**BSC CHEMISTRY MAJOR PROGRAMME**

**Summary of Course Structure**

**Year 1: Semester I**

**CORE COURSES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **L** | **P** | **CH** | **CU** |
| CHM 1101CHM 1102CHM 1105 | BASIC INORGANIC CHEMISTRYBASIC PHYSICAL CHEMISTRYINTEGRATED PHYSICAL/ INORGANIC LABORATORY  | 45450 | 0060 | 454530 | 332 |
|  **TOTAL CU** | **8** |
| COMMUNICATION SKILLS | **3** |

**AUDITED COURSES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **L** | **P** | **CH** | **CU** |
| MTH 1101 | CALCULUS I  | 45 | 0 | 45 | 3 |

**Semester II**

**CORE COURSES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **L** | **P** | **CH** | **CU** |
| CHM 1205 | BASIC ORGANIC CHEMISTRY | 45 | 60 | 75 | 5 |
|  **TOTAL CU** | **5** |

**Year 2: Semester I**

**CORE COURSES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **L** | **P** | **CH** | **CU** |
| CHM 2111CHM 2112CHM 2113CHM 2109 | ELEMENTS OF ANALYTICAL CHEMISTRY BONDING AND PERIODICITYPOLYFUNCTIONAL AND CYCLIC ALIPHATICS AROMATIC CHEMISTRY | 30453030 | 600600 | 60456030 | 4342 |
|  **TOTAL CU** | **13** |
| DEVELOPMENT STUDIES | **3** |

**ELECTIVE COURSES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **L** | **P** | **CH** | **CU** |
| CHM 2114 | NATURAL PRODUCTS CHEMISTRY | 30 | 0 | 30 | 2 |

**Semester II**

**CORE COURSES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **L** | **P** | **CH** | **CU** |
| CHM 2220CHM 2221CHM 2213CHM 2222CHM 2223 | TRANSITION METAL CHEMISTRYSTEREO- AND PHYSICAL ORGANIC CHEMISTRYELECTROCHEMISTRYTHERMODYNAMICS AND KINETICS INTRODUCTORY SPECTROSCOPY | 3030303030 | 6000600 | 6030306030 | 42242 |
|  **TOTAL CU** | **14** |

**RECESS**

**CHM 2301: FIELD ATTACHMENT (5CU)**

**ELECTIVE COURSES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **L** | **P** | **CH** | **CU** |
| CHM 2224CHM 2218 | INORGANIC ENERGETICS BASIC ENVIRONMENTAL CHEMISTRY | 3030 | 00 | 3030 | 22 |

**CORE COURSES**

**Year 3: Semester I**

**CORE COURSES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **L** | **P** | **CH** | **CU** |
| CHM 3128CHM 3129CHM 3122CHM 3130CHM 3124ICH 3130 | ORGANOMETALLIC AND BIOINORGANIC CHEMISTRYQUANTUM CHEMISTRY COLLOID SCIENCESOLUTION AND STATISTICAL THERMODYNAMICSSOLID-STATE AND CRYSTAL CHEMISTRYINORGANIC CHEMICAL TECHNOLOGY | 303030453030 | 0000030 | 303030453045 | 222323 |
|  **TOTAL CU** | **14** |

**ELECTIVE COURSES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **L** | **P** | **CH** | **CU** |
| CHM 3131CHM 3132CHM 3133 | REACTION KINETICS ADVANCED SPECTROSCOPY DIVALENT SPECIES | 303030 | 000 | 303030 | 222 |

**Semester II**

**CORE COURSES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **L** | **P** | **CH** | **CU** |
| CHM 3236CHM 3228CHM 3237CHM 3231ICH 3130 | ADVANCED ANALYTICAL CHEMISTRYAPPLICATION OF GROUP THEORY IN CHEMISTRYPESTICIDES CHEMISTRYADVANCED PHYSICAL CHEMISTRY PRACTICALSORGANIC CHEMICAL TECHNOLOGY |  303030030 | 60006030 | 3030303045 | 42223 |
|  **TOTAL CU** | **13** |

