

Orientation Program Project Semester

Jan- June 2018

September 5, 2017

Project Semester Coordinators

- ◆ **Dr. Tarun Kumar Bera**
Associate Professor
- ◆ **Dr. Vivek Jain**
Associate Professor
- ◆ **Dr. Deepak Jain**
Assistant Professor

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Introduction

- ◆ As a part of the **under graduate curriculum**, students are required to undergo **Industrial Training under Project Semester Scheme in 6th Semester**.
- ◆ **Objective:** To sharpen the technical skills of students by exposing them to Industrial environment, along with adoption of value based Industrial culture, while being engaged in industrial problem solving.

Purpose

- ◆ Translate **engineering theory into practice** in a **professional engineering environment**
- ◆ It includes a practical training in a professional engineering culture (**a company, top educational institution, research institute** etc.)
- ◆ It must be based around **significant engineering work** and is principally assessed on that basis

...cont.

- ◆ **The technical activity should be related to**
 - » both the **student's engineering studies**
 - » the **host organization's activities**

- ◆ **It should involve tasks and methods**
 - » that are **more appropriately completed in a professional engineering environment** and
 - » should, where possible, make use of **human and technology resources provided by the organization**

...cont.

- ◆ Consolidates the **student's prior learning** and provides **a context for later research studies**

- ◆ The student **remains a full time registered student at Thapar University** during the project semester
 - » **this activity is therefore wholly distinct from any other industrial interactions**

Selection Process

1. Through the Department (companies visit the campus, select students through GDs, interviews etc.)
2. Through independent effort (by the students)
Conditions:
 - (a) Location should be discussed prior to approval
 - (b) At least 3 students at specified location
 - (c) Submit the offer letter to us within 7 days (by October) and 3 days (after October to Dec.) of issuing date.
3. Once selected: **No back-out or cancellation** is allowed
4. Once selected: **you cannot apply for other companies**

Training Locations

1. India

- (a) Through Department: No Constraint of Location
- (b) At least 3 students, at one location for individual efforts

2. Outside India

- (a) You have to apply through project semester coordinators and need the approval of HOD, Mechanical.
- (b) You have to fill the proposal form and need one Thapar Alumnus to evaluate two times during the training as per TU evaluation format.

Registration

- ◆ Before final registration you have to clear all hostel dues, semester fee for 6th Semester
- ◆ In total two rounds of registration in the months of December and January.
- ◆ Student has to appear in person for his/her Registration.
- ◆ A **joining letter** will be issued to all the students on the date of registration.
- ◆ Daily diary and other related forms will be given.
- ◆ Dates of registration will be declared in the month of December after the declaration of EST date sheet.

During the Training

- ◆ Discipline and punctuality in industry is of serious concern
- ◆ Each student will work under supervision of one faculty and one industry mentor
- ◆ Update your details, contact no. with assigned faculty
- ◆ Communication of ongoing work with faculty
- ◆ Maintain daily diary
- ◆ Check group email regularly for updates
- ◆ Provide your information within time limit
- ◆ Submit the Goal report and Midterm report on time
- ◆ **There will be strict punishment for those who delay in providing his/her information**

