# PARUL UNIVERSITY

WAGHODIA, VADODARA

**Subject Teaching & Examination Scheme**

**Course :** BTech | **Curriculum :** ENGG & TECH - BTech - BIO - 2021-22

**Semester - 1**

| Code | Subject | Credit | Lect | Lab | Tut | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 203105101 | Fundamentals of Programming | 4 | 2 | 4 | 0 | 20 | 20 | 20 | 60 | 30 | 40 | 25 | 150 |
| 203106101 | Basic Electrical Engineering | 5 | 4 | 2 | 0 | 20 | 20 | 20 | 60 | 30 | 40 | 25 | 150 |
| 203107152 | Electronics Workshop | 1 | - | 2 | - | - | 20 | - | - | 30 | - | 25 | 50 |
| 203109102 | Elements of Mechanical Engineering | 4 | 3 | 2 | 0 | 20 | 20 | 20 | 60 | 30 | 40 | 25 | 150 |
| 203111101 | Biology | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203191102 | Mathematics-I | 5 | 3 | 0 | 2 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203193101 | Communication Skills - 1 | 2 | 0 | 0 | 2 | - | - | 100 | 0 | - | 40 | - | 100 |
| | Total | 24 | 15 | 10 | 4 | | | | | | | | 800 |

**Lect** - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical

**Theory Passing % :** 40 **Practical Passing % :** 50

**Subject Teaching & Examination Scheme**

**Course :** BTech | **Curriculum :** ENGG & TECH - BTech - BIO - 2021-22

**Semester - 2**

| Code | Subject | Credit | Lect | Lab | Tut | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 203104103 | Environmental Science | 2 | 2 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203107151 | Basic Electronics | 4 | 3 | 2 | 0 | 20 | 20 | 20 | 60 | 30 | 40 | 25 | 150 |
| 203109101 | Engineering Graphics | 4 | 2 | 4 | 0 | 20 | 20 | 20 | 60 | 30 | 40 | 25 | 150 |
| 203191152 | Mathematics-II | 5 | 3 | 0 | 2 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203192152 | Engineering Physics | 5 | 4 | 2 | 0 | 20 | 20 | 20 | 60 | 30 | 40 | 25 | 150 |
| 203193151 | Communication Skills - 2 | 2 | 0 | 0 | 2 | - | - | 100 | 0 | - | 40 | - | 100 |
| | **Total** | **22** | **14** | **8** | **4** | | | | | | | | **750** |

**Lect** - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical

**Theory Passing % :** 40 **Practical Passing % :** 50

**Semester - 3**

| Code | Subject | Credit | Lect | Lab | Tut | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 203107203 | Digital System Design | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203107204 | Digital System Design Lab | 1 | 0 | 2 | 0 | - | 20 | - | - | 30 | - | 25 | 50 |
| 203107205 | Network Theory | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203107206 | Network Theory Lab | 1 | 0 | 2 | 0 | - | 20 | - | - | 30 | - | 25 | 50 |
| 203111201 | Human Anatomy & Physiology | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203111202 | Human Anatomy & Physiology Lab | 1 | 0 | 2 | 0 | - | 20 | - | - | 30 | - | 25 | 50 |
| 203111204 | Simulation and Design Tools | 1 | 0 | 2 | 0 | - | 20 | - | - | 30 | - | 25 | 50 |
| 203111205 | Control Theory | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203111206 | Control Theory Lab | 1 | 0 | 2 | 0 | - | 20 | - | - | 30 | - | 25 | 50 |
| 203111208 | Product Realization | 1 | 0 | 2 | 0 | - | 50 | - | - | - | - | 25 | 50 |
| 203191205 | Complex Variables and PDE | 5 | 3 | 0 | 2 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203193201 | Professional Communication Skills-1 | 2 | 1 | 0 | 1 | - | - | 100 | 0 | - | 40 | - | 100 |
| | **Total** | **25** | **16** | **12** | **3** | | | | | | | | **900** |

