

8. First Year Academics (50)

SN	Name of the faculty member	PAN No.	Qualification	Date of Receiving Highest Degree	Area of Specialization	Designation	Date of joining	Teaching load (%)			Currently Associated (Yes/No)	Nature Of Association (Regular/Contract)	Date Of leaving (In case Currently Associate is 'No')
								CAY	CAYm1	CAYm2			
1	Dr. Ramesh Damor	AFTPD2578Q	M.Sc. and PhD	09-10-2014	Fractional differential equations	Associate Professor	03-02-2017	36	50	57	Yes	Regular	
2	Dr. Sanjay Kumar Singhal	AYNPS9528C	M.Sc. and PhD	17-11-2003	Neutron and gamma ray strength functions	Associate Professor	12-10-2018	79	79	100	Yes	Regular	
3	Dr. Hardik M. Makadia	ARYPM8827G	M.Sc. and PhD	04-07-2016	Graph Theory	Assistant Professor	30-06-2015	44	56	69	Yes	Regular	
4	Dr. S.H. Karakar	BFIPK0448E	M.Sc. and PhD	02-04-2019	Graph Theory	Assistant Professor	13-11-2020	56	50	0	Yes	Regular	
5	Prof. Dhairyavi K. Anjaria	AYMPA2318P	MA	01-04-2009	English language and literature	Assistant Professor	04-05-2011	69	81	100	Yes	Regular	

6	Prof. Jayant Kishorbhai Jogi	AFZPJ6107M	M.Sc	01-03-2003	Space Physics	Assistant Professor	06-05-2011	75	88	100	Yes	Regular	
7	Prof. Prashant K Rathod	ARKPR0395Q	M.Sc	01-05-2004	Space Physics	Assistant Professor	10-05-2011	81	88	100	Yes	Regular	
8	Dr. Devshi D. Bantva	ARSPB5610J	M.Sc. and PhD	06-09-2013	Graph Theory	Assistant Professor	20-05-2011	69	56	75	Yes	Regular	
9	Prof. Jagruti B Bheda	BCYPB7419M	M.A and Ph.D	21-08-2021	English language and literature	Assistant Professor	12-05-2011	75	38	100	Yes	Regular	
10	Dr. Ashish K Shukla	BRGPS5155J	M.A and Ph.D	07-12-2015	English language laboratory	Assistant Professor	20-12-2018	0	81	100	No	Regular	28-01-2022
11	Dr. S.K. Tiwari	ATWPT6474A	M.Sc. and PhD	31-07-2014	Functional Analysis	Assistant Professor	01-12-2020	63	81	0	Yes	Regular	
12	Dr. Bhavesh M. Kakrecha	BRYPK1528D	M.Sc. and PhD	19-12-2017	Domination in Graph	Assistant Professor	30-06-2015	0	0	75	No	Regular	12-11-2020
13	Dr. D.D.Tilala	BAIPT7970B	M.Sc. and PhD	18-02-2014	INORGANIC CHEMISTRY	Assistant Professor	10-10-2017	0	0	56	No	Regular	12-11-2020
14	Dr. Gunjan Ranabhat	AVKPR1421P	M.Sc. and PhD	23-08-2012	Real Analysis	Assistant Professor	15-10-2019	0	0	100	No	Regular	27-01-2020

15	Dr. S.R. Upadhyay	AAUPU4374K	M.A and Ph.D	30-12-2015	English Language	Assistant Professor	29-01-2022	69	0	0	Yes	Regular	
16	Prof.M.H. Pandya	ACSPP6486H	ME/M. Tech and PhD	02-06-2017	Machines and drives	Associate Professor	18-03-2011	43	0	0	Yes	Regular	
17	Prof. S. N. PUROHIT	AFLPP1167K	M.E/M. Tech	11-08-2009	Power System	Assistant Professor	21-04-2011	0	13	0	Yes	Regular	
18	Prof.D. V. BAVLECHA	AAEPZ5008P	M.E/M. Tech	05-09-2016	Power System	Assistant Professor	19-02-2020	0	25	0	No	Regular	28-01-2022
19	Prof.H. M. BUCH	AFZPB6786N	ME/M. Tech and PhD	29-06-2020	Power System	Assistant Professor	13-11-2020	0	6	0	Yes	Regular	
20	Prof.A. C. LAKUM	ABEPL9263B	M.E/M. Tech	01-09-2004	Power System	Assistant Professor	19-12-2013	13	19	0	Yes	Regular	
21	Prof.P. D. RAVAL	AHHPR6247E	ME/M. Tech and PhD	18-12-2020	Power System	Assistant Professor	30-06-2015	6	19	0	Yes	Regular	
22	Prof. H.M.KARKAR	AOVPK3280R	ME/M. Tech and PhD	03-02-2021	Power System	Assistant Professor	03-09-2016	0	13	56	Yes	Regular	
23	Prof. B.B.PARMAR	AQBPP6867H	M.E/M. Tech	17-05-2005	Power System	Assistant Professor	12-08-2016	25	6	13	Yes	Regular	
24	Prof. V. G. JOTANGIYA	ALCPJ0477B	M.E/M. Tech	01-08-2011	Power Electronics and	Assistant Professor	12-08-2016	38	31	0	Yes	Regular	

