

TOTAL COURSE- PROGRAMME OUT COMES

RELATIONSHIP

| FALL | | | | | Programme Outcomes | | | | | | | | | | | | | |
|-------------|---|---|---|------|--------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|
| Code | Course Name | T | P | ECTS | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 1. Semester | | | | | | | | | | | | | | | | | | |
| KIM 5003 | Special Topics-I | 5 | 0 | 10 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | | | |
| KIM 5005 | Thesis Research | 0 | 1 | 20 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | | | |
| KIM 5007 | Seminar* | 0 | 2 | 6 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 4 | | | | | |
| KIM 5101 | Pericyclic Reactions | 2 | 0 | 6 | 5 | 4 | 5 | 5 | 4 | 5 | 4 | 4 | 4 | | | | | |
| KIM 5105 | Computer Applications in | 2 | 0 | 6 | 3 | 4 | 4 | 5 | 5 | 3 | 3 | 5 | 4 | | | | | |
| KIM 5107 | Plastic Additives-I | 2 | 0 | 6 | 5 | 5 | 4 | 3 | 5 | 4 | 5 | 5 | 5 | | | | | |
| KIM 5109 | Synthetic Organic Chemistry-I | 2 | 0 | 6 | 5 | 4 | 5 | 5 | 3 | 4 | 5 | 3 | 4 | | | | | |
| KIM 5113 | Characterization Techniques of Polymers | 2 | 0 | 6 | 5 | 5 | 5 | 4 | 5 | 4 | 3 | 5 | 5 | | | | | |
| KIM 5115 | Molecular Structure and Symmetry | 3 | 0 | 8 | 4 | 5 | 5 | 4 | 5 | 4 | 4 | 5 | 5 | | | | | |
| KIM7004 | Industrial Materials Analysis Methods | 3 | 0 | 8 | 4 | 5 | 5 | 5 | 4 | 5 | 4 | 5 | 5 | | | | | |
| KIM 5119 | Phosphorus Chemistry | 2 | 0 | 6 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | | | |
| KIM 5121 | Polymer Chemistry-I | 3 | 0 | 8 | 5 | 5 | 5 | 4 | 5 | 4 | 5 | 4 | 3 | | | | | |
| KIM 5123 | Spectroscopic Methods | 3 | 0 | 8 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | | | | | |
| KIM 5125 | Advanced Organic Reactions | 3 | 0 | 8 | 5 | 4 | 5 | 5 | 3 | 4 | 5 | 3 | 4 | | | | | |
| KIM 5127 | Ligand Adsorption | 3 | 0 | 8 | 5 | 4 | 4 | 3 | 4 | 5 | 4 | 5 | 3 | | | | | |
| KIM 5129 | Reactive Intermediates | 3 | 0 | 8 | 5 | 4 | 5 | 5 | 4 | 5 | 4 | 3 | 2 | | | | | |

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| KIM 5131 | Enzymatic Polymerization | 3 | 0 | 8 | 5 | 5 | 4 | 4 | 5 | 5 | 4 | 5 | 3 | | | | | |
| KIM5133 | Catalysis | 3 | 0 | 8 | 5 | 4 | 5 | 3 | 5 | 4 | 4 | 4 | 4 | | | | | |
| KIM5135 | Molecular Orbital Theory | 3 | 0 | 8 | 4 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 5 | | | | | |
| KIM 5137 | Corrosion | 3 | 0 | 8 | 5 | 4 | 5 | 4 | 5 | 3 | 4 | 4 | 5 | | | | | |
| KIM 5139 | Electropolymerization-I | 3 | 0 | 8 | 5 | 5 | 5 | 3 | 5 | 4 | 4 | 5 | 5 | | | | | |
| KIM 7003 | Chemical Toxicology | 3 | 0 | 8 | 5 | 4 | 4 | 3 | 5 | 4 | 4 | 4 | 5 | | | | | |
| KIM 5143 | Technological Materials Synthesis and Characterization | 3 | 0 | 8 | 5 | 5 | 5 | 5 | 4 | 3 | 5 | 4 | 5 | | | | | |
| KIM 5145 | Principles of Inorganic Chemistry-I | 3 | 0 | 8 | 5 | 5 | 4 | 4 | 5 | 5 | 4 | 5 | 5 | | | | | |
| KIM 5147 | Molecular Quantum Chemistry-I | 3 | 0 | 8 | 4 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 4 | | | | | |
| KIM 5149 | Environmental Analysis in Analytical Chemistry | 3 | 0 | 8 | 5 | 5 | 4 | 3 | 4 | 4 | 5 | 4 | 4 | | | | | |
| KIM 5151 | The Chemistry of Humic Substances | 3 | 0 | 8 | 5 | 4 | 5 | 5 | 4 | 5 | 4 | 3 | 2 | | | | | |
| KIM 5153 | Microencapsulation Technology | 2 | 0 | 6 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | | | |
| KIM 5155 | Molecular Modelling in Electrochemistry | 3 | 0 | 8 | 5 | 5 | 4 | 5 | 4 | 5 | 5 | 5 | 5 | | | | | |
| KIM 6001 | Seminar | 0 | 2 | 6 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 4 | | | | | |
| KIM 6003 | Specialized Field Course-I | 5 | 0 | 10 | 5 | 4 | 4 | 5 | 4 | 4 | 5 | 5 | 5 | | | | | |
| KIM 6005 | Thesis Research | 0 | 1 | 20 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | | | |
| KIM 6007 | Doctoral Qualification*** | 0 | 0 | 30 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | | | |
| KIM 6101 | Advanced Polymer Chemistry-I | 3 | 0 | 10 | 5 | 5 | 4 | 4 | 5 | 4 | 5 | 3 | 3 | | | | | |
| KIM 6103 | Inorganic Reaction Mechanisms-I | 3 | 0 | 10 | 4 | 4 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | | | | | |
| KIM 6105 | Heterocyclic Compounds | 3 | 0 | 10 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | | | |
| KIM 6107 | Bioinorganic Chemistry | 3 | 0 | 10 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 5 | 5 | | | | | |
| KIM 6109 | Thermochemical Kinetic | 3 | 0 | 10 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 5 | 4 | | | | | |