**Lect** - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical
**Theory Passing % :** 40 **Practical Passing % :** 50

**Semester - 4**

| Code | Subject | Credit | Lect | Lab | Tut | Internal Marks T | Internal Marks P | Internal Marks CE | External Marks T | External Marks P | Passing Marks (Theory + CE) Int. + Ext. | Passing Marks (Practical) Int. + Ext. | Total Marks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 203111251 | Biochemistry | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203111252 | Biochemistry Lab | 1 | 0 | 2 | 0 | - | 20 | - | - | 30 | - | 25 | 50 |
| 203111253 | Biosensor and Transducers | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203111254 | Biosensor and Transducers Lab | 1 | 0 | 2 | 0 | - | 20 | - | - | 30 | - | 25 | 50 |
| 203111256 | Industrial/Hospital training | 2 | 0 | 2 | 0 | - | 20 | - | - | 30 | - | 25 | 50 |
| 203111257 | Microprocessor & Interfacing | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203111258 | Microprocessor & Interfacing Lab | 1 | 0 | 2 | 0 | 0 | 20 | - | - | 30 | - | 25 | 50 |
| 203111259 | Electronic Devices & Circuits | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203111260 | Electronic Devices & Circuits Lab | 1 | 0 | 2 | 0 | - | 20 | - | - | 30 | - | 25 | 50 |
| 203111261 | Signals and Systems for Biomedical | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203111262 | Signals and Systems for Biomedical Lab | 1 | 0 | 2 | 0 | 0 | 20 | 0 | - | 30 | - | 25 | 50 |
| 203193251 | Professional Communication Skills-2 | 2 | 1 | 0 | 1 | - | - | 100 | 0 | - | 40 | - | 100 |
| | **Total** | **24** | **16** | **12** | **1** | | | | | | | | **900** |

**Lect** - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical
**Theory Passing % :** 40 **Practical Passing % :** 50

## Semester - 5 Open Elective 01

| | | | | | | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Code | Subject | Credit | Lect | Lab | Tut | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 203101346 | Basic Aircraft Science | 2 | 2 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203104346 | Disaster Preparedness and Planning | 2 | 2 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203105346 | Cyber Security | 2 | 2 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203107346 | Fundamentals of Communication Engineering | 2 | 2 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203108346 | Internet of Things | 2 | 2 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203109346 | Renewable Energy Sources | 2 | 2 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |

## Semester - 5

| | | | | | | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Code | Subject | Credit | Lect | Lab | Tut | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 203111301 | Biological Modelling and Simulation | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203111302 | Biological Modeling and Simulation Lab | 1 | 0 | 2 | 0 | - | 20 | - | - | 30 | - | 25 | 50 |
| 203111303 | Intellectual Property Rights and Bioethics | 2 | 2 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203111304 | Mini Project | 2 | 0 | 2 | 0 | - | 20 | - | - | 30 | - | 25 | 50 |
| 203111305 | Medical Instrumentation and Surgical Procedures | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203111306 | Medical Instrumentation and Surgical Procedures Lab | 1 | 0 | 2 | 0 | - | - | - | - | 30 | - | 25 | 50 |
| 203111307 | Hospital Management Systems | 2 | 2 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |

## Semester - 5

| Code | Subject | Credit | Lect | Lab | Tut | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 203193301 | Programming Skills and Placement Essentials (All Branches Except CSE/IT/ICT) | 2 | 1 | 0 | 1 | - | - | 100 | 0 | - | 40 | - | 100 |
| | Open Elective 01 (Complsory Subjects :1) - | 2 | 2 | 0 | 0 | - | - | - | - | - | - | - | 100 |
| | PEC  01-LAB (Complsory Subjects :1) - | 1 | 0 | 2 | 0 | - | - | - | - | - | - | - | 50 |
| | PEC 01 (Complsory Subjects :1) - | 3 | 3 | 0 | 0 | - | - | - | - | - | - | - | 100 |
| | **Total** | **22** | **16** | **8** | **1** | | | | | | | | **900** |

