

## NATIONAL BOARD OF ACCREDITATION

Data Capturing Points of the Program Applied for NBA Accreditation– Tier I/II UG (Engineering) Institute Programs

<b>Program Name</b> : Plastics Technology	<b>Discipline</b> : Engineering & Technology
<b>Level</b> : Under Graduate	<b>Tier</b> : 1
<b>Application No</b> : 10746	<b>Date of Submission</b> : 29-05-2025

### PART A- Profile of the Institute

<b>A1. Name of the Institute:</b> HARCOURT BUTLER TECHNICAL UNIVERSITY	
Year of Establishment : 1921-1994	Location of the Institute: KANPUR
<b>A2. Institute Address:</b> NAWABGANJ, KANPUR-208002	
City:KANPUR	State:Uttar Pradesh
Pin Code:208002	Website:www.hbtu.ac.in
Email:vc@hbtu.ac.in	Phone No(with STD Code):0512-253400125340022
<b>A3. Name and Address of the Affiliating University (if any):</b>	
Name of the University :	City: Kanpur(Nagar)
State : Uttar Pradesh	Pin Code: 208002
<b>A4. Type of the Institution:</b> University	
<b>A5. Ownership Status:</b> State Government	

#### A6. Details of all Programs being Offered by the Institution:

- No. of UG programs: 12
- No. of PG programs: 6

Table No. A6.1: List of all programs offered by the Institute.

Sr.No.	Discipline	Level of program	Name of the program	Year of Start	Year of Closed	Name of The Department
1	Engineering & Technology	UG	Biochemical Engineering	1964	--	Biochemical Engineering
2	Engineering & Technology	PG	Biochemical Engineering	1966	--	Biochemical Engineering
3	Engineering & Technology	PG	Chemical Engineering	1960	--	Chemical Engineering
4	Engineering & Technology	UG	Chemical Engineering	1954	--	Chemical Engineering
5	Engineering & Technology	PG	Chemical Technology	1966	--	Oil Technology
6	Engineering & Technology	UG	Civil Engineering	1966	--	Civil Engineering
7	Engineering & Technology	PG	Computer Aided Design	2000	--	Mechanical Engineering
8	Engineering & Technology	UG	Computer Science and Engineering	1984	--	Computer Science and Engineering
9	Engineering & Technology	UG	Electrical Engineering	1965	--	Electrical Engineering
10	Engineering & Technology	UG	Electronics Engineering	1990	--	Electronics Engineering
11	Engineering & Technology	UG	Food Technology	1964	--	Food Technology
12	Engineering & Technology	PG	Food Technology	1966	--	Food Technology
13	Engineering & Technology	UG	Leather Technology	1978	--	Leather Technology
14	Engineering & Technology	PG	Masters in Computer Applications	1987	--	Computer Science and Engineering
15	Engineering & Technology	UG	Mechanical Engineering	1964	--	Mechanical Engineering
16	Engineering & Technology	UG	Oil Technology	1921	--	Oil Technology

17	Engineering & Technology	UG	Paint Technology	1964	--	Paint Technology
18	Engineering & Technology	UG	Plastics Technology	1964	--	Plastic Technology

**A7. Programs to be considered for Accreditation vide this Application:**

Table No. A7.1: List of programs to be considered for accreditation.

Name of the Department	Having Allied Departments	Name of the Program	Program Level
Computer Science and Engineering	No	Computer Science and Engineering	UG
Food Technology	No	Food Technology	UG
Electronics Engineering	No	Electronics Engineering	UG
Plastic Technology	No	Plastics Technology	UG
Mechanical Engineering	No	Mechanical Engineering	UG

Table No. A7.2: Allied Department(s) to the Department of the program considered for accreditation as above.  
Cluster ID. Name of the Department (in table no. A7.1) Name of allied Departments/Cluster (for table no. A7.1)

No Record
-----------

## PART-B: Program information

**B1. Provide the Required Information for the Program Applied For:**

Table No. B1: Program details.