					electrical drives								
25	Prof. P.H.CHAUHAN	ARWPC7214R	M.E/M. Tech	20-07-2013	Power System	Assistant Professor	12-08-2016	13	44	31	Yes	Regular	
26	Prof. J.A. JADAV	AHSPJ4863D	M.E/M. Tech	03-08-2010	Industrial Electronics	Assistant Professor	01-09-2016	25	50	0	Yes	Regular	
27	Prof. P.N.PARMAR	CFIPP1371J	ME/M. Tech and PhD	21-07-2012	Power System	Assistant Professor	04-09-2019	69	44	38	Yes	Regular	
28	Prof. S.K. Patel	BCPPP9412D	M.E/M. Tech	15-07-2009	Microprocessor System	Assistant Professor	16-08-2016	13	25	13	No	Regular	28-01-2022
29	Prof. S.L. Kaila	AXDPK0922H	M.E/M. Tech	19-01-2012	Power System	Assistant Professor	03-09-2016	0	0	38	No	Regular	12-11-2020
30	Prof. G.N. Sarvaiya	BTAPS3137G	M.E/M. Tech	14-10-2014	Electric Power System	Assistant Professor	29-01-2022	13	0	0	Yes	Regular	
31	Prof. S.K. Vyas	ALIPV8736F	M.E/M. Tech	29-10-2012	Electrical	Assistant Professor	05-10-2012	0	0	38	No	Contractual	09-11-2020
32	Prof. D.M.BHANKHODIYA	BISPB2288Q	M.E/M. Tech	19-01-2013	Power System	Assistant Professor	21-10-2013	0	0	25	No	Contractual	09-11-2020
33	Prof. D.T.VAGHELA	AFFPV7099L	M.E/M. Tech	23-11-2012	Power System	Assistant Professor	22-10-2013	0	0	25	No	Contractual	09-11-2020

34	Prof. C.K.VASOY A	ASCPG6729J	M.E/M. Tech	22-07-2014	Electrical	Assistant Professor	22-10-2014	0	0	13	No	Contractual	09-11-2020
35	PROF. M.H. LUNAGARI YA	AAQPL6664F	M.E/M. Tech	22-10-2009	Structural Engineerin g	Assistant Professor	13-11-2020	56	44	0	Yes	Regular	
36	PROF B.H. JAISWAL	AIUPJ8979K	M.E/M. Tech	10-12-2012	Transportati on Engineerin g	Assistant Professor	11-09-2017	56	38	44	Yes	Regular	
37	PROF. S.A. PATEL	ASRPP2336F	M.E/M. Tech	28-01-2016	Town and Country Planning	Assistant Professor	01-11-2019	56	63	44	Yes	Regular	
38	PROF. N.J.BHATT	AJGPB9718F	ME/M. Tech and PhD	13-10-2020	Water Resource Engineerin g	Assistant Professor	18-10-2017	0	0	31	Yes	Regular	
39	PROF V.H. KHOKHANI	BJNPK3889C	M.E/M. Tech	21-07-2012	Water Resource Engineerin g	Assistant Professor	25-07-2017	0	0	31	No	Regular	20-11-2020
40	Prof.H. K. Sarvaiya	CDQPS5764Q	ME/M. Tech and PhD	24-09-2018	Civil Enineering	Assistant Professor	27-05-2016	13	0	38	No	Regular	28-01-2022

41	Prof. MKPathak	ATZPP9104G	M.E/M. Tech	16-07-2009	Structural Engineerin g	Assistant Professor	17-07-2018	0	13	38	Yes	Regular	
42	Prof. M B Baldaniya	BLSPB6264P	M.E/M. Tech	09-05-2012	Structural Engineerin g	Assistant Professor	27-05-2016	0	13	0	Yes	Regular	
43	Prof. B R Kanzariya	CRZPK9878C	M.E/M. Tech	21-07-2012	Water Resource Engineerin g	Assistant Professor	04-10-2012	13	0	0	Yes	Contractual	
44	Prof. H.D. Bambhava	BGZPB5847E	M.E/M. Tech	20-07-2013	Constructio n managemen t equipment	Assistant Professor	22-10-2013	0	13	0	Yes	Contractual	
45	PROF.A.A.P ARMAR	BATPP7086H	M.E/M. Tech	28-06-2011	computer engineering	Assistant Professor	08-09-2016	44	44	38	Yes	Regular	
46	PROF. T.M VASAVADA	ADYPV1524F	ME/M. Tech and PhD	01-12-2019	Sensor Networks	Assistant Professor	08-09-2016	0	0	19	Yes	Regular	
47	PROF. R.R.KESHW ALA	DLOTK2479D	M.E/M. Tech	20-06-2013	Information Technology	Assistant Professor	08-09-2016	0	0	25	Yes	Regular	
48	Prof. H.T.LORIYA	ADAPL5172D	ME/M. Tech and PhD	27-09-2018	Wireless Communic ation	Assistant Professor	17-12-2016	25	25	0	Yes	Regular	