## Semester - 5 PEC 01

| Code | Subject | Credit | Lect | Lab | Tut | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 203111331 | Biomaterials & Implants | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203111333 | Nuclear medicine | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203111335 | Telemedicine | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |

**Semester - 5 PEC  01-LAB**

| Code | Subject | Credit | Lect | Lab | Tut | Internal Marks T | Internal Marks P | Internal Marks CE | External Marks T | External Marks P | Passing Marks (Theory + CE) Int. + Ext. | Passing Marks (Practical) Int. + Ext. | Total Marks |
|------|---------|--------|------|-----|-----|---|---|----|---|---|----------|----------|-------|
| 203111332 | Biomaterials & Implants Lab | 1 | 0 | 2 | 0 | - | - | - | - | 30 | - | 25 | 50 |
| 203111334 | Nuclear medicine Lab | 1 | 0 | 2 | 0 | - | - | - | - | 30 | - | 25 | 50 |
| 203111336 | Telemedicine Lab | 1 | 0 | 2 | 0 | - | - | - | - | 30 | - | 25 | 50 |

**Lect** - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical

**Theory Passing % :** 40 **Practical Passing % :** 50

## Semester - 6 Open Elective 02

| Code | Subject | Credit | Lect | Lab | Tut | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | Total Marks |
|------|---------|--------|------|-----|-----|---|---|----|----|----|-------------|-------------|-------------|
| | | | | | | **Internal Marks** | | | **External Marks** | | **Passing Marks (Theory + CE)** | **Passing Marks (Practical)** | **Total Marks** |
| 203100351 | Life Science | 2 | 2 | 0 | 0 | 60 | - | 40 | 0 | 0 | 40 | 0 | 100 |
| 203100352 | Biology for Engineers | 2 | 2 | 0 | 0 | 60 | - | 40 | 0 | 0 | 40 | 0 | 100 |
| 203100353 | Engineering Geology | 2 | 2 | 0 | 0 | 60 | - | 40 | 0 | 0 | 40 | 0 | 100 |
| 203100354 | Landscape Planning and Design | 2 | 2 | 0 | 0 | 60 | - | 40 | 0 | 0 | 40 | 0 | 100 |
| 203100355 | Fundamentals of Management | 2 | 2 | 0 | 0 | 60 | - | 40 | 0 | 0 | 40 | 0 | 100 |
| 203100356 | Corporate Social Responsibility | 2 | 2 | 0 | 0 | 60 | - | 40 | 0 | 0 | 40 | 0 | 100 |
| 203100357 | Innovation and Entrepreneurship | 2 | 2 | 0 | 0 | 60 | - | 40 | 0 | 0 | 40 | 0 | 100 |
| 203100358 | Constitution of India | 2 | 2 | 0 | 0 | 60 | - | 40 | 0 | 0 | 40 | 0 | 100 |
| 203100359 | Cyber Law & Ethics | 2 | 2 | 0 | 0 | 60 | - | 40 | 0 | 0 | 40 | 0 | 100 |

## Semester - 6

| Code | Subject | Credit | Lect | Lab | Tut | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | Total Marks |
|------|---------|--------|------|-----|-----|---|---|----|----|----|-------------|-------------|-------------|
| | | | | | | **Internal Marks** | | | **External Marks** | | **Passing Marks (Theory + CE)** | **Passing Marks (Practical)** | **Total Marks** |
| 203111351 | Diagnostic Techniques and Instrumentation | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203111352 | Diagnostic Techniques and Instrumentation Lab | 1 | 0 | 2 | 0 | - | 20 | - | - | 30 | - | 25 | 50 |
| 203111354 | Mini Project | 2 | 0 | 2 | - | - | 20 | - | - | 30 | - | 25 | 50 |
| 203111355 | Biomedical Signal Processing | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203111356 | Biomedical Signal Processing Lab | 1 | 0 | 2 | 0 | - | 20 | - | - | 30 | - | 25 | 50 |