45	101408063	Jaskirat Singh	Honda Car Plant, Greater Noida	Greater Noida
46	101408034	Ayush Pandey	Honda Car Plant, Greater Noida	Greater Noida
47	101408041	Dheerendra	Honda Car Plant, Greater Noida	Greater Noida
48	101409013	Damanjit Singh	JCB India Pvt. Ltd., 23/7 Mathura Road, Faridabad	Faridabad
49	101408066	Jatin Sharma	JCB India Pvt. Ltd., 23/7 Mathura Road, Faridabad	Faridabad
50	101408132	Tishir Chhaparia	JCB India Pvt. Ltd., 23/7 Mathura Road, Faridabad	Faridabad
51	101414006	Ayaan Loona	JCB India Pvt. Ltd., 23/7 Mathura Road, Faridabad	Faridabad
52	101409021	Juhi Gupta	JCB, Ballabgarh	Faridabad
53	101409006	Akhil jandial	JCB, Ballabgarh	Faridabad
54	101408130	TEJKIRAT SINGH DUGGA	Tata Motors CVBU, Nigdi Bhosari Road, Near	Pune
55	101408082	Mayank Manish	Tata Motors, Car Plant, Pune (off campus)	Pune
56	101408033	Avanshu Shrivastav	Tata Motors, Pune PV and PV Quality, sector	Pune
57	101408060	ISHJOT Singh Jaggi	Tata Motors, Pune PV and PV Quality, K block	Pune
58	101408127	Sunpreet Kochhar	Tata Motors, Pune PV and PV Quality, K block	Pune
59	101408005	Abhishek sharma	Tata Motors, CVBU, D9/1st floor, Pimpri work	Pune
60	101408007	ABHISHESH AGGARWAL	Tata Motors, CVBU, D9/1st floor, Pimpri work	Pune
61	101408050	Harish Jala	Tata Motors, CVBU, D9/1st floor, Pimpri work	Pune
62	101408079	Lucky Ahuja	Tata Motors, CVBU, D9/1st floor, Pimpri work	Pune
63	101408114	Sarabdeep Singh Gambh	Tata Motors, CVBU, D9/1st floor, Pimpri work	Pune
64	101408134	Vikramjeet singh	Tata Motors, CVBU, D9/1st floor, Pimpri work	Pune
65	101588014	Suraj kumar	Tata Motors, CVBU, D9/1st floor, Pimpri work	Pune
66	101408077	Lokesh Bansal	Tata Motors, CVBU, D9/1st floor, Pimpri work	Pune
67	101414019	Nimish chhabra	Tata Motors, PVBU plant, chikwadi, Pune (Off	Pune
68	101408116	Shashank Bindal	Tata Motors, PVBU plant, chikwadi, Pune (Off	Pune
69	101459005	Hemant Kumar	Mercedes Benz, Whitefield palms, Plot No.	Bangalore
70	101459006	Sameer Mehta	Toyota Kirloskar Motors pvt ltd, Plot No. 1,	Bangalore
71	101414031	Shray Saboo	BEL Engineering (UK) Limited, 11 Glasshouse	Bangalore (UK)
72	101408064	Jaspreet Singh Bhalla	CSIO, Sector 30, Chandigarh	Chandigarh
73	101409030	Rohit aggarwal	CSIO, Sector 30, Chandigarh	Chandigarh
74	101464008	Nitish kumar	Socomo Technologies Pvt. Ltd, CDCL Building	Chandigarh
75	101414013	Himaal Sharma	GSK, Nabha	Nabha
76	101414028	sanjay saini	GSK, Nabha	Nabha
77	101414035	Yashaswi issar	Diesel Loco Modernisation Works, Patiala	Patiala
78	101408078	Lovedeep Sharma	Tata Motors Ltd., Industrial Area, Pantnagar	Pantnagar
79	101408125	Sidharth Hinger	Tata Motors Ltd., Industrial Area, Pantnagar	Pantnagar
80	101408136	VIVEK SINGLA	Tata Motors Ltd., Industrial Area, Pantnagar	Pantnagar
81	101458004	Ravi Bishnoi	Tata Motors Ltd., Industrial Area, Pantnagar	Pantnagar
82	101409037	Taranveer Singh Toor	Tata Motors Ltd., Industrial Area, Pantnagar	Pantnagar
83	101408065	Jaswinder Singh	Tata Motors Ltd., Pantnagar, Uttarakhand	Pantnagar
84	101414007	Brahmdeep singh	Jay Bharat Maruti Limited, Gurgaon	Gurgaon
85	101408028	Arpit Kandhari	Mahle Filters India Pvt Limited, NH8, 38th mile	Gurgaon
86	101408051	Harjot Singh	Mahle Filters India Pvt Limited, NH8, 38th mile	Gurgaon
87	101408019	Anand Vardhan	Gabriel India Limited, NH8, 38th mile stone	Gurgaon
88	101408037	Chetan katyal	Future First	Gurgaon
89	101459003	Arpit Garg	Future First, 4th floor, Vipul square, Sushant	Gurgaon
90	101409040	Vidit Gupta	Hitech Robotic Systemz, Sec-34, Infocity Gur	Gurgaon
91	101408022	ankit verma	Satyam Auto	Gurgaon

