

|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                       |                |                     |                       |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|----------------|---------------------|-----------------------|
|                       | <b>Abbreviations used:</b>                                                                                                                                                                                                                                                                                                                                                                                                                      | National Education Policy (NEP)                       |                |                     |                       |
| <b>NEP II revised</b> | Theory(T), Prctical(P), Discipline Specific Course(DSC), Discipline Specific Elective(DSE), Open Elective(OE), Ability Enhancement Course(AEC), Sill Enhancement Course (SEC), Vocational Skill Enhancement(VSE), Value Education Course(VEC), Indian Knowledge System(IKS), On Job Training(OJT), Field Project(FP), Community Engagement and Services(CEP) or (CES), Cocurricular Courses(CC), Research Methodology(RM), Research Project(RP) |                                                       |                |                     |                       |
|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                       |                |                     |                       |
| <b>Year 1</b>         | <b>Semester 1</b>                                                                                                                                                                                                                                                                                                                                                                                                                               | F.Y.B.Sc.Blended Semester I (Revised NEP Version II)  |                |                     |                       |
| (India)               | <b>Course Code</b>                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Course Name</b>                                    | <b>Credits</b> | <b>NEP vertical</b> | <b>Type of course</b> |
|                       | 24BLCH11101                                                                                                                                                                                                                                                                                                                                                                                                                                     | Introductory and Organic Chemistry                    | 2              | DSC                 | Theory                |
|                       | 24BLCH11102                                                                                                                                                                                                                                                                                                                                                                                                                                     | Chemistry Practical-1                                 | 2              | DSC                 | Practical             |
|                       | 24BLBI11101                                                                                                                                                                                                                                                                                                                                                                                                                                     | The Diversity of Life                                 | 2              | DSC                 | Theory                |
|                       | 24BLBI11101                                                                                                                                                                                                                                                                                                                                                                                                                                     | Biology Practical-1                                   | 2              | DSC                 | Practical             |
|                       | 24BLPH11101                                                                                                                                                                                                                                                                                                                                                                                                                                     | Introductory Classical Physics                        | 2              | DSC                 | Theory                |
|                       | 24BLPH11102                                                                                                                                                                                                                                                                                                                                                                                                                                     | Physics Practical-1                                   | 2              | DSC                 | Practical             |
|                       | 24BLMT11301                                                                                                                                                                                                                                                                                                                                                                                                                                     | Calculus                                              | 4              | OE/GE               | Theory                |
|                       | 24BLEN11501                                                                                                                                                                                                                                                                                                                                                                                                                                     | from common basket                                    | 2              | AEC                 | Theory                |
|                       | 24BLIKS11501                                                                                                                                                                                                                                                                                                                                                                                                                                    | from common basket                                    | 2              | IKS                 | Theory                |
|                       | 24BLVEC11501                                                                                                                                                                                                                                                                                                                                                                                                                                    | from common basket                                    | 2              | VEC                 | Theory                |
|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Total credits                                         | <b>22</b>      |                     |                       |
|                       | <b>Semester 2</b>                                                                                                                                                                                                                                                                                                                                                                                                                               | F.Y.B.Sc.Blended Semester II (Revised NEP Version II) |                |                     |                       |
|                       | <b>Course Code</b>                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Course Name</b>                                    | <b>Credits</b> | <b>NEP vertical</b> | <b>Type of course</b> |
|                       | 24BLCH12101                                                                                                                                                                                                                                                                                                                                                                                                                                     | Inorganic and Physical Chemistry                      | 2              | DSC                 | Theory                |
|                       | 24BLCH12102                                                                                                                                                                                                                                                                                                                                                                                                                                     | Chemistry Practical-2                                 | 2              | DSC                 | Practical             |
|                       | 24BLBI12101                                                                                                                                                                                                                                                                                                                                                                                                                                     | Modern Physics                                        | 2              | DSC                 | Theory                |
