: Automobile Engineering./ Artificial Intelligence/ Artificial Intelligence and Machine Learning/ Automation and Robotics/

Course Code: 315004

Cloud Computing and Big Data/ Civil Engineering/ Chemical Engineering/ Computer Technology/

Computer Engineering/ Civil & Rural Engineering/ Construction Technology/

**Computer Science & Engineering/** 

Digital Electronics/ Data Sciences/ Electrical Engineering/ Electronics & Tele-

Programme Name/s c

communication Engg./

Electrical and Electronics Engineering/ Electrical Power System/ Electronics &

**Communication Engg./ Electronics Engineering/** 

Computer Hardware & Maintenance/ Industrial Electronics/ Information Technology/

Computer Science & Information Technology/

Civil & Environmental Engineering/ Mechanical Engineering/ Mechatronics/

**Production Engineering/** 

Computer Science/ Electronics & Computer Engg.

**Programme Code** 

: AE/ AI/ AN/ AO/ BD/ CE/ CH/ CM/ CO/ CR/ CS/ CW/ DE/ DS/ EE/ EJ/ EK/ EP/

ET/EX/HA/IE/IF/IH/LE/ME/MK/PG/SE/TE

Semester : Fifth

Course Title : INTERNSHIP(12 WEEKS)

Course Code : 315004

#### I. RATIONALE

Globalization has prompted organizations to encourage skilled and innovative workforce. Internships are educational and career development opportunities, providing practical/ hands-on experience in a field or discipline. Summer internship is an opportunity for students to get accustomed to modern industry practices, apply the knowledge and skills they've acquired in the classroom to real-world situations and become familiar with industry environments before they enter the professional world. Keeping this in mind, industrial training is incorporated to all diploma programmes as it enables the student to get equipped with practical skills, soft skills and life skills

#### II. INDUSTRY / EMPLOYER EXPECTED OUTCOME

The aim of this course is to help the student to attain the following industry identified competency through various teaching learning experiences: Apply skills and practices to industrial processes.

#### III. COURSE LEVEL LEARNING OUTCOMES (COS)

Students will be able to achieve & demonstrate the following COs on completion of course based learning

- CO1 Observe time/resource management and industrial safety aspects.
- CO2 Acquire professional experience of industry environment.
- CO3 Establish effective communication in working environment.
- CO4 Prepare report of assigned activities and accomplishments.

#### IV. TEACHING-LEARNING & ASSESSMENT SCHEME

				L	earı	ning	Sche	eme					A	ssess	ment	Sch	eme				71
Course Code	Course Title	Abbr	Course Category/s	Co Hrs	ctua onta ./W	ct eek		NLH	Credits	Paper Duration		The	ory		Base		LL &	: TL	Base S	L	Total Marks
	105. 1			$\mathbf{CL}$	TL	LL				Duration	FA- TH		Tot	tal	FA-	PR	SA-	PR	SL		IVIAI KS
											Max	Max	Max	Min	Max	Min	Max	Min	Max	Min	
14 15000	INTERNSHIP(12 WEEKS)	ITR	INP	-		-	1	36 - 40	10	ı	-	ı	-	1	100	40	100#	40			200

Legends: # External Assessment

Note: Credits for Industrial Training are in-line of guidelines of NCrF: The industrial training is of 12 weeks considering 36-40 hours per week engagement of students (as per Guidlines of GR of Maharashtra Govt.) under Self Learning with guidance of industry supervisor / Mentor

#### V General guidelines for organizing Industrial training

The Industry/organization selected for Industrial training/ internships shall be Government/Public Limited/ Private limited / Startup / Centre of Excellence/Skill Centers/Skill Parks etc.

- 1. Duration of Training 12 weeks students engagement time
- 2. Period of Time slot Between 4th and 5th semester (12 weeks) i.e. commencement of internships will be immediately following the 4th semester exams.
- 3. Industry area Engineering Programme Allied industries of large, medium or small-scale, Organization/Govt./ Semi Govt Sectors.