## Semester - 6

| Code | Subject | Credit | Lect | Lab | Tut | Internal Marks T | Internal Marks P | Internal Marks CE | External Marks T | External Marks P | Passing Marks (Theory + CE) Int. + Ext. | Passing Marks (Practical) Int. + Ext. | Total Marks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 203111357 | Microcontroller and Interfacing | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203111358 | Microcontroller and Interfacing Lab | 1 | 0 | 2 | 0 | - | 20 | - | - | 30 | - | 25 | 50 |
| | Open Elective 02 (Complsory Subjects :1) - | 2 | 2 | 0 | 0 | - | - | - | - | - | - | - | 100 |
| | Open Elective 03 (Complsory Subjects :1) - | 2 | 1 | 0 | 1 | - | - | - | - | - | - | - | 100 |
| | PEC 02 (Complsory Subjects :1) - | 3 | 3 | 0 | 0 | - | - | - | - | - | - | - | 100 |
| | PEC 02-LAB (Complsory Subjects :1) - | 1 | 0 | 2 | 0 | - | - | - | - | - | - | - | 50 |
| | **Total** | **22** | **15** | **10** | **1** | | | | | | | | **850** |

## Semester - 6 PEC 02

| Code | Subject | Credit | Lect | Lab | Tut | Internal Marks T | Internal Marks P | Internal Marks CE | External Marks T | External Marks P | Passing Marks (Theory + CE) Int. + Ext. | Passing Marks (Practical) Int. + Ext. | Total Marks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 203111381 | Bioinformatics | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203111383 | Biomechanics & Rehabilitation Engineering | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203111385 | Embedded System | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |

**Course :** BTech | **Curriculum :** ENGG & TECH - BTech - BIO - 2021-22

## Semester - 6 PEC 02-LAB

| Code | Subject | Credit | Lect | Lab | Tut | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 203111382 | Bioinformatics Lab | 1 | 0 | 2 | 0 | - | 20 | - | - | 30 | - | 25 | 50 |
| 203111384 | Biomechanics & Rehabilitation Engineering Lab | 1 | 0 | 2 | 0 | - | 20 | - | - | 30 | - | 25 | 50 |
| 203111386 | Embedded System Lab | 1 | 0 | 2 | 0 | - | 20 | - | - | 30 | - | 25 | 50 |

## Semester - 6 Open Elective 03

| Code | Subject | Credit | Lect | Lab | Tut | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 203193351 | Advanced Programming and Placement Essentials | 2 | 1 | 0 | 1 | - | - | 100 | 0 | - | 40 | - | 100 |

**Lect** - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical
**Theory Passing % :** 40 **Practical Passing % :** 50

## Semester - 7

| Code | Subject | Credit | Lect | Lab | Tut | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|------|---------|--------|------|-----|-----|---|---|----|---|---|---|---|---|
| | | | | | | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 203111401 | Medical Imaging Technology | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203111402 | Medical Imaging Technology Lab | 1 | 0 | 2 | 0 | - | 20 | - | - | 30 | - | 25 | 50 |
| 203111403 | Therapeutic Equipments | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203111404 | Therapeutic Equipments Lab | 1 | 0 | 2 | 0 | - | 20 | - | - | 30 | - | 25 | 50 |
| 203111405 | Analytical techniques & Instrumentation | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203111406 | Analytical techniques & Instrumentation Lab | 1 | 0 | 2 | 0 | - | 20 | - | - | 30 | - | 25 | 50 |
| 203111407 | Hospital Information System & Regulatory Standards | 2 | 2 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203111408 | Virtual Biomedical Instrumentation | 1 | 0 | 2 | 0 | - | 50 | - | - | 50 | - | 50 | 100 |
| 203111410 | Project-I | 6 | 0 | 12 | 0 | - | 100 | - | - | 100 | - | 100 | 200 |
| 203111412 | Summer Internship | 2 | 0 | 0 | 0 | - | 50 | - | - | - | - | 25 | 50 |
| | PEC 03 (Complsory Subjects :1) - | 3 | 3 | 0 | 0 | - | - | - | - | - | - | - | 100 |
| | PEC 03-LAB (Complsory Subjects :1) - | 1 | 0 | 2 | 0 | - | - | - | - | - | - | - | 50 |
| | **Total** | **27** | **14** | **22** | **0** | | | | | | | | **1050** |

