**Bachelor of Science Program in Chemistry (2015)**

**Name of Degree:** Bachelor of Science (Chemistry)

**Abbreviation:** B.Sc. (Chemistry)

**Curriculum**

**Total Credits** **136 Credits**

|  |  |
| --- | --- |
| **First Year , 1st Semester** | **Number of Credit** |
| **Course Number** | **Course Title** |
| 000 101 | English for Communication | 3(3-0-6) |
| 311 111 | Biology for Physical Science | 3(3-0-6) |
| 311 112 | Biology for Physical Science Laboratory | 1(0-3-2) |
| 314 121 | Calculus for Physical Science I | 3(3-0-6) |
| 315 102 | General Physics I | 3(3-0-6) |
| 315 181 | General Physics Laboratory I | 1(0-3-2) |
| 343 101 | Chemistry | 3(3-0-6) |
| 343 102 | Chemistry Laboratory | 1(0-3-2) |
| **Total** | **18** |

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| **First Year , 2nd Semester** | **Number of Credit** |
| **Course Number** | **Course Title** |
| 000 102 | English for Academic Purposes I | 3(3-0-6) |
| 000 146 | Happiness of Life | 3(3-0-6) |
| 314 122 | Calculus for Physical Science II | 3(3-0-6) |
| 315 103 | General Physics II | 3(3-0-6) |
| 315 182 | General Physics Laboratory II | 1(0-3-2) |
| 343 121 | Inorganic Chemistry I | 3(3-0-6) |
| 343 122 | Inorganic Chemistry Laboratory I | 1(0-3-2) |
| 343 141 | Analytical Chemistry | 3(3-0-6) |
| 343 142 | Analytical Chemistry Laboratory | 1(0-3-2) |
| **Total** | **21** |

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| **Second Year , 1st Semester** | **Number of Credit** |
| **Course Number** | **Course Title** |
| 000 103 | English for Academic Purposes II | 3(3-0-6) |
| 000 130 | Information Literacy Skills | 3(3-0-6) |
| 000 145 | Leadership and Management | 3(3-0-6) |
| 314 231 | Ordinary Differential Equations | 3(3-0-6) |
| 343 211 | Organic Chemistry I | 3(3-0-6) |
| 343 212 | Organic Chemistry Laboratory I | 1(0-3-2) |
| 343 231 | Physical Chemistry I | 3(3-0-6) |
| 343 232 | Physical Chemistry Laboratory I | 1(0-3-2) |
| 343 261 | Safety Handling of Chemicals | 1(1-0-2) |
| **Total** | **21** |

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| --- | --- |
| **Second Year , 2nd Semester** | **Number of Credit** |
| **Course Number** | **Course Title** |
| 000 132 | Life and Aesthetics | 3(3-0-6) |
| 000 162 | Life and Modern Technology | 3(3-0-6) |
| 050 108 | English for Sciences | 3(3-0-6) |
| 316 202 | Basic Statistics | 3(3-0-6) |
| 343 213 | Organic Chemistry II | 3(3-0-6) |
| 343 214 | Organic Chemistry Laboratory II | 1(0-3-2) |
| 343 233 | Physical Chemistry II | 3(3-0-6) |
| 343 234 | Physical Chemistry Laboratory II | 1(0-3-2) |
| 343 262 | Research Methodology for Science | 1(1-0-2) |
| **Total** | **21** |

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| --- | --- |
| **Third Year , 1st Semester** | **Number of Credit** |
| **Course Number** | **Course Title** |
| 318 305 | Biochemistry | 3(3-0-6) |
| 318 306 | Biochemistry Laboratory | 1(0-3-2) |
| 343 311 | Advanced Organic Chemistry | 3(3-0-6) |
| 343 321 | Inorganic Chemistry II | 3(3-0-6) |
| 343 322 | Inorganic Chemistry Laboratory II | 1(0-3-2) |
| 343 331 | Advanced Physical Chemistry I | 3(3-0-6) |
| 343 341 | Instrumental Analysis I | 3(3-0-6) |
| 343 361 | Materials and Nanotechnology | 3(3-0-6) |
| **Total** | **20** |

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| **Third Year , 2nd Semester** | **Number of Credit** |
| **Course Number** | **Course Title** |
| 000 169 | Creative Thinking | 3(3-0-6) |
| 343 312 | Spectrometric Identification of Organic Compounds | 3(3-0-6) |
| 343 342 | Instrumental Analysis II | 3(3-0-6) |
| 343 343 | Instrumental Analysis Laboratory | 1(0-3-2) |
| 343 xxx | Elective Course (Chemistry) | 6 |
| xxx xxx | Free Elective | 3 |
| **Total** | **19** |

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| --- | --- |
| **Fourth Year , 1st Semester** | **Number of Credit** |
| **Course Number** | **Course Title** |
| 343 491 | Seminar in Chemistry | 1(0-3-2) |
| 343 499 | Research Project | 2(0-6-4) |
| 343 xxx | Elective Course (Chemistry) | 4 |
| xxx xxx | Free Elective | 3 |
| **Total** | **10** |

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| --- | --- |
| **Fourth Year , 2nd Semester** | **Number of Credit** |
| **Course Number** | **Course Title** |
| **Regular Plan** |
| 343 xxx | Elective Course (Chemistry) | 6 |
| **Total** | **6** |
| **Co-operative Education Plan** |
| 343 498 | Co-operative Education in Chemistry | 6(0-18-12) |
| **Total** | **6** |