92	101409029	Rishi garg	DNA Automation,979, Sector21D, Badkal, Faridabad	Faridabad
93	101408098	Pulkit Gautam	Escorts, Faridabad,kmc 15/15, main mathura	Faridabad
94	101409025	Preet kamal singh	Maruti Suzuki India Limited, Manesar Car Plant	Manesar
95	101414023	Rishav kansal	Sona Koyo Steering Systems Ltd, Gurgaon	Gurgaon
96	101589004	Nitish Gupta	Maruti Suzuki India Limited, Manesar Car Plant	Manesar
97	101408049	Hardik Vashishtha	Maruti Suzuki India Limited, Manesar Car Plant	Manesar
98	101588013	Shubham Sharma	Gabriel India Limited,29,Milestone,Pune-Nagpur	Pune
99	101464007	Yajan Chopra	Mahindra & Mahindra, Pune (4 months)+ T	Pune
100	101408044	Ekam Jot Singh	Mahle Filters, Pune	Pune
101	101408071	Karan goyal	Spicer India Pvt Limited, Chakan, Anand Gr	Pune
102	101408040	Devjot Singh	Khanna Papers Mills Limited, Amritsar	Amritsar
103	101459004	Shanav Garg	Rail Coach Factory, Kapurthala	Kapurthala
104	101409005	AAYUSH SHARMA	Hero Ecotech Limited, Ludhiana	Ludhiana
105	101409039	Vasu Gupta	Kwality Forge, 629/1, Industrial Area B, Mill	Ludhiana
106	101408097	Prasoon Kushwaha	Tata Motors Ltd., TATA Colony,Jamshedpur	Jamshedpur
107	101408103	Ramneek	Tata Motors Ltd., TATA Colony,Jamshedpur	Jamshedpur
108	101408105	Ravi Kumar Mittal	Tata Motors Ltd., TATA Colony,Jamshedpur	Jamshedpur
109	101408015	Akshay Bajaj	Tata Motors, Jamshedpur	Jamshedpur
110	101408025	Anurag verma	Tata Motors, Jamshedpur	Jamshedpur
111	101414004	Akshay dureja	Tata Motors, Jamshedpur (off campus)	Jamshedpur
112	101408048	Gurneet Singh Aujla	Tata Motors,Telco Colony, Jamshedpur	Jamshedpur
113	101408102	raghav ralhan	Tata Motors,Telco colony, Jamshedpur	Jamshedpur
114	101408129	Tanvir Sidhu	Tata Motors,Telco Colony, Jamshedpur	Jamshedpur
115	101409003	Aakash Singhal	Whirlpool	Faridabad
116	101588010	Rachit Joshi	Whirlpool	Faridabad
117	101408012	Akhilesh Sharma	Whirlpool India Ltd,28,New Industrial Town	Faridabad
118	101414011	Furqan Ahamad Khan	Whirlpool India Ltd,28,New Industrial Town	Faridabad
119	101408011	Ajitesh Bindal	Whirlpool,#28,Industrial Township,Faridaba	Faridabad
120	101408101	rachit jain	Whirlpool,New Industrial township, #28, Ra	Faridabad
121	101408113	Sanchit Agarwal	Whirlpool,New Industrial township, #28, Ra	Faridabad
122	101408115	Shanya Bhadauria	Whirlpool,New Industrial township, #28, Ra	Faridabad
123	101408123	Shubham Saxena	Whirlpool,New Industrial township, #28, Ra	Faridabad
124	101409032	Sahil Nagi	Whirlpool,New Industrial township, #28, Ra	Faridabad
125		Vaibhav Bansal	Whirlpool,New Industrial township, #28, Ra	Faridabad
126	101409018	Harleen singh	Continental Automotive Brake Systems (I) F	IMT Manesar
127	101409019	Hemant goyal	Continental Automotive Brake Systems (I) F	IMT Manesar
128	101408087	Mukul barpagga	Rajasthan State Ganganagar Sugar mills Ltd	Ganganagar
129	101409007	Akshita	Maruti Suzuki India Limited, Old Delhi Gurg	Gurgaon
130	101409011	Arush Garg	Maruti Suzuki India Limited, Old Delhi Gurg	Gurgaon
131	101408043	Divyesh Gupta	Maruti Suzuki India Limited, Old Delhi Gurg	Gurgaon
132	101408120	Shivendra Kumar	Maruti Suzuki India Limited, Old Delhi Gurg	Gurgaon
133	101414005	Akshay garg	Maruti Suzuki India Limited, Old Delhi Gurg	Gurgaon
134	101414009	Chanakya Gupta	Maruti Suzuki India Limited, Old Delhi Gurg	Gurgaon
135	101414010	Eshan Aggarwal	Maruti Suzuki India Limited, Old Delhi Gurg	Gurgaon
136	101464011	Siddhant Gulati	Maruti Suzuki India Limited, Old Delhi Gurg	Gurgaon
137	101408089	Nimish Goyal	Maruti Suzuki India Limited, Old Delhi Gurg	Gurgaon
138	101408055	Harnoor Singh	Maruti Suzuki India Limited, Old Delhi Gurg	Gurgaon

