



# **D. Y. Patil College of Engineering and Technology**

Kasaba Bawada, Kolhapur

## **M. Tech. Programme Structure (Autonomous)**

---

**(Department of Electronics &  
Telecommunication Engineering)**

**2020-21**

## Structure for First Year M. Tech. Programme in Engineering

### (Semester-I)

| Sr. No.       | Course Code | Course Type | Name of the Course                              | Teaching Scheme per Week |          |           |           | Total Marks | Evaluation Scheme |            |                        |    |
|---------------|-------------|-------------|---|--------------------------|----------|-----------|-----------|-------------|-------------------|------------|------------------------|----|
|               |             |             |   | Lecture                  | Tutorial | Practical | Credits   |             | Type              | Max Marks  | Min. Marks for Passing |    |
| 1             | 202ETL601   | PCC         | Random Processes                                | 3                        | 1        | 0         | 4         | 100         | ISE               | 20         | 20                     | 40 |
|               |             |             |   |                          |          |           |           | MSE         | 30                |            |                        |    |
|               |             |             |   |                          |          |           |           | ESE         | 50                |            |                        |    |
| 2             | 202ETL602   | PCC         | Embedded System Design & Linux                  | 3                        | 0        | 0         | 3         | 100         | ISE               | 20         | 20                     | 40 |
|               |             |             |   |                          |          |           |           | MSE         | 30                |            |                        |    |
|               |             |             |   |                          |          |           |           | ESE         | 50                |            |                        |    |
| 3             | 202ETL603   | PEC1        | Elective – I                                    | 3                        | 0        | 0         | 3         | 100         | ISE               | 20         | 20                     | 40 |
|               |             |             |   |                          |          |           |           | MSE         | 30                |            |                        |    |
|               |             |             |   |                          |          |           |           | ESE         | 50                |            |                        |    |
| 4             | 202ETL604   | PEC2        | Elective – II                                   | 3                        | 1        | 0         | 4         | 100         | ISE               | 20         | 20                     | 40 |
|               |             |             |   |                          |          |           |           | MSE         | 30                |            |                        |    |
|               |             |             |   |                          |          |           |           | ESE         | 50                |            |                        |    |
| 5             | 202ETP602   | PCC-LC      | Embedded System Design & Linux Lab              | 0                        | 0        | 2         | 1         | 25          | ISE               | 25         | 10                     | 10 |
| 6             | 202ETP603   | PEC1-LC     | Elective-I Lab                                  | 0                        | 0        | 2         | 1         | 25          | ISE               | 25         | 10                     | 10 |
| 7             | 202ETP610   | PCC - LC    | Simulation Lab                                  | 0                        | 0        | 2         | 1         | 50          | ISE               | 50         | 20                     | 20 |
| 8             | 202ETP611   | PCC - LC    | Seminar-I                                       | 0                        | 0        | 2         | 1         | 50          | ISE               | 50         | 20                     | 20 |
| 9             | 202ETP612   | MC          | Pedagogic Studies (Non-Credit Mandatory Course) |                          |          |           |           |             |                   |            |                        |    |
| <b>Total:</b> |             |             |   | <b>12</b>                | <b>2</b> | <b>8</b>  |           |             |                   | <b>550</b> |                        |    |
|               |             |             |   | <b>22</b>                |          |           | <b>18</b> | <b>550</b>  |                   |            |                        |    |

## Structure for First Year M. Tech. Programme in Engineering

### (Semester-II)

| Sr. No.       | Course Code | Course Type | Name of the Course                                      | Teaching Scheme per Week |          |           |         | Total Marks | Evaluation Scheme |            |                        |    |
|---------------|-------------|-------------|---|--------------------------|----------|-----------|---------|-------------|-------------------|------------|------------------------|----|
|               |             |             |   | Lecture                  | Tutorial | Practical | Credits |             | T<br>Y<br>P<br>E  | Max. Marks | Min. Marks for Passing |    |
| 1             | 202ETL605   | PCC         | Design of VLSI System                                   | 3                        | 0        | 0         | 3       | 100         | ISE               | 20         | 20                     | 40 |
|               |             |             |   |                          |          |           |         |             | MSE               | 30         |                        |    |
|               |             |             |   |                          |          |           |         |             | ESE               | 50         |                        |    |
| 2             | 202ETL606   | PCC         | Pattern recognition and Machine Learning                | 3                        | 0        | 0         | 3       | 100         | ISE               | 20         | 20                     | 40 |
|               |             |             |   |                          |          |           |         |             | MSE               | 30         |                        |    |
|               |             |             |   |                          |          |           |         |             | ESE               | 50         |                        |    |
| 3             | 202ETL607   | PCC         | Research Methodology & IPR                              | 3                        | 0        | 0         | 3       | 100         | ISE               | 20         | 20                     | 40 |
|               |             |             |   |                          |          |           |         |             | MSE               | 30         |                        |    |
|               |             |             |   |                          |          |           |         |             | ESE               | 50         |                        |    |
| 4             | 202ETL608   | PEC 3       | Elective – III  | 3                        | 1        | 0         | 4       | 100         | ISE               | 20         | 20                     | 40 |
|               |             |             |   |                          |          |           |         |             | MSE               | 30         |                        |    |
|               |             |             |   |                          |          |           |         |             | ESE               | 50         |                        |    |
| 5             | 202ETL609   | PEC 4       | Elective – IV   | 3                        | 1        | 0         | 4       | 100         | ISE               | 20         | 20                     | 40 |
|               |             |             |   |                          |          |           |         |             | MSE               | 30         |                        |    |
|               |             |             |   |                          |          |           |         |             | ESE               | 50         |                        |    |
| 6             | 202ETP605   | PCC-LC      | Design of VLSI System Lab                               | 0                        | 0        | 2         | 1       | 25          | ISE               | 25         | 10                     | 10 |
| 7             | 202ETP606   | PCC-LC      | Pattern recognition and Machine Learning Lab            | 0                        | 0        | 2         | 1       | 25          | ISE               | 25         | 10                     | 10 |
| 8             | 202ETP613   | PCC-LC      | Seminar II  | 0                        | 0        | 2         | 1       | 50          | ISE               | 50         | 20                     | 20 |
| 9             | 202ETP614   | MC          | Stress Management by Yoga (Non-Credit Mandatory Course) |                          |          |           |         |             |                   |            |                        |    |
| <b>Total:</b> |             |             |   | 15                       | 2        | 6         | 20      | <b>600</b>  |                   | <b>600</b> |                        |    |
|               |             |             |   | <b>23</b>                |          |           |         |             |                   |            |                        |    |