A. List of the Programs Offered by the Department:

SR.NO.	PROGRAM NAME	PROGRAM APPLIED LEVEL	YEAR OF START / YEAR OF CLOSED	SANCTIONED INTAKE	INCREASE/DECREASE INTAKE (if any)	YEAR OF INCREASE/DECREASE	CURRENT INTAKE	YEAR OF AICTE APPROVAL	AICTE/COMPE AUTHORITY AI DETAILS
1	Plastics Technology	UG	1964 / --	20	Yes	2022	51	2022	F.No. Northern/44643637092/2 Dated 20-Mar-2

Sanctioned Intake for Last Five Years for the Plastics Technology	
Academic Year	Sanctioned Intake
2024-25	51
2023-24	51
2022-23	51
2021-22	30
2020-21	30
2019-20	30

List of the Allied Departments/Cluster and Programs:

**B2. Detail of Head of the Department for the program under consideration:**

A. Name of the HoD :	Prof. Indira Nigam
B. Nature of appointment:	Regular
C. Qualification:	Ph.D

**B3. Program Details**

Table No.B3.1: Admission details for the program excluding those admitted through multiple entry and exit points.

Item (Information to be provided cumulatively for all the shifts with explicit headings, wherever applicable)	2024-25 (CAY)	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)	2020-21 (CAYm4)	2019-20 (CAYm5)	2018-19 (CAYm6)
N=Sanctioned intake of the program (as per AICTE /Competent authority)	51	51	51	51	30	30	30

N1=Total no. of students admitted in the 1st year minus the no. of students, who migrated to other programs/ institutions plus no. of students, who migrated to this program	42	44	20	40	24	25	29
N2=Number of students admitted in 2nd year in the same batch via lateral entry including leftover seats	0	2	0	2	0	0	0
N3=Separate division if any	0	0	0	0	0	0	0
N4=Total no. of students admitted in the 1st year via all supernumerary quotas	9	7	0	9	0	0	0
Total number of students admitted in the program (N1 + N2 + N3 + N4) - excluding those admitted through multiple entry and exit points.	51	53	20	51	24	25	29

CAY= Current Academic Year. CAYm1= Current Academic Year Minus 1 CAYm2= Current Academic Year Minus 2. LYG= Last Year Graduate. LYGm1= Last Year Graduate Minus 1. LYGm2= Last Year Graduate Minus 2.

#### B4. Enrolment Ratio in the First Year

Table No. B4.1: Student enrolment ratio in the 1st year.

Year of entry	N (From Table 4.1)	N1 (From Table 4.1)	N4 (From Table 4.1)	Enrollment Ratio [(N1/N)*100]
2024-25 (CAY)	51	42	9	100.00
2023-24 (CAYm1)	51	44	7	100.00
2022-23 (CAYm2)	51	20	0	39.22

Average [ (ER1 + ER2 + ER3) / 3 ] = 79.74≅ 14.00

#### B5. Success Rate of the Students in the Stipulated Period of the Program

Table No.B5.1: The success rate in the stipulated period of a program.

Item	(2020-21) LYG	(2019-20) LYGm1	(2018-19) LYGm2
A*= (No. of students admitted in the 1st year of that batch and those actually admitted in the 2nd year via lateral entry, plus the number of students admitted through multiple entry (if any) and separate division if applicable, minus the number of students who exited through multiple entry (if any).	30.00	30.00	30.00
B=No. of students who graduated from the program in the stipulated course duration	24.00	25.00	29.00

Average SR of three batches ((SR\_1+ SR\_2+ SR\_3)/3): 86.67

#### B6. Academic Performance of the First-Year Students of the Program

Table No.B6.1: Academic Performance of the First-Year Students of the Program.

Academic Performance	CAYm1( 2023-24 )	CAYm2( 2022-23 )	CAYm3 ( 2021-22 )
Mean of CGPA or mean percentage of all successful students(X)	8.05	6.88	6.01
Y=Total no. of successful students	53.00	29.00	51.00
Z=Total no. of students appeared in the examination	53.00	29.00	51.00
API [X*(Y/Z)]	8.05	6.88	6.01

Average API [ (AP1+AP2+AP3)/3 ] : 6.98

#### B7: Academic Performance of the Second Year Students of the Program

Table No.B7.1: Academic Performance of the Second Year Students of the Program.