139	101408059	Ishaan Mangla	Maruti Suzuki India Limited, Old Delhi Gurg	Gurgaon
140	101408100	Puneet	Maruti Suzuki India Limited, Old Delhi Gurg	Gurgaon
141	101408107	Rishabh Jain	Maruti Suzuki India Limited, Old Delhi Gurg	Gurgaon
142	101408110	Rohan Bisht.	Elin Appliances Pvt Limited (Unit II), Vill Bel	HP, Baddi
143	101458003	PRANAV TIWARI	P&G, Plot No. 4, Apparel Park cum Ind. Are	HP, Baddi
144	101408131	Thakur Singla	P&G, Plot No.1, Gillette Plant, Katha Baddi	HP, Baddi
145	101408016	Aman singla	Tata Motors, Dharwad	Dharwad
146	101408036	channddeep	Tata Motors, Dharwad	Dharwad
147	101408038	Daksh Garg	Tata Motors, Dharwad	Dharwad
148	101409015	Gungeet	Tata Motors, Dharwad	Dharwad
149	101464003	Tejeshwar Singh	Tata Motors, Dharwad	Dharwad
150	101464004	Navam Jain	Tata Motors, Dharwad	Dharwad
151	101414002	Aayush Goel	Spicer India Private Limited, Jodalli,taluka k	Jodalli, Karnataka
152	101414015	Keshav Jindal	LG Development	Greater Noida
153	101408076	Kunal Garg	LG Development , Udyog vihar, plot no.51	Greater Noida
154	101408083	Mayank Singh	LG Development , Udyog vihar, plot no.51	Greater Noida
155	101408094	Piyush Goyal	LG Development , Udyog vihar, plot no.51	Greater Noida
156	101408092	om prakash	LG Development , Udyog vihar, plot no.51	Greater Noida
157	101414017	Mayank Mani Sinha	LG Development ,Plot No-51,Udyog Vihar,S	Greater Noida
158	101414020	Rahul goel	LG Development ,Plot No-51,Udyog Vihar,S	Greater Noida
159	101414030	shivendra vashistha	LG Development ,Plot No-51,Udyog Vihar,S	Greater Noida
160	101409002	Aakash Singhal	LG Development ,Plot No-51,Udyog Vihar,S	Greater Noida
161	101409009	Ankit	LG Development ,Plot No-51,Udyog Vihar,S	Greater Noida
162	101408010	Aerk Dimri	LG soft india pvt. Ltd., HA india lab, 4th floo	Greater Noida
163	101408045	Gaurav gupta	LG soft india pvt. Ltd., HA india lab, 4th floo	Greater Noida
164	101408091	Nitin gupta	LG soft india pvt. Ltd., HA india lab, 4th floo	Greater Noida
165	101408003	Abhishek Baruah	Tata Motors, Chinhath Industrial Area, Luckn	Lucknow
166	101408014	Akshansh jain	Tata Motors, Chinhath Industrial Area, Luckn	Lucknow
167	101408090	Nishant Sheoran	Tata Motors, Chinhath Industrial Area, Luckn	Lucknow
168	101408095	Piyush Kumar	Tata Motors, Chinhath Industrial Area, Luckn	Lucknow
169	101408111	Sagandeep Singh	Tata Motors, Chinhath Industrial Area, Luckn	Lucknow
170	101408112	Sagar loomba	Tata Motors, Chinhath Industrial Area, Luckn	Lucknow
171	101588002	Govind Abhimanyu Dho	Tata Motors, Chinhath Industrial Area, Luckn	Lucknow
172	101409031	Sahil Khatter	Tata Motors, Chinhath Industrial Area, Luckn	Lucknow
173	101459001	Saajanpreet Singh	Tata Motors, Chinhath Industrial Area, Luckn	Lucknow
174	101414034	Vedant Bhardwaj	Tata Motors, Chinhath Industrial Area, Luckn	Lucknow
175	101594003	Himanshu Avasthi	Tata Motors, Chinhath Industrial Area, Luckn	Lucknow
176	101408001	AASHISH KUMAR	Tata Motors, Lucknow	Lucknow
177	101408006	Abhishek Singh Nathawa	Tata Motors, Lucknow	Lucknow
178	101408009	Aditya Shubham	Tata Motors, Lucknow	Lucknow
179	101408026	Arjun Raina	Tata Motors, Lucknow	Lucknow
180	101408096	Pranjal shrama	Tata Motors, Lucknow	Lucknow
181	101458001	Devansh Jain	Tata Motors, Chinhath Industrial Area, Luckn	Lucknow
182	101408002	Aayush Khera	Daimler India Commercial Vehicle Pvt. Ltd.,	Chennai
183	101408052	Harmandeep Singh	Rockman Industries Limited	Ludhiana
184	101408017	Amar raj singh	Daimler India Commercial Vehicle Pvt. Ltd.,	Chennai
185	101408042	Dhruv Sharma	Eicher Tractors, Chennai	Chennai

