The following shall be the courses of the studies under CBCS pattern

**M.Sc – I (Physics) C B C S PATTERN (2018-19)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **S E M E S T E R – I (Duration – 6 Months)** | | | | | | | | | | | | | | | | | | | | |
| Sr.No | Course Title | **Teaching Scheme** | | | | | | **Examination scheme** | | | | | | | | | | | | |
| Theory | | | | | | | | Practical  (CPPR) | | |  | |
|  |  | Theory | | | Practical | | | Theory | | | Internal | | | Total | | Total | | | | |  |
|  |  | No.of lectures | Hours | Credits | No. of Lectures | Hours | Credits | Max. | Min. | Hours | Max. | Min. | Hours | Max. | Min. | Max. | Min. | | | Hours. |
| 1 | CP-1100A | 4 | 4 | 4 | 16 | 16 | 8 | 80 | 32 | 3 | 20 | 8 | 1 | 100 | 40 | 200 | | 80 | | 16 |
| 2 | CP-1101A | 4 | 4 | 4 | 80 | 32 | 3 | 20 | 8 | 1 | 100 | 40 |
| 3 | CP-1102A | 4 | 4 | 4 | 80 | 32 | 3 | 20 | 8 | 1 | 100 | 40 |
| 4 | CP-1103A | 4 | 4 | 4 | 80 | 32 | 3 | 20 | 8 | 1 | 100 | 40 |
|  | **Total** | 16 | 16 | **16** | 16 | 16 | **8** | 320 |  |  | 80 | - |  | 400 | - | 200 |  | | | 16 |
|  | **Semester-II(duration 6 months)** | | | | | | | | | | | | | | | | | | | |
| 6 | CP-1106B | 4 | 4 | 4 | 16 | 16 | 8 | 80 | 32 | 3 | 20 | 8 | 1 | 100 | 40 | 200 | 80 | | | 16 |
| 7 | CP-1107B | 4 | 4 | 4 | 80 | 32 | 3 | 20 | 8 | 1 | 100 | 40 |
| 8 | CP-1108B | 4 | 4 | 4 | 80 | 32 | 3 | 20 | 8 | 1 | 100 | 40 |
| 9 | CP-1109B | 4 | 4 | 4 | 80 | 32 | 3 | 20 | 8 | 1 | 100 | 40 |
| **Total** | | 16 | 16 | **16** | 16 | 16 | **8** | 320 |  |  | 80 | - |  | 400 | - | 200 |  | | | 16 |
| **Grand Total** | | 32 | 32 | **32** | **32** | 16 | **16** | 640 |  |  | 160 |  |  | 800 |  | 400 |  | | |  |

|  |  |
| --- | --- |
| * Student contact hours per week : **32** Hours (Min.) | * Total Marks for M.Sc.-I : **1200** |
| * Theory Lectures : 60 Minutes Each | * Total Credits for M.Sc.-I (Semester I & II) : **48** |
| * CP-Core Paper * CPPR-Core Paper Practical * Course list as per enclosed Annexure. | |
| * Practical Examination is Semester wise. | |
| * ***Separate passing is mandatory for Theory, Internal and Practical.*** | |

The following shall be the courses of the studies under CBCS pattern

**M.Sc – II (Physics) C B C S PATTERN (2019-20)**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **S E M E S T E R – III (Duration – 6 Months)** | | | | | | | | | | | | | | | | | | | | |
| Sr.No | Course Title | **Teaching Scheme** | | | | | | **Examination scheme** | | | | | | | | | | | | |
| Theory | | | | | | | | Practical  (CPPR) | | |  | |
|  |  | Theory | | | Practical | | | Theory | | | Internal | | | Total | | Total | | | | |  |
|  |  | No.of lectures | Hours | Credits | No. of Lectures | Hours | Credits | Max. | Min. | Hours | Max. | Min. | Hours | Max. | Min. | Max. | Min. | | | Hours. |
| 1 | CP-1112C | 4 | 4 | 4 | 16 | 16 | 8 | 80 | 32 | 3 | 20 | 8 | 1 | 100 | 40 | 200 | | 80 | | 16 |
| 2 | CBP-1113C | 4 | 4 | 4 | 80 | 32 | 3 | 20 | 8 | 1 | 100 | 40 |
| 3 | CP-1116C | 4 | 4 | 4 | 80 | 32 | 3 | 20 | 8 | 1 | 100 | 40 |
| 4 | CP-1117C | 4 | 4 | 4 | 80 | 32 | 3 | 20 | 8 | 1 | 100 | 40 |
|  | **Total** | 16 | 16 | **16** | 16 | 16 | **8** | 320 |  |  | 80 | - |  | 400 | - | 200 |  | | | 16 |
|  | **Semester-IV(duration 6 months)** | | | | | | | | | | | | | | | | | | | |
| 6 | CP-1120D | 4 | 4 | 4 | 16 | 16 | 8 | 80 | 32 | 3 | 20 | 8 | 1 | 100 | 40 | 200 | 80 | | | 16 |
| 7 | CBP-1123D | 4 | 4 | 4 | 80 | 32 | 3 | 20 | 8 | 1 | 100 | 40 |
| 8 | CP-1124D | 4 | 4 | 4 | 80 | 32 | 3 | 20 | 8 | 1 | 100 | 40 |
| 9 | CP-1125D | 4 | 4 | 4 | 80 | 32 | 3 | 20 | 8 | 1 | 100 | 40 |
|  |  | 16 | 16 | **16** | 16 | 16 | **8** | 320 |  |  | 80 | - |  | 400 | - | 200 |  | | | 16 |
|  | Total | 32 | 32 | **32** | 16 | 16 | **16** | 640 |  |  | 160 |  |  | 800 |  | 400 |  | | |  |