Academic Performance	CAYm1 ( 2023-24 )	CAYm2 ( 2022-23 )	CAYm3 ( 2021-22 )
X=(Mean of 2nd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 2nd year/10)	6.96	6.62	7.42
Y=Total no. of successful students	28.00	51.00	24.00
Z=Total no. of students appeared in the examination	38.00	53.00	24.00
API [ X * (Y/Z) ]	5.13	6.37	7.42

Average API [ (AP1 + AP2 + AP3)/3 ] : 6.31

#### B8. Academic Performance of the Third Year Students of the Program

Table No.B8.1: Academic Performance of the Third Year Students of the Program

Academic Performance	CAYm1 (2023-24)	CAYm2 (2022-23)	CAYm3 (2021-22)
X=(Mean of 3rd year grade point average of all successful students on a 10-point scale) or (Mean of the percentage of marks of all successful students in 3rd year/10)	6.63	7.76	7.40
Y=Total no. of successful students	51.00	24.00	25.00
Z=Total no. of students appeared in the examination	51.00	24.00	25.00
API [ X*(Y/Z) ]:	6.63	7.76	7.40

Average API [ (AP1 + AP2 + AP3)/3 ] : 7.26

### B9. Placement, Higher Studies, and Entrepreneurship

Table No.B9.1: Placement, higher studies, and entrepreneurship details.

Item	LYG (2020-21)	LYGm1(2019-20)	LYGm2(2018-19)
FS*=Total no. of final year students	30.00	30.00	30.00
X=No. of students placed	25.00	24.00	22.00
Y=No. of students admitted to higher studies	1.00	3.00	2.00
Z= No. of students taking up entrepreneurship	3.00	2.00	3.00
Placement Index(P) = (((X + Y + Z)/FS) * 100):	96.67	96.67	90.00

Average Placement Index = (P\_1 + P\_2 + P\_3)/3: 94.45 Placement Index Points:

## PART C: Faculty Details in Department and Allied Departments

(Data to be filled in for the Department and Allied Departments)

### C1. Faculty details of Department and Allied Departments

Table No.C1: Faculty details in the Department for the past 3 years including CAY

Sr.No	Name of the Faculty	PAN No.	Highest degree	University	Area of Specialization	Date of Joining in this Institution	Experience in years in current institute	Designation at Time Joining in this Institution	Present Designation	The date on which Designated as Professor/ Associate Professor if any	Nature of Association (Regular/ Contract/ Ad hoc)	Current Associa (Y/N)
1	Prof. Deepak Srivastava	XXXXXXXX53C	Ph.D	Kanpur University	Plastic Technology	31/10/1992	32.7	Lecturer	Professor	31/10/2009	Regular	Yes
2	Prof. Indira Nigam	XXXXXXXX07R	Ph.D	Kanpur University	Plastic Technology	09/10/1995	29.7	Lecturer	Professor	09/10/2012	Regular	Yes
3	Dr. Soma Banerjee	XXXXXXXX27B	Ph.D	IIT Kanpur	Polymer Science & Technology	09/06/2022	2.11	Assistant Professor	Assistant Professor		Regular	Yes
4	Dr. Manish Kumar	XXXXXXXX00L	Ph.D	IIT Guwahati	Plastic Technology	12/03/2024	1.2	Assistant Professor	Assistant Professor		Regular	Yes
5	Mr. Rashid Khan	XXXXXXXX21D	M.Tech	AKTU, Lucknow	Plastic Technology	24/10/2022	2.7	Assistant Professor	Assistant Professor		Contractual Fulltime	Yes
6	Ms. Malika Singh	XXXXXXXX24P	M.Tech	AKTU Lucknow	Plastic Technology	05/08/2024	0.9	Assistant Professor	Assistant Professor		Contractual Fulltime	Yes
7	Dr. Anjali Awasthi	XXXXXXXX93L	Ph.D	MNIT Jaipur	Chemical Engineering	10/06/2022	2.11	Assistant Professor	Assistant Professor		Regular	Yes
8	Dr Zeenat Arif	XXXXXXXX80R	Ph.D	IT BHU	Chemical Engineering	10/06/2022	2.11	Assistant Professor	Assistant Professor		Regular	Yes
9	Dr. Nidhi Shukla	XXXXXXXX89F	Ph.D	HBTU Kanpur	Chemical Engineering	24/10/2022	0.5	Assistant Professor	Assistant Professor		Contractual Fulltime	No
10	Prof. Reena Singhal	XXXXXXXX46R	Ph.D	CSJMU	Plastic Technology	07/04/1989	34.7	Professor	Professor	28/12/2006	Regular	No
11	Prof. Reena Singhal	XXXXXXXX46R	Ph.D	CSJMU	Plastic Technology	01/08/2024	0.9	Professor	Professor		Contractual Fulltime	Yes

