GEMS POLYTECHNIC COLLEGE

(Approved by AICTE, Govt. of India, F. No Northern/2015/1-2474317051)
Affiliated to SBTE, Bihar.

NH-2, Jogiya more, Ratanpura, Aurangabad, Bihar– 824121

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

SELF ASSESSMENT REPORT (SAR)

ACADEMIC YEAR 2023-2024

Diploma Engineering Program

First Time Accreditation

Submitted to

NATIONAL BOARD OF ACCREDITATION

New Delhi

Self Assessment Report Contents

Part A

Institutional Information

Institutional Information

1.	Name and Address of the Institution:	**GEMS Polytechnic College,** NH-2 Jogia more, Ratnapura, Aurangabad,Bihar-824121
2.	Name and Address of the Directorate of Technical Education:	**State Board of Technical Education,** 4th Floor, Technology Bhawan, Vishweshariya Bhawan Campus, Bailey Road, Patna - 800 015. Bihar.
3.	Year of Establishment:	**2015**
4.	Type of the Institution:	● University ● Deemed University ● **Affiliated** ● Autonomous ● Any Other(Please Specify)
5.	Ownership Status:	● Central Government ● State Government ● Government Aided ● Self-financing ● Trust ● **Society** ● Section 25 Company ● Any Other(Please Specify)

6. Other Academic Institutions of the Trust/Society/Company etc., if any:

Name of Institutions	Year of Establishment	Programs of Study	Location
GEMS Industrial Training Institute	2001	Electrician, Fitter & Welder	Karwandiya, Rohtas, Bihar
GEMS Industrial Training Institute	2015	Electrician, Fitter & Welder	Bhagat Ganj, Bihar
GEMS Industrial Training Institute	2015	Electrician, Fitter & Welder	Madhubani, Bihar
GEMS Girls Industrial Training Institute	2014	Draughtsman (Civil), Sewing	Sikaria, Bihar

7. Details of all the programs being offered by the institution under consideration:

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration
DIPLOMA IN MECHANICAL ENGINEERING	Diploma	2015	2015	60	Yes	60	Applying first time	-	-	Yes	3

Sanctioned Intake for the Last Five Years for the DIPLOMA IN MECHANICAL ENGINEERING

Academic Year	Sanctioned Intake
2023 - 2024	60
2022 - 2023	48
2021 - 2022	48
2020 - 2021	48
2019 - 2020	48
2018 - 2019	60
2017 - 2018	60

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration
DIPLOMA IN CIVIL ENGINEERING	Diploma	2015	2015	60	Yes	60	Applying first time	-	-	Yes	3

Sanctioned Intake for the Last Five Years for the DIPLOMA IN CIVIL ENGINEERING

Academic Year	Sanctioned Intake
2023 - 2024	60
2022 - 2023	48
2021 - 2022	48
2020 - 2021	48
2019 - 2020	48
2018 - 2019	60
2017 - 2018	60

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration
DIPLOMA IN ELECTRICAL ENGINEERING	Diploma	2015	2015	60	Yes	60	Applying first time	-	-	Yes	3

Sanctioned Intake for the Last Five Years for the DIPLOMA IN ELECTRICAL ENGINEERING

Academic Year	Sanctioned Intake
2023 - 2024	60
2022 - 2023	48
2021 - 2022	48
2020 - 2021	48
2019 - 2020	48
2018 - 2019	60
2017 - 2018	60

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration
DIPLOMA IN ELECTRICAL & ELECTRONICS ENGINEERING	Diploma	2015	2015	60	Yes	60	Applying first time	-	-	Yes	3

Sanctioned Intake for the Last Five Years for the DIPLOMA IN ELECTRICAL & ELECTRONICS ENGINEERING

Academic Year	Sanctioned Intake
2023 - 2024	60
2022 - 2023	48
2021 - 2022	48
2020 - 2021	48
2019 - 2020	48
2018 - 2019	60
2017 - 2018	60

Name of Program	Program Applied level	Start of year	Year of AICTE approval	Initial Intake	Intake Increase	Current Intake	Accreditation status	From	To	Program for consideration	Program for Duration
DIPLOMA IN COMPUTER SCIENCE & ENGINEERING	Diploma	2017	2017	60	Yes	60	Applying first time	-	-	Yes	3

Sanctioned Intake for the Last Five Years for the DIPLOMA IN COMPUTER SCIENCE & ENGINEERING

Academic Year	Sanctioned Intake
2023 - 2024	60
2022 - 2023	48
2021 - 2022	48
2020 - 2021	48
2019 - 2020	48
2018 - 2019	60
2017 - 2018	60

7a. Accreditation History:

Sr.No	Name of the Department	Name of the Program	Year of 1st Accreditation (if Applicable)	Year of 2nd Accreditation (if Applicable)	Year of 3rd Accreditation (if Applicable)
-	-	-	-	-	-

7b. Programs to be considered for Accreditation vide this application:

Sr.No	Level	Discipline	Program
1.	Diploma	Engineering & Technology	Civil Engg.
2.	Diploma	Engineering & Technology	Electrical Engg.
3.	Diploma	Engineering & Technology	Mechanical Engg.
4.	Diploma	Engineering & Technology	Computer Science & Engg.
5.	Diploma	Engineering & Technology	Electrical and Electronics Engineering

8. Total number of Employees:

A. Regular* Employees (Faculty and Staff):

Engineering and Technology- Diploma	**Shift 1**	Shift 2

Engineering and Technology- Diploma Shift-1:

Engineering and Technology- Diploma Shift-1	**2023-24**		**2022-23**		**2021-22**		**2020-21**	
Items	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**	**Min**	**Max**
Faculty in Engineering & Technology (Male)	27	27	31	31	28	28	26	26
Faculty in Engineering & Technology (Female)	11	11	7	7	8	8	4	4
Faculty in Science & Humanities (Male)	4	4	2	2	4	4	2	2
Faculty in Science & Humanities (Female)	-	-	2	2	2	2	2	2
Non-teaching staff (Male)	18	18	16	16	14	14	11	11
Non-teaching staff (Female)	3	3	7	7	3	3	2	2

B. Contractual Staff (Not Covered in 9. A):

Engineering and Technology- Diploma	**Shift 1**	Shift 2

9. Total number of Students:

Engineering and Technology- Diploma	**Shift 1**	Shift 2

Engineering and Technology- Diploma Shift-1:

Total number of Students:	**2023-24**	**2022-23**	**2021-22**	**2020-21**
Total no. of Boys	433	379	397	349
Total no. of Girls	105	110	110	89
Total no. of Students	**538**	**489**	**507**	**438**

10. Contact Information of the Head of the Institution and NBA Coordinator:

Head of the Institution	
Name:	**Rama Gopal Challa**
Designation:	Principal
Mobile No.:	8294268027
Email ID:	principal@gemspolytechnic.edu.in

NBA Coordinator, If Designated	
Name:	**Titus R**
Designation:	NBA Coordinator
Mobile No.:	9304706901
Email ID:	nba@gemspolytechnic.edu.in

Part B

Program Level Criteria

Criterion 1

Vision, Mission, Program Educational Objectives

1 VISION, MISSION AND PROGRAM EDUCATIONAL OBJECTIVES (50)

1.1 State the Vision and Mission of the Department and Institution (5)

Vision of the Institute

Empowering the young minds with holistic education and futuristic skills to be a valuable resource for the State and Nation.

Mission of the Institute

Mission No	Mission Statement
M1	To provide professional education thereby producing technically competent engineers with moral and ethical values.
M2	To train students and provide them with leading resources to address problems faced by industry and society.
M3	To encourage doers to embrace learning and achieve their personal best in building their emotional, social and physical well-being.

Vision of the Department

To produce quality diploma Computer Science Engineers to serve ethically and technically for the advancement of the society.

Mission of the Department

Mission No	Mission Statement
M1	To strengthen the technical knowledge in computer science through analytical learning.
M2	To inculcate moral and ethical values and interpersonal skills among the students.
M3	To impart quality education with social awareness and train them in the development of community.

1.2 State the Program Educational Objectives (PEOs) (5)

PEO No.	Program Educational Objectives Statements
PEO1	Our graduates will be acquiring core competencies to serve the society through their mathematical, scientific and basic engineering fundamentals.
PEO2	Our graduates will be able to analyze, design and implement computer programming skills & concepts.
PEO3	Graduates will be capable of adapting to new technologies and constantly upgrade their skills with an ethical attitude towards lifelong learning.

1.3 Indicate where and how the Vision, Mission and PEOs are published and disseminated among stakeholders (10)

"The Vision, Mission, and PEOs have been effectively communicated through various channels, as outlined below:

Publication Channels:

- Official College Website: https://gemspolytechnic.edu.in/
- Dedicated Department Webpage on the College Website: https://gemspolytechnic.edu.in/computer-science-and-engineering/
- Department Brochure
- Department Newsletter
- Laboratory Manuals
- Student Orientation Programs
- Department Association Activities
- Course Files
- Lab Record Copy

Dissemination Points:

- Faculty and Staff Rooms
- Department Corridors
- Classroom Environments
- Laboratories
- Departmental Notice Board

