



**NANDHA ENGINEERING COLLEGE, ERODE-52**  
**(AUTONOMOUS)**

**7.2: Best Practices – (1)**

**Title of the Practice**

**Project Based Learning**

**1. Goal**

Project-Based Learning aims to create a dynamic, student-centered learning environment that fosters critical thinking, collaboration, practical skills, entrepreneurship skills and preparing students for success in both academic and professional pursuits. It enhances the learning experience and prepares the students to face the complexities in their career. It ignites intrinsic motivation as students often find PBL more engaging and interesting. The autonomy and creativity involved in project work enhance students' passion for learning. PBL often involves the integration of various subjects and skills which in turn makes the students to gain knowledge on various disciplines. Moreover, PBL helps to demonstrate research competence by effectively gathering, evaluating, and synthesizing information from different sources. Through PBL, students are exposed to real-world problems which force them to develop the ability to generate new ideas and solutions, which is essential in the rapidly evolving world.

**2. The Context**

In PBL, Students engage in analyzing information, making decisions, and solving complex problems within the context of their projects. They involve in hands-on exploration of concepts, sustained research activities and refine and enhance practical skills. They effectively manage project tasks, deadlines, and resources, demonstrating project and time-management skills. In order to encourage the students to take up research activities, Nandha Engineering College has introduced Project Based Learning courses in the curriculum.

### 3. The Practice

- In all the departments, Project Based Learning courses are offered from third to sixth semester.
- Among the courses offered in each semester, one course will be the Project Based Learning course.
- 2 hours per week is allotted for PBL courses in addition to regular credit hours.
- Two continuous assessment and one online assessment are conducted usually. Further, three reviews are also conducted to know the progress of the projects.
- Students' project report is also taken into account for awarding internal marks.
- End Semester examination is also conducted like other regular courses.

### Projects Collected

Students encouraged to involved in the project based learning to enhance their knowledge. In Odd semester of 2022-2023 academic year, 211 projects are implemented and in the even semester of 2022 - 2023 academic year, 202 projects are implemented.

#### NANDHA ENGINEERING COLLEGE (AUTONOMOUS), ERODE - 52

2022 - 2023 Odd Semester

#### PBL Course Details

S.No.	Name of the Department	Sem	Course Code	Course Title	Name of the Faculty Member
1	Agri	III	17AGC02	Soil Science and Engineering	Mr.R.M.Subramanian
2		V	17AGC15	Bio and Thermo-chemical Conversion of Biomass	Ms.P.Sandhiyadevi
3	AI&DS	III	17AIC02	Introduction to Artificial Intelligence	Ms.M.Senthamarai
4	BME	III	17ECC06	Digital Logic Design	Dr.M.Dhipa/BME
5		V	17BMC05	Bio Medical Instrumentation-I	Mrs.B.Sowparnika/BME
6	Chemical	III	17CHC03	Material Technology	Mr.M.C.Jawahar
7		V	17CHC10	Mass Transfer - I	Mr.S.Pandiyarajan
8	Civil	III	17CEC05	Building Materils	Mr.T.Bragadeeshwaran
9		V	17CEC15	Water Resoures and Irrigation Engineering	Mr.S.Gnanavenkatesh
10	CSE	III	17ITC01	OOPs using JAVA	Mrs.S.Geetha & Mrs.D.Kavinpriya
11		V	17CSX10	Mobile Application Development	Dr.S.Karupusamy & Ms.S.Kavitha
12	ECE	III	17ECC06	Digital Logic Design	Ms.V.Parameshwari & Mr.T.Jayachandran
13		V	17ECC13	Microprocessors and Microcontrollers Interfacing	Dr.R.Murugasamy
14	EEE	III	17EEC03	Electronic devices and circuits	Mr.V.Arunkumar
15		V	17EEC13	Power Electronics	Mrs.R.Vijayalakshmi
16	IT	III	17ITC01	OOPs Using Java	Mrs.A.Bharathi
17		V	17ITC10	Object Oriented Analysis and Design	Mrs.C.Vasuki
18	Mech	III	17MEC06	Manufacturing Processes	Mr.M.A.Omprakas & Dr.N.Senniangiri
19		V	17MEC16	Fluid Power System	Dr.M.Eswaramoorthi & Mr.T.Venkatesan

Dean (Academics)

Principal

29/09/2022



NANDHA ENGINEERING COLLEGE (AUTONOMOUS), ERODE-52  
DEPARTMENT OF CHEMICAL ENGINEERING  
R17 PBL COURSE REVIEW I & II - Topic  
YEAR/SEMESTER: II / III

COURSE CODE/COURSE TITLE:  
FACULTY NAME:

17CH003 / Mass Transfer I  
Mr. T. P. S. K. H. A. P. / Chemical

S.No	Reg No	Name	Title of the Project
1	21CH001	AJESH B M	Bio- Degradable Products
2	21CH002	ARAVINTH V	
3	21CH003	ARAVINTH V	
4	21CH004	ASRUKA	
5	21CH005	ATHIBAN C	
6	21CH006	BHAVANI M	
7	21CH007	CHANDU	Synthesis Plastic Glue
8	21CH008	CHARAN K	
9	21CH009	DEEPA K	
10	21CH010	DEEVANATHAM S	
11	21CH011	GRI HARISH A	DIY with Water Drop Lens
12	21CH012	HAKKIEM S	
13	21CH013	JANANI K	
14	21CH014	JEEVANANTHAM A	
15	21CH015	JEEVANANTHAM B	
16	21CH016	JEEVANANTHAM S	
17	21CH017	JOYAL B	Bio-Based Smart materials for product Packaging
18	21CH018	KISHORE S	
19	21CH019	MUHAMMAD RISHAN S	
20	21CH020	MCHANKUMAR M	
21	21CH021	MURUGESHS	
22	21CH022	PRATHEESH C R	
23	21CH023	PRABHAKAR V	
24	21CH024	RAVINIO R V	
25	21CH025	ROOBAN K	
26	21CH026	SAMARAJIT B C	
27	21CH027	SOWMYA S	
28	21CH028	SUDHAKARAN J	
29	21CH029	SUMATHI M	
30	21CH030	VIVEK V	
31	21CH031	VIJAY KUMAR M	Manufacturing of Babana Fibre Bag - A substitute for Plastic Bags
32	21CH032	BALASHANMUGAM K	
33	21CH033	DEEPAK KUMAR A	
34	21CH034	SHANTOSH K A	
35	21CH035	FAYIS T	
36	21CH036	GOKULVASANTH K	
37	21CH037	GOPALAKRISHNAN C	Storage tanks manufacture by Reuse Plastic
38	21CH038	JELET S JAYAN	
39	21CH039	KRISHNARAJ S	
40	21CH040	MARSH LEMING	
41	21CH041	MURUGESAN K	
42	21CH042	PRASANTH K	
43	21CH043	RAVISHARATHIM	
44	21CH044	UDHIT PILLAI U S	
45	21CH045	VIGNESH S	

T. P. S. K. H. A. P.  
Faculty DC  
10/10/22

S. P. J.  
Faculty DC  
10/10/22



NANDHA ENGINEERING COLLEGE (AUTONOMOUS), ERODE-52  
DEPARTMENT OF CHEMICAL ENGINEERING  
R17 PBL COURSE - BATCH & TITLE LIST  
YEAR/SEMESTER: II/IV

COURSE CODE/COURSE TITLE:  
FACULTY NAME:

17CH010 / MASS TRANSFER I  
Mr. S. PANDURAJAN, AP/CHEMICAL

S.No	Reg No	Name	Title of the Project
1	20CH025	SANTHOSH KUMAR V	Study of regular packing in packed column
2	20CH013	LOGESHWARAN S	
3	20CH015	MOORTHY G	
4	20CH021	IRAGUL S	
5	20CH136	MURALIDHARAN A	Study of Plate column design
6	20CH113	SDWTHAM P	
7	20CH117	PALANAPPAN K	
8	20CH121	RAJA B	
9	20CH008	JAYANTH S	Study of Wet and Dry Bulb Thermometer
10	20CH110	DHARANESH K V	
11	20CH122	RAJATHIR S	
12	20CH104	ANTO SHELTON S	
13	20CH027	SUGESHVASHANMUGAM A R	Separation of impurities from water using Adsorbent
14	20CH018	PAVITHRA R	
15	20CH022	RANITH B	
16	20CH028	VENKATANARASIMMAN P	
17	20CH019	PRAKADESH U	Study of Humidifier
18	20CH014	MATHAN KUMAR K	
19	20CH011	KISHORE V	
20	20CH016	NITHISH CANDRAN P G	
21	20CH023	SANJAY R	Study of Molecular and Eddy Diffusion
22	20CH134	HARIHARAN K	
23	20CH009	JEEVITHA C	
24	20CH106	BALU K	
25	20CH128	VISHWA M	Study of effect of Random Packing in Packed column
26	20CH135	KENNEDY DWAKAR J	
27	20CH007	DENKROSS D	
28	20CH112	GOKUL G	
29	20CH017	PABINESH P	Study of Spray column
30	20CH007	HADIHARAN M	
31	20CH111	ESAKKIPANDI S	
32	20CH120	RAGUNATH M	
33	20CH010	KISHORE A	Study of Dryer
34	20CH020	IRAGUL S	
35	20CH024	SANJAY V	
36	20CH029	VITHYASAGAR B	
37	20CH005	GIRANAVEL P	Study of Bubble column
38	20CH123	RAKUNAR D	
39	20CH116	GREENATH P	
40	20CH128	VISHANTH A	
41	20CH003	DHANUSH A S	Study of Crystallization techniques
42	20CH022	ADARSH S	
43	20CH002	AKASH G	
44	20CH005	ARHIL JOHN	
45	20CH006	SUBASINI R	Study on calculation of Diffusion coefficient in liquids
46	20CH124	SABIN N	
47	20CH008	OLIVIAH M	
48	20CH130	VUTUKURI BHARATH	
49	20CH012	KRISHNA PRASATH M	Study of measurement of Relative humidity
50	20CH001	ARIN RAJ D	
51	20CH004	ETABA RAJAN M	
52	20CH001	AKASH B	
53	20CH135	SREE SAIVITHAN	

