
GUJARAT TECHNOLOGICAL UNIVERSITY (GTU)

Semester-VI

Course Title: Internship/Industrial Training

(Course Code: 4363201)

Diploma programme in which this course is offered	Semester in which offered
Information & Communication Technology	6 th Semester

1. RATIONALE

As we can now find out that all Branches of Diploma Engineering are changing rapidly. New and emerging technologies are adding fast and their effects can be seen in our society. Internship is a good option by which students can get flavor of such emerging technology and be familiar with industry environment to identify scope and focus of their career development opportunities. Main objective of internship is hands-on practice to expose students for thinking about professional career by observing, understanding working mechanism of ongoing work of industry and to obtain various types of skills throughout internship program.

This fourteen-week mandatory internship is to equip the students with practical knowledge and provide them exposure to real time industrial environments. Further, in this internship, the option is provided to do internship in Government Agencies/ skill centers/ social sector/ Govt. initiated social schemes/ NGOs etc. The duration of internship will be fourteen weeks. It will be in the 6th Semester fully.

2. COMPETENCY

The purpose of this course is to help the student to attain flavor of the following industry identified competency through summer internship experiences:

- **Develop essential technical skills for a technician-like design, development, debugging, troubleshooting software and firmware of a system**

3. COURSE OUTCOMES (COs)

The practical exercises, the underpinning knowledge and the relevant soft skills associated with the identified competency are to be developed in the student for the achievement of the following COs:

- a) Adopt the engineer's role and responsibilities with ethics.
- b) Get exposure to the industrial environment for professional activities.
- c) Get possible opportunities to learn, understand and sharpen the technical skills required for technical advancement.
- d) Develop managerial skills required for professional career.
- e) Attain skill for writing technical report and prepare poster for presentation.

4. TEACHING AND EXAMINATION SCHEME

Teaching Scheme (In Hours)			Total Credits (L+T+P/2)	Examination Scheme				
				Theory Marks		Practical Marks		Total Marks
L	T	P	C	CA	ESE	CA	ESE	
0	0	36	18	0	0	100	100	200

CA will be carried out based on submitted progress card by Industry resource person and ESE / Assessment will be carried out by institute resources person.

Legends: *L*-Lecture; *T* – Tutorial/Teacher Guided Theory Practice; *P* -Practical; *C* – Credit, *CA* - Continuous Assessment; *ESE* -End Semester Examination.

5. AFFECTIVE DOMAIN OUTCOMES

The following affective Domain Outcomes (ADOs) are embedded in many of the above mentioned COs. More could be added to fulfill the development of this course competency.

- Work as a leader/a team member as role of Engineer.
- Practice environmentally friendly methods and processes.
- Follow safety precautions and ethical practices.

6. SUGGESTED STUDENT ACTIVITIES

They should also collect/record physical evidences for their (student's) portfolio which may be useful for their placement interviews:

- Perform various tasks given by industry resources person during internship.
- Perform various tasks required to complete mini project work under guidance of industry resource person.
- Internship program Interns are required to give a presentation to institute faculty mentor.
- The faculty mentor gives feedback and suggests possible improvements in the work.
- A completion certificate will be issued to all Summer Internship program Interns only after the completion of internship tenure by industry and faculty mentor as well as HOD and same must be put in internship report.
- All interns have to submit internship report as partial completion of diploma in ICT.

7. SUGGESTED SPECIAL INSTRUCTIONAL STRATEGIES (if any)

These are sample strategies, which the faculty mentor can use to accelerate the attainment of the various outcomes in this course. It is desirable to verify that title or subject of internship / training is from the current syllabus and applications in field of what has been already studied. It may be similar to or fall within any of groups categorized broadly as under:

HTML,CSS,Java script, PHP	Cyber Security
Embedded system	Digital Communication
IOT	Computer networking
Data Base management	Network security
Data Structure	Software engineering
Mobile application	Python Programming
Java programming	Arduino
C++ Programming	Raspberry Pi

8. SUGGESTED SOFTWARE / LEARNING WEBSITES

An internship is a short-term program usually offered to students by companies and institutes who require staff for assistance at junior levels. Thus, for the students undergoing internship a professional learning experience is provided to benefit them in their skills as well as career. It will brush existing skills and provide exposure to new skills. Generally, it is provided at entry level in the industry.

Here is a suggestive list for reference only.