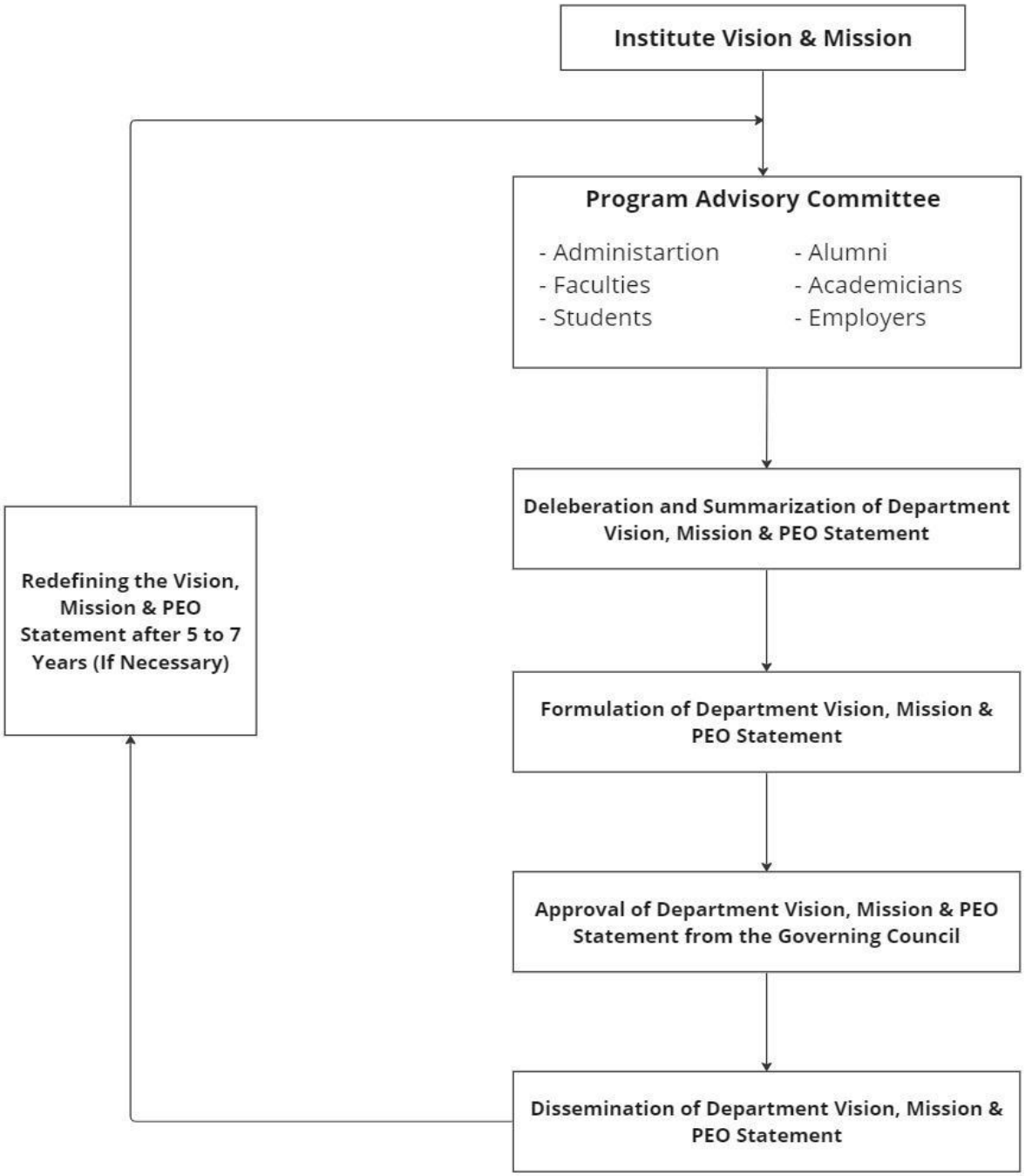
1.4 State the process for defining the Vision and Mission of the Department, and PEOs of the program (15)

The process for defining the Vision and Mission of the Department and PEOs of the program:
Initial Input Gathering: The starting point is to consider the Vision and Mission statements of the institute as the primary input.

Stakeholder Involvement: Inputs are gathered from a range of stakeholders, both internal and external. This includes input from internal stakeholders such as management, faculty, and students, as well as external stake.

Deliberation and Summarization: The next step involves careful deliberation and summarization of the department's vision, mission and the Program Educational Objectives (PEOs). This is based on the valuable input received during Program Advisory Committee (PAC) meetings.

Finalization and Approval: Once the departments Vision, Mission and PEOs have been refined based on stakeholder input, they are finalized. The Final Statements are then presented for the approval from the Governing and Mission and PEOs are disseminated to all relevant stakeholders.


Institute Vision & Mission
Program Advisory Committee
- Administartion
- Faculties
- Students
- Alumni
- Academicians
- Employers
Deleberation and Summarization of Department Vision, Mission & PEO Statement
Formulation of Department Vision, Mission & PEO Statement
Approval of Department Vision, Mission & PEO Statement from the Governing Council
Dissemination of Department Vision, Mission & PEO Statement
Redefining the Vision, Mission & PEO Statement after 5 to 7 Years (If Necessary)

1.5 Establish Consistency of PEOs with Mission of the Department (15)

PEO Mapping with Mission	Justification
PEO-1 Statement is Strongly attained by M1 and M2, Moderately attained by M3	Teaching the basics of engineering and science to build a strong foundation for accomplishing the goal by enhancing their professional skills.
PEO-2 Statement is Strongly attained by M3, Moderately attained by M2 and Slightly attained by M1	By providing career development programs through enrichment programs by accessing the industrial expert and encouraging students for Online SWAYAM/NPTEL/MOOCS Courses.
PEO-3 Statement is Strongly attained by M2 and M3 Moderately attained by M1	By making the students adapt to industry education with ethical attitude, effective communication skills, teamwork, and leadership and contribute to the advancement and well-being of the society.

PEO Statements	M1	M2	M3
Our graduates will be acquiring core competencies to serve the society through their mathematical, scientific and basic engineering fundamentals.	**3**	**3**	**2**
Our graduates will be able to analyze, design and implement computer programming skills & concepts.	**1**	**2**	**3**
Graduates will be capable of adapting to new technologies and constantly upgrade their skills with an ethical attitude towards lifelong learning.	**2**	**3**	**3**

Criterion 2

Program Curriculum and Teaching-learning processes

2.1 Program Curriculum (40)

All POs and PSOs are being demonstrably met through Curriculum ?:**No**

2.1.1 State the process used to identify extent of compliance of the Board curriculum for attaining the Program Outcomes (POs) and Program Specific Outcomes mentioned in AnnexureI. Also mention the identified curricular gaps, if any (25)

A. Process used to identify extent of compliance of curriculum for attaining POs & PSOs (15)

In order to ensure that our educational programs align with the Program Outcomes (POs) and Program Specific Outcomes (PSOs) as stipulated by the State Board of Technical Ed

employs a rigorous process for assessing and enhancing curriculum compliance. This process involves a systematic approach to mapping curriculum elements, analyzing feedback from vario

Program Specific Outcome (PSOs):

The Program Specific Outcomes (PSOs) serve as a critical component of our curriculum development, shaped by the Departments Vision and Mission, Program Outcomes, Program Educat

Representatives and Alumni. Additionally, the PSOs are benchmarked against the outcomes and objectives of technical societies and other esteemed institutions.

A. Process Used to Identify Extent of Compliance of SBTE Curriculum for Attaining POs & PSOs

Curriculum Structure:

GEMS Polytechnic College adheres to the curriculum and syllabi prescribed by the State Board of Technical Education, Bihar (SBTE). The SBTE curriculum is organized into eight different and courses:

1.Basic Sciences
2.Engineering Sciences
3.Humanities & Social Sciences
4.Program Core
5.Program Elective
6.Open Elective
7.Project, Seminar, Internship
8.Audit Courses & MOOCs

Table 2.1-Distribution of Curriculum towards the attainment of POs and PSOs

S. No	Course Component	Courses	Credits	Total Course Component Credit	Curriculum Content (% of total number of credits of the program)	Total number of contact Periods per week	Total Periods	Relevance to PO and PSOs (Y / N)								
								PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PSO 1	PSO 2
1	**Basic Sciences**	Mathematics - I (2001101)	3	21	14.58%	6	33	Y	Y						Y	N
2		Applied Physics - I (2001102)	3			5		Y	Y		Y	Y			N	N
3		Applied Chemistry (2001103)	3			5		Y	Y	N	N	Y	N	N	N	N
4		Applied Physics Lab - I (2001106)	2			2		Y	Y	N	Y	Y	N	N	N	N
5		Applied Chemistry Lab (2001107)	2			2		Y	N	N	Y	Y	N	N	N	N
6		Mathematics - II 2002201	4			6		Y	Y	N	N	N	N	N	N	N
7		Applied Physics - II 2002202	3			5		Y	Y	Y	N	N	N	N	N	N
8		Applied Physics Lab - II Lab 2002206	1			2		Y	Y	N	N	N	N	N	N	N
9	**Engineering sciences**	Engineering Graphics (2001105)	2	20	13.89%	6	31	Y	Y	Y	Y	Y	Y	Y	N	N
10		Engineering Workshop Practice (TW) (2001109)	2			2		Y	N	Y	Y	Y	N	Y	N	N

11		Engineering Mechanics 2002205	3			2		Y	Y	N	N	Y	N	N	N	N
12		Engineering Mechanics Lab 2002209	2			2		Y	Y	N	Y	Y	N	N	N	N
13		Introduction to IT System 2002203	2			5		Y	N	Y	Y	N	Y	Y	Y	Y
14		Introduction to IT System Lab 2002207	2			2		Y	Y	Y	Y	Y	N	Y	Y	Y
15		Fundamental of Electrical & Electronics Engineering - 2002204	3			6		Y	Y	N	N	N	N	N	N	N
16		Fundamental of Electrical and Electronics Engineering. Lab 2002208	1			2		Y	N	N	Y	N	N	N	N	N
17		Discrete Mathematics - 2018301	3			4		Y	Y	Y	Y	Y	Y	Y	Y	Y
18	**Humanities**	Communication Skills in English (2001104)	2	9	6.25%	4	8	Y	N	N	N	N	N	N	N	N
19		Communication Skills in English Lab (2001108)	2			2		Y	N	N	N	Y	Y	Y	N	N
20		Sports & Yoga (TW) (2001110)	2			1		N	N	N	N	Y	N	N	N	N
21		Entrepreneurship and Start-ups 2000601	3			1		Y	N	N	N	N	Y	Y	N	N
22	**Program Core**	Computer Programming through C - 2000302	3	60	41.67%	4	95	Y	Y	Y	Y	Y	Y	Y	Y	Y

