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| <p align="center"><b>MINOR PROGRAM DESCRIPTION and INFORMATION</b></p> |  |
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|                                |                                                                                         |
|--------------------------------|-----------------------------------------------------------------------------------------|
| <b>Program Name</b>            | <b>Chemistry Minor Program</b>                                                          |
| <b>Faculty/Department Name</b> | <b>Faculty of Engineering and Natural Sciences /<br/>Molecular Biology and Genetics</b> |

|                    |  |
|--------------------|--|
|                    |  |
| COMPULSORY COURSES |  |

| CODE    | COURSE                   | T | I | L | CREDIT | ECTS |
|---------|--------------------------|---|---|---|--------|------|
| CHEM101 | General Chemistry I      | 3 | 0 | 0 | 3      | 5    |
| CHEM102 | General Chemistry II     | 3 | 0 | 0 | 3      | 6    |
| CHEM121 | General Chemistry Lab I  | 0 | 0 | 2 | 1      | 1    |
| CHEM122 | General Chemistry Lab II | 0 | 0 | 2 | 1      | 1    |
|         |                          |   |   |   |        |      |

**Compulsory Courses Total: 13 ECTS**[illegible]

| CODE       | COURSE                                                             | T | I | L | CREDIT | ECTS |
|------------|--------------------------------------------------------------------|---|---|---|--------|------|
| MBG201     | Bioorganic Chemistry I                                             | 3 | 0 | 0 | 3      | 5    |
| MBG211     | Bioorganic Chemistry I                                             | 3 | 0 | 0 | 3      | 6    |
| MBG212     | Bioorganic Chemistry II                                            | 3 | 0 | 2 | 4      | 8    |
| MBG221     | Bioorganic Chemistry Lab I                                         | 0 | 0 | 2 | 1      | 1    |
| MBG404     | Introduction to Quantum Thermodynamics                             | 3 | 0 | 0 | 3      | 5    |
| MBG407     | Introduction to Quantum Computational Chemistry                    | 3 | 0 | 0 | 3      | 5    |
| MBG425     | Organic Chemistry of Drug Design and Drug Action                   | 3 | 0 | 0 | 3      | 5    |
| MSN512     | Advanced Organic Chemistry I                                       | 3 | 0 | 0 | 3      | 7,5  |
| MSN517     | Purification Methods and Separation Techniques                     | 3 | 0 | 0 | 3      | 7,5  |
| MSN519     | Spectroscopic Methods in Organic Chemistry                         | 3 | 0 | 0 | 3      | 7,5  |
| MSN520     | Organic Chemistry of Drug Design and Drug Action                   | 3 | 0 | 0 | 3      | 7,5  |
| KHAS1004   | Chemistry On A Plate                                               | 3 | 0 | 0 | 3      | 5    |
| KHAS1006   | Ethics of Artificial Intelligence                                  | 3 | 0 | 0 | 3      | 5    |
| KHAS1012   | Polymers in Daily Life: The Mystery Within Household Items         | 3 | 0 | 0 | 3      | 5    |
| KHAS1018   | The World of Elements                                              | 3 | 0 | 0 | 3      | 5    |
| KHAS1032*1 | Quantum and Life: Between Science, Pseudoscience, and Junk Science | 3 | 0 | 0 | 3      | 5    |
| KHAS1200   | Environmental Ethics                                               | 3 | 0 | 0 | 3      | 5    |
| KHAS1434   | Literary Analysis                                                  | 3 | 0 | 0 | 3      | 5    |
| KHAS1460*1 | Trauma, Memory and Narrative: Literature and Film                  | 3 | 0 | 0 | 3      | 5    |
| KHAS1740   | Human Rights Around the World                                      | 3 | 0 | 0 | 3      | 5    |
| PH322      | Phase Transitions and Renormalization Group                        | 3 | 2 | 0 | 4      | 8    |
|            |                                                                    |   |   |   |        |      |

**Elective Courses Total: 20 ECTS****Total: 33 ECTS**

**\*\* Theoretical courses that have a laboratory course with the same name must be taken together with their corresponding laboratory courses.  
Example: If General Chemistry I is taken, General Chemistry Lab I must also be taken concurrently.**