S. P. J.  
Faculty DC

S. P. J.  
HPO



**NANDHA ENGINEERING COLLEGE (AUTONOMOUS)**  
**ERODE - 51**  
**DEPARTMENT OF MECHANICAL ENGINEERING**  
**BATCH 2021 - 2025**  
**ACADEMIC YEAR 2022 - 2023 (ODD SEMESTER)**  
**17ME64 - MANUFACTURING PROCESSES (PBL)**  
**REVIEW - I ATTENDANCE**

YEAR / SEMESTER: II / III

DATE: 04/11/2022

S.No	BATCH	Register No.	Student Name	TITLE	SIGNATURE
1	1	21ME026	NANDHAKUMAR K	STATIC EAGLE MODEL FROM WASTE MATERIALS	[Signature]
2		21ME046	SANTHOSH S (22.03.2004)		[Signature]
3		21ME032	SURJITH KUMAR C		[Signature]
4	2	21ME058	YUVARAJ S	DRAGON MODEL FROM WASTE MATERIALS	[Signature]
5		21ME006	ARUN A		[Signature]
6		21ME014	GOPALAKRISHNAN S		[Signature]
7	3	21ME017	JAYESH A	SNAKE MODEL FROM WASTE MATERIALS	[Signature]
8		21ME044	SAKTHIVEL S		[Signature]
9		21ME002	AJAY PRINCE C		[Signature]
10	4	21ME012	DHARSHAN S	MICRO BIKE	[Signature]
11		21ME015	GOKUL K		[Signature]
12		21ME031	SHAYIN SINGH S		[Signature]
13	5	21ME018	KALAIYANAN R	SHEET METAL PUNCHING MACHINE	[Signature]
14		21ME028	NAVANEETHAN M		[Signature]
15		21ME034	PRANAYKERTHI P		[Signature]
16	6	21ME049	SIVASAN P	PEDAL POWER DRILLING MACHINE	[Signature]
17		21ME005	ARASHI M		[Signature]
18		21ME015	GOVINDASANKAR V		[Signature]
19	7	21ME021	LOGESHWARAN S	FLOUR MACHINE	[Signature]
20		21ME022	MAHESHKUMAR R		[Signature]
21		21ME001	ARISHNEK V		[Signature]
22	8	21ME007	BALAJI K	HOIST CRANE	[Signature]
23		21ME033	PRADITYAVENGAT N		[Signature]
24		21ME043	SAKTHIVEL A		[Signature]
25	9	21ME027	NANDHAKUMAR M	BUTTERFLY MODEL FROM WASTE MATERIALS	[Signature]
26		21ME036	PUGAZHENDHI K		[Signature]
27		21ME037	RAJAVIGNESH S		[Signature]
28	10	21ME054	SYED IBRAHIM H	SHIELD MODEL FROM WASTE MATERIALS	[Signature]
29		21ME023	MAHARAJAN T		[Signature]
30		21ME025	MOULLESHWARAN H M		[Signature]
31	11	21ME035	PRASANTH K	TURTLE MODEL FROM WASTE MATERIALS	[Signature]
32		21ME040	KCHITHI D		[Signature]
33		21ME011	DHARANIDHARAN M		[Signature]
34	12	21ME019	KATHRESAN M	OWL MODEL FROM WASTE MATERIALS	[Signature]
35		21ME024	MORANKUMAR P		[Signature]
36		21ME048	SATHISH M		[Signature]
37	13	21ME009	DHARANEEESH J	DOLPHIN MODEL FROM WASTE MATERIALS	[Signature]
38		21ME010	DHARANEEETHARAN S		[Signature]
39		21ME016	HARIVIMAL P		[Signature]
40	14	21ME045	SANTHOSH S (03.12.2003)	Trophy Model from Waste Materials	[Signature]
					[Signature]
					[Signature]