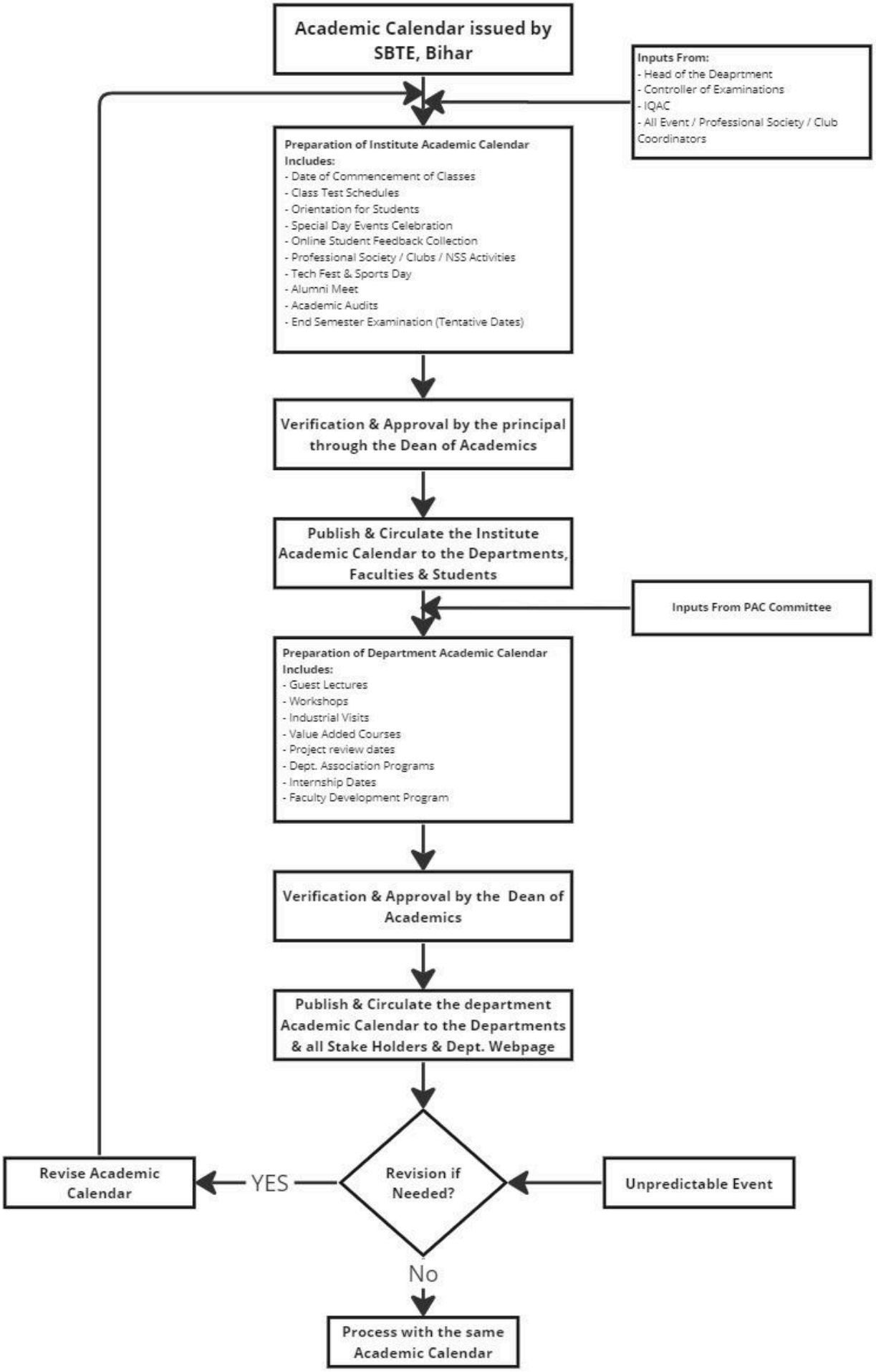
23		Computer programming through C (LAB) - 2000306	3			4		Y	Y	Y	Y	Y	Y	Y	Y	Y
24		Computer Organization and Architecture - 2018303	3			4		Y	Y	Y	N	N	N	N	Y	N
25		Digital Electronics & Microprocessor - 2018304	3			4		Y	N	N	N	N	N	N	N	N
26		Digital Electronics and Microprocessor Lab- 2018307	2			3		Y	N	N	N	N	N	N	N	N
27		Web Technology - 2018305	3			4		Y	N	Y	Y	N	N	N	Y	N
28		Web Technology Lab - 2018308	1			4		N	Y	Y	Y	N	Y	Y	Y	N
29		OOP through JAVA - 2018503A	3			4		Y	Y	Y	Y	Y	Y	Y	Y	Y
30		Multimedia Technology - 2018504B	2			4		Y	N	N	Y	N	N	N	Y	Y
31		Computer Hardware & Networking Lab- 2018506	1			3		Y	Y	Y	N	N	Y	Y	Y	N
32		OOP through JAVA Lab- 2018507A	1			5		Y	Y	Y	Y	Y	Y	Y	Y	Y
33		Multimedia Technology Lab - 2018508B	2			3		Y	N	N	Y	N	N	N	N	Y
34		Mobile Computing - 2018501	3			4		Y	N	N	N	N	N	N	Y	Y

35		Computer Hardware & Networking - 2018502	3			4		Y	Y	N	N	N	N	Y	Y	Y
36		Operating System 2018401	3			4		Y	Y	Y	N	Y	N	Y	Y	Y
37		Database Management System 2018402	3			5		Y	N	N	Y	Y	N	N	Y	Y
38		Data Structure & Algo. Using C 2018403	3			4		Y	Y	N	N	N	N	Y	Y	Y
39		Python Programming 2018404	3			5		Y	Y	Y	Y	Y	Y	Y	Y	N
40		Computer Graphics 2018405	3			4		Y	Y	Y	Y	N	Y	N	N	N
41		Database Management System (Lab) 2018406	2			4		Y	Y	Y	Y	Y	N	N	Y	Y
42		Data Structure & Algo. Using C (LAB) 2018407	2			4		Y	Y	Y	Y	N	N	N	Y	Y
43		Python Programming (LAB) 2018408	2			4		Y	Y	Y	Y	Y	Y	Y	Y	N
44		MOOCs / SWAYAM / SPOKEN TUTORIAL / Others (T.W) 2018409	2			1		Y	Y	N	Y	Y	Y	Y	Y	Y
45		Software Engineering - 2018602	4			6		Y	Y	Y	Y	Y	Y	Y	Y	Y
46	**Project, Seminar, Internship**	Summer Internship-I (4 weeks) after II semester 2018310	2	15	10.42%		8	Y	Y	Y	Y	Y	Y	Y	Y	Y

47		Summer Internship (6 weeks) after IV semester - 2018509	2			1		Y	Y	Y	N	Y	Y	Y	N	Y
48		Minor Project - 2018510	2			1		Y	Y	Y	Y	Y	Y	Y	Y	Y
49		Operating System (Case Study Linux) (T.W) 2018410	1			1		Y	Y	Y	N	N	Y	Y	Y	Y
50		Entrepreneurship & start up (TW) 2018609	2			1		Y	Y	Y	N	Y	Y	Y	N	Y
51		Software Engineering (TW) - 2018610	2			1		Y	Y	Y	Y	Y	Y	Y	Y	Y
52		Major Project & Seminar - 2018612	2			2		Y	Y	Y	Y	Y	Y	Y	Y	Y
53		Computer Organization and Architecture (TW)- 2018309	2			1		Y	Y	Y	N	N	N	N	Y	N
54	**Interdisciplinary courses**	Data Sciences: Data Warehousing and Data Mining Lab 2018608A	2	9	6.25%	5	16	Y	Y	Y	Y	Y	Y	Y	Y	Y
55		Data Sciences: Data Warehousing and Data Mining (2018603A)	3			4		Y	N	N	N	N	N	Y	Y	Y
56		Computer Network Security - 2018604A	3			6		Y	Y	Y	Y	Y	Y	Y	Y	N
57		Python TW - 2018311	1			1		Y	Y	Y	N	N	Y	Y	Y	N

58	**Audit Courses & Moocs**	Environmental Science - 2018505B	2	10	6.94%	3	15	Y	Y	N	N	Y	N	N	N	N
59		Environmental Science 2002212	0			1		Y	Y	N	N	N	N	Y	N	N
60		Indian Constitution - 2000605	2			5		N	N	N	N	Y	N	Y	N	N
61		IT Essential (2001111)	1			1		Y	N	N	Y	Y	N	Y	Y	N
62		KYP/IT Essential/Python /Others 2002211	1			1		Y	Y	Y	Y	Y	Y	Y	Y	Y
63		Course under MOOCS / SWAYAM / ETC / Others 2002210	2			1		Y	N	N	N	N	N	N	Y	Y
64		MOOCS TW - 2018511	1			1		Y	Y	Y	N	N	N	Y	Y	Y
65		Course Under Moocs /NPTEL/ Others TW (2018611)	1			2		Y	Y	N	Y	Y	Y	Y	Y	Y
Total			**144**	**144**	**100%**	**No. of Courses Mapped with POs & PSOs**		**59**	**44**	**33**	**34**	**35**	**27**	**35**	**36**	**29**

Moreover, the course objectives and outcomes are meticulously framed at the commencement of each new curriculum regulation.


Academic Calendar issued by SBTE, Bihar
Inputs From:
- Head of the Deaprtment
- Controller of Examinations
- IQAC
- All Event / Professional Society / Club Coordinators
Preparation of Institute Academic Calendar Includes:
- Date of Commencement of Classes
- Class Test Schedules
- Orientation for Students
- Special Day Events Celebration
- Online Student Feedback Collection
- Professional Society / Clubs / NSS Activities
- Tech Fest & Sports Day
- Alumni Meet
- Academic Audits
- End Semester Examination (Tentative Dates)
Verification & Approval by the principal through the Dean of Academics
Publish & Circulate the Institute Academic Calendar to the Departments, Faculties & Students
Inputs From PAC Committee
Preparation of Department Academic Calendar Includes:
- Guest Lectures
- Workshops
- Industrial Visits
- Value Added Courses
- Project review dates
- Dept. Association Programs
- Internship Dates
- Faculty Development Program
Verification & Approval by the Dean of Academics
Publish & Circulate the department Academic Calendar to the Departments & all Stake Holders & Dept. Webpage
Revision if Needed?
YES
Revise Academic Calendar
Unpredictable Event
No
Process with the same Academic Calendar

Curriculum with CO-PO/PSO Mapping:

- To assess the extent of compliance of the SBTE curriculum in achieving the Program Outcomes (POs) and Program Specific Outcomes (PSOs), we employ the following process:

Categorization:

- The entire curriculum is categorized into the relevant domains, including Basic Sciences, Engineering Sciences, Humanities & Social Sciences, Program Core, Program Elective, Open Elective, MOOCs.

Mapping Matrix:

- A correlation matrix is developed, establishing links between individual courses and the corresponding POs and PSOs.
- This mapping matrix provides a clear overview of the alignment between

Cumulative Evaluation:

- We calculate the cumulative value for every PO and PSO by assessing the percentage of courses that successfully align with each outcome.

Gap Identification:

- Curricular gaps are identified by analyzing courses where the percentage of alignment with POs or PSOs falls below the average percentage of alignment across all courses.

Table: Compliance of SBTE curriculum with POs

S.NO	Program Outcomes	Number of courses Mapped with POs	Percentage
PO 1	Basic and Discipline specific Knowledge	59	90.77%
PO 2	Problem Analysis	44	67.69%
PO 3	Design / Development of solutions	33	50.77%
PO 4	Engineering Tools, Experimentation and Testing	34	52.31%
PO 5	Engineering Practices for society, Sustainability and Environment	35	53.85%
PO 6	Project Management	27	41.54%
PO 7	Life-Long Learning	35	53.85%
Average Percentage (%)			**58.68%**

Percentage of courses mapping with PO = No.of courses mapped with PO / Total number of courses in curriculum.

