



BACHELOR OF SCIENCE

CBCS

(Three Year Six Semester Program)

w.e.f. 2015-16

BACHELOR OF SCIENCE FIRST SEMESTER

| THEORY PAPERS | | No. of Teaching Hours | | | Marks Allocation | | | |
|-----------------------------|---|-----------------------|----------|----------|------------------|------------|------------|-----------|
| Code | Subject/Paper | L | T | P | IA | EA | Total | Credits |
| BSC101 | English | 3 | - | - | 30 | 70 | 100 | 3 |
| BSC102 | Mechanics | 5 | - | - | 30 | 70 | 100 | 5 |
| BSC103 | Atomic Structure, Bonding, General Organic Chemistry & Aliphatic hydrocarbons | 5 | - | - | 30 | 70 | 100 | 5 |
| BSC104 | Differential Calculus | 6 | - | - | 30 | 70 | 100 | 6 |
| <i>PRACTICALS/VIVA-VOCE</i> | | No. of Teaching Hours | | | Sessional | Practical | Total | Credits |
| BSC105 | Mechanics Lab | - | - | 4 | 30 | 20 | 50 | 2 |
| BSC106 | General Organic Chemistry Lab | - | - | 4 | 30 | 20 | 50 | 2 |
| TOTAL | | 19 | - | 8 | 180 | 320 | 500 | 23 |

BACHELOR OF SCIENCE

SECOND SEMESTER

| THEORY PAPERS | | No. of Teaching Hours | | | Marks Allocation | | | |
|-----------------------------|---|-----------------------|---|----------|------------------|------------|------------|-----------|
| Code | Subject/Paper | L | T | P | IA | EA | Total | Credits |
| BSC201 | Environmental Science | 3 | - | - | 30 | 70 | 100 | 3 |
| BSC202 | Electricity, Magnetism and EMT | 5 | - | - | 30 | 70 | 100 | 5 |
| BSC203 | Chemical energetic, Equilibria & Functional Group Organic Chemistry-I | 5 | - | - | 30 | 70 | 100 | 5 |
| BSC204 | Differential Equations | 6 | - | - | 30 | 70 | 100 | 6 |
| <i>PRACTICALS/VIVA-VOCE</i> | | No. of Teaching Hours | | | Sessional | Practical | Total | Credits |
| BSC205 | Electricity, Magnetism and EMT Lab | - | - | 4 | 30 | 20 | 50 | 2 |
| BSC206 | Equilibria & Functional Group Organic Chemistry-I Lab | - | - | 4 | 30 | 20 | 50 | 2 |
| TOTAL | | 19 | | 8 | 180 | 320 | 500 | 23 |

BACHELOR OF SCIENCE THIRD SEMESTER

| THEORY PAPERS | | No. of Teaching Hours | | | Marks Allocation | | | |
|-----------------------------|--|------------------------------|----------|----------|------------------|------------------|--------------|----------------|
| Code | Subject/Paper | L | T | P | IA | EA | Total | Credits |
| BSC301 | Thermal Physics and Statistical Mechanics | 5 | - | - | 30 | 70 | 100 | 5 |
| BSC302 | Solutions, Phase equilibria, Conductance, Electrochemistry & Functional Group Organic Chemistry-II | 5 | - | - | 30 | 70 | 100 | 5 |
| BSC303 | Real Analysis | 6 | - | - | 30 | 70 | 100 | 6 |
| BSC304 | SEC-1 (Choose any one) | 3 | - | - | 30 | 70 | 100 | 3 |
| BSC304A | Analytical Geometry | | | | | | | |
| BSC304B | Integral Calculus | | | | | | | |
| BSC304C | Physics work shop skills | | | | | | | |
| BSC304D | Computational physics skills | | | | | | | |
| BSC304E | Pharmaceutical Chemistry | | | | | | | |
| BSC304F | Basic Analytical Chemistry) | | | | | | | |
| PRACTICALS/VIVA-VOCE | | No. of Teaching Hours | | | Sessional | Practical | Total | Credits |
| BSC305 | Thermal Physics and Statistical Mechanics Lab | - | - | 4 | 30 | 20 | 50 | 2 |
| BSC306 | Solutions, Phase equilibria, Conductance, Electrochemistry & Functional Group Organic Chemistry-II Lab | - | - | 4 | 30 | 20 | 50 | 2 |
| TOTAL | | 19 | - | 8 | 180 | 320 | 500 | 23 |

