | | | | | | | **45** |
| *Take the mandatory CHOICE modules listed below. This is a requirement for the MCCB program.* | | | | | | | |
| | **Unit 1: Foundations of Medicinal Chemistry & Chemical Biology *(default minor)*** | | | | | | **15** |
| **CH-110** | **Module: General Medicinal Chemistry & Chemical Biology** *(default minor)* | | | | **m** | **1** | **7.5** |
| CH-110-A | General Medicinal Chemistry & Chemical Biology | Lecture | Written examination | Examination period | | | 5 |
| CH-110-B | General Medicinal Chemistry & Chemical Biology Tutorial | Tutorial | | | | | 2.5 |
| **CH-111** | **Module: General Organic Chemistry** *(default minor)* | | | | **m** | **2** | **7.5** |
| CH-111-A | General Organic Chemistry | Lecture | Written examination | Examination period | | | 5 |
| CH-111-B | General Organic Chemistry Laboratory | Lab | Lab Reports | During the semester | | | 2.5 |
| | **Unit 2: General Biochemistry and Cell Biology** | | | | | | **15** |
| **CH-100** | **Module: General Biochemistry** | | | | **m** | **1** | **7.5** |
| CH-100-A | General Biochemistry | Lecture | Written examination | Examination period | | | 5 |
| CH-100-B | General Biochemistry Laboratory | Lab | Lab reports | During the semester | | | 2.5 |
| **CH-101** | **Module: General Cell Biology** | | | | **m** | **2** | **7.5** |
| CH-101-A | General Cell Biology | Lecture | Written examination | Examination period | | | 5 |
| CH-101-B | General Cell Biology Laboratory | Lecture | Lab Reports | During the semester | | | 2.5 |
| | **Unit 3: CHOICE (own selection)** | | | | **me** | | **15** |
| Take two further CHOICE modules from those offered for all other study programs[2] | | | | | | | |
| **Year 2 - CORE** | | | | | | | **45** |
| *Take all CORE modules listed below or replace the mandatory elective (me) modules (15 CP) with suitable CORE modules from other study programs[2]* | | | | | | | |
| | **Unit 1: Medicinal Chemistry & Chemical Biology *(default minor)*** | | | | | | **15** |
| **CO-420** | **Module: Medicinal Chemistry** *(default minor)* | | | | **m** | **3** | **5** |
| CO-420-A | Medicinal Chemistry | Lecture | Written examination<br>Presentation | Examination period<br>During the semester | | | |
| **CO-421** | **Module: Chemical Biology** *(default minor)* | | | | **m** | **4** | **5** |
| CO-421-A | Chemical Biology | Lecture | Written examination | Examination period | | | |
| **CO-422** | **Module: Pharmaceutical Chemistry (default minor)** | | | | **m** | **3+4** | **5** |
| CO-422-A | Pharmaceutical Chemistry I | Lecture | Oral examination | Examination period | | 3 | 2.5 |
| CO-422-B | Pharmaceutical Chemistry II | Lecture | | | | 4 | 2.5 |
| | **Unit 2: Organic and Analytical Chemistry** | | | | | | **15** |
| **CO-423** | **Module: Advanced Organic Chemistry** | | | | **m** | **3** | **5** |
| CO-423-A | Advanced Organic Chemistry | Lecture | Written examination | Examination period | | | |
| **CO-443** | **Module: Scientific Software and Databanks** | | | | **me** | **4** | **5** |
| CO-443-A | Scientific Software and Databanks | Seminar | Report | During the semester | | | |
| **CO-424** | **Module: Advanced Organic and Analytical Chemistry Lab** | | | | **m** | **3** | **5** |
| CO-424-A | Advanced Organic Chemistry Laboratory | Lab | Lab Reports | During the semester | | | 2.5 |
| CO-424-B | Analytical Chemistry Laboratory | Lab | Lab Reports | | | | 2.5 |
| | **Unit 3: Drug Screening and Docking** | | | | | | **15** |
| **CO-425** | **Module: High Throughput Screening** | | | | **me** | **3** | **5** |
| CO-425-A | High Throughput Screening | Lecture | Written examination | Examination period | | | |
| **CO-426** | **Module: Physical Chemistry and Molecular Modelling** | | | | **me** | **4** | **5** |
| CO-426-A | Physical Chemistry and Molecular Modelling | Lecture | Written examination | Examination period | | | |
| **CO-427** | **Module: MCCB Laboratory** | | | | **m** | **4** | **5** |
