# GUJARAT TECHNOLOGICAL UNIVERSITY

**Bachelor of Engineering**
**Subject code: 3181101**
**Semester – VIII**
**Subject Name:** Internship/ Project

**Type of course:** Project work, seminar and internship in industry

**Prerequisite:** Electronics engineering courses (Basic science, Engineering Science and core courses), Effective Technical Communication and Design Engineering

**Rationale:** To enhance employability skills of the students; Industrial Training or Project work is required. It provides practical experience in a field of Electronics and Communication Engineering and help to reinforce theoretical knowledge gained in different courses to solve real life challenges.

**Teaching and Examination Scheme:**

| Teaching Scheme | | | Credits | Examination Marks | | | | Total Marks |
|---|---|---|---|---|---|---|---|---|
| L | T | P | C | Theory Marks | | Practical Marks | | |
| | | | | ESE (E) | PA (M) | ESE (V) | PA (I) | |
| 0 | 0 | 24 | 12 | 0 | 0 | 100 | 100 | 200 |

**Content:**
Final semester of Electronics & Communication Engineering is dedicated to project work or Industrial Training

**Industrial Training:**

Minimum twelve weeks in an Industry to get exposure to the practical aspects of the Electronics and Communication Engineering. In addition, the student may also work on a specified task or project which may be assigned to him/her by industry mentor or faculty. The outcome of the Industrial Training should be presented in the form of a report.

**Objectives of Industrial Training:**

- To expose students to the industrial environment
- To create competent professionals for the industry.
- To provide possible opportunities to learn, understand and sharpen the real time technical / managerial skills required at the job
- To work on a problem assigned by a mentor at industry, prepare action plan and complete within time limit
- Exposure to the current technological developments relevant to the subject area of training.
- Learn to apply the Technical knowledge in real industrial situations
- To learn, create/prepare report for Project/Framework/research as used in industry with productive (Data in a concise form) and efficient way (with action resolution).
- To explore possibilities of patent or research paper publications
- Expose students to the engineer's responsibilities and ethics.
- To become familiarize with various materials, processes, products and their applications along with relevant aspects of quality control.
- Understand the social, economic and administrative considerations that influence the working environment of industrial organizations

- Understand the psychology of the workers and their habits, attitudes and approach to problem solving
- To strengthen industry-institute linkage and increase employability of the students

OR
In a major project work, students are expected to …

- Survey and study published literature related to project
- Do patent search analysis and submit PSAR (Paten Search Analysis Report)
- Design algorithm/circuit/configuration for the project and analyze/verify through simulations.
- Decide implementation method and list components or parts required.
- Point out practical difficulties faced during implementations and device to solve them.
- Iterate design if feasible to obtain better results.
- Optimize the project design in terms of cost, area, power, computation complexity etc.
- Compare results of projects with other similar design specifications.
- Prepare project report and do presentation before department project committee.
- Conclude the project work and suggest future work.
- Intermediate and final seminar in presence of department project committee for review of the work done
- To explore possibilities of patent or research paper publications

During Training or at Project at institute, Students may be encouraged to take up projects which are aimed at providing solutions to societal problems, reduce drudgery and improving efficiency in rural work, green technologies, utilization of rural and urban waste, sanitation and public health, utilizing non-conventional energy sources, technologies for the benefit of the differently abled people and technologies ready to be implemented in the Institute.

**Course Outcomes:**

| **Sr. No.** | **CO statement** | **Marks % weightage** |
|---|---|---|
| CO-1 | Undertake problem identification, formulation and solution | 20% |
| CO-2 | Design engineering solutions to complex problems utilising a systematic approach and team work | 30% |
| CO-3 | Communicate with engineers and the community at large in written and oral forms | 20% |
| CO-4 | Demonstrate the knowledge and understanding of engineering and management principle and apply it to assigned project | 30% |

**Reference:**

- AICTE Model curriculum

- AICTE Internship Policy: https://www.aicte-india.org/sites/default/files/AICTE%20Internship%20Policy.pdf