The Following PO's are identified as curricular gaps are obtained from the above mentioned table:

S.NO	Program Outcomes	Number of courses Mapped with POs	Percentage
PO 3	Design / Development of solutions	33	50.77%
PO 4	Engineering Tools, Experimentation and Testing	34	52.31%
PO 5	Engineering Practices for society, Sustainability and Environment	35	53.85%
PO 6	Project Management	27	41.54%
PO 7	Life-Long Learning	35	53.85%

Table: Compliance of SBTE curriculum with PSOs

Total No. of Courses:

S.NO	Program Outcomes	Number of courses Mapped with PSOs	Percentage
PSO 1	Ability to develop computer programs in areas related to Algorithms, DBMS, Software Design, Programming Languages andNetworking.	36	55.38%
PSO 2	To enable diploma, to acquire programming and development competence, to sustain in academia as well as in industry.	29	44.62%
Average Percentage (%)			**50.00%**

Percentage of courses mapping with PSO = No.of courses mapped with PSO / Total number of courses in curriculum.

The Following PSO's are identified as curricular gaps are obtained from the above mentioned table:

S.NO	Program Outcomes	Number of courses Mapped with POs	Percentage
PSO 2	To enable diploma, to acquire programming and development competence, to sustain in academia as well as in industry.	29	44.62%

Feedback from Stakeholders:

- The Program Advisory Committee (PAC) Meeting plays a pivotal role in the curriculum assessment process.
- It serves as a platform for deliberating and incorporating feedback received from various stakeholders, including industry representatives, alumni, faculty, and students.
- This feedback loop ensures that the curriculum remains responsive to the evolving needs and expectations of the industry and community.

In conclusion, GEMS Polytechnic College places a strong emphasis on maintaining a curriculum that aligns with the Program Outcomes (POs) and Program Specific Outcomes (PSOs) assessment, and stakeholder engagement, we continually strive to bridge any curricular gaps and provide students with a well-rounded education that prepares them for success in their chosen

B. List the curricular gaps for the attainment of POs & PSOs (10)

In the pursuit of educational excellence, it is imperative to critically examine and identify areas within the curriculum of the Diploma in Computer Science and Engineering program with the Program Outcomes (POs) and Program Specific Outcomes (PSOs).

The identification of curricular gaps in the Diploma in Computer Science Engineering program was a comprehensive process that incorporated two primary sources of assessment.

The compliance with the State Board of Technical Education (SBTE) curriculum.
The valuable feedback from various stakeholders.

The following is a comprehensive list of curricular gaps identified within the program:

S. No	Gaps Identified	Explanation	Relevance to PO's/PSO's
1	Industry Readiness	Industry readiness gaps in computer science include outdated curricula, insufficient emphasis on soft skills, and a lack of practical experience. Additionally, challenges exist in preparing graduates for emerging technologies, cybersecurity, agile development practices, ethical considerations, and the need for a global perspective. Closing these gaps requires updating curricula, enhancing practical training, and fostering adaptability and lifelong learning.	PO2, PO3, PO6, PSO1, PSO2
2	Emerging Technologies	The limited coverage of cutting-edge fields like AI, blockchain, and quantum computing in traditional curricula Graduates may lack exposure to these rapidly evolving technologies, hindering their readiness for industry demands. Bridging this gap requires incorporating these advancements into educational programs and promoting ongoing learning.	PO3, PSO1, PSO2
3	Career Guidance	Many graduates face challenges in aligning their skills with specific roles and may lack awareness of emerging job opportunities. Addressing this gap involves providing robust career counseling, industry insights, and resources to empower students to make informed career decisions.	PO2, PO3, PO6, PSO1, PSO2

2.1.2. Contents beyond the Syllabus (15)

At GEMS Polytechnic College, we understand the significance of providing education that goes beyond the confines of the syllabus. We believe in offering students a comprehensive learning experience that not only covers the prescribed curriculum but also equips them with additional knowledge and skills to excel in their chosen fields. This commitment is evident through our proactive approach to addressing identified gaps and our diverse range of initiatives aimed at delivering content beyond the syllabus.

A. Steps Taken to Get Identified Gaps Included in the Curriculum
Engagement with SBTE, Bihar:

- Recognizing the importance of a curriculum that aligns with the evolving needs of industry and society, we have taken proactive steps to address identified gaps.
- One crucial avenue for this is our engagement with the State Board of Technical Education (SBTE), Bihar.
- We have initiated a formal communication process by sending letters to SBTE, Bihar, requesting a review of the curriculum gaps we have identified.
- Our aim is to advocate for the inclusion of these gaps in the upcoming new regulation of the syllabus.
- This collaborative approach ensures that our curriculum remains dynamic and responsive to the changing educational landscape and industry requirements.

Semester	Course Name	Input to the SBTE Board (suggestion)	Reason	Relevance to PO's/PSO's
III	Digital Electronics & Microprocessor - 2018304	PC Architecture	PC architecture refers to the design and organization of personal computers, encompassing components such as the central processing unit (CPU), memory, storage, and input/output devices. It defines the system's structure, enabling the seamless integration of hardware and software for efficient computing.	PO2, PO3,PO4,PO7, PSO2
IV	Database Management System 2018402	Query Language	Query language is a specialized programming language designed for managing, retrieving, and manipulating data from databases. It serves as an essential tool for help to understand the concept and working process of other databases like SQL and MongoDB and extracting information based on specific criteria	PO3, PO4, PO7, PSO1

IV	Python Programming 2018404	Bootstrap Frameworks	Bootstrap is a popular front-end framework that streamlines web development by providing a responsive grid system, pre-designed components, and CSS styling. It enables developers to create consistent and mobile-friendly websites with efficiency and ease. With the help of Bootstrap, they can gain knowledge about web development using Django.	PO2,PO3, PO4,PSO1
V	Computer Hardware & Networking - 2018502	Boolean Algebra	Boolean algebra is a mathematical structure that deals with binary variables and logic operations, primarily AND, OR, and NOT. It forms the foundation for digital circuit design and is instrumental in computer science and electronic engineering.	PO3, PO6, PSO1, PSO2

B. Delivery Details of Content beyond Syllabus:

To ensure that our students receive content that extends beyond the syllabus, we have implemented a series of special initiatives designed to bridge curricular and attainment gaps. These initiatives are tailored to provide students with practical knowledge, valuable insights, and essential skills that enhance their overall learning experience.

Some of these initiatives include:

Sl. No	Delivery Process	Delivery Details of Content beyond Syllabus
1.	**Lecture on Content Beyond the Syllabus**	Respective course-handling faculties will identify the topic for industry readiness and emerging technology in their course as content beyond the syllabus, which will be delivered during the regular course duration itself.
2.	**Lab Experiments on Content Beyond the Syllabus**	Respective lab course-handling faculties will identify experiments related to industry readiness and emerging technology in their lab courses as content beyond the syllabus. These experiments will be incorporated into the regular lab course duration.

3.	**Value-Added Courses**	We offer value-added courses that complement the core curriculum. These courses cover emerging topics, advanced technologies, and specialized skills, giving students a competitive edge in their respective fields.
4.	**Guest Lectures**	Distinguished experts from academia and industry are invited to conduct guest lectures. These sessions provide students with exposure to real-world insights, industry trends, and the opportunity to interact with industry leaders.
5.	**Industrial Visits**	Students are encouraged to participate in industrial visits, where they can observe industrial processes and gain practical knowledge. These visits help them connect theoretical concepts to real-world applications.
6.	**In-Plant Training**	In-plant training programs enable students to work within an industrial setting. This hands-on experience allows them to apply classroom knowledge, develop technical skills, and understand industry practices.
7.	**Mini Projects**	Students engage in mini projects that encourage innovation, problem-solving, and teamwork. These projects foster creativity and practical application of their learning.
8.	**Soft Skills Training**	We provide soft skills training to enhance students' communication, teamwork, and interpersonal skills. These skills are crucial for personal and professional development.
9.	**Mock Interviews**	To prepare students for the job market, we conduct mock interviews facilitated by both internal academic experts and external industrial experts. These sessions offer constructive feedback and help students build confidence for actual job interviews.

At GEMS Polytechnic College, our commitment to delivering content beyond the syllabus is rooted in our dedication to nurturing well-rounded, employable graduates. By actively addressing identified gaps and offering these diverse initiatives, we empower our students with the knowledge, skills, and confidence to excel in their academic and professional journeys.

C. Mapping of content beyond syllabus with the POs & PSOs (3)

CAY 2023-24

S. No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	Mode	No. of students present	Relevance to POs, PSOs
1	Industry Readiness	Industrial Visit	12-03-2024	Mr. Amit Kumar (JTO BSNL Dalmiaanagar)	Offline	20	POs-1,2, 4 PSOs-1

2	Emerging Technologies	Workshop on 7 segment Counter with logical gates	26-02-2024 to 4-03-2024	Mathias Keibeler	Offline	38	PO2, PO3,PO4 PO5,PO6 ,PO7

CAY M1 2022-23

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	Mode	No. of students present	Relevance to POs, PSOs
1	Emerging Technologies	Career Guidance	30-08-2022	Dr. P. K. Rao, Training and Placement Expert, Department of Science and Technology, Patna, Bihar	Offline	23	POs-1,7 PSOs-3
2	Career Guidance	Technical quiz	03-09-2022	ISTE	Offline	90	POs-2,7 PSOs-2
3	Environmental Awareness and sustainability	Guest Lecture - National Startup day	11-01-2023	Mr.Abraham Dennison. B.tech,MBA, PGD-PHN Senior manager-Program analyst at Project Concern International.	Online	53	POs-1,7 PSOs-1
4	Emerging Technologies	National Science Day - QUIZ competition, Poster presentation.	28-02-2023	Mr.Raghunath A. IIC President GEMS Polytechnic College	Offline	26	POs-1,6,7 PSOs-3
5	Emerging Technologies	PC Architecture	20-3-2023	Jenitha K Lecturer GEMS Polytechnic college	Offline	26	POs-1,5,7 PSOs-1

6	Career Guidance	Local Web Server	21-3-2023	Mr. Christal Anand S Lecturer GEMS Polytechnic college	Offline	26	POs-2,3,7 PSOs-3
7	Emerging Technologies	Metal Art	27-06-2023	Mrs. Catherine, Lecturer GEMS Polytechnic college	Offline	42	POs-3,6 PSOs-3
8	Emerging Technologies	Technical Quiz	27-06-2023	Mrs. Chinthiya Lecturer GEMS Polytechnic college	Offline	20	POs-1,6,7 PSOs-3
9	Career Guidance	Paper presentation	28-06-2023	Mr. Anil Kolli, HoD ME Mrs. Pameela HoD EEE GEMS Polytechnic college	Offline	18	POs-1,6,7 PSOs-3
10	Emerging Technologies	Light Up- An activity on Electric lamp designing	27.07.23	Mrs.Catharine,Lecturer, GEMS Polytechnic college	Offline	75	POs-3,5,7 PSOs-3
11	Industry Readiness	Broadband Technology Optical Fiber cable & System (Industrial Visit)	12-08-2023	Mr. Amit Kumar (JTO BSNL Dalmiaanagar)	Offline	27	POs-1,2,4 PSOs-1