## Structure for Second Year M. Tech. Programme in Engineering

(Semester-III)

| Sr. No. | Course Code | Course Type | Name of the Course                      | Teaching Scheme per Week |          |           |         | Total Marks | Evaluation Scheme |            |                        |    |
|---------|-------------|-------------|---|--------------------------|----------|-----------|---------|-------------|-------------------|------------|------------------------|----|
|         |             |             |   | Lecture                  | Tutorial | Practical | Credits |             | Type              | Max. Marks | Min. Marks for Passing |    |
| 1       | 202ETL701   | SLC         | Massive open online course / NPTEL etc. | 0                        | 1        | 0         | 1       | 50          | ISE               | 50         | 20                     | 20 |
| 2       | 202ETP702   | PCC-LC      | Seminar-III                             | 0                        | 0        | 2         | 1       | 50          | ISE               | 50         | 20                     | 20 |
| 3       | 202ETP703   | PROJ        | Dissertation Phase – I                  | 0                        | 0        | 24        | 12      | 100         | ISE               | 50         | 20                     | 20 |
|         |             |             |   |                          |          |           |         |             | ESE-POE           | 50         | 20                     | 20 |
|         |             |             |   | 0                        | 1        | 26        | 14      |             | <b>200</b>        |            |                        |    |
|         |             |             | <b>Total:</b>                           | <b>27</b>                |          |           |         | <b>200</b>  |                   |            |                        |    |

# Structure for Second Year M. Tech. Programme in Engineering

## (Semester-IV)

| Sr. No. | Course Code | Course Type | Name of the Course      | Teaching Scheme per Week |           |           |         | Total Marks | Evaluation Scheme |            |                        |    |
|---------|-------------|-------------|-------------------------|--------------------------|-----------|-----------|---------|-------------|-------------------|------------|------------------------|----|
|         |             |             |                         | Lecture                  | Tutorial  | Practical | Credits |             | Type              | Max Mks    | Min. Marks for Passing |    |
| 1       | 202ETP704   | PROJ        | Dissertation Phase – II | -                        | -         | 32        | 16      | 200         | ISE               | 100        | 40                     | 80 |
|         |             |             |                         |                          |           | 32        | 16      |             | POE               | 100        | 40                     |    |
|         |             |             | <b>Total:</b>           |                          |           | 32        | 16      |             |                   | <b>200</b> |                        |    |
|         |             |             |                         |                          | <b>32</b> |           |         | <b>200</b>  |                   |            |                        |    |

### Program Electives:

| Sr. No. | Elective – I                    | Elective – II   | Elective – III                  | Elective – IV                         |
|---------|---------------------------------|---|---------------------------------|---------------------------------------|
| 1       | Wireless & Mobile Communication | Industrial Automation and Process Control             | Error Control Coding Techniques | Internet of Things                    |
| 2       | Wireless Sensor Networks        | Application Specific Integrated Circuit (ASIC) Design | Network Security & Cryptography | Multiple Input Multiple Output System |

### Note:

- 1) Tutorials and practicals shall be conducted in batches with batch size of 9 students maximum.
- 2) For Pre-Dissertation Seminar, work load will be for two students
- 3) Dissertation Phase I & Dissertation phase II work load will be for one student.
- 4) Self-Learning Course (SLC) should be preferably on dissertation area and it should be completed before the end of semester III
- 5) Pedagogic Studies & Stress Management by Yoga(Non-Credit Mandatory Course) :
  - a. This course is self-study course
  - b. This Course will be assessed by conducting objective type examination for 50 marks for which criteria for passing is 40% (20 marks).
  - c. Result of student will be declared only if student passes this course.

## **Evaluation Methods:**

**1) In Semester Evaluation (ISE-Theory) 20 marks:** ISE-1 and ISE-2 can be done by using following modes

- 1) Online test
- 2) Surprise test
- 3) Open book-test
- 4) Self-Study
- 5) Self-learning topic
- 6) Case study
- 7) Demonstrations
- 8) Seminars
- 9) Assignments
- 10) Active learning methods

ISE (Lab) 25 marks: Lab assessment is to be done using continuous assessment method in which faculty has to evaluate student's performance based upon defined rubrics only and shown to the students

**2) Mid Semester Examination (MSE)** will be conducted for 30 marks

**3) End Semester Examination (ESE) 50 marks :-** ESE will be conducted on entire syllabus for 100 marks for 3 hours duration and converted to 50 marks