#### VI Role(s) of Department at the Institute:

Following activities are expected to be performed by the concerned department at the Polytechnics.

#### Table of activities to be completed for Internship

S.No	Activity	Suggested Schedule WEEKS
	Collection of information about industry available and ready for extending training with its offered capacity of students (Sample Format 1)	1 <sup>st</sup> to 3 <sup>rd</sup> week of 4 <sup>th</sup> Semester
2	Allocations of Student and Mentor as per availability (Mentor: Student Ratio (1:15)	4 <sup>th</sup> to 6 <sup>th</sup> week of 4 <sup>th</sup> semester
3	Communication with Industry and obtaining its confirmation  Sample letter Format	6 <sup>th</sup> to 8 <sup>th</sup> week of 4 <sup>th</sup> semester
4	Securing consent letter from parents/guardians of students (Sample Format 2)	Before 10 <sup>th</sup> week of 4 <sup>th</sup> semester
5	Enrollment of Students for industrial training (Format 3)	Before 12 <sup>th</sup> week of 4 <sup>rd</sup> semester
6	Issue of letter to industry for training along with details of students and mentor (Format 4)	Before 14 <sup>th</sup> week of 4 <sup>th</sup> Semester
7	Organize Internship Orientation session for students	Before end of 4 <sup>th</sup> Semester
8	Progressive Assessment of industry training by Mentor	Each week during training period
9	Assessment of training by institutional mentor and Industry mentor	5 <sup>th</sup> Semester ESE

#### Suggestions-

1. Department can take help of alumina or parents of students having contact in different industries for securing placement.

- 2. Students would normally be placed as per their choices, in case of more demand for a particular industry, students would be allocated considering their potentials. However preference for placement would be given to students who have arranged placement in company with the help of their parents or relatives.
- 3. Principal/HOD/Faculty should address students about industrial safety norms, rules and discipline to be maintained in the industry during training before relieving students for training.
- 4. The faculty members during the visit to industry or sometimes through online mode will check the progress of the student in the training, student attendance, discipline, and project report preparation each week.

#### VII Roles and Responsibilities of students:

- 1. Students may interact with the mentor to suggest choices for suitable industry, if any. If students have any contact in industry through their parents or relatives then the same may be utilized for securing placement for themselves and their peers.
- 2. Students have to fill the forms/formats duly signed by institutional authorities along with a training letter and submit it to a training officer/mentor in the industry on the first day of training.
- 3. Students must carry with him/her Identity card issued by the institute during the training period.
- 4. Students should follow industrial dressing protocols, if any. In absence of specific protocol students must wear college uniform compulsorily.
- 5. Students will have to get all necessary information from the training officer/mentor at industry regarding schedule of training, rules and regulation of the industry and safety norms to be followed. Students are expected to observe these rules, regulations and procedures.
- 6. Students must be fully aware that if they disobey any rule of industry or do not follow the discipline then non-disciplinary action will be taken .
- 7. Students must maintain a weekly diary (**Format 6**) by noting daily activities undertaken and get it duly signed from industry mentor or Industrial training in charge.
- 8. In case students face any major problems in industry such as an accident or any disciplinary issue then they should immediately report the same to the mentor at the institute.
- 9. Prepare a final report about the training for submitting to the department at the time of presentation and vivavoce and get it signed from a mentor as well as industry training in charge.
- 10. Students must submit the undertaking as provided in **Format 5**.