CAY M2 2021-22

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	Mode	No. of students present	Relevance to POs, PSOs
1	Career Guidance	Incremental Model	18-01-2021	Mr. Ranjit Chaudhary Lecturer, CSE GEMS Polytechnic College	Offline	26	POs-1,7 PSOs-3
2	Career Guidance	RISC and CISC Processor	22-01-2021	Mrs.Jenitha K Lecturer , CSE GEMS Polytechnic College	Offline	22	POs-1,4,7 PSOs-2
3	Career Guidance	Network Security	23-01-2021	Mr.Vivek Kumar Lecturer GEMS Polytechnic college	Offline	26	POs-1,5 PSOs-2
4	Career Guidance	How to create a web page using CSS	25-01-2021	Mr. Christal Anand S Lecturer GEMS Polytechnic college	Offline	26	POs-1,3,6 PSOs-3
5	Career Guidance	JAVA Networking	27-01-2021	K Gopalal Krishna Lecturer , CSE GEMS Polytechnic College	Offline	26	POs-1,7 PSOs-1
6	Emerging Technologies	Seminar on Railway trends	11.08.22	Mr.Abner,PGD Rail & Metro technology	Offline	28	POs-1,5,7 PSOs-1
7	Career Guidance	Python Program	18-08-2022	Mr. Saurav Kumar (PMRF Department of Electrical Engineering)	Online	28	POs-1,2 PSOs-2

8	Career Guidance	Algorithmic Problem Solving -Notations (FlowChart Pseudo Code)	10-10-2022	Mrs.Jenitha K Lecturer , CSE GEMS Polytechnic College	Offline	24	POs-1,3 PSOs-1
9	Emerging Technologies	Shearing in 2D Graphics	21-10-2022	K Gopalal Krishna Lecturer , CSE GEMS Polytechnic College	Offline	28	POs-1,5 PSOs-3
10	Career Guidance	IPC (Inter Process Communication - Process Synchronization)	22-10-2022	Mr. Ranjit Chaudhary Lecturer ,CSE GEMS Polytechnic College	Offline	25	POs-1,2,6 PSOs-1
11	Career Guidance	Array Data Structure (Introduction)	24-10-2022	Mr. Christal Ananad S HOD CSE GEMS Polytechnic College	Offline	26	POs-1,5 PSOs-2
12	Career Guidance	Relation Algebra	26-10-2022	Mrs.Jenitha K Lecturer , CSE GEMS Polytechnic College	Offline	28	POs-1,6 PSOs-1

CAY M3 2020-21

S.No	Gap	Action Taken	Date-Month-Year	Resource Person with Designation	Mode	No. of students present	Relevance to POs, PSOs
1	Industry Readiness	Android App development training	02-09-21	Mr.Dinesh Palappan,Start up & Entrepreneurship Coordinator	Offline	26	POs-5,6,7 PSOs-2
2	Career Guidance	Fiber To Home (Industrial Visit)	16-11-2021	Mr.Sunil Kumar (SDO BSNL)	Offline	26	POs-4,7 PSOs-3

2.2 Teaching - Learning Process (160)

2.2.1 Describe Processes followed to ensure/improve quality of Teaching & Learning based on following points (25)

A. Adherence to Academic Calendar (3)

Adherence to the academic calendar is critical to maintaining a structured and efficient educational environment within our department. Our department's academic calendar is meticulously prepared ahead of each semester, considering the institution's calendar and the SBTE (State Board of Technical Education) Calendar. This careful planning ensures that the department's activities are well-coordinated and aligned with the broader educational framework.

Here are the key components of our department's academic calendar:

Semester Structure:

The academic calendar outlines the working days of the semester, providing a clear overview of the duration of the academic term. This serves as a foundational framework for all academic and non-academic activities within the department.

Internal Test Schedule:

To gauge students' progress and ensure timely assessments, the calendar includes the schedule for internal tests. This allows students and faculty members to adequately prepare and allocate their time for exam preparation and review.

Project Reviews:

For courses involving project work, the calendar specifies dates for project reviews. This ensures students receive timely feedback on their projects and can make necessary improvements.

Industrial Visits:

Many of our programs emphasize practical learning and industry exposure. The academic calendar incorporates planned industrial visits, providing students with opportunities to gain real-world insights into their fields of study.

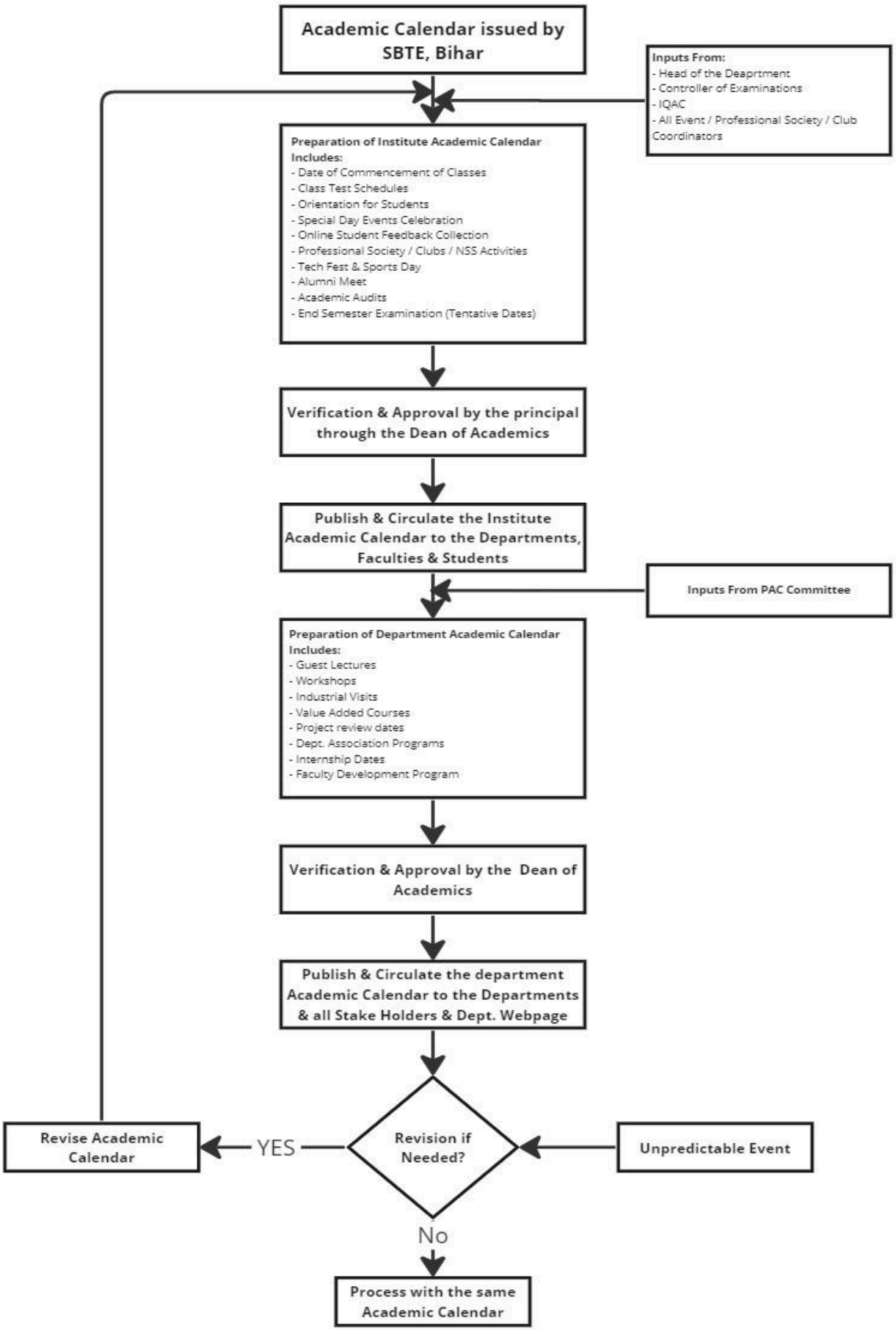
Additional Activities:

Beyond regular classes and assessments, the academic calendar accommodates various other activities designed to enrich the learning experience. These include guest lectures by industry experts, seminars on emerging topics, workshops to enhance practical skills, and participation in professional society activities.

Communication:

The academic calendar is not a static document; it is a living guide that evolves as necessary. It is disseminated among faculty members and students to ensure everyone is aware of the schedule and can plan their commitments accordingly. Any updates or changes are communicated promptly to maintain transparency and adherence to the plan.

Adhering to the department's academic calendar is vital for creating a conducive learning environment where both faculty and students can maximize their potential. It fosters discipline, and time management, and ensures that all educational objectives are met systematically and organized. By following the calendar diligently, we aim to provide our students with a holistic and enriching educational experience while staying aligned with the institution's and SBTE's guidelines.


Academic Calendar issued by SBTE, Bihar
Inputs From:
- Head of the Deaprtment
- Controller of Examinations
- IQAC
- All Event / Professional Society / Club Coordinators
Preparation of Institute Academic Calendar Includes:
- Date of Commencement of Classes
- Class Test Schedules
- Orientation for Students
- Special Day Events Celebration
- Online Student Feedback Collection
- Professional Society / Clubs / NSS Activities
- Tech Fest & Sports Day
- Alumni Meet
- Academic Audits
- End Semester Examination (Tentative Dates)
Verification & Approval by the principal through the Dean of Academics
Publish & Circulate the Institute Academic Calendar to the Departments, Faculties & Students
Inputs From PAC Committee
Preparation of Department Academic Calendar Includes:
- Guest Lectures
- Workshops
- Industrial Visits
- Value Added Courses
- Project review dates
- Dept. Association Programs
- Internship Dates
- Faculty Development Program
Verification & Approval by the Dean of Academics
Publish & Circulate the department Academic Calendar to the Departments & all Stake Holders & Dept. Webpage
Revision if Needed?
YES
Revise Academic Calendar
Unpredictable Event
No
Process with the same Academic Calendar

B. Use of various instructional planning and delivery methods (3)

At our institution, the faculty is dedicated to fostering a dynamic and enriching learning environment for our students. To achieve this goal, we employ a diverse array of innovative teaching and learning methodologies that cater to different learning styles and enhance the overall educational experience. Below, we outline our key instructional methods:

Lecture Methods:

Curriculum Alignment:

We meticulously adhere to the curriculum and syllabus outlined by the SBTE, which serves as the foundation for preparing our academic calendar and teaching plans. This alignment ensures that our students receive education that is not only comprehensive but also industry-relevant.