49	Prof. A.R.GAUS WAMI	BKXPG3008A	M.E/M. Tech	24-12-2013	Industrial Electronics	Assistant Professor	07-05-2016	25	25	31	Yes	Regular	
50	Prof. P.M.SHAH	BOOPS5592G	M.E/M. Tech	15-07-2013	Power Electronics	Assistant Professor	21-05-2014	25	25	0	Yes	Contractual	
51	Prof. R.B.Parmar	ACDPP2403R	B.E/B. Tech	07-05-1992	EC	Assistant Professor	18-08-2011	25	25	38	Yes	Regular	
52	Prof. R.N.Rathod	ALSPR2901C	ME/M. Tech and PhD	05-07-2021	Wireless Communication	Assistant Professor	22-03-2011	19	19	38	Yes	Regular	
53	Prof. S H Trivedi	AEXPT1826N	M.E/M. Tech	26-08-2016	Industrial Electronics	Assistant Professor	17-12-2009	0	0	6	Yes	Regular	
54	Prof. M.R.Mali	ABZPM7632A	M.E/M. Tech	20-07-2010	CAD CAM	Associate Professor	21-09-2012	14	14	7	Yes	Regular	
55	Prof. B.J. Makwana	AEYPM6655D	M.E/M. Tech	02-08-2010	CAD CAM	Associate Professor	16-01-2016	14	14	7	Yes	Regular	
56	Prof. S.R. Patel	ACYPP1109R	M.E/M. Tech	24-07-2012	MECHANICAL	Assistant Professor	05-07-2011	13	38	25	Yes	Regular	
57	Prof. M.B. Jethwa	AGVPJ2558B	M.E/M. Tech	22-01-2018	Production	Assistant Professor	19-12-2013	0	6	19	Yes	Regular	
58	Dr. V.A. Parikh	AGWPP6930G	ME/M. Tech and PhD	01-09-2020	Logistics and Supply Chain Management	Assistant Professor	26-08-2020	22	19	0	Yes	Regular	

59	Prof. P.H. Solanki	ASKPF6103N	M.E/M. Tech	27-07-2015	Production	Assistant Professor	04-12-2019	19	13	13	Yes	Regular	
60	Dr. M.D. Vadhvani	AKNPJ1508M	ME/M. Tech and PhD	08-01-2018	Lean Manufacturing	Assistant Professor	26-08-2020	9	19	0	Yes	Regular	
61	Prof.A.B. Panchal	BFPPP3108B	M.E/M. Tech	20-07-2013	Machine Design	Assistant Professor	27-05-2016	19	6	13	Yes	Regular	
62	Prof. H.Z. Parmar	AVKPP1346N	M.E/M. Tech	10-06-2010	Mechanical	Assistant Professor	20-06-2016	9	19	6	Yes	Regular	
63	Prof. P.B. Tailor	ABUPT7939G	ME/M. Tech and PhD	08-08-2015	Manufacturing	Professor	11-12-2018	14	29	14	Yes	Regular	
64	Prof. V.B. Patel	ABHPP5543P	ME/M. Tech and PhD	06-10-2014	Manufacturing	Professor	11-12-2018	14	29	14	Yes	Regular	
65	Prof V P Pandya	ADKPP4363N	M.E/M. Tech	30-04-1994	Thermal Science	Associate Professor	20-09-2012	0	0	21	No	Regular	31-07-2020
66	Prof.R.N. Chovatia	AEAPC0288A	M.E/M. Tech	07-01-2011	CAD CAM	Associate Professor	21-09-2012	29	36	36	Yes	Regular	
67	Prof. K.K. Dave	AKUPD8913H	M.E/M. Tech	09-02-2009	Mechanical	Assistant Professor	19-04-2011	38	38	63	Yes	Regular	
68	Prof. H.N. Jani	AHMPJ4266A	M.E/M. Tech	15-12-2008	Machine Design	Assistant Professor	01-07-2015	19	38	50	Yes	Regular	