186	101588004	Hardik Bedi	Eicher Tractors, Chennai	Chennai
187	101588006	Jashandeep Singh	Eicher Tractors, Chennai	Chennai
188	101408023	Ankush Narula	Ford India Pvt. Ltd., Revenue Survey No. 1,	Sanand
189	101588001	Arpanjot singh	Ford India Pvt. Ltd., Revenue Survey No. 1,	Sanand
190	101588015	Tejinder Singh	Ford India Pvt. Ltd., Revenue Survey No. 1,	Sanand
191	101414014	Karan Matta	Ford India Pvt. Ltd., Revenue Survey No. 1,	Sanand
192	101414001	Aashray Chopra	Tata Motors, Opp Chandi Railway Station,ir	Sanand
193	101594001	Chirag Mutreja	Tata Motors,taluka Sanand, village north ka	Sanand
194	101408124	SHUBHAM SHARMA	L&T	Surat
195	101408085	Moksh Pawar	EIL office complex,sector 16 on NH6, Gurga	Gurgaon
196	101459002	Amrantar Joshi	Honda Two Wheelers,Plot No 1&2,IMT Ma	Gurgaon
197	101464005	Sahib Harish	Honda Two Wheelers,Plot No 1&2,IMT Ma	Gurgaon+ Manes
198	101464006	Nikhil Goyal	Mahindra & Mahindra, Mohali (4 months)+	Mohali
199	101408013	Akin	Mahindra & Mahindra Swaraj Division(4), N	Mohali
200	101408108	Rishav kumar	Pritika Industries Limited, Mohali	Mohali
201	101588011	Rajinder Singh Sidhu	Mahindra and Mahindra Limited, Phase IV,	Mohali + Ludhian
202	101408126	simranpreet singh	International Tractors Limited, Industrial Ar	Hoshiarpur
203	101408047	Gurbaksh Singh	VE Commercial Vehicles Ltd, Pithampur-45	Pithampur
204	101408058	Himanshu Raj	VE Commercial Vehicles Ltd, Pithampur-45	Pithampur
205	101408004	Abhishek Pandey	VE Commercial Vehicles Ltd, Pithampur-45	Pithampur
206	101408128	Tanmay Mathur	VE Commercial Vehicles Ltd, Pithampur-45	Pithampur
207	101409010	Arpit jindal	VE Commercial Vehicles Ltd, Pithampur-45	Pithampur
208	101409004	Aashish Sharma	VE Commercial Vehicles Ltd, Pithampur-45	Pithampur
209	101408118	Shirish Goel	VE Commercial Vehicles Ltd, Pithampur-45	Pithampur
210	101414027	SANGHMITRA	HMC MM Auto Limited, Manesar	IMT Manesar
211	101409001	Aadil Marya	KSS Safety Systems, Manesar	IMT Manesar
212	101408088	Navyug Kumar	Panki Thermal Power Station, Panki, Kanpu	Kanpur
213	101408039	Deepanshu Mohan	Hindalco, Renukoot	Renukoot
214	101409033	Shubham Dixit	Lohia Corp Limited+Injectoplast (2)	Kanpur
215	101408074	Kshitiz raturi	IRDE, DRDO, Dehradun	Dehradun
216	101414016	Manvi Sood	Sigma, Banur, Mohali	Mohali
217	101408057	Himalaya Nath Chinoriy	HMT Machine Tools Limited, Pinjore	Pinjore
218	101408008	Adit Goel	ADI Collaborations Private Limited, SSS 64 F	Mohali
219	101408084	Mir Faizan Mushtaq	National Taipei University of Technology	Taipei