Tutorial Hours:

For courses demanding a deeper analytical perspective, we conduct tutorial hours. These sessions provide students with the opportunity for in-depth discussions and a thorough understanding of course material.

Interactive Teaching:

While we embrace traditional lecture methods, we encourage active participation from students during lectures. This engagement allows students to seek clarifications and engage in real-time discussions, fostering a deeper understanding of the subject matter.

ICT Based Learning:

Enhanced Information Delivery:

ICT-based learning plays a pivotal role in enriching the quality of education and teaching. To this end, we leverage various ICT tools and platforms to enhance information delivery.

Tools and Platforms:

Our program incorporates a variety of ICT-based learning tools, including multimedia projectors, Smart Boards, PowerPoint presentations, Google Classroom, MOODLE (Learning Management System), and VMEDULIFE (Campus Management System).

Seminars:

We allocate dedicated seminar hours in our timetable to facilitate enhanced learning and to keep students updated with rapidly evolving technology.

Collaborative Learning:

Interactive Learning:

Collaborative learning is a cornerstone of our approach, wherein groups of students collaborate to analyze and apply concepts interactively. This fosters a deeper understanding and knowledge retention.

Involvement of Student Groups:

We actively involve student groups in collaborative learning exercises, technical quizzes, and project work to encourage teamwork and critical thinking.

Value-Added Courses:

To further promote learning and skill development, we conduct value-added courses. These courses provide students with opportunities for specialized training, often guided by industry experts.

Beginners/Freshers Connect Program:

Bridge Courses:

At the commencement of each academic year, we offer bridge courses for fundamental science subjects like mathematics, physics, chemistry, and engineering graphics. These courses help incoming students recall and comprehend core theories, ensuring a strong foundation.

Faculty Orientation:

At the beginning of every semester, newly appointed faculty members undergo orientation to familiarize themselves with teaching methods and pedagogical strategies.

Bloom's Taxonomy:

Faculty members are also introduced to Bloom's taxonomy objectives to enhance their educational activities and facilitate more effective teaching.

Through the adoption of these diverse instructional planning and delivery methods, we aim to create an engaging, interactive, and effective learning environment that prepares our students for success in their academic pursuits and future careers.

C. Methodologies to support weak students and encourage bright students (4)

Every student possesses unique learning attitudes and habits. It is crucial to adapt teaching methods and strategies to cater to the diverse needs of students, ensuring that neither slow learners.

This process manual serves as a comprehensive guide to facilitate the development of effective strategies for both slow and advanced learners, while also addressing the needs of average learners.

Process to Identify Slow and Advanced Learners:

Slow Learners:

Students who score below 40% in-class tests and face challenges in assignments, class participation, responsiveness, general awareness, and attentiveness will be classified as slow learners.

Advanced Learners:

Students who consistently score above 60% in-class tests and excel in assignments, class participation, responsiveness, general awareness, and attentiveness will be categorized as advanced learners.

Slow Learners
To identify slow learners, we follow:

- Review class test results below 40%.
- Track absenteeism.
- Observe classroom participation.
- Collaborate with teachers.
- Maintain a list of challenges.

Activities for Slow Learners:
Remedial Classes:

- Conduct focused sessions.
- Explain, give examples, and practice.

Retesting:

- Offer retests in areas of struggle.
- Ensure comfortable conditions.

Assignments:

- Customize tasks for learning needs.
- Encourage critical thinking.

Peer Group Support:

- Pair with classmates excelling in subjects.
- Peer mentors provide extra help.

Monitoring of Slow Learners:

Involve subject teachers:

- Update them on progress.

Use a monitoring format:

- Track attendance, participation, and improvement.
- Implement a mentorship program.

Assign mentors for guidance:

- Conduct progress meetings.

Involve parents:

- Regularly update them.
- Seek their input.

Encourage continuous feedback:

- Modify strategies as needed.

ADVANCED LEARNERS:

Identification of Advanced Learners:

- Identify based on academic performance (above 60%) and attendance.
- Collaborate with subject teachers.
- Maintain a database of achievements and interests.
- Regularly communicate to understand aspirations.

Motivating Participation in Technical Events:

- Keep them informed about upcoming events.
- Provide event selection guidance.
- Encourage group participation.
- Acknowledge achievements through awards.

Encouraging Online Certification Programs:

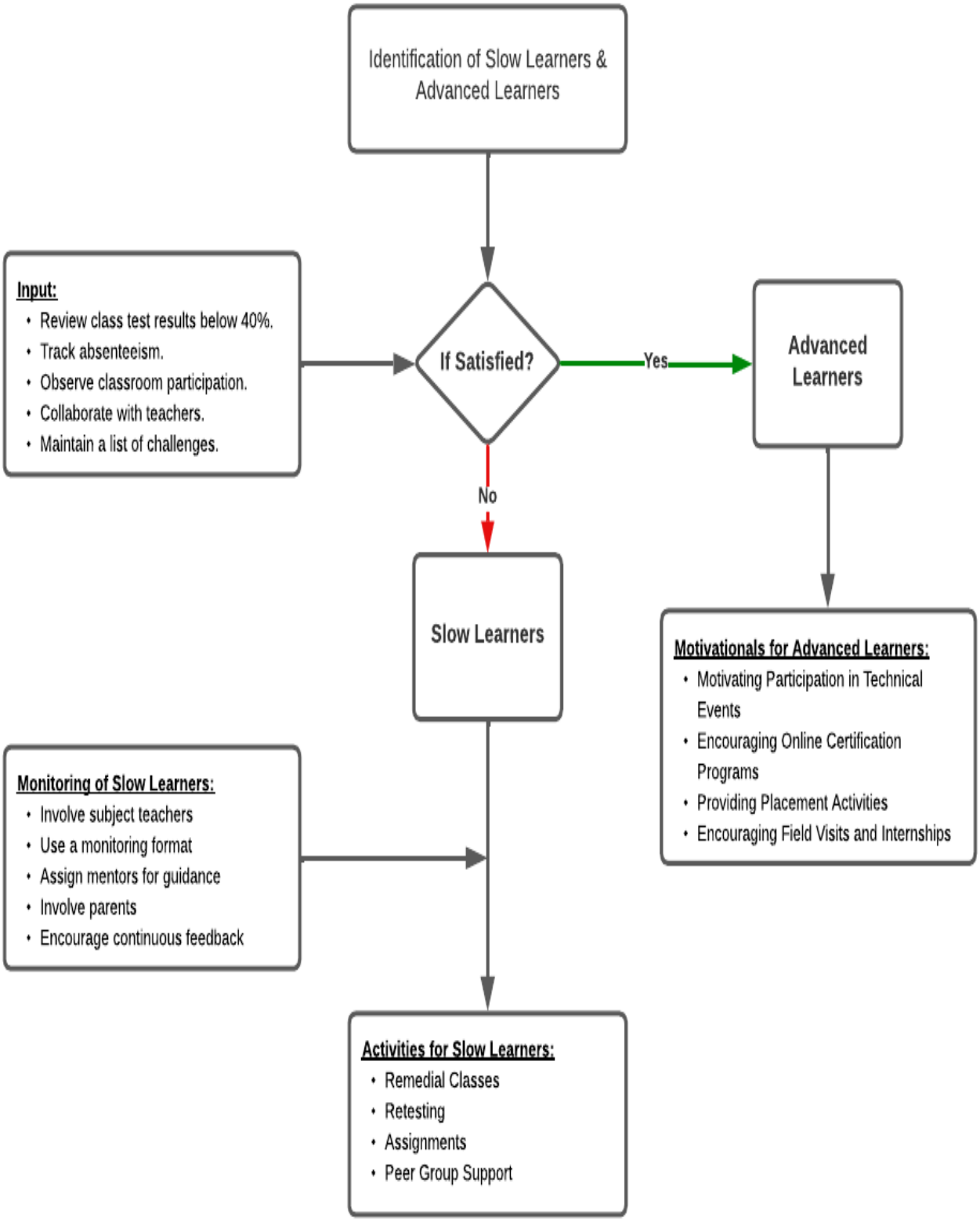
- Explore MOOC courses on platforms like NPTEL, SPOKEN TUTORIAL, CISCO, etc.
- Select courses aligning with your academic interests and career goals.
- Manage your time effectively to balance coursework and certification requirements.

Providing Placement Activities:

- Offer career guidance.
- Enhance interview skills.
- Facilitate networking events.
- Collaborate with industries for placements.

Encouraging Field Visits and Internships:

- Organize industry visits.
- Facilitate internships.
- Connect with mentors.
- Promote learning reflection and sharing.


Identification of Slow Learners & Advanced Learners
Input:
Review class test results below 40%.
Track absenteeism.
Observe classroom participation.
Collaborate with teachers.
Maintain a list of challenges.
If Satisfied?
Yes
No
Advanced Learners
Slow Learners
Motivationals for Advanced Learners:
Motivating Participation in Technical Events
Encouraging Online Certification Programs
Providing Placement Activities
Encouraging Field Visits and Internships
Monitoring of Slow Learners:
Involve subject teachers
Use a monitoring format
Assign mentors for guidance
Involve parents
Encourage continuous feedback
Activities for Slow Learners:
Remedial Classes
Retesting
Assignments
Peer Group Support

D. Quality of classroom teaching (3)

Quality teaching is essential for effective learning. To ensure high-quality classroom teaching, the following aspects are prioritized:

Interactive Classroom Ambience:

- Classrooms are designed to foster interaction among students.
- Visual aids, group activities, and discussions create an engaging learning environment.

Smart Board Integration:

- Smart boards are installed institution-wide to enhance teaching.
- Faculty members use this technology to make lessons engaging and interactive, capturing students' attention.

Real-world Learning with Smart Boards:

- Smart boards enable faculty to create dynamic, real-world learning experiences.
- These boards facilitate real-time assessment and practical learning.

Collaborative Problem Solving:

- Complex tutorial problems are tackled collaboratively in classrooms.
- Faculty and students work together, promoting teamwork and critical thinking.

Administrative Observations:

- Regular visits by the Principal, Dean of Academics, and Head of Department.
- Observations help improve teaching quality, and valuable feedback is conveyed to faculty members.

Student Engagement:

- Students are encouraged to present short "Snap Talks" during class hours, enhancing their communication skills and confidence.

Hands-on Learning:

- Faculty bring real components and models to classrooms for clear concept demonstrations.
- This hands-on approach aids students comprehension.

Class Committee Meetings:

- Regular meetings are conducted to monitor and evaluate classroom teaching quality.
- Collaborative efforts with faculty and student representatives identify areas for improvement.