69	Prof.H.D. Patel	AZKPP8476E	M.E/M. Tech	19-01-2013	CAD CAM	Assistant Professor	23-12-2014	25	31	63	Yes	Regular	
70	Prof. C.A. Maradiya	AUDPM8686M	ME/M. Tech and PhD	15-04-2021	Thermal Engineering	Assistant Professor	17-06-2016	31	31	25	Yes	Regular	
71	Prof.A.N. Dave	AJNPD0506C	ME/M. Tech and PhD	26-03-2018	Mechanical	Assistant Professor	10-06-2016	31	38	50	Yes	Regular	
72	Prof L M Rola	AJWPR8249M	M.E/M. Tech	19-01-2013	Thermal Science	Assistant Professor	13-06-2016	0	0	38	No	Regular	11-12-2020
73	Prof.J.H. Solanki	BPSPS1391L	M.E/M. Tech	19-12-2014	Heat Power and Thermal Engineering	Assistant Professor	23-06-2016	19	13	38	Yes	Regular	
74	Prof.R.C. Ghanghas	BLBPG5349B	M.E/M. Tech	06-02-2015	Materials Technology	Assistant Professor	06-11-2017	50	50	69	Yes	Regular	
75	Prof. J. M. Pujara	ATUPP4841P	ME/M. Tech and PhD	01-10-2018	Mechanical	Assistant Professor	13-11-2020	13	44	0	Yes	Regular	
76	Prof.M.B. Vaghela	AHOPV4111C	M.E/M. Tech	16-01-2014	CAD CAM	Assistant Professor	10-06-2016	50	31	44	Yes	Regular	
77	Prof.R.N. Makadiya	AWPPM3175P	M.E/M. Tech	08-01-2012	Thermal System Design	Assistant Professor	13-06-2016	38	38	63	Yes	Regular	

78	Prof.A.B. Khant	ANDPV1247Q	M.E/M. Tech	19-01-2013	Machine Design	Assistant Professor	13-06-2016	75	31	31	Yes	Regular	
79	Prof.I.B. Shah	CRDPS8615P	M.E/M. Tech	19-01-2013	CAD CAM	Assistant Professor	08-10-2012	38	63	44	Yes	Contractual	
80	Prof D M Joshipura	ABUPJ2798R	ME/M. Tech and PhD	07-07-2020	Mechanical	Assistant Professor	11-04-2013	0	0	38	No	Regular	19-08-2020
81	Dr. K.R. Gurjar	AJGPG2350N	M.Sc. and PhD	14-09-2018	Organic Chemistry	Assistant Professor	20-11-2020	31	31	0	Yes	Regular	
82	Prof. R.A. Parmar	BMPPP1789P	M.E/M. Tech	31-01-2016	Computer Engineering	Assistant Professor	10-05-2018	0	0	31	Yes	Regular	
83	Prof. R.H.BHESD ADIYA	AMSPB2039C	ME/M. Tech and PhD	05-09-2016	Power System	Assistant Professor	12-05-2011	38	31	38	Yes	Regular	
84	Prof.PB Somaiya	DPVPS0413A	M.E/M. Tech	24-05-2011	Civil Geotech	Assistant Professor	07-06-2016	13	0	25	No	Regular	28-01-2022
85	Prof H M Shah	ATDPS7060G	M.E/M. Tech	12-07-2008	Cryogenic	Assistant Professor	30-06-2015	0	0	75	No	Regular	19-08-2020

Data for first year courses to calculate the FYSFR:

Table 8.1 Calculation of FYSFR

Year	Number of Students (Approved Intake) N	Number of Faculty Members (Considering fractional Load) F	FYSFR	Assesment = (5*20)/FYSFR (limited to Maximum 5)
CAY m2 (2019-20)	510	27	19	5
CAY m1 (2020-21)	480	21	23	4
CAY (2021-22)	480	20	24	4
Average	490	22	22	4

***Note:** If FYSFR is greater than 25, then assessment equal to zero.

8.2 Qualification of Faculty Teaching First Year Common Courses (5):

Assessment of qualification = $(5x + 3y)/RF$, x = Number of Regular Faculty with Ph.D., y = Number of Regular Faculty with Post-graduate qualification, RF= Number of faculty members required as per SFR of 20:1, Faculty definition as defined in 5.1

Table 8.2 Assessment of qualification of faculty members teaching first year

Year	x Number of Regular faculty with Ph.D	y Number of Regular faculty with PG qualification	RF	Assessment of Faculty Qualification (5x + 3y) / RF

CAY m2 (2019-20)	6	14	25	2
CAY m1(2020-21)	5	11	24	2
CAY (2021-22)	7	10	24	2
Average Assessment				2

8.3 First Year Academic Performance (10)

Academic Performance = ((Mean of 1st Year Grade Point Average of all successful Students on a 10-point scale) or (Mean of the percentage of marks in First Year of all successful students/10)) x (number of successful students/number of students appeared in the examination). Successful students are those who are permitted to proceed to the second year.