Companies of 2017

S.No.	Name of Company
1	Eicher Tractors
2	Federal Mogul
4	JCB
5	Gabriel
6	Anand Group
7	TAFE India
8	Tata motors Limited (8 Plants)
9	Whirlpool
10	LG Soft (R&D)
11	LG Development
12	GSK, Nabha
13	Ford
14	Continental Automotive Brake
15	P&G
16	International Tractors
17	Honda Cars
18	Honda Two Wheelers
19	Pritika Industries Limited
20	EIL

S.No.	Name of Company
21	Kwality Forge
22	Maruti Suzuki
23	Hero Ecotech Limited
24	Toyota Kirloskar Motors pvt ltd
25	Minda
26	L & T
27	BEL Engineering (UK) Limited
28	Volvo Eicher
29	Sona Koyo Steering Systems Ltd
30	DNA Automation
31	Anchemco pvt. Ltd.
32	Satyam Auto
33	Hitech Robotic Systemz
34	Future First
35	SML Isuzu
36	Mercedes Benz
37	Mahle Filters, Pune
38	Spicer India Pvt Limited
39	Khanna Papers Mills Limited
40	Rail Coach Factory

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S.No.	Name of Company
41	Escorts agri machinery
42	M&M vehicles
43	M&M (Swaraj)
44	Rajasthan State Ganganagar
45	Elin Appliances Pvt Limited
46	Daimler India Commercial Vehicle
47	Rockman Industries Limited
48	Diesel Loco Modernisation Works
49	Aditya Birla chemicals
50	DRDO
51	Socomo Technologies Pvt. Ltd
52	IIT Delhi
53	CSIO, Chandigarh
54	BARC, Mumbai
55	HMC MM Auto Limited
56	KSS Safety Systems
57	Panki Thermal Power Station,
58	Hindalco
59	Lohia Corp Limited
60	IRDE, DRDO, Dehradun