Note: **Click here to get CCM Report:**
https://drive.google.com/file/d/14hIxwG5BfWhhFVifKhg_b5si7ZT52B5U/view?usp=drive_link (https://drive.google.com/file/d/14hIxwG5BfWhhFVifK

Feedback Collection:

- Feedback from students is collected mid-semester and at the end of each semester for all courses.
- This feedback helps evaluate the teaching and learning process and informs improvements.
- Prioritizing these aspects ensures that classroom teaching is dynamic, engaging, and continuously improved to benefit both faculty and students.

Note: **Click here to get Online student feedback of faculty:**
https://drive.google.com/file/d/1xS1QxqNxPGumceSk6vJkyYlzrUQlUmcE/view?usp=drive_link (https://drive.google.com/file/d/1usp=drive_link)

E. Conduct of experiments (3)

To facilitate effective experimentation, the following procedures are meticulously followed:

Group Division and Lab Allocation:

- The class is divided into two groups: Group A and Group B.
- Alternate use of laboratory facilities is scheduled to ensure efficient utilization; for instance, when Group A utilizes Lab 1, Group B uses Lab 2, and vice versa.
- Lab sessions are meticulously scheduled, and students are informed of their allocated lab sessions in advance.

Batch Formation:

- Each group is further divided into batches consisting of 3 to 4 students.
- This allows for efficient management and supervision during practical sessions.

Preparation and Instruction:

- Comprehensive laboratory manuals and course plans are developed before each semester.
- Students receive detailed instructions on experimental procedures and safety protocols before commencing practical sessions.

Data Recording and Accuracy:

- Students are provided with lab observation notebooks to record readings and calculations during experiments.
- The significance of accurate data collection is emphasized, and students are well-versed in the format and guidelines for recording observations.

Transcription and Verification:

- Following experiments, students transcribe their observations and results into their lab record notebooks.
- In subsequent classes, thorough verification and authentication of entries are conducted to ensure data accuracy.

Additional Experiments:

- Beyond the curriculum, students are encouraged to conduct additional experiments to enhance their practical knowledge and design capabilities.

Faculty and Lab Personnel Duties:

Faculty members in charge and lab assistants play pivotal roles by:

- Regularly inspecting and maintaining laboratory equipment for functionality and safety.
- Reporting any faulty equipment for prompt repair or replacement.
- Maintaining an up-to-date inventory of all lab equipment and materials.
- Keeping records of batch assignments, lab schedules, and student attendance.
- Continuously updating and improving laboratory manuals and course plans based on student feedback and evolving educational requirements.

By adhering to these systematic procedures, the institution ensures the smooth and efficient conduct of experiments, fostering a conducive environment for hands-on learning and practical skill development.

F. Continuous Assessment in the laboratory (3)

In accordance with SBTE guidelines, practical courses undergo continuous assessment, combining both Internal and External marks, as outlined in the SBTE Syllabus.

Continuous Assessment Components:

Completion of the Experiment:

- Regular progress in conducting experiments.

Periodic Submission of Observation and Record:

Timely submission of comprehensive observations and records.

Individual Experiment Evaluation:

- In-depth assessment involving parameters such as Theoretical Concept, Experimental Execution, Viva-Voce, and Record Note.

Internal Assessment (A):

Individual Experiment Evaluation (out of 50 marks):

- Detailed Parameters for Evaluation.
- Evaluation criteria encompass Theoretical Concept, Experimental Execution, viva voce, and Record Note.

Model Examination:

- A model exam was conducted, accounting for 50 marks.

Calculation of Internal Marks:

- Final internal marks were derived from consolidating experiment marks and model exam results, with a total of 100 marks.
- The total of 100 marks will be converted to the value of the internal marks specified in the SBTE-prescribed syllabus.

External Assessment (B):

- External marks assigned during end-semester practical examinations.
- Evaluation by an external examiner designated by SBTE, Bihar, following predefined criteria.

Overall Laboratory Assessment:

- Total marks for a student in a laboratory course are determined by adding an Internal Mark (A) and an External Mark (B).

The pass marks for laboratory exams are subject-specific and are outlined in the SBTE syllabus.

G. Student feedback of teaching learning process and action taken (6)

"Student Feedback of Teaching-Learning Process and Action Taken" is a vital mechanism in our educational institution, enabling continuous improvement and accountability. Through structured feedback collection and a proactive approach, we aim to enhance the teaching and learning experience. This process empowers both students and faculty to collaboratively work towards achieving excellence in education.

1. Purpose of Student Feedback:

Student feedback serves several critical purposes:

- To assess the effectiveness of the teaching-learning process.
- To identify areas for improvement in course delivery.
- To address classroom-related issues and grievances.
- To foster continuous enhancement in teaching methods.

2. Feedback Collection Process:

a. Mid-Semester Feedback:

- ❖ Collected to proactively identify and address concerns early in the semester.
- ❖ Allows for prompt adjustments to enhance the teaching-learning experience.
- ❖ Provides insight into initial student experiences and perceptions.

b. End-of-Semester Feedback:

- ❖ Offers a comprehensive assessment of the entire semester, aiding in the evaluation of the overall teaching and learning journey.

c. Student Feedback Questions:

Students are asked to provide feedback on various aspects using a 4-point scale:

- Punctuality of the teacher.
- Coverage of relevant topics beyond the syllabus.
- Effectiveness in delivering technical/content.
- Communication skills.
- Use of teaching aids.
- Motivation to learn.
- Support for practical demonstration skills.
- Support for hands-on training.
- Commitment to self-improvement based on feedback.
- Willingness to offer help and advice to students.
- Consistency in evaluating and returning assignments and test papers.
- Syllabus coverage as per SBTE guidelines.
- Classroom discipline and control.
- Syllabus completion as per SBTE syllabus.
- Any additional feedback or grievances.

Participation Rate:

- Measures the percentage of students participating in the feedback process.
- Formula: Participation Rate (%) = (Number of Students Participating / Total Number of Students) x 100.
- Benchmark: Maintaining a participation rate of 80% or higher is required.

3. Action Taken on Feedback:

a. Target Performance:

- Faculty members are expected to meet or exceed a target performance level of 75% or above based on student feedback scores.

b. Explanation Letter:

- Faculty members falling below 75% must provide an explanation letter to the Dean of Academics and the Principal through the Head of the Department (HOD).

c. Warning Letter:

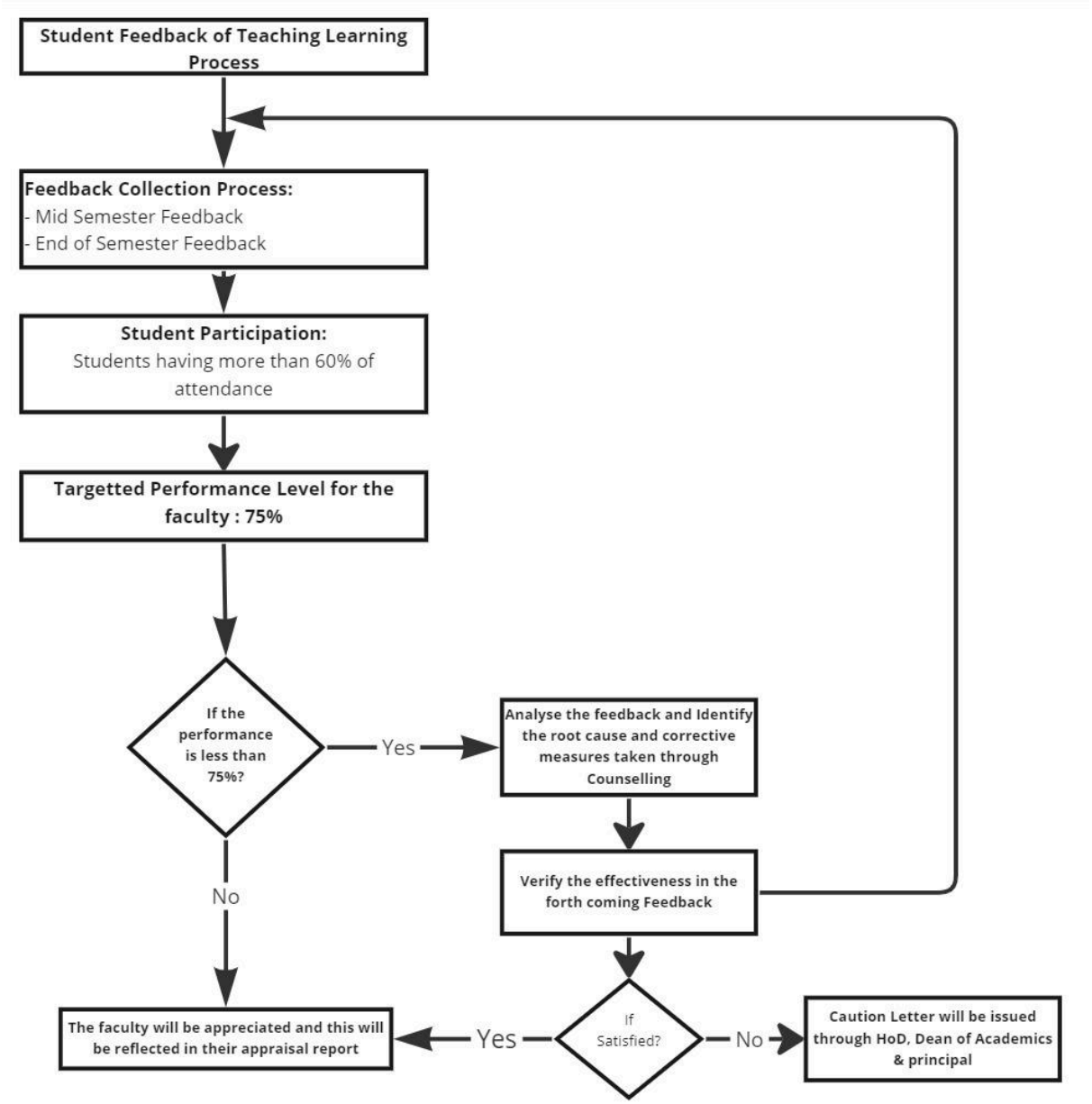
- If performance remains unsatisfactory despite the initial feedback and explanation letter, a warning letter is issued to the faculty member by the Principal through the Dean of Academics.

d. Monitoring and Evaluation:

Continuous monitoring and evaluation of faculty members' progress throughout the semester.
A second feedback round is conducted at the semester's end to assess improvements.

4. Reporting and Communication:

- Feedback scores and any letters of explanation or warning are communicated to faculty members through official channels.
- Involvement of the Principal, Dean of Academics, and HOD in the communication process ensures transparency and accountability.