- <http://www.gksgujarat.org/>
- <https://anubandham.gujarat.gov.in/home>
- <https://kaushalyaskilluniversity.ac.in/>
- <https://www.internshala.com>
- <https://swayam.gov.in>
- <https://nptel.ac.in/>
- <https://neat.aicte-india.org/>
- <https://www.edx.org/>
- <https://www.coursera.org/>
- <https://www.udemy.com/>

9. PO-COMPETENCY-CO MAPPING

Semester VI	Internship (Course Code: 4363201)						
	Pos						
Competency & Course Outcomes	PO 1 Basic & Discipline specific knowledge	PO 2 Problem Analysis	PO 3 Design/development of solutions	PO 4 Engineering Tools, Experimentation & Testing	PO 5 Engineering practices for society, sustainability & environment	PO 6 Project Management	PO 7 Life-long learning
Competency	Develop essential technical skills for a Technician like design, development, debugging, troubleshooting software and firmware of a system						
CO1) Adopt the engineer's role and responsibilities with ethics.	2	2	2	1	1	3	1
CO2) Get exposure to the industrial environment for professional activities.	2	2	2	1	2	2	2
CO3) Get possible opportunities to learn understand and sharpen the technical skills required for technical	1	2	2	2	3	2	3

advancement.							
CO4) Develop managerial skills required for professional career.	1	2	2	1	3	1	2
CO5) Attain skill for writing technical report and prepare poster for presentation.	1	2	1	1	2	1	2

Legend: '3' for high, '2' for medium, '1' for low and '-' for no correlation of each CO with PO.

Annexure-I Registration Form

Note: Students needs to submit this registration form after finalizing mode of internship.

Student Details												
Enrollment Number												
Student Name												
Student Details	Mobile Number :											
	Email Address:											
Branch												
Code of the Institute	Name of the Institute											
Mentor Details (Institute)	Name:											
	Designation:											
	Mobile No:											
	Email Address:											
Industry Details	Name:											
	Address:											
	Email:											
	Phone:											
	Website:											
Mentor Details (Industry)	Name:											
	Designation:											
	Mobile No:											
	Email Address											
Mode of Internship Carried Out	Offline/ Project											
Title of the Project/ Internship/Industrial Training carried out												
Nature of Work Carried Out	Web Design / Application development (Web / Mobile), Experimental results/ simulations/ Analysis of System(s) etc.... Other please Specify__											

Annexure-II -Suggested Letter for Completion

[Company letter head]

No:

Date

TO WHOM SO EVER IT MAY CONCERN

This is to certify that, Mr. /Mrs. _____

Enrollment No. _____ Student of _____

Has successfully completed a fourteen week/Full semester Internship in the field of _____

From the date: _____ to date: _____.

[90% Attendance is mandatory for completion of Internship]

During the period of his/her summer internship program with us, He / She were exposed to following different fields/areas and were found sincere and hardworking.

1. _____
2. _____
3. _____
4. _____

Industry Mentor Signature

Industry Head

Stamp

Stamp

Annexure-III -Evaluation Rubrics for Institute

Evaluation Rubrics (Institute)

Enrollment No: _____

Branch: ICT

Name of the Student: _____

Date of Evaluation: _____

Internal Evaluation – 50 Marks PA(II) (To be carried out by mentor in consultation with Industry Supervisor) Minimum Passing Marks: 20)					
Parameter	Excellent	Good	Average	Not up the level of Satisfaction	Obtained Marks
Mark range	8-10	6-8	4-6	Below 4	
Knowledge acquisition in specific domain. 10 marks					
Skill and attitude attainment in specific domain 10 marks					
Feedback and suggestions given are incorporated? 10 marks					
Quality of the prepared report and poster. 10 marks					
Quality of the presentation. 10 marks					
Total Marks Obtained Out of 50 PA(II)					

Signature: _____

Institute Resource Examiner Name: _____

**Suggested Evaluation Rubrics for Industry
Evaluation Rubrics (Industry)**

Enrollment No: _____

Branch: ICT

Name of the Student: _____

Date of Evaluation: _____

External Evaluation – 100 Marks ESE(II) (To be carried out by the) Minimum Passing Marks: 40					
Parameter	Excellent	Good	Average	Not up the level of Satisfaction	Obtained Marks
Mark range	16-20	12-16	8-12	Below 8	
Student regularity during the Internship period and proactive ness/ responsiveness towards the given tasks (20 Marks)					
Work Plan, Execution and quality of work in forms of Outcome achieved (20 Marks)					

Engineering Tools and Techniques (20 Marks)					
Quality of poster design and presentation (20 Marks)					
Quality of the report and Skill (20 Marks)					
Total Marks Obtained Out of 100 ESE(II)					

Signature: _____
Common Note:

Industry resource/ External Examiner Name: _____

-
- 1) For Summer Internship / Projects / Seminar etc. Evaluation is based on work done, quality of report, performance in viva-voce, presentation etc. The internal / external assessment is based on the student's performance in viva- voce /work record respectively.
 - 2) In case Industry Supervisor is not available / Institute Mentor and External Faculty can fill up respective evaluation.

Miscellaneous Instructions:

List of Documents to be prepared for Submission:

- Detail report duly signed and approved by the internal/external mentor
- Presentation softcopy approved by the internal/external mentor

Sample forms for Registration and Evaluation of are given below:

- 1) Both forms are mandatory to be filled at the commencement and completion of internship
- 2) A Seminar / Webinar can be arranged so that students coming from different industry / institute / project background can share experiences and learnings to their peers.
- 3) Attached formats for Registration, Completion and Evaluation are suggestive. But, adhering to these formats is anticipated.