|  |  |
| --- | --- |
| * Student contact hours per week : 16 Hours (Min.) | * Total Marks for M.Sc.-II : **1200** |
| * Theory Lectures : 60 Minutes Each | * Total Credits for M.Sc.-II (Semester III & IIV) : **48** |
| * CP-Core Paper CBP-Choice Base Paper * Course list as per enclosed Annexure. | |
| * Practical Examination is semester wise * CPPR-Core Paper Practical. | * **Total Credits for M.Sc. Course : 96** |
| * ***Separate passing is mandatory for Theory, Interna and practical.*** | * **Total Marks for M.Sc. Course : 2400** |

**Annexure**

M.Sc. (Physics) (Part-I)

CORE PAPER (COMPULSORY)

|  |  |  |
| --- | --- | --- |
| **M.Sc. (Physics) Part -I Semester-I (Total Credits = 24)** | | |
| **Paper Code** | **Paper Title** | **Credits** |
| CP-1100A | Mathematical methods of Physics | 4 |
| CP-1101A | Classical Mechanics | 4 |
| CP-1102A | Quantum Mechanics I | 4 |
| CP-1103A | Condensed Matter Physics | 4 |
| CPPR-1104A(Practical Lab-I) | Laboratory/ Practical Course-I | 4 |
| CPPR-1105A (Practical Lab-II) | Seminar +Tutorials on practical Course-I | 4 |
| **M.Sc. (Physics) Part -I Semester-II (Total Credits = 24)** | | |
| **Paper Code** | **Paper Title** | **Credits** |
| CP-1106B | Quantum Mechanics-II | 4 |
| CP-1107B | Statistical Mechanics | 4 |
| CP-1108AB | Electrodynamics | 4 |
| CP-1109B | Atomic & Molecular Physics | 4 |
| CPPR-1110B(Practical Lab-III) | Laboratory/ Practical Course-II | 4 |
| CPPR-1111B(Practical Lab-IV) | Seminar +Tutorials on practical Course-II | 4 |

M.Sc. (Physics) (Part-II)

CORE PAPER (COMPULSORY)

|  |  |  |  |
| --- | --- | --- | --- |
| **M.Sc. (Physics) Part -II Semester-III (Total Credits = 24)** | | | |
| **Paper Code** | **Paper Title** | | **Credits** |
| CP-1112C | Nuclear and Particle Physics (Compulsory) | | 4 |
| **CHOICE BASE PAPER (ANY ONE PAPER)** | | | |
| CBP-1113C | Data Analysis and Statistical Software (2 credits)+ Tutorials/LAB work (2-credits) | | 4 |
| CBP-1114C | Numerical Computing Using MATLAB (2-credits) +Tutorials/LAB work (2-credits) | | 4 |
| CBP-1115C | Computational Programming using Mathematica (2-credits)+Tutorials/LAB work (2-credits) | | 4 |
| **Core Paper(Compulsory Papers)** | | | |
| CP-1116C | | Solid State Physics- I | 4 |
| CP-1117C | | Solid State Physics-II**,(** Semiconductor Physics) | 4 |
| CPPR-1118C(Practical Lab-V) | | Solid State Physics Lab-I | 4 |
| CPPR-1119C( Practical Lab-VI) | | Project +Tutorial Lab-II | 4 |

M.Sc. (Physics) (Part-II)

CORE PAPER (COMPULSORY)

|  |  |  |
| --- | --- | --- |
| **M.Sc. (Physics) Part -II Semester-IV (Total Credits = 24)** | | |
| **Paper Code** | **Paper Title** | **Credits** |
| CP-1120D | EXPERIMENTAL TECHNIQUES | 4 |
| **CHOICE BASE PAPER (ANY ONE PAPER)** | | |
| CBP-1121D | COMPUTATIONAL METHODS AND PROGRAMMING | 4 |
| CBP-1122D | MATLAB Programming and applications (2-credits)  +Tutorials/LAB work (2-credits) | 4 |
| CBP-1123D | Electronic Devices | 4 |
| **Core Paper(Compulsory Papers)** | | |
| CP-1124D | Solid State Physics- II | 4 |
| CP-1125D | Solid State Physics-II**,(** Semiconductor Physics) | 4 |
| CPPR 1126D(Practical Lab-V) | Laboratory/ Practical Course-III | 4 |
| CPPR127D(Practical Lab-VI) | Project + Tutorial Lab-IV | 4 |