**ELECTIVE COURSES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **L** | **P** | **CH** | **CU** |
| CHM 3233CHM 3234CHM 3238 CHM 3232 | ADVANCED INORGANIC TOPICSADVANCED ORGANIC TOPICSSTRUCTURE DETERMINATION POLYMER CHEMISTRY | 30303030 | 0000 | 30303030 | 2222 |

**BSC CHEMISTRY MINOR PROGRAMME**

**Summary of Course Structure**

**Year 1: Semester I**

**CORE COURSES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **L** | **P** | **CH** | **CU** |
| CHM 1101CHM 1102CHM 1105 | BASIC INORGANIC CHEMISTRYBASIC PHYSICAL CHEMISTRYINTEGRATED PHYSICAL/ INORGANIC LABORATORY  | 45450 | 0060 | 454530 | 332 |
|  **TOTAL CU** | **8** |

**AUDITED COURSES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **L** | **P** | **CH** | **CU** |
|  | CALCULUS I | 45 | 0 | 45 | 3 |

**Semester II**

**CORE COURSES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **L** | **P** | **CH** | **CU** |
| CHM 1205 | BASIC ORGANIC CHEMISTRY | 45 | 60 | 75 | 5 |
|  **TOTAL CU** | **5** |

**Year 2: Semester I**

**CORE COURSES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **L** | **P** | **CH** | **CU** |
| CHM 2112 | BONDING AND PERIODICITY | 45 | 0 | 45 | 3 |
|  |  |  |  |  |  |
|  **TOTAL CU** | **3** |

**ELECTIVE COURSES (Choose one)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **L** | **P** | **CH** | **CU** |
| CHM 2115 | NATURAL PRODUCTS CHEMISTRY | 30 | 0 | 30 | 2 |
| CHM 2114 | AROMATIC CHEMISTRY | 30 | 0 | 30 | 2 |

**Semester II**

**CORE COURSES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **L** | **P** | **CH** | **CU** |
| CHM 2220CHM 2222 | TRANSITION METAL CHEMISTRYTHERMODYNAMICS AND KINETICS  | 3030 | 6060 | 3060 | 44 |
|  **TOTAL CU** | **8** |

**ELECTIVE COURSES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **L** | **P** | **CH** | **CU** |
| CHM 2224CHM 2218 | INORGANIC ENERGETICS BASIC ENVIRONMENTAL CHEMISTRY | 3030 | 00 | 3030 | 22 |
| CHM 2223 | INTRODUCTORY SPECTROSCOPY | 30 | 0 | 30 | 2 |

**Year 3: Semester I**

**CORE COURSES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **L** | **P** | **CH** | **CU** |
| CHM 3127 | ORGANOMETALLIC AND BIOINORGANIC CHEMISTRY | 30 | 0 | 30 | 2 |
|  **TOTAL CU** | **2** |

**ELECTIVE COURSES (Choose one)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **L** | **P** | **CH** | **CU** |
| CHM 3131CHM 3132 | REACTION KINETICSADVANCED SPECTROSCOPY | 3030 |  00 | 3030 | 22 |

**Semester II**

**CORE COURSES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **L** | **P** | **CH** | **CU** |
| CHM 3237 | PESTICIDES CHEMISTRY | 30 | 0 | 30 | 2 |
|  **TOTAL CU** | **2** |

**ELECTIVE COURSES**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Course Code** | **Course Title** | **L** | **P** | **CH** | **CU** |
| CHM 3232CHM 3238 | POLYMER CHEMISTRYSTRUCTURE DETERMINATION  | 3030 | 00 | 3030 | 22 |

**NOTE:** Chemistry Minors will have a minimum of **30** Credit Units, reflected in the core courses.

**MATHEMATICS REQUIREMENT**

1. Students who possess Advanced Level Principal Pass and those possessing Advanced Level Subsidiary Pass in mathematics, are exempted from doing CALCULUS

2. Those students who do not possess a minimum of Advanced Level

Subsidiary Pass in mathematics, must audit CHM 1104, and the auditing must be certified by the Lecturer.