Table 8.3: Academic performance (Mechanical Engineering)

Academic Performance	2021-22(CAY)	2020-21 (CAYm1)	2019-20 (CAYm2)	2018-19 (CAYm3)
Mean of CGPA or mean percentage of all successful students(X)	Result Awaited	6.68	5.98	3.98
Total Number of successful students(Y)	Result Awaited	68	70	53
Total Number of students appeared in the examination(Z)	Result Awaited	68	76	55
API [X*(Y/Z)]		6.68	5.51	3.84
	Average API[(AP1+AP2+AP3)/3] : 5.34			
	Assessment = Average API : 5.34			

8.4.1 Describe the assessment processes used to gather the data upon which the evaluation of Course Outcomes of first year is done
(5)

CO attainment is based on the internal and external assessment as per GTU scheme of examination. Depending upon nature, of course, maximum marks for various courses may be 150 or 100. Different components and its maximum marks are as shown in Table 3.2.1.2. For the 150 marks subject, component wise mark distribution is shown below;

- (a) and (b) constitute internal components (30%) of evaluation**

- (c) and (d) constitute external components (70%) of evaluation**

The Mid-Semester exam component is in form of written exam while assignment and continuous evaluation of practical work is in form of assessment of student done by subject faculty. The external component is divided in two sub-categories; End Semester exam (E) (70 Marks) and End semester practical examination (V) (30 Marks). The End semester exam component is in form of written exam while end semester practical exam component is completed by internal subject faculty coordinator in first year.

For 100 marks subject the internal and external component are divided in single component; that is, internal component is of mid-semester exam with assignment and external component is of end semester exam. Both these components are in form of written exam.

For 100 marks subjects having only practical component, there is only one component for external and internal evaluation and their maximum marks are 80 and 20 respectively.

As the affiliating university i.e. GTU does not provide the marks obtained by the students in university examination and also average university average marks for individual subjects. The evaluation process is based on result/marks of the students in various components of the subjects. The grades of all students for all courses at the end of each semester are collected from the university results and converted into marks as per Gujarat Technological University Norms.

8.4.2 Record the attainment of Course Outcomes (CO) of all first year courses (5)

The attainment of measured COs through progressive assessment are shown as follows in Table 8.4.1:

Table 8.4.1: CO Attainment

CO Attainment (For Academic Year CAY 2021-22)-Result Awaited							
CO Attainment (For Academic Year CAYm1 2020-21)							
SN	Course Code	CO1	CO2	CO3	CO4	CO5	CO6
1	C121	2	2	2	2	2	2
2	C122	3	3	3	3	3	3
3	C123	2.55	2.3	2.3	2.55	2.55	
4	C124	2	2	2	3	3	
5	C125	3	3	3	3		
6	C126	2	2	3	2	2	
7	C127	2.38	2.38	2.88	2.38		

8	C128	3	3	3	2	3	
9	C129	3	3	3	3	3	
10	C130	3	2	2	3		
11	C131	2	1	3	1	2	
12	C132	3	3	3	3	3	
13	C133	2	2	2	2	2	2
14	C134	3	3	3	3	3	
CO Attainment (For Academic Year CAYm2 2019-20)							
SN	Course Code	CO1	CO2	CO3	CO4	CO5	CO6
1	C121	3	2	2	1	1	2
2	C122	2	3	2	3	3	3
3	C123	2.18	1.89	1.89	2.18	2.18	-
4	C124	3	3	2	3	3	-
5	C125	2	2	2	2	-	-
6	C126	2	2	3	2	2	-
7	C127	2.2	2.3	2.5	2.5	-	-
8	C128	2	2	3	2	2	-
9	C129	3	3	3	3	3	-
10	C130	3	2.7	2.7	3	-	-
11	C131	1	-	2	2	1	-

12	C132	2	2	2	3	3	-
13	C133	2	2	2	2	2	2
14	C134	3	3	3	3	3	-
CO Attainment (For Academic Year CAYm3 2018-19)							
SN	Course Code	CO1	CO2	CO3	CO4	CO5	CO6
1	C121	2	2	2	3	1	3
2	C122	2	2	2	3	3	2
3	C123	1.64	1.75	1.91	1.95	1.79	
4	C124	2	2	1	2	2	
5	C125	2	2	2	2		
6	C126	2	1	1	1	2	
7	C127	2.1	1.9	2.4	2.7		
8	C128	2	2	1	1	1	
9	C129	3	3	3	3	3	
10	C130	1.72	2	1.72	1.72		
11	C131	1	1	1	1	1	
12	C132	1	1	1	2	2	
13	C133	1	1	1	2	1	2
14	C134	3	3	3	3	3	

Department has set values as follows in all 1st year courses;

For 2020-21,

If 60% or more students scored $\geq 60\%$ of Marks then attainment level is 3.0. If 60% or more students scored $\geq 50\%$ but $< 60\%$ of Marks then attainment level is 2.0. If 60% or more students scored $\geq 40\%$ but $< 50\%$ of Marks then attainment level is 1.0. However for C131, same criteria of 2019-20 has been adopted.