#### VIII Typographical guidelines for Industry Training report

Following is the suggestive format for preparing the training report. Actual report may differ slightly depending upon the nature of industry. The training report may contain the following

- 1. The training report shall be computer typed (English- British) and printed on A4 size paper.
- 2. Text Font -Times New Roman (TNR), Size-12 point
- 3. Subsection heading TNR- 12 point bold normal
- 4. Section heading TNR- 12 capital bold
- 5. Chapter Name/ Topic Name TNR- 14 Capital
- 6. All text should be justified. (Settings in the Paragraph)

- 7. The report must be typed on one side only with double space with a margin 3.5 cm on the left, 2.5 cm on the top, and 1.25 cm on the right and at bottom.
- 8. The training report must be hardbound/ Spiralbound with a cover page in black color. The name of the candidate, diploma (department), year of submission, name of the institute shall be printed on the cover.
- 9. The training report, the title page should be given first then the Certificate followed by the acknowledgment and then contents with page numbers.

#### IX Suggestive format of industrial training report

Following format may be used for training report. Actual format may differ slightly depending upon the nature of Industry/ Organization.

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

Chapter 1	Organization structure of Industry and general layout.
Chanton 2	Introduction to Industry / Organization (history, type of products and services, turn over and
Chapter 2	number of employees etc.)
	Types of Major Equipments/raw materials/ instruments/machines/ hardware/software used in
Chapter 3	industry with their specifications, approximate cost, specific use and routine maintenance
	done
Chanton 1	Processes/ Manufacturing Manufacturing techniques and methodologies and material
Chapter 4	handling procedures
Chanton 5	Testing of Hardware/Software/ Raw materials/ Major material handling product (lifts, cranes,
Chapter 5	slings, pulleys, jacks, conveyor belts etc.) and material handling procedures.
Chapter 6	Safety procedures followed and safety gears used by industry.
Chantan 7	Particulars of Practical Experiences in Industry/Organization if any in
Chapter 7	Production/Assembly/Testing/Maintenance
Chapter 8	Detailed report of the tasks undertaken (during the training).
Charton 0	Special/challenging experiences encountered during training if any (may include students
Chapter 9	liking & disliking of workplaces).
Chapter 10	Conclusion
Chapter 11	References / sources of information

#### X Suggested learning strategies during training at Industry

- 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 to the handbook of the major machines and operations, testing, quality control and testing manuals.
- Students may also visit websites related to other industries wherein similar products are being manufactured.

#### XI Tentative week wise schedule of Industry Training

Industrial training is a common course to all Diploma programmes, therefore the industry selection will depend upon the nature of the programme and its related industry. The training activity may vary according to nature and size of industry.

The following table details of activities to be completed during industrial training.

# Details of Activities to be completed during Industry training Introduction of Industry and departments. Study of Layout of Industry, Specifications of Machines, raw materials, components available in the industry

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Report writing

#### **INTERNSHIP(12 WEEKS)**

Study of setup and manufacturing processes

Execute given project or work assigned to the students, study of safety and maintenance procedures

Validation from industry mentor regarding project or work allocated

#### XII CO-PO Mapping Table to be created by respective Department/faculty.

#### XIII. Formative Assessment of training: Suggested RUBRIC

(Note: Allot the marks in proportion of presentations and outcome observed. Marks excluding component of week 11 are to be filled by Institute mentor)

Week	Task to be assessed	Outcome Achievement - Poor	Outcome Achievement - Moderate	Outcome Achiever	ment - High	Week- wise
No	Task to be assessed	Poor	Average		Excellent	total Marks
1	Introduction of Industry	Departments, processes, products and work culture	Marks Moderate Knowledge of Departments, processes, products and work culture of the company  (Marks –2)	processes, products and work culture of the company	Marks Extensive Knowledge of Departments, processes, products and work culture of the company  (Marks –5)	
2	Presentation of Layout of Industry, Specifications of Machines, raw materials, components available in the industry	Minimal w.r.t.	Moderate w.r.t. tasks (Marks –2)	Good w.r.t. tasks (Marks –3/4)	Extensive w.r.t. tasks  (Marks -5)	7
3	Participation in setup and manufacturing processes/platforms	Minimal Participation with poor understanding (Marks –1-8)		Good Participation with poor understanding  (Marks –13-17)	Extensive Participation with poor understanding (Marks –18-20)	ř
4 to	Execution of given project or work to the students, Follow of safety and maintenance procedures	Minimal	Moderate Participation with	Good Participation with Good	Extensive Participation with excellent understanding (Marks – 18-20)	
11	Validation by industry mentor regarding project or work allocated	Minimal	Moderate Participation with acceptable performance  (Marks – 11-15)	Good Participation with Good performance (Marks – 16-20)	Extensive Participation with excellent performance  (Marks – 21-25)	

