



DETAILED TEACHING SCHEME

SCHOOL OF ENGINEERING
ACADEMIC YEAR – 2022-23

PROGRAM: B. TECH – ELECTRICAL ENGINEERING
SEMESTER – I (Batch – 2022-26)

DEFINITION OF CREDIT: **1. Lecture (L):** 1 hour/week/semester, **2. Practical (P):** 2 hours/week/semester **3. Tutorial (T):** 2 hours/week/semester

TEACHING SCHEME

| Course Code | Course Name | Teaching Hours | | | SSH | Credits | Max. Marks of TSEE | CIE | PSEE | Remarks if any |
|-------------|---|----------------|----------|-----------|-------------|-----------|--------------------|-----|------|----------------|
| | | Lecture | Tutorial | Practical | | | | | | |
| APS101 | Calculus | 4 | 0 | 0 | 2.5 | 4 | 100 | Y | N | - |
| APS121 | Applied Science | 3 | 0 | 2 | 1 | 4 | 100 | Y | Y | - |
| APS143 | Environmental Sciences* | 2 | 0 | 0 | 2 | 3 | 50 | Y | N | - |
| CV114 | Fundamentals of Civil Engineering | 3 | 0 | 2 | 2 | 4 | 100 | Y | Y | - |
| ESLB2A | English As a Second Language - Intermediate Level-I | 3 | 0 | 0 | 2 | 3 | 100 | Y | N | - |
| ME123 | Fundamentals of Mechanical Engineering | 3 | 0 | 2 | 2 | 4 | 100 | Y | Y | - |
| WP101 | Workshop Practice-I | 0 | 0 | 4 | 2 | 2 | 00 | Y | Y | |
| ME127 | Software Lab-I | 0 | 0 | 2 | 3 | 1 | 00 | Y | Y | |
| | Total | 18 | 0 | 10 | 12.5 | 25 | | | | |
| | Total Teaching Hours -28 | | | | | | | | | |

1. CIE – Continuous internal evaluation (TCIE &/OR PCIE)
 2. SSH - Self-study hours
 3. PSEE – Practical semester end examination including ITD, Dissertation, Industrial project, Industrial training etc..
 4. (@) Audit Course / Non-Gradual Course
 5. TSEE – Theory Semester End Examinations
 6. Y – Yes, I N-No
- *Students are required to undergo 15 hrs. training / field visit / workshop in relevant field during semester

Signature of HOD

Signature of Director



DETAILED TEACHING SCHEME

SCHOOL OF ENGINEERING
ACADEMIC YEAR – 2022-23

PROGRAM: B. TECH – ELECTRICAL ENGINEERING
SEMESTER –II (Batch – 2022-26)

DEFINITION OF CREDIT: **1. Lecture (L):** 1 hour/week/semester, **2. Practical (P):** 2 hours/week/semester **3. Tutorial (T):** 2 hours/week/semester

TEACHING SCHEME

| Course Code | Course Name | Teaching Hours | | | SSH | Credits | Max. Marks of TSEE | CIE | PSEE | Remarks if any |
|-------------|--|----------------|----------|-----------|-----------|-----------|--------------------|-----|------|----------------|
| | | Lecture | Tutorial | Practical | | | | | | |
| APS201 | Vector Calculus and Linear Algebra | 4 | 0 | 0 | 3 | 4 | 100 | Y | N | - |
| CE209 | Computer Programming | 3 | 0 | 0 | 1 | 3 | 100 | Y | Y | - |
| ESLB2B | English As a Second Language - Intermediate Level-II | 3 | 0 | 0 | 2 | 3 | 100 | Y | N | - |
| ME124 | Engineering Drawing | 3 | 0 | 4 | 3 | 5 | 100 | Y | Y | - |
| WP201 | Workshop Practice-II | 0 | 0 | 2 | 2 | 1 | 00 | Y | Y | - |
| EL105 | Fundamentals of Electrical Engineering | 2 | 0 | 2 | 2 | 3 | 100 | Y | Y | - |
| EL324 | Electronic Devices and Circuits | 3 | 0 | 2 | 2 | 4 | 100 | Y | Y | Revised |
| | Total | 18 | 0 | 10 | 15 | 23 | | | | |
| | Total Teaching Hours -28 | | | | | | | | | |

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2. SSH - Self-study hours
3. PSEE – Practical semester end examination including ITD, Dissertation, Industrial project, Industrial training etc..
4. (@) Audit Course / Non-Gradual Course
5. TSEE – Theory Semester End Examinations
6. Y – Yes I N- No