|                       | 24BLBI12102                                                                                                                                                                                                                                                                                                                                                                                                                                     | Physics Practical-2                                   | 2              | SEC                 | Practical             |
|                       | 24BLPH12101                                                                                                                                                                                                                                                                                                                                                                                                                                     | Biology of Cells                                      | 2              | Minor               | Theory                |
|                       | 24BLPH12102                                                                                                                                                                                                                                                                                                                                                                                                                                     | Biology Practical-2                                   | 2              | VSC                 | Practical             |
|                       | 24BLMT12301                                                                                                                                                                                                                                                                                                                                                                                                                                     | Algebra                                               | 4              | SEC                 | Theory (T/P)          |
|                       | 24BLEN12501                                                                                                                                                                                                                                                                                                                                                                                                                                     | from common basket                                    | 2              | AEC                 | Theory                |
|                       | 24BLCS12501                                                                                                                                                                                                                                                                                                                                                                                                                                     | Scientific Computation and Modelling                  | 2              | VEC                 | Practical             |
|                       | 24BLCC12601                                                                                                                                                                                                                                                                                                                                                                                                                                     | from common basket                                    | 2              | CC                  | Practical             |
|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Total credits                                         | <b>22</b>      |                     |                       |
|                       | <b>After 1 year : 44 credits</b>                                                                                                                                                                                                                                                                                                                                                                                                                |                                                       |                |                     |                       |
|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                       |                |                     |                       |
|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                       |                |                     |                       |
| NEP-II                |                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                       |                |                     |                       |

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|--------|----------------------------------------|--------------------------------------------------------|----------------|---------------------|-----------------------|
| Year 2 | <b>Semester 3</b>                      | <b>S.Y.B.Sc.Blended Semester III (NEP Version II)</b>  |                |                     |                       |
|        | <b>Course Code</b>                     | <b>Course Name</b>                                     | <b>Credits</b> | <b>NEP vertical</b> | <b>Type of course</b> |
|        | 24BLCH23101                            | Chemistry: Reactions and Synthesis                     | 2              | DSC                 | Theory                |
|        | 24BLCH23102                            | Chemistry Practical-3                                  | 2              | DSC                 | Practical             |
|        | 24BLPH23101                            | Quantum Mechanics and Thermodynamics                   | 2              | DSC                 | Theory                |
|        | 24BLPH23102                            | Physics Practical-3                                    | 2              | DSC                 | Practical             |
|        | 24BLBI23101                            | Functional Biology of Organisms                        | 2              | Minor               | Theory                |
|        | 24BLBI23102                            | Biology Practical-3                                    | 2              | Minor               | Practical             |
|        | 24BLMT23301                            | Vector Calculus and Differential Equations             | 2              | GE/OE               | Theory                |
|        | 24BLIKS23501                           | from common basket                                     | 2              | IKS (Generic)       | Theory                |
|        | 24BLMA23501                            | from common basket                                     | 2              | AEC                 | Theory (T/P)          |
|        | 24BLFP23601                            | Field Project                                          | 2              | FP                  | Practical             |
|        | 24BLCC23601                            | Democracy, Elections and Governance                    | 2              | CC                  | Theory (T/P)          |
|        |                                        | Total credits                                          | 22             |                     |                       |
|        |                                        |                                                        |                |                     |                       |
|        |                                        |                                                        |                |                     |                       |
|        | <b>Semester 4</b>                      | <b>S.Y.B.Sc.Blended Semester IV (NEP Version II)</b>   |                |                     |                       |
|        | <b>Course Code</b>                     | <b>Course Name</b>                                     | <b>Credits</b> | <b>NEP vertical</b> | <b>Type of course</b> |
|        | 24BLCH24101                            | Chemistry: Structure and Properties                    | 2              | DSC                 | Theory                |
|        | 24BLCH24102                            | Chemistry Practical-4                                  | 2              | DSC                 | Practical             |
|        | 24BLPH24101                            | Electricity, Magnetism, Special Relativity, and Optics | 2              | DSC                 | Theory                |
|        | 24BLPH24102                            | Physics Practical-4                                    | 2              | DSC                 | Practical             |
|        | 24BLBI24101                            | Genetics, Evolution and Ecology                        | 2              | Minor               | Theory                |
|        | 24BLBI24102                            | Biology Practical-4                                    | 2              | Minor               | Practical             |
|        | 24BLMT24301                            | Probability                                            | 2              | GE/OE               | Theory                |
|        | 24BLMT24401                            | Statistics                                             | 2              | SEC                 | Theory (T/P)          |
|        | 24BLMA24501                            | from common basket                                     | 2              | AEC                 | Theory                |
|        | 24BLCE24601                            | Community Engagement and Services                      | 2              | CEP                 | Practical             |
|        | 24BLCC24601                            | from common basket                                     | 2              | CC                  | Practical             |