Table No.C2: Faculty details of Allied Departments for the past 3 years including CAY.

**C2. Student-Faculty Ratio (SFR)**

No. of UG(Engineering) programs in Department including allied departments/ clusters (UGn):

UG1=1st UG program

UGn=nth UG program

**B**= No. of Students in UG 2nd year (ST)

**C**= No. of Students in UG 3rd year (ST)

**D**= No. of Students in UG 4th year (ST)

No. of PG (Engineering) programs in Department including allied departments/ clusters (PGm):

PG1=1st PG program.

PGm=mth PG program

**A**= No. of Students in PG 1st year

**B**= No. of Students in PG 2nd year

Student Faculty Ratio (**SFR**) = S/F

S= No. of students of all programs in the Department including all students of allied departments/clusters.

**No. of students (ST)**=Sanctioned Intake (SA)+ Actual admitted students via lateral entry including leftover seats (L) if any (limited to 10 % of SA)

Students who admitted under supernumerary quotas (SNQ, EWS, etc) will not be considered in calculating SFR value. Those students are exempted.

**F**=Total no. of regular or contractual faculty members (Full Time) in the Department, including allied departments/clusters (excluding first year faculty (The faculty members who have a 100% teaching load in the first-year courses)).

No. of UG Programs in the Department1 No. of PG Programs in the Department0

Table No.C2.1: Student-faculty ratio.

Description	CAY(2024-25)	CAYm1 (2023-24)	CAYm2 (2022-23)
UG1.B	53	56	32
UG1.C	56	32	30
UG1.D	32	30	30
<b>UG1: Plastics Technology</b>	<b>141</b>	<b>118</b>	<b>92</b>
DS=Total no. of students in all UG and PG programs in the Department	141	118	92
AS=Total no. of students of all UG and PG programs in allied departments	0	0	0
S=Total no. of students in the Department (DS) and allied departments (AS)	<b>S1= 141</b>	<b>S2= 118</b>	<b>S3= 92</b>
DF=Total no. of faculty members in the Department	9	6	6
AF= Total no. of faculty members in the allied Departments	0	0	0
F=Total no. of faculty members in the Department (DF) and allied Departments (AF)	<b>F1= 9</b>	<b>F2= 6</b>	<b>F3= 6</b>
FF=The faculty members in F who have a 100% teaching load in the first-year courses	0	0	0
Student Faculty Ratio (SFR)=S/(F-FF)	<b>SFR1= 15.67</b>	<b>SFR2= 19.67</b>	<b>SFR3= 15.33</b>
Average SFR for 3 years	<b>SFR= 16.89</b>		

**C3. Faculty Qualification**

- Faculty qualification index (FQI) =  $2.5 * [(10X + 4Y)/RF]$  where
- X=No. of faculty members with Ph.D. degree or equivalent as per AICTE/UGC norms.
- Y=No. of faculty members with M. Tech. or ME degree or equivalent as per AICTE/ UGC norms.
- RF=No. of required faculty in the Department including allied Departments to adhere to the 20:1 Student-Faculty ratio, with calculations based on both student numbers and faculty requirements as per section C2 of this documents: (RF=S/20).

Table No.C3.1: Faculty qualification.

