



SPN NO:

**ST. XAVIER'S TECHNICAL INSTITUTE
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A Govt. Aided Autonomous and Minority Institute

Recognised by Govt. of Maharashtra

Approved by A.I.C.T.E.

Vocational Training Guidelines and Manual

For

Diploma in Electronics and Telecommunication Engineering

Fifth Semester

ACADEMIC YEAR 20__-20__

**ST. XAVIER'S TECHNICAL INSTITUTE
MAHIM, MUMBAI 400 016.**

CERTIFICATE

PROGRAMME: D.E.T.E. SEM: FIFTH Academic Year: 20__-20__

Course: Vocational Training Course Code: ET - 18516

**This is to certify that the vocational training in
from tohas been carried out
satisfactorily and hence recorded in this JOURNAL, which is the bonafide work of**

Mr./Ms. _____.

S.P.N. No. _____ for the academic Year 20__ to 20__.

Mentor

Head of Dept.

Date : _____

Seal

Principal

PROGRAMME TITLE : Diploma in Electronics & Telecom. Engineering											
SEMESTER : Five											
Course Code	Course Title	Prerequisite	Credits			Examination Scheme					
			L	P	Total	Theory		PR	OR	TW	Total
						T H	T S				
ET 18516	VOCATIONAL TRAINING (No Theory exam)	All subjects	-	4 + 2 *	6	-	-	--	50	50	100
1) The assessment of Report / Certification of training done in industry is Internal and External. 2) Assessment of Term Work / Presentation is Internal.											

*** 2 credits for actual vocational training in industry**

RATIONALE:

It is of utmost importance that the student gets exposure to the environment and working conditions in industry. This subject is classified under the Applied Technology category. It is of utmost importance that the student gets exposure to the environment and working conditions in industry. For this purpose, the Institute has introduced the mandatory vocational training programme of 4 to 6 weeks, for all the students, after the fourth semester examinations (during vacation period). The students are placed in various industries / companies in various departments where they are exposed to actual work environment, enabling them to learn various aspects of the functioning of the industry as well as interacting and communicating with people associated with the industry. The objective of this vocational training programme is to instill confidence among students and build their personality, as well as gain work experience in a real-time industry environment.

This Vocational Training programme has a total weightage of **four credits**, and the assessment is based on the performance of the student, other traits like punctuality and attendance, and also feedback from the industry as well as the report submitted by the student. This assessment of term work / presentation is internal.

COURSE OUTCOMES & CO PO MAPPING

SEM V C 306	VOCATIONAL TRAINING (6 TH COURSE IN THIRD YEAR)
C306.1	Enable to learn various aspects of the functioning of the industry
C306.2	Enable to interact and communicate with people associated with the industry
C306.3	Develop confidence among students
C306.4	Build personality among students
C306.5	Gain work experience in a real-time industry environment
C306.6	Expose to the environment and working conditions in industry

Mapping of Course outcomes (COs) to Program outcomes (POs)

SEM V C 306 CO	VOCATIONAL TRAINING (6 TH COURSE IN THIRD YEAR)									
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0
C306.1					3	3	3		3	3
C306.2					3	3	3		3	3
C306.3					3	3	3		3	3
C306.4					3	3	3		3	3
C306.5					3	3	3		3	3
C306.6					3	3	3		3	3
C 306 TOTAL	00	00	00	00	18	18	18	00	18	18
CORRELATI ON LEVEL	0	0	0	0	3	3	3	0	3	3

TABLE TO DECIDE CORRELATION LEVELS

CO SUM TOTAL	06	12	18
CORRELATION LEVEL	1	2	3

CO SUM TOTAL	0, 1, 2	3, 4, 5, 6, 7, 8	9, 10, 11, 12, 13, 14	15, 16, 17, 18
CORRELATION LEVEL	0	1	2	3

General Guidelines for Vocational Training

- a) **Training during the programme:** Between 4th and 5th semester (During Summer Vacation).
- b) **Duration of the training:** Six weeks
- c) **Training Area:** Students should be trained in large, medium and small scale Industry / Organization.
- d) These Industries / Organizations can be Government / Government Undertaking / Public limited/ or Private/Family enterprises.

For **Electronic & Telecommunication engineering** it can be telecommunication companies, post and telegraph department, manufacturer of telecommunication product, manufacturers of control equipments, manufacturer of CNC machines, any manufacturing industry where electronic controls are used either in production process or in its products, computer hardware manufacturers, signal divisions of railways, electronic instruments repairing/testing/calibration workshops or laboratories etc.

Role of Institute		
Sr. No.	Activity	Schedule
1	Collecting information about Industry / Organization available for training along with capacity (Format - 1)	Before completion of 3 rd semester
2	Submission of information of Industry / Organization available for training along with capacity and its confirmation to institute coordinator	On commencement of 4 th semester
3	Student and mentor allocation as per the slots available for vocational training (Desirable mentor-student ratio is 1:15)	On commencement of 4 th semester
4	Obtaining consent letter from parents / guardian (Format - 2)	Before second Unit Test of the 4 th semester
5	Student enrollment for Internship (mapping)	Before commencement of 4 th semester examination
6	Issue letter to the Industry / Organization for the training along with details of students and mentors. (Format - 3)	
7	Mentors to carry out progressive assessment of the students during the Internship (Format - 4)	Each week of training
8	Training assessment by mentor along with Industry / Organization expert as external examiner (Format — 5)	Within 2 weeks after the start of 5 th semester
9	Submission of marks of Vocational Training	End of 5 th semester

All Format Nos & weekly duty will be implemented as per MSBTE guidelines.