|        |                                        | Total credits                                          | 22             |                     |                       |
|        | <b>After 2 years: 44+44=88 credits</b> |                                                        |                |                     |                       |
|        |                                        |                                                        |                |                     |                       |
|        |                                        |                                                        |                |                     |                       |

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|        | # The courses can be changed and taken from general <a href="#">B.Sc.</a> (Chemistry/Microbiology/Zoology/Mathematics/Statistics), <a href="#">B.Sc.</a> Computer Science and <a href="#">B.Sc.</a> Biotechnology |                                                       |                |                     |                       |
| NEP I  | <b>Semester 5</b>                                                                                                                                                                                                 | <b>T.Y.B.Sc.Blended Semester V (NEP Version I)</b>    |                |                     |                       |
| Year 3 | <b>Course Code</b>                                                                                                                                                                                                | <b>Course Name</b>                                    | <b>Credits</b> | <b>NEP vertical</b> | <b>Type of course</b> |
|        | CHM 501                                                                                                                                                                                                           | Reaction Dynamics & Quantum Chemistry                 | 2              | DSC                 | Theory                |
|        | CHM 502                                                                                                                                                                                                           | Catalysis & Industrial Processes                      | 2              | DSC                 | Theory                |
|        | CHM 503                                                                                                                                                                                                           | Design & Synthesis of Organic Molecules               | 2              | DSC                 | Theory                |
|        | CHM 504                                                                                                                                                                                                           | Introduction to Analytical Chemistry                  | 2              | DSC                 | Theory                |
|        | CHM 505                                                                                                                                                                                                           | Physical & Analytical Chemistry - LAB-1               | 2              | DSC                 | Practical             |
|        | CHM 506                                                                                                                                                                                                           | Inorganic & Organic Chemistry - LAB-2                 | 2              | DSC                 | Practical             |
|        | CHM 507                                                                                                                                                                                                           | Green Chemistry #                                     | 2              | DSE                 | Theory                |
|        | CHM 508                                                                                                                                                                                                           | Green Chemistry Practical #                           | 2              | DSE                 | Practical             |
|        | CHM 509                                                                                                                                                                                                           | Introduction to Forensic Science & Technology #       | 2              | VSC                 | Theory (T/P)          |
|        | BIO501                                                                                                                                                                                                            | Biomolecules: Structure & Significance                | 2              | Minor               | Theory                |
|        | IDC501                                                                                                                                                                                                            | Project/ Field Work/Community Engagement and Services | 2              | FP/CEP              | Practical             |
|        |                                                                                                                                                                                                                   | Total credits                                         | <b>22</b>      |                     |                       |
|        | <b>Semester 6</b>                                                                                                                                                                                                 | <b>T.Y.B.Sc.Blended Semester VI (NEP Version I)</b>   |                |                     |                       |
|        | <b>Course Code</b>                                                                                                                                                                                                | <b>Course Name</b>                                    | <b>Credits</b> | <b>NEP vertical</b> | <b>Type of course</b> |
|        | CHM 601                                                                                                                                                                                                           | Solid State Chemistry & Nanoscience                   | 2              | DSC                 | Theory                |
|        | CHM 602                                                                                                                                                                                                           | Bioinorganic & Coordination Chemistry                 | 2              | DSC                 | Theory                |
|        | CHM 603                                                                                                                                                                                                           | Natural product & Heterocyclic Chemistry              | 2              | DSC                 | Theory                |
|        | CHM 604                                                                                                                                                                                                           | Advanced Analytical Techniques                        | 2              | DSC                 | Theory                |
|        | CHM 605                                                                                                                                                                                                           | Physical & Analytical Chemistry - LAB-2               | 2              | DSC                 | Practical             |
|        | CHM 606                                                                                                                                                                                                           | Inorganic & Organic Chemistry - LAB-2                 | 2              | DSC                 | Practical             |
|        | CHM 607                                                                                                                                                                                                           | Agricultural Chemistry #                              | 2              | DSE                 | Theory                |
|        | CHM 608                                                                                                                                                                                                           | Agrochemistry Practical #                             | 2              | DSE                 | Practical             |
|        | CHM 609                                                                                                                                                                                                           | Materials Chemistry #                                 | 2              | VSC                 | Theory (T/P)          |
|        | IDC 601                                                                                                                                                                                                           | Project/On Job Training                               | 4              | OJT                 | Practical             |
|        |                                                                                                                                                                                                                   | Total credits                                         | <b>22</b>      |                     |                       |
|        | <b>After 3 years: 44 + 44+ 44= 132 credits</b>                                                                                                                                                                    |                                                       |                |                     |                       |