Year	X	Y	RF	FQ = $2.5 * [(10X + 4Y) / RF]$
2024-25(CAY)	7	2	7.00	27.86
2023-24(CAYm1)	5	1	5.00	27.00
2022-23(CAYm2)	6	0	4.00	37.50

**C4. Faculty Cadre Proportion**

- Faculty Cadre Proportion is 1(RF1): 2(RF2): 6(RF3)
- RF1= No. of Professors required =  $1/9 * \text{No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per C2 of this documents.}$
- RF2= No. of Associate Professors required =  $2/9 * \text{No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per section C2 of this documents.}$
- RF3= No. of Assistant Professors required =  $6/9 * \text{No. of Faculty required to comply with 20:1 Student-Faculty ratio based on no. of students (S) as per section C2 of this documents.}$
- Faculty cadre and qualification and experience should be as per AICTE/UGC norms.

Table No.C4.1: Faculty cadre proportion details.

Year	Professors		Associate Professors		Assistant Professors	
	Required RF1	Available AF1	Required RF2	Available AF1	Required RF3	Available AF3

2024-25	1.00	2.00	1.00	0.00	4.00	4.00
2023-24	1.00	2.00	1.00	0.00	3.00	3.00
2022-23	1.00	3.00	1.00	0.00	3.00	3.00
Average	RF1=1.00	AF1=2.33	RF2=1.00	AF2=0.00	RF2=3.33	AF2=3.33

### C5. Visiting/Adjunct Faculty/Professor of Practice

Table No. C5.1: List of visiting/adjunct faculty/professor of practice and their teaching and practical loads.

(CAYm1)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	Prof. A K Nagpal	Visiting Professor	Ex Director HBTI	Processing of Polymers-I and II	20.00
2	Prof. Reena Singhal	Visiting Professor	Ex HOD Plastic Department	Plastic product and mold design and Polymerization Engineering	30.00

(CAYm2)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	A K Nagpal	Visiting Professor	Ex Director HBTI	Polymer Composites	20.00

(CAYm3)

S.No	Name of the Person	Designation	Organization	Name of the Course	No. of hours handled
1	A K Nagpal	Visiting Professor	Ex Director HBTI	Polymer adhesives and foams	25.00

### C6. Academic Research

Table No. C6.1: Faculty publication details.

S.No.	Item	2023-24 (CAYm1)	2022-23 (CAYm2)	2021-22 (CAYm3)
1	No. of peer reviewed journal papers published	4	2	1
2	No. of peer reviewed conference papers published	0	0	0
3	No. of books/book chapters published	11	5	2

### C7. Sponsored Research Project

Table No. C7.1: List of sponsored research projects received from external agencies.

(CAYm1)

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
De Deepak Srivastava	Dr Ashwani Kumar Rathore and Dr Kavita Srivastava	Plastic Tech	Development of carbon nanotubes and graphine oxide from plastic waste for multifarious applications	UPCST	3 years	11.94
						Amount received (Rs.):11.94

(CAYm2)

(CAYm3)

**Total Amount (Lacs) Received for the Past 3 Years: 11.94**

**Note\*:**

- Only sponsored research projects will be considered. Infrastructure-based projects will not be considered here.

### C8. Consultancy Work

Table No. C8.1: List of consultancy projects received from external agencies.

**(CAYm1)**

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Prof. Indira Nigam	Dr. Soma Banerjee & Dr. Manish Kumar	Plastic Technology	Executive Training Program: Polymer Engineering	IOCL	2 week	17.70
						Amount received (Rs.):17.70

**(CAYm2)**

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Prof. Indira Nigam		Plastic Technology	UV Stabilization for sample (1) CAL-007 (2) RT- 010 (3) R- 007	RP Reiletech Pvt. Ltd.	2 months	0.14
Prof. Indira Nigam		Plastic Technology	UV Stabilization For LED Signal lamp	SAFE Electronics ( India) Pvt. Ltd.	1 month	0.05
Prof. Indira Nigam		Plastic Technology	UV Stabilization For LED Signal lamp	ADVANCE Hi tech	2 months	0.05
Prof. Indira Nigam		Plastic Technology	UV Stabilization For LED Signal lamp	RDSO Lucknow	2 months	0.05
Prof. Indira Nigam	Dr. Soma Banerjee	Plastic Technology	Executive Training Program: Polymer Engineering	IOCL	2 week	13.79
						Amount received (Rs.):14.08