Suggestions:

- a. Departments can take help of alumni or present students (if they or their parents or relatives have some contact in different industries) for securing placement
- b. The students would normally be placed as per their choices, in case of more demand for a particular Industry / Organization students would be allocated and placed based on their relative merit. However, if some students have arranged training placement in some companies with the help of their parents/relatives etc. then they will be given preference for placement in those companies.
- c. Principal/HOD/Faculty should address students about vocational safety norms, rules and discipline to be maintained in the Industry / Organization during the training before relieving students for training.
- d. The faculty member during the weekly visit to Industry / Organization will check the progress of the student in the training, his/ her attendance, discipline and project report preparation.

Expectations from Industry

Helping institute in developing the following competencies among students

- a) Soft Skill i.e. Communication, Presentation etc.
- b) Life skills i.e. Time management, Safety, Innovation, Entrepreneurship, Team building etc.
- c) Hands-on i.e. Design, Implementation, O&M and Quality Assurance aspects etc.
- d) Industry specific tools i.e. Value Engineering, 6 Sigma and Lean.

Roles and Responsibilities of the Students

Following should be informed to students deputing them for the training

- a) Students would interact with the mentor to suggest choices for suitable Industry / Organization. If students have any contact in Industry / Organization (through their parents, relatives or friends) then same may be utilized for securing placement for themselves and their peers.
- b) Students have to fill the forms duly signed by authorities along with training letter and submit it to training officer in the industry on the first day of training. Student should also carry with him/her the Identity card issued by institute during training period.

- c) He/she will have to get all the necessary information from the training officer regarding schedule of the training, rules and regulations of the Industry /Organization and safety procedures to be followed. Student is expected to observe these rules, regulations, procedures.
- d) Students should know that if they break any rule of industry or do not follow the discipline then industry can terminate the training and sent back the students.
- e) It is the responsibility of the student to collect information from Industry / Organization about manufacturing processes / testing and quality assurance methods/specifications of machines and raw materials/maintenance procedures/ production planning/organizational structure etc.
- f) During the training period students have to keep record of all the useful information in Log book and maintain the weekly diary as provided and get it signed from mentor as well as Industry / Organization training in-charge.
- g) In case they face any major problem in industry such as an accident or any disciplinary issue then they should immediately report the same to the institute.
- h) Prepare final report about the training for submitting to the department at the time of presentation and viva.

Format for Training Report

Following is the suggestive format for the training report, actual format may differ slightly depending upon the nature of Industry / Organization. The training report may contain the following

- Title page
- Certificate
- Abstract
- Acknowledgement
- Content Page

Chapter 1: Organizational structure of Industry / Organization and General Lay Out

Chapter 2: Introduction of Industry / Organization (Type of products and services, history, turn over and number of employees etc.)

Chapter 3: Types of major equipment/instruments/ machines used in industry with their specifications, approximate cost and specific use and their routine maintenance.

Chapter 4: Manufacturing Processes along with production planning and control methods.

Chapter 5: Testing of raw materials, components and finished products along with quality assurance procedures.

Chapter 6: Major material handling product (lifts, cranes, slings, pulleys, jacks, conveyor belts etc.) and material handling procedures.

Chapter 7: Safety procedures followed and safety gear used (includes Preventive maintenance schedule and breakdown maintenance procedures).

Chapter 8: Particulars of Practical Experiences in Industry / Organisation if any in Production/ Assembly/ Testing/Maintenance.

Chapter 9: Short report/description of the project (if any done during the training)

Chapter 10: Special/challenging experiences encountered during training

References /Bibliography:-

The size of the report may be about 20 pages.

Suggested **Learning** Strategies

Students should visit the website of the industry where they are undergoing training to collect information about products, processes, capacity, number of employees, turnover etc. They should also refer the handbooks of the major machines and operation, testing, quality control and testing manuals used in the industry. Students may also visit websites related to other industries wherein similar products are being manufactured as their learning resource.

Tentative Week-Wise Schedule Of Vocational Training

The vocational training is a common course to all programmes; therefore the industry / Organization selection will depend upon the nature of programme and its related industry. The training activity may vary according to nature and size of Industry / Organization. The details of activities to be completed during 6 week wise Vocational training schedule should be planned by the Industry. The plan should be intended to develop Soft Skill i.e. Communication, Presentation etc., Life skills i.e. Time management, Safety, Innovation, Entrepreneurship, Team building etc. Hands-on i.e. Design, Implementation and Quality Assurance aspects and Industry specific tools

e.g. Value Engineering, 6 Sigma and Lean in each student. The evaluation of Vocational training will be done on the basis of skills acquired by the student during this 6 week period.

Table - 1 Assessment Scheme for Vocational Training

Trainin g duration	PROGRESSIVE ASSESSMENT (TERM WORK) (<i>Weekly report of all 6 week and attendance</i>)		END SEMESTER ASSESSMENT (Report, <i>Presentation and Viva</i>)		Total marks	
	Max. marks	Min. passing marks	Max. marks	Min. passing marks	Max. marks	Min. passing marks
6 weeks	# 50	20	** 50	20	100	40

assessed by Mentor (25 Marks) and concern Industry Supervisor (25 Marks)

**assessed by Mentor/internal and external examiner (Industry Personnel)
based on report (10 Marks), presentation (20 Marks) and Viva (20 Marks)

Table - 2 Distribution of End-Semester-Examination (ESE) marks of Vocational Training

Marks for Vocational Training Report	Marks for Seminar/ Presentation	Marks for Oral/Viva-voce	Total ESE marls
10	20	20	50