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DETAILED TEACHING SCHEME

SCHOOL OF ENGINEERING
ACADEMIC YEAR – 2022-23

PROGRAM: B. TECH – ELECTRICAL ENGINEERING
SEMESTER – III (Batch – 2021-25)
DEFINITION OF CREDIT: **1. Lecture (L):** 1 hour/week/semester, **2. Practical (P):** 2 hours/week/semester **3. Tutorial (T):** 2 hours/week/semester

TEACHING SCHEME

| Course Code | Course Name | Teaching Hours | | | SSH | Credits | Max. Marks of TSEE | CIE | PSEE | Remarks if any |
|-------------|---------------------------------|----------------|----------|-----------|-----------|-----------|--------------------|-----|------|----------------|
| | | Lecture | Tutorial | Practical | | | | | | |
| APS301 | Differential Equations | 4 | 0 | 0 | 2 | 4 | 100 | Y | N | - |
| EC211 | Digital Circuit Design | 3 | 0 | 2 | 3 | 4 | 100 | Y | Y | - |
| EL316 | Network Analysis and Synthesis | 3 | 0 | 2 | 2 | 4 | 100 | Y | Y | - |
| EL317 | Energy Sources | 3 | 0 | 0 | 2 | 3 | 100 | Y | N | - |
| EL318 | DC Machines and Transformers | 3 | 0 | 2 | 2 | 4 | 100 | Y | Y | - |
| EL323 | Power System-I | 3 | 4 | 0 | 3 | 5 | 100 | Y | N | - |
| | Total | 19 | 4 | 6 | 14 | 24 | | | | - |
| | Total Teaching Hours -29 | | | | | | | | | |

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2. SSH - Self-study hours
3. PSEE – Practical semester end examination including ITD, Dissertation, Industrial project, Industrial training etc..
4. (@) Audit Course / Non-Gradual Course
5. TSEE – Theory Semester End Examinations
6. Y – Yes I N- No

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DETAILED TEACHING SCHEME

SCHOOL OF ENGINEERING
ACADEMIC YEAR – 2022-23
DEFINITION OF CREDIT: 1. **Lecture (L)**: 1 hour/week/semester, 2. **Practical (P)**: 2 hours/week/semester

PROGRAM: B. TECH – ELECTRICAL ENGINEERING
SEMESTER – IV (Batch – 2021-25)
DEFINITION OF CREDIT: 1. **Lecture (L)**: 1 hour/week/semester, 2. **Practical (P)**: 2 hours/week/semester 3. **Tutorial (T)**: 2 hours/week/semester

TEACHING SCHEME

| Course Code | Course Name | Teaching Hours | | | SSH | Credits | Max. Marks of TSEE | CIE | PSEE | Remarks if any |
|-------------|---|----------------|---|-----------|-----------|-----------|--------------------|-----|------|----------------|
| | | Lecture | Tutorial | Practical | | | | | | |
| | | APS411 | Complex Variables and Numerical Methods | 4 | | | | | | |
| EL416 | Rotating AC Machines | 4 | 0 | 2 | 2 | 5 | 100 | Y | Y | - |
| EL418 | Power System-II | 3 | 2 | 0 | 2 | 4 | 100 | Y | N | - |
| EL421 | Engineering Electromagnetics | 2 | 0 | 0 | 2 | 2 | 100 | Y | N | Revised |
| EL427 | Electrical Measurements and Instrumentation | 3 | 0 | 2 | 2 | 4 | 100 | Y | Y | - |
| EL511 | Analog Electronics | 3 | 0 | 2 | 2 | 4 | 100 | Y | Y | - |
| NEN001 | Orientation Program in Entrepreneurship | 2 | 0 | 0 | 1 | 2 | 100 | Y | N | - |
| | Total | 21 | 2 | 6 | 13 | 25 | 50 | | | |
| | Total Teaching Hours- 29 | | | | | | | | | |

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4. (@) Audit Course / Non-Gradual Course
5. TSEE – Theory Semester End Examinations
6. Y – Yes I N- No

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DETAILED TEACHING SCHEME

SCHOOL OF ENGINEERING
ACADEMIC YEAR – 2022-23
DEFINITION OF CREDIT: **1. Lecture (L):** 1 hour/week/semester, **2. Practical (P):** 2 hours/week/semester **3. Tutorial (T):** 2 hours/week/semester

PROGRAM: B. TECH – ELECTRICAL ENGINEERING
SEMESTER – V (Batch – 2020-24)