**(CAYm3)**

PI Name	Co-PI names if any	Name of the Dept., where project is sanctioned	Project Title*	Name of the Funding agency	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25
Prof. Indira Nigam		Plastic Technology	UV stabilization test for samples i. ROUTE sr. no. 008 ii. SHUNT sr. no. 005 iii. Calling on sr. no. 005 iv. Hologram no. SACF 2016	RDSO, New delhi	3 months	0.19
Prof. Indira Nigam		Plastic Technology	UV Stabilization for sample (1) route sr. no. 08 (2)shunt sr.no. 05 (3) calling sr. no. 05	RDSO, Lucknow	2 months	0.14
Prof. Indira Nigam		Plastic Technology	UV Stabilization Main colour light	RDSO, Lucknow	3 months	0.05
						Amount received (Rs.):0.38

**Total amount (Lacs) received for the past 3 years: 32.16**

**Note\*:**

- Only consultancy projects will be considered. Infrastructure-based projects will not be considered here.

**C9. Institution Seed Money or Internal Research Grant to its Faculty for Research Work**

Table No. C9.1: List of faculty members received seed money or internal research grant from the Institution.

(CAYm1)

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project
Dr. Soma Banerjee	Contingency for Ph.D. research work	1 year	20000.00	20000.00	1 research paper published
Dr. Soma Banerjee	Contingency for M.tech research work	1 year	10000.00	10000.00	presentation in conference and 1 student graduated
Dr. Soma Banerjee	Contingency for B.tech. research/project work	1 year	5000.00	5000.00	Presentation in conference and 3 students graduated
Dr. Soma Banerjee	Research work presentation at international conference CHEMCON-2023	4 days	15426.00	15426.00	Presentation in conference
Dr. Soma Banerjee	Research work presentation at international conference CHEM-TECHNOVA-2024	3 days	2000.00	2000.00	Presentation in conference
Dr. Manish Kumar	Research work presentation at international conference APA 2024, Jaipur	3 days	14000.00	14000.00	Presentation in conference
			Amount received (Rs.): 66426.00		

(CAYm2)

Faculty name	Project title/ Support for Activity	Duration of the project	Amount(Lacs) i.e. 15,25,000=15.25	Amount Utilized(Lacs) i.e. 15,25,000=15.25	Outcomes of the project
Dr. Soma Banerjee	Research work presentation at international conference CHEMCON-2022	4 days	4720.00	4720.00	Presentation in conference
			Amount received (Rs.): 4720.00		

(CAYm3)

Total amount (Lacs) received for the past 3 years : 71146.00

## PART D: Laboratory Infrastructure in the Department

### (Data to be filled in for the Department)

#### D1. Adequate and Well-Equipped Laboratories, and Technical Manpower

Table No.D1.1: List of laboratories and technical manpower.