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| KIM 6111 | Theoretical Foundations of Analytical Chemistry-I | 3 | 0 | 10 | 5 | 5 | 4 | 4 | 5 | 4 | 5 | 3 | 3 | | | | | |
| KIM 6113 | Use of Protective Groups in Organic Chemistry | 3 | 0 | 10 | 5 | 4 | 5 | 5 | 4 | 3 | 5 | 3 | 4 | | | | | |
| KIM 6115 | Molecular Modeling in Organic Chemistry | 3 | 0 | 10 | 5 | 5 | 4 | 4 | 4 | 5 | 5 | 4 | 5 | | | | | |
| KIM 6117 | Basic Group Elements Chemistry | 3 | 0 | 10 | 4 | 5 | 5 | 4 | 5 | 4 | 4 | 5 | 5 | | | | | |
| KIM 6119 | Advanced Organometallic Chemistry-I | 3 | 0 | 10 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 4 | | | | | |
| KIM 7001 | Modern Analyse Techniques | 3 | 0 | 8 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | | | | | |
| KIM 7005 | Advances in Nanocomposite Technology | 3 | 0 | 8 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | | | |

TOTAL COURSE- PROGRAMME OUT COMES

RELATIONSHIP

| SPRING | | | | | Programme Outcomes | | | | | | | | | | | | | |
|----------|---------------------------------|---|---|------|--------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|
| Code | Course Name | T | P | ECTS | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | 2. Semester | | | | | | | | | | | | | | | | | |
| KIM 5004 | Special Topics-II | 5 | 0 | 10 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | | | |
| KIM 5006 | Thesis Research | 0 | 1 | 20 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | | | |
| KIM 5008 | Seminar | 0 | 2 | 6 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 4 | | | | | |
| KIM 5102 | Coordination Polymers | 2 | 0 | 6 | 5 | 4 | 4 | 5 | 5 | 3 | 5 | 5 | 5 | | | | | |
| KIM 5104 | Advanced Quantum Chemistry | 2 | 0 | 6 | 5 | 4 | 5 | 3 | 3 | 4 | 4 | 4 | 4 | | | | | |
| KIM 5106 | Living Polymerization | 2 | 0 | 6 | 5 | 5 | 4 | 5 | 5 | 3 | 5 | 5 | 4 | | | | | |
| KIM 5108 | Advanced Coordination Chemistry | 2 | 0 | 6 | 5 | 4 | 5 | 5 | 4 | 3 | 4 | 5 | 5 | | | | | |
| KIM5110 | Chemistry of Natural Compounds | 2 | 0 | 6 | 5 | 5 | 5 | 3 | 5 | 4 | 5 | 4 | 4 | | | | | |
| KIM 5112 | Synthetic Organic Chemistry-II | 2 | 0 | 6 | 5 | 4 | 5 | 5 | 3 | 4 | 5 | 3 | 4 | | | | | |
| KIM 5114 | Alcoholoids | 2 | 0 | 6 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | | | |
| KIM 5116 | Polymer Chemistry-II | 3 | 0 | 8 | 5 | 5 | 5 | 4 | 5 | 4 | 5 | 4 | 3 | | | | | |
| KIM 5118 | Liquid Chromatography | 3 | 0 | 8 | 4 | 5 | 3 | 4 | 5 | 4 | 3 | 4 | 5 | | | | | |
| KIM 5120 | Corrosion Inhibitors | 3 | 0 | 8 | 5 | 4 | 4 | 5 | 4 | 5 | 4 | 4 | 5 | | | | | |