For 2019-20,

If 55% or more students scored $\geq 60\%$ of Marks then attainment level is 3.0. If 55% or more students scored $\geq 50\%$ but $< 60\%$ of Marks then attainment level is 2.0. If 55% or more students scored $\geq 40\%$ but $< 50\%$ of Marks then attainment level is 1.0.

For 2018-19,

If 50% or more students scored $\geq 60\%$ of Marks then attainment level is 3.0. If 50% or more students scored $\geq 50\%$ but $< 60\%$ of Marks then attainment level is 2.0. If 50% or more students scored $\geq 40\%$ but $< 50\%$ of Marks then attainment level is 1.0.

Correlation of Course Code with GTU subject code is given below in Table 8.4.2;

Table 8.4.2; GTU subject code

Course	Subject Code (GTU)	Subject Name
C121	3110001	Chemistry
C122	3110002	English
C123	3110003	Programming for Problem Solving
C124	3110004	Basic Civil Engineering
C125	3110005	Basic Electrical Engineering
C126	3110006	Basic Mechanical Engineering

C127	3110007	Environmental Science
C128	3110011	Physics
C129	3110012	Workshop/Manufacturing Practices
C130	3110013	Engineering Graphics & Design
C131	3110014	Mathematics-1
C132	3110015	Mathematics-2
C133	3110016	Basic Electronics
C134	3110018	Physics

8.5 Attainment of Program Outcomes from first year courses (20)

8.5.1 Indicate results of evaluation of each relevant PO and or PSO if applicable (15)

Table 8.5.1: PO Attainment

PO Attainment (For Academic Year CAY 2021-22)-Result Awaited												
PO Attainment (For Academic Year CAYm1 2020-21)												
Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C121	0.8	0.67	-	-	2	1	-	-	0.8	-	-	0.78
C122	3.00	-	-	-		2.67	2.83	-	3.00	3.00	-	3.00
C123	1.94	-	1.27	-	0.82	-	-	-	1.27	0.85	-	-
C124	1.6	1.92		2.17	2	1.6	2.5		1.6	2	-	1.6
C125	3	3	3	-	-	1	-	-	-	-	-	-
C126	1.47	1.33	-	-	-	-	-	-	-	-	-	-
C127	0.72	0.77	0.88	-	-	0.89	0.89	-	-	-	-	1.11
C128	1.87	1.87	0.93	-	-	-	-	-	1.9	-	-	1.27
C129	2	1	1	1	1	-	-	-	1	-	1	1
C130	1.69	1.17	-	-	1.00	-	-	-	-	1.00	-	-
C131	0.87	0.87	0.87	0.87	0.87	-	-	-	-	-	-	-
C132	2	2	2	2	2	-	-	-	-	-	-	-

C133	2.6	2.2	1	1.5	2	-	-	-	-	-	-	-
C134	2	2	1	-	-	-	-	-	2	-	-	1.4
Average	1.83	1.57	1.33	1.51	1.46	1.43	2.07		1.65	1.71	1.00	1.45

PO Attainment (For Academic YearCAYm2 2019-20)												
Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C121	0.6	0.83	-	-	2	0.67	-	-	0.5	-	-	0.61
C122	3	-	-	-	-	2.44	2.56	-	2.7	2.67	-	2.67
C123	1.63	-	0.99	-	0.67	-	-	-	0.99	0.62	-	-
C124	1.87	2.25	-	2.5	2	1.87	3	-	1.87	2	-	1.87
C125	2	2	2	-	-	0.67	-	-	-	-	-	-
C126	1.47	1.33	-	-	-	-	-	-	-	-	-	-
C127	0.79	0.8	0.84	-	-	1.04	1	-	-	-	-	1.28
C128	1.47	1.47	0.73	-	-	-	-	-	1.47	-	-	1.07
C129	2	1	1	1	1	-	-	-	1	-	1	1
C130	1.87	1.26	-	-	1	-	-	-	-	1	-	-
C131	0.67	0.67	0.67	0.67	0.67	-	-	-	-	-	-	-
C132	1.6	1.6	1.6	1.6	1.6	-	-	-	-	-	-	-

C133	2	2	1.33	-	-	-	-	-	-	-	-	-
C134	2	2	1	-	-	-	-	-	2	-	-	1.4
Average	1.64	1.43	1.13	1.44	1.28	1.34	2.19		1.50	1.57	1.00	1.41