| CO-427-A | Medicinal Chemistry & Chemical Biology Laboratory | Lab | Lab Reports | During the semester | | | 5 |
| **Year 3 - CAREER** | | | | | | | **45** |
| **CA-INT-900** | **Module: Internship / Startup and Career Skills** | | | | **m** | **4/5** | **15** |
| CA-INT-900-0 | Internship / Startup and Career Skills | Internship | Report/Business Plan | During the 5th semester | | | |
| **CA-MCCB-800** | **Module: Seminar / Thesis MCCB** | | | | **m** | **6** | **15** |
| CA-MCCB-800-T | Thesis MCCB | Thesis | Thesis and Presentation | 15th of May | | | 12 |
| CA-MCCB-800-S | Seminar MCCB | Seminar | | During the semester | | | 3 |
| | **Unit: Specialization MCCB** | | | | **m** | | **15** |
| *Take a total of 15 CP of specialization modules* | | | | | | | |
| CA-S-MCCB-801 | Advanced Organic Synthesis | Lecture | Oral examination | Examination period | me | 6 | 5 |
| CA-S-MCCB-802 | Fluorine in Drug Development | Lecture | Oral examination | Examination period | me | 5 | 2.5 |
| CA-S-MCCB-804 | Synthetic Biology | Seminar | Oral examination | Examination period | me | 6 | 5 |
| CA-S-MCCB-805 | Drug Discovery | Lecture | Written examination | Examination period | me | 6 | 2.5 |
| CA-S-xxx | Specialization electives (from CBT and BCCB) (see study program handbook)2 | | Various | Various | me | 5/6 | 5 |
| **Total CP** | | | | | | | **45** |

| | Jacobs Track Modules (General Education) | Type | Assessment | Period | Status[1] | Sem. | CP |
|---|---|---|---|---|---|---|---|
| **Year 1 - CHOICE** | | | | | | | **15** |
| | **Unit: Methods / Skills** | | | | | | **10** |
| **JTMS-MAT-07** | **Module: Mathematical Concepts for the Sciences** | | **Final exam** | | **m** | **1** | **5** |
| JTMS-07 | Mathematical Concepts for the Sciences | Lecture | Written examination | Examination period | | | |
| **JTMS-SCI-17** | **Module: Physics for the Natural Sciences** | | **Final exam** | | **m** | **2** | **5** |
| JTMS-17 | Physics for the Natural Sciences | Lecture | Written examination | Examination period | | | |
| | **Unit: Language** | | | | **m** | | **5** |
| | German is default language. Native German speakers take modules in another offered language. | | | | | | |
| **JTLA-xxx** | **Module: Language 1** | | | | **m** | **1** | **2.5** |
| JTLA-xxx | Language 1 | Seminar | Various | Various | me | | |
| **JTLA-xxx** | **Module: Language 2** | | | | **m** | **2** | **2.5** |
| JTLA-xxx | Language 2 | Seminar | Various | Various | me | | |
| **Year 2 - CORE** | | | | | | | **15** |
| | **Unit: Methods / Skills** | | | | | | **10** |
| **JTMS-SCI-16** | **Module: Analytical Methods** | | | | **m** | **3** | **5** |
| JTMS-16 | Analytical Methods | Lecture | Written examination | Examination period | | | |
| **JTMS-SCI-18** | **Module: Plant Metabolites and Natural Products** | | | | **m** | **4** | **5** |
| JTMS-18 | Plant Metabolites and Natural Products | Lecture | Written examination | Examination period | | | |
| | **Unit: Language** | | | | | | **5** |
| | German is default language. Native German speakers take modules in another offered language. | | | | | | |
| **JTLA-xxx** | **Module: Language 3** | | | | **m** | **3** | **2.5** |
| JTLA-xxx | Language 3 | Seminar | Various | Various | me | | |
| **JTLA-xxx** | **Module: Language 4** | | | | **m** | **4** | **2.5** |
| JTLA-xxx | Language 4 | Seminar | Various | Various | me | | |
| **Year 3 - CAREER** | | | | | | | **15** |
| | **Unit: Big Questions** | | | | | | **10** |
| **JTBQ-BQ** | **Module: Big Questions** | | | | **m** | **5/6** | |
| Take a total of 10 CP of Big Questions modules (each 2.5 or 5 CP) as mandatory elective | | various | Various | Various | **me** | | 10 |
| | **Unit: Community Impact Project** | | | | | | **5** |
| **JTCI-CI-950** | **Module: Community Impact Project** | | | | **m** | **5** | **5** |
| JTCI-950 | Community Impact Project | Project | Project | Examination period | | | |
| | | | | | | | **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.