BACHELOR OF SCIENCE FOURTH SEMESTER

| THEORY PAPERS | | No. of Teaching Hours | | | Marks Allocation | | | |
|-----------------------------|---|------------------------------|----------|----------|------------------|------------------|--------------|----------------|
| Code | Subject/Paper | L | T | P | IA | EA | Total | Credits |
| BSC401 | Waves and optics | 5 | - | - | 30 | 70 | 100 | 5 |
| BSC402 | Transition Metal & Coordination Chemistry, states and matter Chemical kinetics | 5 | - | - | 30 | 70 | 100 | 5 |
| BSC403 | Algebra | 6 | - | - | 30 | 70 | 100 | 6 |
| BSC404 | SEC-2 (Choose any one) | | | | | | | |
| BSC404A | Vector Calculus | | | | | | | |
| BSC404B | Theory of Equations | | | | | | | |
| BSC404C | Electrical circuit & net work skills | 3 | - | - | 30 | 70 | 100 | 3 |
| BSC404D | Technical drawing | | | | | | | |
| BSC404E | Analytical Clinical Biochemistry | | | | | | | |
| BSC404F | Green Methods in Chemistry | | | | | | | |
| PRACTICALS/VIVA-VOCE | | No. of Teaching Hours | | | Sessional | Practical | Total | Credits |
| BSC405 | Waves and optics Lab | - | - | 4 | 30 | 20 | 50 | 2 |
| BSC406 | Transition Metal & Coordination Chemistry Lab | - | - | 4 | 30 | 20 | 50 | 2 |
| TOTAL | | 19 | - | 8 | 180 | 320 | 500 | 23 |

BACHELOR OF SCIENCE

FIFTH SEMESTER

| THEORY PAPERS | | No. of Teaching Hours | | | Marks Allocation | | | |
|-----------------------------|---|------------------------------|----------|----------|------------------|------------------|--------------|----------------|
| Code | Subject/Paper | L | T | P | IA | EA | Total | Credits |
| BSC501 | SEC-3 (Choose any one) | | | | | | | |
| BSC501A | Probability and Statistics | | | | | | | |
| BSC501B | Mathematical Modelling | | | | | | | |
| BSC501C | Radiology & safety | 3 | - | - | 30 | 70 | 100 | 3 |
| BSC501D | Weather forecasting | | | | | | | |
| BSC501E | Chemistry of Cosmetics & Perfumes | | | | | | | |
| BSC501F | Pesticide Chemistry | | | | | | | |
| BSC502 | DSE-1A (Choose any one) | | | | | | | |
| BSC502A | Matrices | | | | | | | |
| BSC502B | Mechanics | 6 | - | - | 30 | 70 | 100 | 6 |
| BSC502C | Linear Algebra | | | | | | | |
| BSC503 | DSE-2A (Choose any one) | | | | | | | |
| BSC503A | Analytical Methods in Chemistry | | | | | | | |
| BSC503B | Novel Inorganic Solids | | | | | | | |
| BSC503C | Organometallics | 5 | - | - | 30 | 70 | 100 | 5 |
| BSC503D | Bioinorganic chemistry | | | | | | | |
| BSC503E | Polynuclear hydrocarbons and UV | | | | | | | |
| BSC503F | IR Spectroscopy | | | | | | | |
| BSC504 | DSE-3A (Choose any one) | | | | | | | |
| BSC504A | Digital, Analog and Instrumentation | | | | | | | |
| BSC504B | Elements of Modern Physics | 5 | - | - | 30 | 70 | 100 | 5 |
| BSC504C | Mathematical Physics | | | | | | | |
| BSC504D | Solid State Physics | | | | | | | |
| PRACTICALS/VIVA-VOCE | | No. of Teaching Hours | | | Sessional | Practical | Total | Credits |
| BSC505 | DSE-2A (Choose any one) | | | | | | | |
| BSC505A | Analytical Methods in Chemistry Lab | | | | | | | |
| BSC505B | Novel Inorganic Solids Lab | | | | | | | |
| BSC505C | Organometallics | - | - | 4 | 30 | 20 | 50 | 2 |
| BSC505D | Bioinorganic chemistry | | | | | | | |
| BSC505E | Polynuclear hydrocarbons and UV | | | | | | | |
| BSC505F | IR Spectroscopy Lab | | | | | | | |
| BSC506 | DSE-3A (Choose any one) | | | | | | | |
| BSC506A | Digital, Analog and Instrumentation Lab | | | | | | | |
| BSC506B | Elements of Modern Physics Lab | - | - | 4 | 30 | 20 | 50 | 2 |
| BSC506C | Mathematical Physics Lab | | | | | | | |
| BSC506D | Solid State Physics Lab | | | | | | | |
| TOTAL | | 19 | - | 8 | 180 | 320 | 500 | 23 |