PO Attainment (For Academic Year CAYm3 2018-19)												
Course Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
C121	0.67	0.67	-	-	3	0.67		-	0.7		-	0.72
C122	2.50	-	-	-		2.11	2.22	-	2.33	2.33	-	2.33
C123	1.47	-	0.87	-	0.63			-	0.87	0.60	-	-

C124	1.2	1.42	-	1.67	1.33	1.2	2	-	1.2	1.33	-	1.2
C125	2	2	2	-	-	0.67	-	-	-	-	-	-
C126	0.93	0.67	-	-	-	-	-	-	-	-	-	-
C127	0.76	0.72	0.8	-	-	0.96	0.99	-	-	-	-	1.19
C128	0.93	0.93	0.47	-	-	-	-	-	0.93	-	-	0.6
C129	2	1	1	1	1	-	-	-	1	-	1	1
C130	1.21	0.8	-	-	0.57	-	-	-	-	0.57	-	-
C131	0.47	0.47	0.47	0.47	0.47	-	-	-	-	-	-	-
C132	0.93	0.93	0.93	0.93	0.93	-	-	-	-	-	-	-
C133	1.5	1.33	0.67	-	-	-	-	-	-	-	-	-
C134	2	2	1	-	-	-	-	-	2	-	-	1.4
Average	1.33	1.08	0.91	1.02	1.13	1.12	1.74		1.29	1.21	1.00	1.21

Average of 3 years (AY 20-21, 19-20 & 18-19)	1.60	1.36	1.12	1.32	1.29	1.30	2.00	-	1.48	1.50	1.00	1.36
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PSOs Attainment

SN	Course Code	PSO Attainment (For Academic Year CAY 2021-22)	PSO Attainment (For Academic Year CAYm1 2020-21)		PSO Attainment (For Academic Year CAYm2 2019-20)		PSO Attainment (For Academic Year CAYm3 2018-19)	
		PSO1 & PSO2	PSO1	PSO2	PSO1	PSO2	PSO1	PSO2
1	C122	Result Awaited	3	1.67	2.67	1.56	2.33	1.11
2	C124	Result Awaited	0.93	1.13	1.07	1.27	0.67	0.8
3	C125	-	1	-	0.67	-	0.67	-
4	C128	-	0.93	-	0.73	-	0.47	-
5	C129	Result Awaited	-	1	-	1	-	1
Average		Result Awaited	1.47	1.27	1.29	1.28	1.04	0.97

Average of 3 years (AY 20-21, 19-20 & 18-19)	PSO1	PSO2
	1.27	1.17

8.5.2 Actions taken based on the results of evaluation of relevant POs (5)

Pos Attainment levels and Actions for improvement

POs	Target Level	Attainment Level	Observations
PO1: Engineering Knowledge			
PO1	1.37(20-21)	1.83 (20-21)	The target of PO1 is achieved based on the average value of attainment. However, measures are taken for non-attained PO 1 for particular case
	1.37(19-20)	1.64 (19-20)	
	1.37(18-19)	1.33 (18-19)	
Action 1: Additional Assignments/Tutorials for better learning are given in non-attained course.			
Action 2: Percentage of students scoring defined set of marks for all attainment levels is progressively enhanced.			
PO 2: Problem analysis:			
PO2	1.24(20-21)	1.57(20-21)	The target of PO 2 is achieved based on the average value of attainment. However, measures are taken for non-attained PO 2 for particular case
	1.24(19-20)	1.43 (19-20)	
	1.24(18-19)	1.08 (18-19)	
Action 1: Additional Assignments/Tutorials for better learning are given in non-attained course.			
Action 2: Animated Videos and assignments for better learning are given in few of the subjects.			
Action 2: Percentage of students scoring defined set of marks for all attainment levels is progressively enhanced.			
PO 3: Design/development of solutions:			
PO3	1.03(20-21)	1.33 (20-21)	The target of PO 3 is achieved based on the average value of attainment. However, measures are taken for non-attained PO 3 for particular case
	1.03(19-20)	1.13 (19-20)	
	1.03(18-19)	0.91 (18-19)	
Action 1: Additional Assignments/Tutorials for better learning are given in non-attained course.			
Action 2: Percentage of students scoring defined set of marks for all attainment levels is progressively enhanced.			
PO4: Conduct Investigations of Complex Problems			
PO4	1.15(20-21)	1.51 (20-21)	The target of PO4 is achieved based on the average value of attainment. However, measures are taken for non-attained PO 4 for particular case
	1.15(19-20)	1.44 (19-20)	
	1.15(18-19)	1.02 (18-19)	
Action 1: Additional Assignments/Tutorials for better learning are given in non-attained course.			
Action 2: Percentage of students scoring defined set of marks for all attainment levels is progressively enhanced.			