DEFINITION OF CREDIT: **1. Lecture (L):** 1 hour/week/semester, **2. Practical (P):** 2 hours/week/semester **3. Tutorial (T):** 2 hours/week/semester

| TEACHING SCHEME | | | | | | | | | | |
|-----------------|---|----------------|----------|-----------|--------------|-----------|--------------------|-----|------|----------------|
| Course Code | Course Name | Teaching Hours | | | SSH | Credits | Max. Marks of TSEE | CIE | PSEE | Remarks if any |
| | | Theory | Tutorial | Practical | | | | | | |
| EL513 | Power System Operation and Control | 3 | 2 | 2 | 3 | 5 | 100 | Y | Y | - |
| EL516 | Electrical Power Utilization and Traction | 3 | 0 | 0 | 1 | 3 | 100 | Y | N | - |
| EL519 | Power Electronics-I | 3 | 0 | 2 | 2 | 4 | 100 | Y | Y | - |
| EL520 | Control Systems | 3 | 2 | 2 | 3 | 5 | 100 | Y | Y | Revised |
| EL608 | Green Energy Generation and Control | 3 | 0 | 2 | 2 | 4 | 100 | Y | Y | - |
| PC501 | Rural Internship* | 0 | 0 | 0 | 0 | 3 | - | Y | Y | - |
| XXXX | University Elective-III | 3 | 0 | 0 | 3/2 | 3 | 100 | Y | N | - |
| | Total | 18 | 4 | 8 | 14/13 | 27 | | | | |
| | Total Teaching Hours- 30 | | | | | | | | | |

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 4. (@) Audit Course / Non-Gradual Course
 5. TSEE – Theory Semester End Examinations
 6. Y – Yes, I N- No
- * Students are required to undergo 15 hrs. training / field visit / workshop in relevant field during semester

Signature of HOD

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DETAILED TEACHING SCHEME

SCHOOL OF ENGINEERING
ACADEMIC YEAR – 2022-23
DEFINITION OF CREDIT: 1. **Lecture (L)**: 1 hour/week/semester, 2. **Practical (P)**: 2 hours/week/semester

PROGRAM: B. TECH – ELECTRICAL ENGINEERING
SEMESTER – VI (Batch -2020-24)

DEFINITION OF CREDIT: 1. **Lecture (L)**: 1 hour/week/semester, 2. **Practical (P)**: 2 hours/week/semester 3. **Tutorial (T)**: 2 hours/week/semester

TEACHING SCHEME

| Course Code | Course Name | Teaching Hours | | | SSH | Credits | Max. Marks of TSEE | CIE | PSEE | Remarks if any |
|-------------|---|----------------|----------|-----------|------------------|-----------|--------------------|-----|------|----------------|
| | | Theory | Tutorial | Practical | | | | | | |
| EL517 | Microprocessor and Microcontroller | 3 | 0 | 2 | 2 | 4 | 100 | Y | Y | - |
| EL613 | High Voltage Engineering | 3 | 0 | 2 | 2 | 4 | 100 | Y | Y | - |
| EL614 | Switchgear and Protection of Power System | 4 | 0 | 2 | 2 | 5 | 100 | Y | Y | - |
| EL616 | Power Electronics-II | 3 | 0 | 2 | 1.5 | 4 | 100 | Y | Y | - |
| EL915 | Power System Design and Practices | 3 | 0 | 0 | 2 | 3 | 100 | Y | N | - |
| ELXXX | Department Elective-I | 3 | 0 | 0 | 3/2 | 3 | 100 | Y | N | - |
| XXXXX | University Elective-IV | 3 | 0 | 0 | 3/2 | 3 | 100 | Y | N | - |
| | TOTAL | 22 | 0 | 8 | 15.5/13.5 | 26 | | | | |
| | Total Teaching Hours-30 | | | | | | | | | |

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2. SSH - Self-study hours
3. PSEE – Practical semester end examination including ITD, Dissertation, Industrial project, Industrial training etc..
4. (@) Audit Course / Non-Gradual Course
5. TSEE – Theory Semester End Examinations
6. Y – Yes I N- No

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DETAILED TEACHING SCHEME

SCHOOL OF ENGINEERING
ACADEMIC YEAR – 2022-23
DEFINITION OF CREDIT: 1. **Lecture (L):** 1 hour/week/semester, 2. **Practical (P):** 2 hours/week/semester

PROGRAM: B. TECH – ELECTRICAL ENGINEERING
SEMESTER –VII (Batch – 2019-23)

DEFINITION OF CREDIT: 1. **Lecture (L):** 1 hour/week/semester, 2. **Practical (P):** 2 hours/week/semester 3. **Tutorial (T):** 2 hours/week/semester