BACHELOR OF SCIENCE SIXTH SEMESTER

| THEORY PAPERS | | No. of Teaching Hours | | | Marks Allocation | | | |
|-----------------------------|--|------------------------------|----------|----------|------------------|------------------|--------------|----------------|
| Code | Subject/Paper | L | T | P | IA | EA | Total | Credits |
| BSC601 | SEC-4 (Choose any one) | | | | | | | |
| BSC601A | Transportation and Game Theory | | | | | | | |
| BSC601B | Graph Theory | | | | | | | |
| BSC601C | Applied optics | 3 | - | - | 30 | 70 | 100 | 3 |
| BSC601D | Basic instrumentation skills | | | | | | | |
| BSC601E | Chemical Technology & Society | | | | | | | |
| BSC601F | Fuel Chemistry | | | | | | | |
| BSC602 | DSE-1B (Choose any one) | | | | | | | |
| BSC602A | Numerical Methods | 6 | - | - | 30 | 70 | 100 | 6 |
| BSC602B | Complex Analysis | | | | | | | |
| BSC602C | Linear Programming) | | | | | | | |
| BSC603 | DSE-2B (Choose any one) | | | | | | | |
| BSC603A | Polymer Chemistry | 5 | - | - | 30 | 70 | 100 | 5 |
| BSC603B | Green Chemistry | | | | | | | |
| BSC603C | Instrumental Methods of Analysis | | | | | | | |
| BSC604 | DSE-3B (Choose any one) | | | | | | | |
| BSC604A | Quantum Mechanics | 5 | - | - | 30 | 70 | 100 | 5 |
| BSC604B | Embedded System: Introduction to microcontroller | | | | | | | |
| BSC604C | Nuclear and Particle Physics | | | | | | | |
| BSC604D | Medical Physics | | | | | | | |
| PRACTICALS/VIVA-VOCE | | No. of Teaching Hours | | | Sessional | Practical | Total | Credits |
| BSC605 | DSE-2B (Choose any one) | | | | | | | |
| BSC605A | Polymer Chemistry Lab | | | | | | | |
| BSC605B | Green Chemistry Lab | - | - | 4 | 30 | 20 | 50 | 2 |
| BSC605C | Instrumental Methods of Analysis Lab | | | | | | | |
| BSC606 | DSE-3B (Choose any one) | | | | | | | |
| BSC606A | Quantum Mechanics Lab | | | | | | | |
| BSC606B | Embedded System: Introduction to microcontroller Lab | - | - | 4 | 30 | 20 | 50 | 2 |
| BSC606C | Nuclear and Particle Physics Lab | | | | | | | |
| BSC606D | Medical Physics Lab | | | | | | | |
| TOTAL | | 19 | - | 8 | 180 | 320 | 500 | 23 |

The total number of the credits of the B. Sc 3-Year Course is 138

Each student shall be required to appear for examination in all courses. However, for the award of the degree a student should secure at least 132 credits.

Relaxation of credits will be given only in SEC.