S.No.	Name of Company
61	Sigma, Banur, Mohali
62	HMT Machine Tools Limited
63	ADI Collaborations
64	National Taipei University

Duration of Training

- ◆ **January to June, 2018**
- ◆ **As per Academic Regulation, six months**

Evaluation Scheme

Activity	Submission time line	Marks awarded by	Weightage
Goals Report	End of 4 weeks of joining	Faculty Supervisor	5%
Midway report	End of 10 weeks of joining	Faculty Supervisor	15%
Daily Diary	During both visits to supervisor	Panel assessment	10%
Final Assessment	End of project semester	Industry Mentor	20%
Final Report	End of project semester	Panel assessment	20%
Oral and poster presentation and viva (i.e. ppt)	End of project semester	Panel assessment	30%

Learning Outcomes

- ◆ **Learning outcomes for the project semester are focussed on**
 - » **Implementation of technical knowledge to address engineering problems**
 - » **Communication**
 - » **Group work**
 - » **Professional and social ethics**
 - » **Engineering design practice**

Learning Outcomes

- ♦ The **project work** undertaken as part of the project semester is **diverse**. As a result, the **Learning Outcomes will vary**, but on completion of the module, **you will have achieved several learning outcomes from the following list**:
 - » Able to identify and use appropriate mathematical methods, numerical techniques and software tools for application to new and ill-defined engineering problems;
 - » Be able to integrate knowledge, handle complexity and formulate judgements with incomplete or limited information;
 - » Have the ability to redesign products, processes or systems in order to improve productivity, quality, safety and other desired needs;
 - » Have the ability to apply design methods, processes and techniques to unfamiliar, ill-defined problems, involving other disciplines;

Learning Outcomes

- » Be able to **design according to codes of practice and industry standards**; to identify limitations of codes of practice and the need for their application;
- » Have the **ability to investigate and define a need and identify constraints** including health, safety and legal issues and the impact of engineering solutions in a societal and environmental context;
- » Be able to make **engineering judgments** that take cognizance of the **social, environmental, ethical, economic, financial, institutional and commercial considerations**;

Learning Outcomes

- » Be able, via knowledge and **understanding of group dynamics**, to exercise **leadership**;
- » Be able to select and apply appropriate **communication tools** and write technical papers and reports;
- » Be able to describe the relevant advantages and disadvantages of various technologies to an audience, and **to communicate effectively in public**.

Reflective Diary

- ◆ The Reflective Diary should be maintained by the student and included as an appendix in the final report.
- ◆ It must be signed by you and industry mentor on regular basis.
- ◆ The Learning outcomes provide a context for the reflective entries, which should focus on the learning achieved during the training program.

Reflective Diary

♦ What do you reflect on?

- » Reflection is most effective when it is applied to areas of your experience that are memorable or significant in some way.
- » For example, an incident, event or activity that
 - Went better or worse than you expected or was unexpected
 - Caused you to stop and think or challenged your assumptions about what you thought would occur
- » In short, the best reflections tend to be about those events or incidents that challenged what you thought before, presented a dilemma or left you with a sense of unease.

How do you reflect ?

- ◆ ***Descriptive Process:*** Write a paragraph that is straightforward account of the incident or event or activity, including any context you deem relevant. This helps to take you back to the event and start the reflective process.
- ◆ ***The Reflection:*** During this stage, you start reflecting on the event by questioning yourself, for example
 - » What made it memorable or what made me uneasy?
 - » What has surprised me about this?
 - » What has challenged the way I think or the way in thoughts things would be?
 - » What were my assumptions about how things would be compared to how they are?
 - » What have I learnt about myself as a result of this event?
 - » What have I learnt about the practice of the environment I am in?

