

2022 - Engineering Physics

| SEMESTER - I (Common for all B.Tech Courses) | | | | | | |
|-----------------------------------------------------|--------------------|----------------------------------------------------|----------|----------|----------|----------|
| S. No | Course Code | Course Name | L | T | P | C |
| 1 | CH 102 | Fundamental Concepts and Applications of Chemistry | 3 | 0 | 0 | 6 |
| 2 | MA 109 | Calculus-1 (1st Half) | 3 | 1 | 0 | 4 |
| 3 | MA 121 | Calculus-2 (2nd half) | 3 | 1 | 0 | 4 |
| 4 | PH 101 | Quantum Physics and Applications | 2 | 1 | 0 | 6 |
| 5 | BB 103 | Introduction to Modern biology | 3 | 0 | 0 | 6 |
| 6 | CS 103 | Introduction to Programming -1 (Using C) | 3 | 0 | 2 | 4 |
| 7 | EE 103 | Introduction to Programming -2 (Python) | 3 | 0 | 2 | 4 |
| 8 | PH 113 | Hand on science Laboratory-I | 0 | 0 | 3 | 3 |
| 9 | HS 103 | Introduction to Fine Arts | 0 | 0 | 1 | PP/NP |
| 10 | HS 106 | Design Thinking and Creativity | 1 | 0 | 0 | PP/NP |
| 11 | NO101/NO103 | NSO/NSS | 0 | 0 | 1 | PP/NP |
| | Total Credits | | | | | 37 |

| SEMESTER - II | | | | | | |
|----------------------|--------------------|----------------------------------------------------|----------|----------|----------|----------|
| S. No | Course Code | Course Name | L | T | P | C |
| 1 | MA 102 | Linear Algebra (1st half) | 3 | 1 | 0 | 4 |
| 2 | MA 103 | Differential Equations – I (2nd half) | 3 | 1 | 0 | 4 |
| 3 | ME 111 | Engineering Graphics Laboratory | 1 | 0 | 3 | 5 |
| 4 | EE 101 | Introduction to Electrical Systems and Electronics | 3 | 0 | 0 | 6 |
| 5 | CS 201 | Data Structure & Algorithms | 3 | 0 | 0 | 6 |
| 6 | CS 211 | Data Structure & Algorithms Laboratory | 0 | 0 | 3 | 3 |
| 7 | ME 113 | Hands on Engineering Laboratory | 0 | 0 | 3 | 3 |
| 8 | PH 102 | Electricity and Magnetism | 2 | 1 | 0 | 6 |
| 9 | NO102/ NO104 | NSO/NSS | 0 | 0 | 1 | PP/NP |
| | Total Credits | | | | | 37 |

| SEMESTER - III | | | | | | |
|-----------------------|--------------------|-----------------------|----------|----------|----------|----------|
| S. No | Course Code | Course Name | L | T | P | C |
| 1 | PH 314 | Electrodynamics | 2 | 1 | 0 | 6 |
| 2 | ME 201 | Engineering Mechanics | 2 | 1 | 0 | 6 |
| 3 | ME 207 | Thermodynamics | 2 | 1 | 0 | 6 |

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|---------------|--------|-----------------------------------------------|---|---|---|----|
| 4 | EE 210 | Signals and Systems | 2 | 1 | 0 | 6 |
| 5 | EE 221 | Introduction to Probability (Pre mid-sem) | 3 | 0 | 0 | 3 |
| 6 | EE 229 | Electronic Devices (Pre mid-sem) | 3 | 0 | 0 | 3 |
| 7 | EE 202 | Introduction to Analog Circuits (Post midsem) | 3 | 0 | 0 | 3 |
| 8 | PH 211 | Introductory Physics Laboratory | 0 | 0 | 3 | 3 |
| Total Credits | | | | | | 36 |

SEMESTER - IV

| S. No | Course Code | Course Name | L | T | P | C |
|---------------|-------------|---------------------------------|---|---|---|----|
| 1 | PH 323 | Classical Mechanics | 2 | 1 | 0 | 6 |
| 2 | PH 310 | Quantum Mechanics-I | 2 | 1 | 0 | 6 |
| 3 | EE 204 | Digital Systems | 2 | 1 | 0 | 6 |
| 4 | CS 301 | Computer Architecture | 2 | 1 | 0 | 6 |
| 5 | EE 212 | Devices and Circuits Laboratory | 0 | 0 | 3 | 3 |
| 6 | EE 214 | Digital Circuits Laboratory | 0 | 0 | 3 | 3 |
| 7 | CS 311 | Computer Architecture Lab | 0 | 0 | 3 | 3 |
| Total Credits | | | | | | 33 |

SEMESTER - V

| S. No | Course Code | Course Name | L | T | P | C |
|---------------|-------------|----------------------------------------------|---|---|---|----|
| 1 | PH 304 | Statistical Physics | 2 | 1 | 0 | 6 |
| 2 | PH 405 | Quantum Mechanics - II | 2 | 1 | 0 | 6 |
| 3 | EE 321 | Digital Signal Processing (Pre mid-sem) | 3 | 0 | 0 | 3 |
| 4 | EE 227 | Data Analysis (Post mid-sem) | 2 | 1 | 0 | 3 |
| 5 | ME 203 | Fluid Mechanics | 2 | 1 | 0 | 6 |
| 6 | EE 315 | Digital Signal Processing Lab (Post mid-sem) | 0 | 0 | 2 | 2 |
| 7 | PH 312 | General Physics Laboratory | 0 | 0 | 3 | 3 |
| 8 | HS 201 | Economics | 3 | 0 | 0 | 6 |
| Total Credits | | | | | | 35 |

SEMESTER - VI

| S. No | Course Code | Course Name | L | T | P | C |
|-------|-------------|--------------------------------------|---|---|---|---|
| 1 | PH 434 | Condensed Matter Physics | 2 | 1 | 0 | 6 |
| 2 | CE s301 | Environmental Studies | 3 | 0 | 0 | 6 |
| 3 | | HSS Elective - I | 3 | 0 | 0 | 6 |
| 4 | | Institute Elective – 1 / RnD Project | 2 | 1 | 0 | 6 |

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|----------------------|--------|-------------------------------|---|---|---|----|
| 5 | PH 411 | Advanced Physics Laboratory | 0 | 0 | 3 | 3 |
| 6 | ME 331 | Mechanics and Measurement Lab | 1 | 0 | 3 | 5 |
| 7 | PH 307 | Seminar – 1 | 0 | 0 | 3 | 3 |
| Total Credits | | | | | | 35 |

SEMESTER - VII

| S. No | Course Code | Course Name | L | T | P | C |
|-------|----------------------|------------------------------|---|---|---|----|
| 1 | | HSS Elective - II | 3 | 0 | 0 | 6 |
| 2 | | Seminar – 2 | 0 | 0 | 3 | 3 |
| 3 | | Institute Elective – 2 | 2 | 1 | 0 | 6 |
| 4 | | Institute Elective – 3/BTP-I | 2 | 1 | 0 | 6 |
| 7 | Total Credits | | | | | 21 |

SEMESTER - VIII

| S. No | Course Code | Course Name | L | T | P | C |
|-------------------------------------------|-------------|--------------------------------|------------|---|---|----|
| 1 | | Institute Elective – 4 | 2 | 1 | 0 | 6 |
| 2 | | Institute Elective – 5 | 2 | 1 | 0 | 6 |
| 3 | | Institute Elective – 6/ BTP-II | 2 | 1 | 0 | 6 |
| Total Credits | | | | | | 18 |
| Overall Credits Required (Minimum) | | | 253 | | | |