PO5: Modern tool usage			
PO5	1.09(20-21)	1.46 (20-21)	The target of PO5 is achieved based on the average value of attainment. However, measures are taken for non-attained PO 5 for particular case
	1.09(19-20)	1.28 (19-20)	
	1.09(18-19)	1.13 (18-19)	
Action 1: Additional Assignments/Tutorials for better learning are given in non-attained course.			
Action 2: Percentage of students scoring defined set of marks for all attainment levels is progressively enhanced.			
PO6: The Engineer and Society			
PO6	1.07(20-21)	1.43 (20-21)	The target of PO6 is achieved based on the average value of attainment.
	1.07(19-20)	1.34 (19-20)	
	1.07(18-19)	1.12 (18-19)	
Action 1: Percentage of students scoring defined set of marks for all attainment levels is progressively enhanced.			
PO7: Environment and Sustainability			
PO7	1.57(20-21)	2.07 (20-21)	The target of PO7 is achieved based on the average value of attainment.
	1.57(19-20)	2.19 (19-20)	
	1.57(18-19)	1.74 (18-19)	
Action 1: Activities like tree plantation were organized to sensitize students towards our responsibility for our environment.			
Action 2: Percentage of students scoring defined set of marks for all attainment levels is progressively enhanced.			
PO8: Ethics			
PO8	0	0	PO8 is not mapped and no target is fixed. Ethics has been formally introduced in unit 4: Ethics in Engineering of Effective Technical Communication that appears in sem 3 of BE degree program of GTU.
PO9: Individual and Team Work			
PO9	1.19(20-21)	1.65 (20-21)	The target of PO9 is achieved based on the average value of attainment. However, measures are taken for non-attained PO9 for particular case
	1.19(19-20)	1.50(19-20)	
	1.19(18-19)	1.29 (18-19)	

Action 1: Additional Assignments/Tutorials for better learning are given in non-attained course.

Action 2: Animated Videos and PPTs are shared with the students for better learning.

Action 2: Percentage of students scoring defined set of marks for all attainment levels is progressively enhanced.

PO10: Communication

PO10	1.17(20-21)	1.71 (20-21)	The target of PO10 is achieved based on the average value of attainment. However, measures are taken for non-attained PO10 for particular case
	1.17(19-20)	1.57 (19-20)	
	1.17(18-19)	1.21 (18-19)	

Action 1: Practice focusing on listening, reading, speaking and writing skills is been done. Enhancement of ascent and pronunciation of student by providing knowledge of phonetics and other linguistic methods.

Action 2: Percentage of students scoring defined set of marks for all attainment levels is progressively enhanced.

PO11: Project Management and finance

PO11	0.67(20-21)	1.0 (20-21)	The target of PO11 is achieved based on the average value of attainment. However, measures are taken for non-attained PO11 for particular case
	0.67(19-20)	1.0 (19-20)	
	0.67(18-19)	1.0 (18-19)	

Action 1: Students are motivated to take Student Start Up and Innovation (SSIP) projects

Action 2: Percentage of students scoring defined set of marks for all attainment levels is progressively enhanced.

PO12: Life- long learning

PO12	1.09(20-21)	1.45 (20-21)	The target of PO12 is achieved based on the average value of attainment. However, measures are taken for non-attained PO12 for particular case
	1.09(19-20)	1.41 (19-20)	
	1.09(18-19)	1.21 (18-19)	

Action 1: Students are motivated to learn from the lives of our renounced scientists during celebration of the days such as National Science Day.

Action 2: Percentage of students scoring defined set of marks for all attainment levels is progressively enhanced.

PSOs Attainment Levels and Actions for Improvement (Mechanical)-

PSOs	Target Level	Attainment Level	Observations
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PSO1: Students will be able to apply the knowledge of computer aided tools for design and development of products based on engineering principles			
PSO1	0.83(20-21)	1.47 (20-21)	The target of PSO1 is achieved based on the average value of attainment.
	0.83(19-20)	1.29 (19-20)	
	0.83(18-19)	1.04 (18-19)	
Action : Percentage of students scoring defined set of marks for all attainment levels is progressively enhanced.			
PSO 2: Students will be able to manage production of components/systems using conventional and advanced manufacturing methods			
PSO2	0.54(20-21)	1.27 (2020-21)	The target of PSO 2 is achieved based on the average value of attainment. However, measures are taken for non-attained PSO 2 for particular case
	0.54(19-20)	1.28 (2019-20)	
	0.54(18-19)	0.97 (2018-19)	
Action : Percentage of students scoring defined set of marks for all attainment levels is progressively enhanced.			

Pl. Note: In all POs and PSOs the target level in all 3 years seems to be same but it is not so because for the same levels, the % of students getting a definite set of marks have been progressively enhanced every year as explained in detail in section 8.4.2 below the CO attainment Table 8.4.1.