## Semester - 7 PEC 03

| Code | Subject | Credit | Lect | Lab | Tut | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|------|---------|--------|------|-----|-----|---|---|----|---|---|---|---|---|
| | | | | | | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 203111431 | Nanotechnology for Medical Applications | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |

## Semester - 7 PEC 03

| Code | Subject | Credit | Lect | Lab | Tut | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 203111433 | Internet of Things | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203111435 | Artificial Organ & Rehabilitation Devices | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |

## Semester - 7 PEC 03-LAB

| Code | Subject | Credit | Lect | Lab | Tut | Internal Marks | | | External Marks | | Passing Marks (Theory + CE) | Passing Marks (Practical) | Total Marks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | T | P | CE | T | P | Int. + Ext. | Int. + Ext. | |
| 203111432 | Nanotechnology for Medical Applications Lab | 1 | 0 | 2 | 0 | - | 20 | - | - | 30 | - | 25 | 50 |
| 203111434 | Internet of Things Lab | 1 | 0 | 2 | 0 | - | 20 | - | - | 30 | - | 25 | 50 |
| 203111436 | Artificial Organ & Rehabilitation Devices Lab | 1 | 0 | 2 | 0 | - | 20 | - | - | 30 | - | 25 | 50 |

**Lect** - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical
**Theory Passing % :** 40 **Practical Passing % :** 50

## Semester - 8

| Code | Subject | Credit | Lect | Lab | Tut | Internal Marks T | Internal Marks P | Internal Marks CE | External Marks T | External Marks P | Passing Marks (Theory + CE) Int. + Ext. | Passing Marks (Practical) Int. + Ext. | Total Marks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 203111453 | Digital image processing for Biomedical | 3 | 3 | 0 | 0 | 20 | - | - | 60 | - | 40 | - | 100 |
| 203111454 | Digital image processing for Biomedical Lab | 1 | 0 | 2 | 0 | - | 20 | - | - | 30 | - | 25 | 50 |
| 203111456 | Project-II | 7 | 0 | 14 | 0 | - | 100 | - | - | 100 | - | 100 | 200 |
| | PEC 04 (Complsory Subjects :1) - | 3 | 3 | 0 | 0 | - | - | - | - | - | - | - | 100 |
| | **Total** | **14** | **6** | **16** | **0** | | | | | | | | **450** |

## Semester - 8 PEC 04

| Code | Subject | Credit | Lect | Lab | Tut | Internal Marks T | Internal Marks P | Internal Marks CE | External Marks T | External Marks P | Passing Marks (Theory + CE) Int. + Ext. | Passing Marks (Practical) Int. + Ext. | Total Marks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 203111481 | Tissue Engineering | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203111483 | Radiotherapy | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |
| 203111485 | Biomedical microsystems | 3 | 3 | 0 | 0 | 20 | - | 20 | 60 | - | 40 | - | 100 |

**Lect** - Lecture, **Tut** - Tutorial, **Lab** - Lab, **T** - Theory, **P** - Practical, **CE** - CE, **T** - Theory, **P** - Practical
**Theory Passing % :** 40 **Practical Passing % :** 50