Sr. No	Name of the Laboratory	Number of students per set up(Batch Size)	Name of the Important Equipment	Weekly utilization status(all the courses for which the lab is utilized)	Technical Manpower Support		
					Name of the Technical staff	Designation	Qualification
1	Polymer Chemistry Lab (PC Lab) / 3rd Sem	5	1. Heating mantles 2. Laboratory stirrer 3. Hot air oven 4. High pressure autoclave	4 hours in two days	Ms Beena Pa	Technical Ass	M Sc
2	Polymerization Engineering Lab (PE Lab) / 4th Sem	5	1. Heating mantles 2. Laboratory stirrer 3. Hot air oven 4. High pressure autoclave	4 hours in two days	Ms Beena Pa	Technical Ass	M Sc
3	Processing of Polymers Lab – I (Clubbed with)	5	1. Extrusion plant for blown film 2. Extrusion plant for HDPE pipe 3. Blow Moulding Machine 4. Hydraulic Press	2 hours in one day	Mr Govind Si	Foreman	M Tech
4	Processing of Polymers Lab – II (Clubbed with)	5	1. Injection moulding machine 2. Compression moulding machine 3. Sheet blow moulding machine 4. Hydraulic Press	2 hours in one day	Mr Govind Si	Foreman	M Tech
5	PT Lab/ 5th Sem	5	1. Indentation hardness tester 2. Vicat softening point 3. Melt flow index tester 4. Rubber hardness	6 hours in two days	Mr. Govind Si	Foreman	M Tech
6	Polymer Characterization Lab / 6th Sem	5	1. Double beam UV spectrophotometer 2. Differential scanning calorimeter (DSC) 3. Thermogravimetric analyzer (TGA)	6 hours in two days	Ms. Beena Pa	Technical Ass	M Sc / M Tech
7	Minor Project	4	1. Projector (02) 2. Laptop (01) 3. Desktop Computer i7 (01)	6 hours in three days	Ms. Beena Pa	Technical Ass	M Sc / M Tech
8	FMMO Laboratory	4	1. Venchuri meter, 2. Orifice Meter, 3. Jaw Crusher, 4. Crushing Roll, 5. Ball Mill 6. Domestic Thermocouple	2 hours in two days	Mr. Sanjay ku	Research Ass	B Tech

## D2. Safety Measures in Laboratories

Table No. D2.1: List of various safety measures in laboratories.

Sr. No	Laboratory Name	Safety Measures
1	Undergraduate Lab	1. Fire extinguishers are placed at strategic locations in the department/labs. 2. First aid facilities 3. Apron 4. Gloves 5. Double exit in each lab for emergency 6. Emergency contact number 7. Fire Alarms are placed at strategic locations in the department/labs. 8. Safety rules, emergency procedures, and SOPs for equipment displayed in the lab
2	Polymer Testing Lab	1. Fire extinguishers are placed at strategic locations in the department/labs. 2. First aid facilities 3. Apron 4. Gloves 5. Double exit in each lab for emergency 6. Emergency contact number 7. Fire Alarms are placed at strategic locations in the department/labs. 8. Safety rules, emergency procedures, and SOPs for equipment displayed in the lab
3	Polymer Processing Lab	1. Fire extinguishers are placed at strategic locations in the department/labs. 2. First aid facilities 3. Apron 4. Gloves 5. Double exit in each lab for emergency 6. Emergency contact number 7. Fire Alarms are placed at strategic locations in the department/labs. 8. Safety rules, emergency procedures, and SOPs for equipment displayed in the lab
4	Polymer Characterization Lab	1. Fire extinguishers are placed at strategic locations in the department/labs. 2. First aid facilities 3. Apron 4. Gloves 5. Double exit in each lab for emergency 6. Emergency contact number 7. Fire Alarms are placed at strategic locations in the department/labs. 8. Safety rules, emergency procedures, and SOPs for equipment displayed in the lab
5	Research Lab I (Synthesis Lab)	1. Fire extinguishers are placed at strategic locations in the department/labs. 2. First aid facilities 3. Apron 4. Gloves 5. Double exit in each lab for emergency 6. Emergency contact number 7. Fire Alarms are placed at strategic locations in the department/labs. 8. Safety rules, emergency procedures, and SOPs for equipment displayed in the lab
6	Research Lab II (Composite Lab)	1. Fire extinguishers are placed at strategic locations in the department/labs. 2. First aid facilities 3. Apron 4. Gloves 5. Double exit in each lab for emergency 6. Emergency contact number 7. Fire Alarms are placed at strategic locations in the department/labs. 8. Safety rules, emergency procedures, and SOPs for equipment displayed in the lab

## D3. Project Laboratory/Research Laboratory

The departmental laboratories are sufficiently equipped to carry out B. Tech, M.Tech and Ph.D. research projects. Depending on the area of specialization, student(s) are assigned laboratories where they undertaken their respective projects with the guidance of their supervisors/laboratory in-charges.

Table No. 7.5.1: List of project laboratory/research laboratory /Centre of Excellence.