	12 Diary writing  Total Out of :100	<ul> <li>Results are not Presented properly,</li> <li>Project work is summarized and concluded not acceptable</li> <li>Future extensions are not specified</li> <li>(Marks -1-10)</li> </ul>	<ul> <li>Results are Presented just casually</li> <li>Project work is summarized and concluded casually</li> <li>Future extensions are casually specified</li> <li>(Marks -11-15)</li> </ul>	<ul> <li>Results are Presented well and properly,</li> <li>Project work is summarized and concluded to a Good level</li> <li>Future extensions are well specified</li> <li>(Marks -16-20)</li> </ul>	<ul> <li>Results are Presented exhaustively</li> <li>Project work is summarized and elaborated in excellent manner, concluded</li> <li>Future extensions are excellently specified (Marks -21- 25)</li> </ul>
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Marks for (FA) are to be awarded for each week considering the level of completeness of activity observed as per table specified in Sr.No. XIII above, from the daily diary maintained . Feedback from industry supervisor shall also be considered.

#### XIV Summative Assessment (SA) of training:

Academic year: 20 -20

#### i) Suggested RUBRIC for SA

	Observatio	ons from Orals		•	Present	tations			Total (100)
Enrollment Number	Tasks undertaken (20)	Overall Understanding (20)	Creativity /Innovation demonstrated (10)	Knowledge acquired (10)		Body Language (10)	Presentations	Diary, Report writing and / Product	

Name of mentor: Signature of Mentor

#### **XV FORMATS**

Format-1:	Collecting	Information about	out Industry/	Organization	available for	training alon	g with car	nacity

- 1) Name of the industry/organization:
- 2) Address/communication details with email:
- 3) Contact person details:
  - a) Name:
  - b) Designation:
  - c) Email
  - d) Contact number/s:
- 4) Type:

Govt / PSU / Pvt /

Large scale / Medium scale / Small scale .....

- 5) Products/services offered by industry:
- 6) a) Whether willing to offer Industrial training facility during May/ June for Diploma in Engineering students: Yes / No.
  - b) If yes, whether you offer 12 weeks training: Yes/No
  - c) Possible Industrial Capacity:

			44.1			
Students						Total
	Civil	Mechanical	Chemical			
Male						O4
Female						
Total	1				17	7 7 7

Total				<b>-</b>	7///
7) Whether accommod If yes capacity:	ation available	e for interns \	es / No.	/	7
8) Whether internship in the state of the st					
Signature of responsib	le person at In	dustry:			

Format-2: Obtaining Consent Letter from parents/guardians	
(Undertaking from Par	rents)
To,	
The Principal,	
Subject: Consent for Industrial Training. Sir/Madam,	
I am fully aware that -	
i) My ward studying in semester at your to undergo 12 weeks of Industrial training for partial fulfillment Engineering.	towards completion of Diploma in
ii) For this fulfillment he/she has been deputed at for Industrial training /internship	for the period from to
<ul> <li>c) My ward is NOT entitled to any leave during the training period.</li> <li>d) My ward will regularly submit a prescribed weekly diary, duly fil of the organization to the mentor faculty of the polytechnic.</li> <li>I have explained the contents of the letter to my ward, who has also I assure that my ward will be properly instructed to take his own car In case of any accident neither industry nor the institute will be held</li> </ul>	promised to adhere strictly to the requirements. e to avoid any accidents/injuries in the industry.
	Signature : Name :
	Address:
	Phone Number :