41	11	21ME020	KAVIYARASAN E	Trophy Model from Waste Materials	[Signature]
42		21ME019	ROHAN S		[Signature]
43		21ME041	ROKUMAR S		[Signature]
44	12	21ME057	VINU S	Turtle Model from Waste Materials	[Signature]
45		21ME008	BIHARATHI RAJ R		[Signature]
46		21ME029	NAVEEN M		[Signature]
47	13	21ME051	SUDHARSHAN S	Owl Model from Waste Materials	[Signature]
48		21ME056	THANISH SAMSON A		[Signature]
49		21ME063	AMAL QUAIS R		[Signature]
50	14	21ME042	RUTHISH A	Dolphin Model from Waste Materials	[Signature]
51		21ME030	SRI SAKTHI SARLES H		[Signature]
52		21ME033	SURYA K		[Signature]
53	15	21ME032	NIYETHA V	Trophy Model from Waste Materials	[Signature]
54		21ME038	RATHIPREETHI S		[Signature]
55		21ME035	TAMIZHONYA A		[Signature]

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17MEC16 Fluid Power System- Project based Learning				
SEMESTER-V & YEAR - III (B-Section)				
S.no	Batch No	Students Name	Reg. No	Project Title
1		Dhanabalan . S	20ME003	
2	Batch 1	Karthi . T	20ME013	Pneumatic Hand Saw
3		Santhosh . E	20ME031	
4		Arul Kumar . M	20MEL05	
5		Rajkumar . K	20MEL54	
6	Batch 2	Magadeshwaran . A	20MEL39	Pneumatic Bearing Puller
7		Srikanth .G	20MEL69	
8		Mukesh . K	20MEL43	
9		Naveen Kumar . S	20ME024	
10	Batch 3	Santhosh . R	20ME032	Pneumatic wise
11		Pandiyaraja . R	20MEL49	
12		Sasi Kumar . P	20ME034	
13		Ragul . K.K	20MEL51	
14	Batch 4	Thiyagarajan . V	20MEL72	Pneumatic Can Crusher
15		Nandha Kumar . K	20MEL44	
16		Marikandan . J	20MEL40	
17		Manjunath . G	20ME018	
18	Batch 5	Santhanakrishnan . A	20ME030	Pneumatic Ram
19		Kavin Adithiya .A.M	20ME014	
20		Nithish Kumar . M	20ME025	
21		Harish . R	20ME009	
22	Batch 6	Kavin . V	20ME016	Pneumatic Sheet bending
23		Loganathan . A	20ME017	
24		Vishwanath . G	20ME044	
25		Siva Sankar . P	20MEL66	
26	Batch 7	Sridhar . T	20MEL68	Pneumatic solar panel cleaner
27		Saran . R	20MEL62	
28		Navaneethan . A	20MEL46	
29		Dinesh . K	20MEL17	
30	Batch 8	Mageshwaran .K.S	20MEL38	Pneumatic Air Engine
31		Ravi Pragash . E	20MEL58	
		Anceline Nishanth M	20MEL04	
32		Vinubalan . K	20MEL74	

33		Varun . K.R	20ME042	
34	Batch 9	Geethesh Kumar . C	20MEL19	Pneumatic nail remover
35		Sanjay . R	20ME029	
36		Karthikeyan . N	20MEL31	
37		Rahul Kannan . T	20MEL52	
38	Batch 10	Hari Krishnan . P	20MEL24	Pneumatic Sheet Metal Cutter
39		Nitharson . V	20MEL48	
40		Bala Surya . G	20MEL09	
41		Keerthi Vasan . P	20MEL34	
42	Batch 11	Sabarish . D	20MEL59	Pneumatic punching machine
43		Boopathi . K	20MEL12	
44		Sukant . O.P	20ME038	
45		Dharaneesh . R	20MEL13	
46	Batch 12	Ashwin . B	20MEL07	Pneumatic sheet pending
47		Ranjith . G	20MEL56	
48		Santhosh K.K	20MEL61	
49		Mithilash K.S	20MEL41	
50	Batch 13	Pradeep . P	20MEL50	Hydraulic Braking System
51		Sibidharan . S	20MEL65	
52		Giridharan . A	20MEL20	

Faculty-  
Incharge

HoD

#### 4. Evidence of success

PBL courses help to enhance the research activities by converting projects into products.

Total No.of PBL courses conducted :

2022-2023 Odd Semester : 211 Nos.

2022-2023 Even Semester : 202 Nos.

No.of Projects submitted to CiPD : 50 Nos.

No.of projects projects-products conversion: 30 Nos.





## **5. Problems Encountered and Resources Required**

Allocating Since the PBL course is offered within the academic schedule, allocating extra hours for doing the course effectively becomes difficult.

## **6. Notes (Optional )**

Nil +