TEACHING SCHEME

| Course Code | Course Name | Teaching Hours | | | SSH | Credits | Max. Marks of TSEE | CIE | PSEE | Remarks if any |
|-------------|---|----------------|----------|-----------|-----------|-----------|--------------------|-----|------|----------------|
| | | Lecture | Tutorial | Practical | | | | | | |
| EL710 | Commissioning and Testing of Electrical Equipment | 3 | 0 | 2 | 2 | 4 | 100 | Y | Y | - |
| EL711 | Project* | 0 | 0 | 2 | 5 | 5* | - | Y | Y | - |
| EL712 | Advances in Power Systems | 3 | 0 | 2 | 2 | 4 | 100 | Y | Y | - |
| EL713 | Electrical Machine Design | 3 | 2 | 0 | 3 | 4 | 100 | Y | N | - |
| EL724 | Electric Drives | 3 | 0 | 2 | 2 | 4 | 100 | Y | Y | - |
| EL9XX | Department Elective-II | 3 | 0 | 0 | 2/2/2 | 3 | 100 | Y | N | - |
| EL9XX | Department Elective-III | 3 | 0 | 2 | 2/2/2 | 4 | 100 | Y | Y | - |
| | Total | 18 | 2 | 10 | 18 | 28 | | | | - |
| | Total Teaching Hours | 30 | | | | | | | | - |

1. CIE – Continuous internal evaluation (TCIE &/OR PCIE)
 2. SSH - Self-study hours
 3. PSEE – Practical semester end examination including ITD, Dissertation, Industrial project, Industrial training etc..
 4. (@) Audit Course / Non-Gradual Course
 5. TSEE – Theory Semester End Examinations
 6. Y – Yes I N- No
- *Students are expected to work 10 hours/week on project. Two (2) hours shall be allotted in regular teaching for project.

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DETAILED TEACHING SCHEME

SCHOOL OF ENGINEERING
 ACADEMIC YEAR – 2022-23
 DEFINATION OF CREDIT: **1. Lecture (L):** 1 hour/week/semester, **2. Practical (P):** 2 hours/week/semester **3. Tutorial (T):** 2 hours/week/semester

PROGRAM: B. TECH – ELECTRICAL ENGINEERING
 SEMESTER – VIII (Batch – 2019-23)

TEACHING SCHEME

| Course Code | Course Name | Teaching Hours | | | SSH | Credits | Max. Marks of TSEE | CIE | PSEE | Remarks if any |
|-------------|---------------------------------|----------------|----------|-----------|----------|-----------|--------------------|-----|------|----------------|
| | | Lecture | Tutorial | Practical | | | | | | |
| EL805 | Industrial Internship* | 0 | 0 | 0 | 0 | 25 | - | Y | Y | - |
| | Total | 0 | 0 | 0 | - | 25 | | | | |
| | Total Teaching Hours- 00 | | | | | | | | | |

1. CIE – Continuous internal evaluation (TCIE &/OR PCIE)
 3. PSEE – Practical semester end examination including ITD, Dissertation, Industrial project, Industrial training etc..
 5. TSEE – Theory Semester End Examinations
- * Students are required to undergo 14-16 weeks training / field visit / workshop in relevant field during semester
2. SSH - Self-study hours
 4. (@) Audit Course / Non-Gradial Course
 6. Y – Yes I N- No

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SYLLABUS

Teaching Scheme

Semester-VIII

| Course Code | Course Name | Teaching Scheme (Hours) | | | Credits (C) |
|-------------|-----------------------|-------------------------|--------------|---------------|-------------|
| | | Theory (L) | Tutorial (T) | Practical (P) | |
| EL805 | Industrial Internship | - | - | - | 25 |
| | Total | - | - | - | 25 |
| | Total Hours | NA | | | |



SYLLABUS

| | |
|----------------------|------------------------------|
| Course Title | INDUSTRIAL INTERNSHIP |
| Course Code | EL805 |
| Course Credit | 25 |

Course Learning Outcomes:

After successful completion of Industrial Training, learners shall be able to:

- **Integrate** classroom theory with workplace practice.
- **Develop** the technical skills, best practices and knowledge required in workplace.
- **Understand** administrative functions and company culture.
- **Recognize** the role of the professional/specialist/manager/supervisor in the industry.
- **Explore** the opportunities for career.
- **Gain** knowledge through research and development.
- **Make gradual** transition from academia to career.

PEDAGOGY

A student is required to undergo one full Semester of Industrial Internship as partial requirement for the fulfillment award of the degree.

A student's practical experience, under supervision in a well-administered agency, office, industry or organization should be commensurate with his or her level of education and future career goals. While the evaluation of the student's performance is based primarily on academic criteria, the practical experience, prospective career fields, and learning about his or her ability to function in a given occupational environment.

Rules and Regulations

Student should

- Follow the company etiquettes and all company regulations.
- Maintain the regularity at the assigned industry.
- Submit a detailed report at the end of the internship along with the certificate from the industry.
- Appear for end semester viva, scheduled as per the academic calendar in order to assess the learning outcomes.