E	. C41 4	Enrollment	C T	142-1	T
HORMST- Y	Students	Enrallment	TAP IN	MIISTRIAL	irainino
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(	Acadar	nic Year –	)
	ACAUCI	IIIC. ICAI —	

Sr No	<b>Enrollment Number</b>	Name of Student	Name of Industry	Name of Mentor at Institute
			C. A.	
				: 1
		-		
			Valya	
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-/	/LA-/			- <b> </b>
7	/67 T/			
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Format-4: Issu nentors	e Letter to the Indus	try/Organization for	the training a	long with details of students and		
To,						
The HR M	Manager,					
	-/ //3					
		cement for Industrial to	· · · · · · · · · · · · · · · · · · ·	weeks in your organization		
	Reference:	Your consent letter no:				
Sir,						
	reference to the above ng in your esteemed o			ng students from this institute for rived at.		
and world of wo his training ma equest your su- guided on the e Additionally, the guidelines for e	ork, as well as to prove by enhance his/her empty pport in facilitating this expectations of this train the institute has secured exit training. In view of the provided has been accordance to the engactivities. Your cool	ide exposure to the pro- bloyability and liveliho is Industrial Training f ning, including the ma the necessary consent f all the above industry	ofessional environd opportunition of the student. In aintenance of a translation and undertaking shall refrain for the student.	Ils relevant to the demands of the industronment and work culture. It is hoped to es. In view of the above, we kindly He/she has been adequately oriented at daily diary during the training period. In grom the parent/guardian regarding from involving students into the mundar appreciated.	that nd the	
Sr.No	Enrollment No	Name of	Student	Name and designation of Mentor		
Diploma progra	nmme in	Engg.				
Sr.No	Enrollment No	Name of	Student	Name and Designation of Mentor		
Kindly extend a	all possible cooperation	n to the students for ab	oove.			
Thanking you						
Na		(Principal) Co Name of the Institute: with Seal		Cc- To HoD/Mentor	c- To HoD/Mentor	

### 1 PW 7 .....

# Format-5: Undertaking by the students TO Principal Subject: Undertaking regarding Placement for Industrial training of 12/16/18 weeks duration ......Studying in -----Institute at -----fully aware of the Industrial Training requirement and related responsibilities and participation in the ......, Industrial training between From: ..... To..... I assure you that I will be of good behavior and be obedient to the staff and mentor during the ....../Industrial training. I will also abide and will not participate in all activity. I will also discipline myself within the rules and regulations of the Institution. I am also aware that I am participating in the ...... at my own risk and I will not hold the ------Institute responsible in any way in any eventuality namely Accident /Injury/death or whatever mishap and I myself will be solely responsible for my safety. Place: Signature of the student Date: Reg. No.

Format-6:	Internships Da	nily Diary				
Name of the Student:			Name of the mentor (Faculty):			
Enrollr	ment Number: _		_ Semester: Academ	nic Year		
Week	Day & Date	Discussion Topics/Activity	Details of Work Allotted Till Next Session /Corrections Suggested/Faculty Remarks	Signature of Industry Mentor		
	Mon, Date					
	Tue, Date					
Week 01	Wed, Date	P C TI		<u>.</u>		
WCCK 01	Thu, Date			<u> </u>		
	Fri, Date			4), 1		
	Sat, Date		<u>, , , , , , , , , , , , , , , , , , , </u>			
.//	Mon, Date			27 A. \		
	Tue, Date					
	Wed, Date			67) (		
	Thu, Date			1 (70)		
1 1	Fri, Date		y <del>\</del>			
1.4	Sat, Date					
	Mon, Date		No. of the last of	1 44 1		
	Tue, Date			ادللا		
Week n	Wed, Date					
WEEK II	Thu, Date			]   /a		
	Fri, Date					
	Sat, Date					

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Semester - 5, K Scheme