S. N.	Name of the Laboratory
1.	UG/PG/PhD research Labs for conducting their experimental projects/Ph D works
2.	Incubation Centre where students can undertake their start-up projects
3	A Center of Excellence on Applied Research, Training and Education in Lipid Science (OR Advanced Surfactant Lab) which exists in Oil Technology Department. In this Lab several instruments used by plastic technology students depending of type of the project allotted under the supervision of their guide.
4	Centre of Technical Excellence of exists in the Department of Paint Technology where students use the instruments in coatings related projects.

## PART E: First Year faculty and financial Resources

(Data to be filled in for the first year course faculty and budget allocation and utilization)

### E1. First Year Student-Faculty Ratio (FYSFR)

Table No. E1.1: FYSFR details.

Year	Sanctioned intake of all UG programs (S4)	No. of required faculty (RF4=S4/20)	No. of faculty members in Basic Science Courses & Humanities and Social Sciences including Management courses (NS1)	No. of faculty members in Engineering Science Courses (NS2)	Percentage= No. of faculty members ((NS1*0.8) + (NS2*0.2))/(No. of required faculty (RF4)); Percentage= ((NS1*0.8) + (NS2*0.2))/RF
2022-23(CAYm2)	645	32	11	14	36
2023-24(CAYm1)	645	32	12	21	43
2024-25(CAY)	645	32	16	37	63

## E2. Budget Allocation, Utilization, and Public Accounting at Institute Level

Table No. E2.1: Budget and actual expenditure incurred at Institute level.

Items	Budgeted in 2024-2025	Actual Expenses in 2024-2025 till	Budgeted in 2023-2024	Actual Expenses in 2023-2024 till	Budgeted in 2022-2023	Actual Expenses in 2022-2023 till	Budgeted in 2021-2022	Actual Expenses in 2021-2022 till
Infrastructure Built-Up	1279.52	1267.74	641.38	64138	500	163.04	2618.02	2001.57
Library	50	28.14	146	76.79	100.92	70.19	20	4.31
Laboratory equipment	300	213.03	500	104.79	500	163.04	200	27.80
Teaching and non-teaching staff	5408.06	4579.02	5163	2654.37	4982	4135.14	3534.46	2911.87
Outreach Programs	0	0	0	0	0	0	0	0
R&D	100	22.95	102.40	48.09	116.38	54.70	121	30.91
Training, Placement and	75	32.12	90	70.97	90	25.66	30	8.41
SDGs	0	0	0	0	0	0	0	0
Entrepreneurship	0	0	0	0	0	0	0	0
Others, specify	550	532.21	300	246.64	250	236.42	207	171.17
<b>Total</b>	<b>7762.58</b>	<b>6675.21</b>	<b>6942.78</b>	<b>67339.65</b>	<b>6539.30</b>	<b>4848.19</b>	<b>6730.48</b>	<b>5156.04</b>

## E3. Budget Allocation, Utilization, and Public Accounting at Program Specific Level

Table No. E3.1: Budget and actual expenditure incurred at program level.

Items	Budgeted in 2024-2025	Actual Expenses in 2024-2025 till	Budgeted in 2023-2024	Actual Expenses in 2023-2024 till	Budgeted in 2022-2023	Actual Expenses in 2022-2023 till	Budgeted in 2021-2022	Actual Expenses in 2021-2022 till
Laboratory equipment	800000	37860	700000	282850	500000	232199	500000	38484
Software	400000	0	300000	0	200000	0	200000	0
SDGs	0	0	0	0	0	0	0	0
Support for faculty development	225000	207568	150000	42950	100000	34283	100000	6000
R & D	300000	77264	250000	100000	150000	30000	150000	0
Industrial Training, Industry expert,	75000	10000	50000	10557	50000	0	50000	0
Miscellaneous Expenses*	400000	83884	350000	146733	200000	64116	200000	15999
<b>Total</b>	<b>2200000</b>	<b>416576</b>	<b>1800000</b>	<b>583090</b>	<b>1200000</b>	<b>360598</b>	<b>1200000</b>	<b>60483</b>