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| KIM 5122 | Bonding Theories | 2 | 0 | 6 | 5 | 4 | 5 | 4 | 5 | 4 | 5 | 5 | 4 | | | | |
| KIM 5124 | Structural Analysis of Coordination Compounds | 3 | 0 | 8 | 4 | 5 | 4 | 5 | 4 | 4 | 5 | 5 | 5 | | | | |
| KIM 5126 | Retrosynthetic Analysis of Organic Molecules | 3 | 0 | 8 | 5 | 4 | 5 | 5 | 3 | 4 | 5 | 3 | 4 | | | | |
| KIM 5128 | Plastic Additives-II | 3 | 0 | 8 | 5 | 4 | 5 | 3 | 5 | 5 | 5 | 4 | 5 | | | | |
| KIM 5130 | Surface Analysis Methods | 3 | 0 | 8 | 5 | 4 | 5 | 3 | 5 | 4 | 4 | 4 | 4 | | | | |
| KIM 5132 | Macrocyclic Compounds | 3 | 0 | 8 | 5 | 4 | 5 | 4 | 4 | 4 | 5 | 5 | 4 | | | | |
| KIM 5134 | Named Organic Reactions | 3 | 0 | 8 | 5 | 4 | 5 | 5 | 4 | 3 | 5 | 2 | 4 | | | | |
| KIM 5136 | Inorganic Electronic Spectroscopy | 3 | 0 | 8 | 5 | 4 | 5 | 4 | 5 | 4 | 3 | 4 | 3 | | | | |
| KIM 5138 | Methods of Chemical Analysis of Water | 3 | 0 | 8 | 4 | 4 | 5 | 5 | 5 | 4 | 5 | 3 | 3 | | | | |
| KIM 5140 | Coating Techniques | 3 | 0 | 8 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 5 | 5 | | | | |
| KIM 5142 | Molecular Quantum Chemistry-II | 3 | 0 | 8 | 5 | 5 | 5 | 4 | 4 | 5 | 5 | 4 | 5 | | | | |
| KIM 5144 | Electrically Active Polymers | 3 | 0 | 8 | 5 | 5 | 4 | 4 | 5 | 4 | 5 | 3 | 3 | | | | |
| KIM 5146 | Functional Group Interconversion | 3 | 0 | 8 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | | |
| KIM 5148 | Mass Spectroscopy and Applications | 2 | 0 | 6 | 5 | 5 | 5 | 5 | 5 | 4 | 5 | 5 | 5 | | | | |
| KIM 5150 | Derivation Methods Sorption | 2 | 0 | 6 | 5 | 5 | 4 | 4 | 5 | 5 | 5 | 4 | 5 | | | | |
| KIM 5152 | Modern Chromatographic Techniques | 3 | 0 | 8 | 5 | 5 | 4 | 5 | 5 | 5 | 4 | 5 | 5 | | | | |
| KIM 5154 | Surfactants in Analytical Chemistry | 3 | 0 | 8 | 5 | 4 | 4 | 4 | 5 | 5 | 4 | 3 | 4 | | | | |
| KIM 6002 | Seminar** | 0 | 2 | 6 | 5 | 5 | 4 | 5 | 5 | 5 | 5 | 5 | 4 | | | | |
| KIM 6004 | Specialized Field Course-II | 5 | 0 | 10 | 5 | 4 | 4 | 5 | 4 | 4 | 5 | 5 | 5 | | | | |
| KIM 6006 | Thesis Research | 0 | 1 | 20 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | | |
| KIM 6008 | Doctoral Qualification | 0 | 0 | 30 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | | |
| KIM 6102 | Advanced Polymer Chemistry-II | 3 | 0 | 10 | 5 | 5 | 4 | 4 | 5 | 4 | 5 | 3 | 3 | | | | |

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| KIM 6104 | Advanced Radicalic Reactions | 3 | 0 | 10 | 5 | 4 | 5 | 5 | 4 | 3 | 5 | 2 | 3 | | | | |
| KI M 6106 | Advanced Organometallic Chemistry-II | 3 | 0 | 10 | 5 | 4 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | | | | |
| KIM 6108 | Theoretical Foundations of Analytical Chemiatry-II | 3 | 0 | 10 | 5 | 5 | 4 | 4 | 5 | 4 | 5 | 3 | 3 | | | | |
| KIM 6110 | Inorganic Reaction Mechanisms-II | 3 | 0 | 10 | 5 | 5 | 4 | 4 | 5 | 4 | 5 | 4 | 4 | | | | |
| KIM 6112 | Application of Frontier Orbitals | 3 | 0 | 10 | 4 | 5 | 5 | 4 | 5 | 5 | 4 | 5 | 5 | | | | |
| KIM 7002 | Occupational Healt Security in Laboratory | 3 | 0 | 8 | 4 | 5 | 5 | 5 | 5 | 5 | 4 | 4 | 5 | | | | |
| KIM 7004 | Industrial Materials Analysis Methods | 3 | 0 | 8 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | | |