

# *Indian Institute of Information Technology, Surat*

## *B.Tech Project Guidelines*

### **Introduction**

1. All B.Tech. final year students shall carry out major project work as a compulsory component of their course curriculum in the 8<sup>th</sup> semester.
2. Aim of the final year project is to develop student's knowledge for solving technical problems through structured project research work in order to produce competent and sound engineers.
3. The project can be done in two modes:
  - a. 6-month B.Tech. Project at campus
  - b. 6-month Industrial Internship
4. Each project activity must be supervised by a faculty member of the concerned department. These faculty members are termed as Supervisors. There can be at most two supervisors for a B. Tech Project; out of which at least one shall be from the Department and the other from outside the Department/Institute.
5. Every student is required to prepare documentary proofs of the activities done by him. The evaluation of these activities will be done by Program Head/Cell In-charge/ Project Head/ TPO/ faculty mentor or Industry Supervisor.
6. The supervisor must monitor the progress being carried out by students on regular basis. The supervisor shall look into the project report prepared in the desired format before the final submission.

### **General Guidelines**

The general guidelines for the B.Tech. project:

- 1) 6-month B.Tech. Project at campus
  - a) Student shall select an internal supervisor and decide on the scope of work he/she would be working as part of his/her project work in consultation with the supervisor.
  - b) Student shall submit Synopsis of his work in consultation with supervisor to T&P office by making appropriate required changes to 'FORMAT – 3'
  - c) Student must maintain a Daily Diary/Daily log of his/her work ('FORMAT – 4') and must report to his/her supervisor daily
  - d) Student must present his/her work to the evaluation panel as and when notified by T&P office pertaining to "Evaluation Scheme"
  - e) The student, after completion of the project, must submit required number of duly signed Project – Report copies to T&P office. Project report must be prepared based on "Project-Report guidelines" provided.
  - f) The student should try to publish his/her project work in reputed conferences/journals.
- 2) 6-month Industrial Internship:
  - a) Student shall find a suitable industrial internship opportunity and request an internal faculty to act as his/her internal supervisor.
  - b) Student shall submit hard-copy of duly filled "Student Internship Program Application" ('FORMAT – 1') to T&P office.

- c) T&P coordinator shall send a “request letter/email from institute to internship provider” by making appropriate required changes to ‘FORMAT – 2’. A copy of duly signed request letter should be provided to the student.
- d) Student shall print “Internship Synopsis” (‘FORMAT – 3’), fill-in as many details as possible, take signature of Faculty Supervisor, and proceed to join the internship at industrial site along with a duly filled and signed copy of ‘FORMAT – 2’ from T&P coordinator
- e) On joining, student shall complete the remaining details of “Internship Synopsis” (‘FORMAT – 3’) and email a scanned copy of the same to T&P coordinator keeping Industrial supervisor and HR into cc. Hard copy should be submitted to T&P office on student’s next campus visit.
- f) Student must maintain a Daily Diary/Daily log of his/her work (‘FORMAT – 4’) and must report to his/her supervisor daily.
- g) Student must present his/her work to the evaluation panel as and when notified by T&P office pertaining to “Evaluation Scheme”
- h) At the end of internship, student must obtain his/her “Supervisor Evaluation of Intern” (‘FORMAT – 5’) report from industrial supervisor and submit the same to T&P office.
- i) Student shall ask for ‘Training Certificate’ to be provided by the industry.
- j) The student, after completion of the internship/project, must submit required number of duly signed Project – Report copies to T&P office. Project report must be prepared as per “Project-Report guidelines” provided.
- k) Student shall submit “Student feedback of Internship” (‘FORMAT – 6’) report to T&P office
- l) The student shall try to publish internship work in conferences and journals with due permission/consent from the organization/industry where he has undergone the internship.

### **Evaluation Scheme**

All B.Tech. 8<sup>th</sup> Semester students have to appear for three presentations during the course.

#### **First/Introductory Presentation**

- a) Shall be held at the beginning of 8<sup>th</sup> Semester
- b) Student presentation shall include: Identification of Problem Domain & Detailed analysis of Feasibility, Objectives and Methodology of Project Proposal, etc.

#### **Second/Mid-sem Presentation**

- c) Shall be held during mid of 8<sup>th</sup> Semester
- d) Student presentation should include: Literature Survey, Design Methodology, Planning of Project work, Demonstration of work-done so far, etc.

#### **Third/Final Presentation**

- e) Shall be held at the end of 8<sup>th</sup> Semester
- f) Student presentation should include: Incorporation of suggestions from second/mid-sem presentation, Description of Concepts and Technical Details, Complete Project Demonstration, Conclusion, etc.

### Evaluation by Project Supervisor (20 Marks)

- g) Supervisor should be in regular touch with the student. He/She should evaluate the student based on: Technical Knowledge and Awareness related to the Project, Regularity/Attendance, Quality of the Project Report, etc.

### Project-Report Guidelines

The content of the report, which is submitted to the Institute in partial fulfilment for the award of the degree of Bachelor of Technology, is very much important. It is also imperative that the report, to be acceptable by the Institute, shall essentially meet a uniform format emphasizing readability, concordance with ethical standards and Institute-wide homogeneity.

The B.Tech. project report submitted by the students will be passed through a plagiarism check using the Turnitin or similar anti-plagiarism software. Reports which bear similarity of more than 5% with a single source and a cumulative similarity of 20% will be identified and communicated to the evaluation committee and On-campus BTP supervisor/mentor. Note that subsequent revision of the BTP report is not possible under any circumstances.

On successful completion of the third/final presentation, the student shall be required to submit three hard-bound copies of the final, corrected project report.

### Report Layout

The report has to be organised in the following order.

1. Cover Page
2. Inside Colour Title Page
3. Colour Certificate signed by the Supervisor(s) (in the stipulated format)
4. Declaration signed by the Candidate (in the stipulated format)
5. Acknowledgements
6. Abstract
7. Table of Contents
8. List of Figures
9. List of Tables
10. Abbreviations/Notations/ Nomenclature (if any)
11. Text of the Report
  - Chapter 1
  - Chapter 2....
12. References
13. Appendices (if any)
14. Non-paper materials (if any)

{Item 11, 12, and 13 can be printed with Double side printing. All other must be with Single Side Printing. }

### Report Preparation

- Paper must be white royal executive Bond, 85 gsm paper of A4 size only.

- Double Side Laser Printing: Only Core chapters of report and appendices can be printed on double sided. (Initial pages such as Title, Certificate, Contents, List of Figures etc. page must be single sided).
- New chapter must begin from Right Hand side page.
- Line Spacing: 1.5
- Printing Margin: 1.2 inch (left & right)      1.0 inch (Top & Bottom)
- Font: Times New Roman
- Font Size:
  - Leave Two line spaces between Chapter Title (20 Bold) and start of text.
  - TOPIC TITLE: 16 Bold Underline, left align, (Title Case).
  - SUB TOPICS TITLE: 14 Bold Underline, left align (Title case).
  - MATTER: 12 normal, Justify alignment.
  - Figure must be outside border & in center of whole margin. All details in figure must be clearly readable.
  - Write a figure no. at bottom of figure, i.e. ( Fig.5.1(a)), followed by title of figure in normal case.
  - Throughout text figure must be cited as “Fig.5.1(a)”.
  - Write a table number at top of table, i.e. (Table 1.1), followed by title of table.
  - Cite references appropriately in text and in figures using [ref. no.]
  - All paragraphs must start without ‘tab’.
  - One line spacing between paragraphs.
  - Start new chapter from new page (right hand side page).
  - No blank area at the end of each page except last page of the chapter.
  - All equations in the middle of line with equation no. at the end of line with small bracket, e.g.(2).
  - No dots between equation and equation no. space before and after equation sign.
  - Chapter heading (without underline) must be identical for each new chapter.
  - All topics and subtopics titles must be in title case.
  - In content page, in list of figure, etc; all topic must be written in title case.
  - “e.g.” and “i.e.” must have commas before and after. One space after each comma.
  - Extra information should be given in Appendices (e.g. datasheets, relevant proofs, charts, etc.)
- Reference List must be written in IEEE Journal/Transaction format. [download .pdf file from [http://www.ieee.org/documents/style\\_manual.pdf](http://www.ieee.org/documents/style_manual.pdf) and refer to pages 34-42]
  - Preferably at least two or three references have to be recent published paper from some reputed national/ international journals, preferably by IEEE.
  - All the reference citations must appear in the report text for which they have been refereed.
  - Figure copied from some paper or website has to be captioned with ‘Courtesy of \_\_\_’, or give specific reference number like [1].

**FORMAT – 1**

**Student Internship Program Application**

Complete and submit to the TPO/Internship Program Coordinator. Type or write clearly.

1. Student Name:			
2. Campus Address:		Phone:	
3. Home Address:		Phone:	
3a. Student E-mail Address:			
4. Academic Concentration		5. Internship Semester: _____ Year.	
6. Overall GPA:			
7. Internship Preference			
	Location/Address	Core Area	Company/Institution
1.			
Supervisor Signature: _____ Date _____ Signature confirms that the student has attended the internship orientation and has met all paperwork and process requirements to participate in the internship program, and has received approval from his/her Supervisor.			
Student Signature: _____ Date _____ Signature confirms that the student agrees to the terms, conditions, and requirements of the Internship Program.			

**FORMAT – 2**

**REQUEST LETTER FROM INSTITUTE TO INTERNSHIP PROVIDER**

To

The General Manager (HR)

.....

Subject: REQUEST FOR 6 Months INDUSTRIAL TRAINING of B.Tech.-4 years Degree Programme.

Dear Sir,

Our Students have undergone internship training in your esteemed Organization in the previous years. I acknowledge the help and the support extended to our students during training in previous years.

/ (For first time industry) You must be aware that internship mandatory for all technical education students.

In view of the above, I request your good self to allow our following \_\_\_\_\_ students for practical training in your esteemed organization. Kindly accord your permission and give at least one-week time for students to join training after confirmation.

S. No.	Name	Roll No.	Year	Discipline

This training being an essential part of the curriculum, the following guidelines have been prescribed in the curriculum for the training. You are therefore, requested to please issue following guidelines to the concerned manager/Industrial Supervisor.

1. Internship schedule may be prepared and a copy of the same may be sent to us.
2. Each student is required to prepare Internship diary and report.
3. Kindly check the Internship diary of the student daily.
4. Issue instruction regarding working hours during training & maintenance of the attendance record.

Your efforts in this regard will positively enhance knowledge and practical skills of the student. Your cooperation will be highly appreciated and we shall feel obliged.

The students will abide by the rules and regulation of the organization and will maintain a proper discipline with keen interest during their Internship. The students will report to you on dated..... along with a copy of this letter.

If vacancies exist, kindly do plan for Campus/Off Campus Interview for\_\_\_\_\_ batch passing out students in above branches. CHECK THIS (link to institute T&P website/brochure)

A Line of confirmation will be highly appreciated.

With warm regards,

Yours sincerely,

Training and Placement Officer

### FORMAT – 3

#### OBJECTIVES/GUIDELINES/AGREEMENT: INTERNSHIP SYNOPSIS

(THIS WILL BE PREPARED IN CONSULTATION WITH SUPERVISOR)

An internship is a unique learning experience that integrates studies with practical work. This agreement is written by the student in consultation with the faculty Mentor and Industrial supervisor. It shall serve to clarify the educational purpose of the internship and to ensure an understanding of the total learning experience among the principal parties involved.

#### Part I: Contact Information

##### *Student*

Name: \_\_\_\_\_ Student ID # \_\_\_\_\_ Class Year: \_\_\_\_\_

Campus Address: \_\_\_\_\_

City, State: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

##### *Industrial Supervisor*

Name: \_\_\_\_\_ Title: \_\_\_\_\_

Company/Organization: \_\_\_\_\_

Internship Address: \_\_\_\_\_

City, State, Pin: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

##### *Faculty Mentor*

Name: \_\_\_\_\_ Phone: \_\_\_\_\_

Campus Address: \_\_\_\_\_

#### Academic Credit Information

Internship Title: \_\_\_\_\_ Department: \_\_\_\_\_

Course #: \_\_\_\_\_ Credits: \_\_\_\_\_

Grading Option: \_\_\_\_\_ Credit/Non-Credit \_\_\_\_\_

Beginning Date: \_\_\_\_\_ Ending Date: \_\_\_\_\_

Hours per Week: \_\_\_\_\_ Internship is: \_\_\_\_\_ Paid \_\_\_\_\_ Unpaid \_\_\_\_\_

#### Part II: Internship Objectives/Learning Activities

Internship Objectives: What do you intend to learn, acquire and clarify through this internship? Try to use concrete, measurable terms in listing your learning objectives under each of the following categories:

- Knowledge and Understanding

- Skills

### **Part III: The Internship**

Job Description: Describe in as much detail as possible your role and responsibilities while on your internship. List duties, project to be completed, deadlines, etc. How can you contribute to the organization/site of internship.

### **Part IV: Agreement**

This contract may be terminated or amended by student, faculty coordinator or work supervisor at any time upon written notice, which is received and agreed to by the other two parties.

Student \_\_\_\_\_

Date \_\_\_\_\_

Faculty Mentor \_\_\_\_\_

Date \_\_\_\_\_

Industry Supervisor \_\_\_\_\_

Date \_\_\_\_\_



**FORMAT – 4**

**STUDENT'S DAILY DIARY/ DAILY LOG**

Day - 1		Date		
Time of Arrival		Time of Departure		Remarks
Dept./Division		Name of finished Product/Task		
Name of HOD/Supervisor with email-id				
Main points of the day				

**Signature of Industry Supervisor**

**FORMAT – 5**

**SUPERVISOR EVALUATION OF INTERN**

Student Name: \_\_\_\_\_ Date: \_\_\_\_\_

Work Supervisor: \_\_\_\_\_ Title: \_\_\_\_\_

Company/Organisation: \_\_\_\_\_

Internship Address: \_\_\_\_\_

Dates of Internship: From \_\_\_\_\_ To \_\_\_\_\_

Please evaluate your intern by indicating the frequency with which you observed the following behaviours:

<b>Parameters</b>	<b>Needs Improvement</b>	<b>Satisfactory</b>	<b>Good</b>	<b>Excellent</b>
Behaviours				
Performs in a dependable manner				
Cooperates with co-workers & supervisors				
Shows interest in work				
Learns quickly				
Shows initiative				
Produces high quality work				
Accepts responsibility				
Accepts criticism				
Demonstrates organizational skills				
Uses technical knowledge and expertise				
Shows good judgment				
Demonstrates creativity/originality				
Analyses problems effectively				
Is self-reliant				
Communicates well				
Writes effectively				
Has a professional attitude				
Gives a professional appearance				
Is punctual				
Uses time effectively				

Overall performance of student intern:

(Needs Improvement/ \_\_\_\_\_ Satisfactory/ \_\_\_\_\_ Good/ \_\_\_\_\_ Excellent \_\_\_\_\_)

Additional Comments if any:

Signature of Industry Supervisor \_\_\_\_\_ HR Manager \_\_\_\_\_

**FORMAT – 6**

**STUDENT FEEDBACK OF INTERNSHIP (TO BE FILLED BY STUDENTS AFTER INTERNSHIP COMPLETION)**

Student Name: \_\_\_\_\_ Date: \_\_\_\_\_

Industrial Supervisor: \_\_\_\_\_ Title: \_\_\_\_\_

Supervisor Email: \_\_\_\_\_ Internship is: \_\_\_ Paid \_\_\_ Unpaid \_\_\_

Company/Organisation: \_\_\_\_\_

Internship Address: \_\_\_\_\_

Faculty Coordinator: \_\_\_\_\_ Department: \_\_\_\_\_

Dates of Internship: From \_\_\_\_\_ To \_\_\_\_\_

\*\*\*Please fill out the above in full detail\*\*\*

Give a brief description of your internship work (title & tasks for which you were responsible):

Was your internship experience related to your major area of study?

\_\_\_\_\_ Yes, to a large degree \_\_\_\_\_ Yes, to a slight degree \_\_\_\_\_ No, not related at all

Indicate the degree to which you agree or disagree with the following statements.

This experience has:	Strongly Agree	Agree	No opinion	Disagree	Strongly Disagree
Given me the opportunity to explore a career field					
Allowed me to apply classroom theory to practice					
Helped me develop my decision-making and problem-solving skills					
Expanded my knowledge about the work world prior to permanent employment					
Helped me develop my written and oral communication skills					
Provided a chance to use leadership skills (influence others, develop ideas with others, stimulate decision-making and action)					
This experience has:	Strongly Agree	Agree	No opinion	Disagree	Strongly Disagree
Expanded my sensitivity to the ethical implications of the work involved					
Made it possible for me to be more confident in new situations					
Given me a chance to improve my interpersonal skills					
Helped me learn to handle responsibility and use my time wisely					

Helped me discover new aspects of myself that I didn't know existed before					
Helped me develop new interests and abilities					
Helped me clarify my career goals					
Provided me with contacts which may lead to future employment					
Allowed me to acquire information and/or use equipment not available at my Institute					

In the Institute internship program, faculty members are expected to be mentors for students. Do you feel that your faculty coordinator served such a function? Why or why not?

How well were you able to accomplish the initial goals, tasks and new skills that were set down in your learning contract? In what ways were you able to take a new direction or expand beyond your contract? Why were some goals not accomplished adequately?

In what areas did you most develop and improve?

What has been the most significant accomplishment or satisfying moment of your internship?

What did you dislike about the internship?

Considering your overall experience, how would you rate this internship? (Circle one).

( Satisfactory / Good / Excellent )

Give suggestions as to how your internship experience could have been improved. (Could you have handled added responsibility? Would you have liked more discussions with your professor concerning your internship? Was closer supervision needed? Was more of an orientation required?)