The Outcome

- ◆ **All the reflections must have an outcome and these needs to be clearly articulated and presented at the end of the reflection.**
- ◆ **Outcomes should include a new understanding, a plan to research something or a commitment to you or others.**

Goals Report & Final Reports

- ◆ The **goals report** (section A and B -upto 5 pages) should
 - » describe the **engineering problem/ opportunity being addressed**
 - » define the **project objectives**
 - » set out the **methodology**
 - » identify **tasks to be completed** and
 - » present **a plan** for the completion of the project semester.

- ◆ The **midway report** (section C and D –10 pages) should describe
 - » **Work done and the results** (or other outcomes) achieved to date
 - » **Major challenges and innovations** along with the **remaining tasks** to be completed by the end of the project.

Final Reports

- ◆ **The *FINAL report* will outline achievements while on project semester and incorporate the description of all the work conducted and how this work meets the learning objectives of the project semester. The final report (approx 80 pages) should:**
 - » **Introduce the project setting and identify objectives**
 - » **Describe the background to the project (eg. Prior work)**
 - » **Describe the methodology and work done on the project, highlighting the areas of greatest challenge and innovation; this description should demonstrate how the learning outcomes are achieved**
 - » **Present conclusions, findings and recommendations for further work**
 - » **Include the Reflective diary as an appendix**

Final Reports

- ◆ **The suggested structure for the final report is as under:**
 - » ***Abstract, Acknowledgement and Table of Contents***
 - » ***Chap 1: Introduction: Describe the industry setting, explain why the project is important, define project objectives***
 - » ***Chap 2: Background: Give context of the project, describe prior work done, summarise state of knowledge of the topic – background research***
 - » ***Chap 3 to N-1: Describe the work done, divide into chapter by topic or project, and describe the methodology employed and the results obtained with as much detail as possible, use graphical material. Use the learning outcomes when deciding what to include or exclude.***
 - » ***Chap N: Conclusions: Summary of project(s) in 1 to 2 pages, Main Findings (typically 5 – 6 bullet points), Recommendation for further work, what would be done if there was more time?***

Final Reports

- ◆ The final report is **evaluated** under the following headings:
 - » Quality of the report (layout, structure, written and graphical material, referencing): **25%**
 - » Quantity of work completed, student effort: **25%**
 - » Level of difficulty, innovation and understanding of work completed: **25%**
 - » Results, conclusions and learning outcomes achieved: **25%**

Presentation Guidelines

- ◆ **Final Presentation** and **Viva** should include a .ppt presentation (or equivalent) followed by a period of questions and answers.
- ◆ **Some guidelines for the presentation (.ppt)**
 - » Use the TU template
 - » Use proper font - calibri or arial (times new roman is for reports, papers, articles) and minimum font size 18
 - » Structure the presentation (contents, introduction, background, work done, results and discussion, conclusions, references)
 - » Use figures/images/graphic material where appropriate
 - » Do not copy content from the report (and paste in ppt)
 - » Make bullet points and explain those points
 - » Keep track of time (15 to 20 mins) – rehearsal helps
 - » Focus on your contribution, major achievements etc.

Forms / Documents

- ◆ **Request letter**
- ◆ **Forms**
 - » **Joining report**
 - » **Emergency contact details**
 - » **Employer survey form**
 - » **Alumni survey form**
 - » **Student feedback form**
 - » **Industry feedback form**
 - » **Graduate Attributes form**
 - » **Industry mentor evaluation form**

Miscellaneous

- ◆ **2 slots (3 months + 3 months) – subject to review and decision by DPPC**
- ◆ **In case of any dispute/contest/conflict related to Project Semester, the matter will be referred to DPPC (MED). DPPC will decide the suitable course of action and advise accordingly.**

Alternate Semester

- ◆ Registration and fee structure as usual
- ◆ Student has to clear three *Regular Courses* offered by the department.
- ◆ One project within university or in the industry.

Good Luck