2.2.2 Initiatives to improve the quality of semester tests and assignments (15)

A. Process for Internal semester question paper setting and evaluation and effective process implementation (5)

Establishing a seamless and meticulous process for internal semester question paper setting and evaluation is paramount to ensuring the quality and fairness of assessments. In this endeavor, effective process implementation plays a crucial role in upholding academic standards and promoting student success.

Exam Schedule Preparation:

The Exam cell meticulously plans the test date schedule, aligning it with the academic calendar, and includes three Class tests and one optional Model Exam. Consideration is given to SBTE Bihar Exam schedules to avoid conflicts.

Syllabus-Based Question Paper Formation:

Question papers are meticulously designed to align with the syllabus coverage for each test:
Class Test 1: Encompasses the initial 30% of the entire syllabus.
Class Test 2: Covers the subsequent 35% of the entire syllabus.
Class Test 3: Targets the remaining 35% of the entire syllabus.
Model Exam: Encompasses 100% of the entire syllabus.

Question Paper Preparation:
Respective subject-handling faculties collaborate to create question papers, ensuring comprehensive coverage of topics.
The question papers undergo thorough verification and approval by the Head of the Department (HOD) to maintain quality and consistency.
Approved question papers are promptly submitted to the Exam Cell.

Question Paper Format:
Internal question papers adhere to the standards set by SBTE for end-semester question papers.
Format for Class Test 1, 2 & 3:
Part-A: 11 Questions x 1 Mark = 11 Marks
Part-B: 3 Questions x 4 Marks = 12 Marks (Either/or Options)
Part-C: 2 Questions x 6 Marks = 12 Marks (Either/or Options)
Total: 35 Marks

Format for Model Exam:
Part-A: 20 Questions x 1 Mark = 20 Marks
Part-B: 5 Questions x 4 Marks = 20 Marks (Either/or Options)
Part-C: 5 Questions x 6 Marks = 30 Marks (Either/or Options)
Total: 70 Marks

Answer Key Preparation:
Faculty members take responsibility for preparing the answer keys for internal tests, ensuring accuracy and consistency.

Evaluation and Result Analysis:
Faculty members commit to evaluating answer scripts within a 3-day window from the test date,maintaining efficiency and timeliness.
Result analysis is meticulously conducted and submitted to the HOD for review and action.
Evaluated answer scripts are promptly distributed to students, fostering transparency and understanding.
Classroom discussions led by faculty members enable students to comprehend their performance and the correct answers effectively.

This comprehensive process ensures the effective implementation of the internal semester question paper setting and evaluation, promoting fairness, quality, and academic excellence.

B. Question paper setting taking into account outcomes/learning levels (5)

The process of setting question papers is a vital aspect of assessing students' subject knowledge, analytical skills, design aptitude, and their ability to justify their responses. It is essential to align these assessments with the intended learning outcomes. To achieve this, questions are crafted following Bloom's Taxonomy, ensuring a holistic evaluation of students' cognitive abilities.

Question Paper Setting:

Three Class Tests for Theory Courses:

In each semester, three Class Tests are conducted for theory courses, providing multiple opportunities for students to demonstrate their understanding and skills.

Note: Click to get Sample Question Paper -

https://drive.google.com/file/d/1oXfkDa-2l6fO02ZhzRwWXQlas-0Bvux-/view?usp=drive_link

Alignment with Course Outcomes (COs):

- Question papers are meticulously designed to encompass all Course Outcomes (COs) for theory courses over the course of the three Class Tests.
- Faculties are instructed to create questions based on the COs distributed unit-wise.

Inclusion of COs and Bloom Level:

- To enhance clarity and transparency, question papers include references to the corresponding Course Outcomes (COs) and specify the Bloom level associated with each question, aligning the assessment with learning objectives.

Structured Evaluation:

- During the evaluation process, marks allocated for each question are entered question-wise on the answer sheet's front page.
- Additionally, the corresponding question's CO number is mentioned, facilitating a comprehensive assessment of students' attainment of learning outcomes.
- This approach ensures that the question paper-setting process is tightly aligned with the intended learning outcomes, enabling a thorough evaluation of a student's cognitive skills and subject knowledge.

C. COs coverage in-class tests / mid-term tests and assignments (5)

A crucial aspect of effective pedagogy is ensuring that the learning objectives are met through various assessments. In our educational institution, the mapping of Class Tests, Mid-Term Tests, and Assignments with Course Outcomes (COs) is meticulously executed to gauge students' progress and attainment of desired learning outcomes.

Mapping of Class Tests with Course Outcomes (COs):

To comprehensively assess student performance and align with the syllabus coverage, questions in Class Tests are thoughtfully linked with specific Course Outcomes (COs) as follows:

Class Test 1: Encompasses the initial 30% of the syllabus.

Class Test 2: Covers the subsequent 35% of the syllabus.

Class Test 3: Addresses the remaining 35% of the syllabus.

This structured approach ensures that students are evaluated on the entirety of the curriculum, with their performance reflecting the achievement of COs throughout the semester.

Mapping of Assignments with Course Outcomes (COs):

Assignments play a pivotal role in reinforcing learning and enhancing students' skills. The alignment of assignments with Course Outcomes (COs) is a deliberate process to promote holistic development. Here's how it is implemented:

Two Assignments with Clear Timelines:
Students are given two assignments, each carrying 25 marks, which are scheduled before Class Test 2 (covering 50% of the syllabus) and before Class Test 3 (completing 100% of the syllabus). These assignments are to be submitted within a week, encouraging timely completion.

CO-Based Mapping:
Assignments are carefully mapped with specific COs based on the nature of the questions. This alignment ensures that assignments address the intended learning outcomes effectively.

Emphasis on Skill Enhancement:
Faculty members emphasize the significance of assignments in enhancing students' technical competence, vocabulary, presentation skills, and writing proficiency. Assignments encompass various formats, including Class Mini Project Models, Posters, Subjective/Descriptive Questions and Answers, Multiple Choice Test Questions, Seminars/Presentations, and Reports on Industry Visits.

This approach not only facilitates comprehensive evaluation but also aids in reinforcing learning objectives and fostering skill development among our students.

2.2.3 Quality of Experiments (15)

A. Experimental methodologies (05)

Quality is a paramount aspect of any educational institution's laboratory experiments. The effectiveness of these experiments is essential in shaping the practical skills and knowledge of students. In this regard, our institution places significant emphasis on ensuring the quality of experiments through various measures and strategies.

A. Experimental Methodologies

Expert Involvement: Our experiments are conducted under the guidance of experienced subject lecturers, ensuring that students receive the best practical knowledge from experts in the field.

Equipment Maintenance: To maintain the quality of experiments, laboratory assistants regularly inspect and maintain the laboratory equipment. This proactive approach ensures that students work with reliable instruments, enhancing the learning experience.

Logbook Maintenance: Throughout the year, detailed logbooks are maintained in the laboratories. These records not only track the progress of experiments but also serve as valuable resources for students to refer to in the future.

Consumables Planning: Prior to each semester, the laboratory anticipates the consumables required for experiments. This foresight helps in conducting practical sessions smoothly, without interruptions.

Maintenance Communication: Any repair or maintenance needs related to the laboratory are promptly communicated to the principal, ensuring a safe and conducive learning environment for students.

B. Innovative experiments including industry attached practices, virtual labs (5)

Beyond Syllabus Experiments: In a bid to enhance students' practical skills and knowledge, experiments that go beyond the syllabus are regularly conducted. This approach fosters a spirit of exploration and curiosity among students.

State-of-the-Art Laboratories: Well-equipped laboratories are provided to students, enabling them to acquaint themselves with the latest technology and tools used in their respective fields.

Industry Practices: Real-time industry procedures are adopted wherever feasible in the laboratory. This bridges the gap between academic learning and industry demands, preparing students for the workforce effectively.

Virtual Labs Integration: To facilitate better understanding and remote learning, our institution leverages virtual labs, including resources from IITs. These virtual labs include video lectures and animated demonstrations, enriching students' knowledge beyond the physical laboratory.

Accessible Resources: A curated list of experiments under virtual labs, along with their web links, is readily available to students. This valuable resource is shared with students and is accessible on the department's official website, enhancing accessibility and convenience.

3D Printing: In engineering and architecture, 3D printing facilitates the development of detailed prototypes and structures, enhancing creativity and efficiency in design and manufacturing processes.

Demo Models: These models not only enhance conceptual understanding but also spark curiosity by providing physical experience demonstrations that bridge theory and practical application in science, technology, and various academic disciplines.

C. Relevance to outcomes (5)

Quality of Experiments: Industry Readiness Outcomes

Ensuring the industry readiness of students is imperative, and the quality of experiments plays a pivotal role in this preparation. Here are five simple yet crucial outcomes that contribute to fostering industry-ready professionals:

Sl. No	Outcomes
1	**Practical Proficiency**: The quality of experiments equips students with hands-on practical proficiency, enabling them to seamlessly apply theoretical knowledge to real-world scenarios.
2	**Problem-Solving Skills:** Engaging in high-quality experiments nurtures students problem-solving skills, as they learn to analyze, adapt, and innovate in response to challenges encountered during experiments.
3	**Effective Communication**: Quality experiments encourage students to articulate their methodologies, findings, and insights effectively. This fosters the development of clear and concise communication skills, a key asset in the professional world.
4	**Critical Thinking Abilities:** Students engaged in well-designed experiments are more likely to develop critical thinking abilities. They learn to question, evaluate, and draw meaningful conclusions, enhancing their analytical prowess.
5	**Adaptability to Technology**: With a focus on the quality of experiments, students become adept at utilizing advanced technologies and tools relevant to their field. This adaptability to technological advancements enhances their industry readiness in a rapidly evolving professional landscape.

Quality of Experiments:

Course Outcomes (COs) and Program Outcomes (POs)/Program Specific Outcomes (PSOs)

Every experiment conducted in our laboratories is meticulously mapped to the corresponding Course Outcomes (COs) and Program Outcomes (POs)/Program Specific Outcomes (PSOs).

This mapping ensures that the experiments directly contribute to achieving the educational objectives set by the institution.

It allows us to assess and measure the effectiveness of each experiment in meeting the intended learning outcomes.

In conclusion, the quality of experiments in our institution is a product of careful planning, expert guidance, innovative practices, and a strong focus on aligning with desired educational outcomes. We are committed to

providing our students with the best possible laboratory experience, equipping them with the skills and knowledge necessary for success in their academic and professional journeys.

2.2.4 Quality of Students Projects and Report Writing (35) Institute Marks 35.00

A. Identification of projects and allocation methodology (3)

At GEMS Polytechnic College, we recognize that true learning goes beyond the classroom, and one of the most effective ways to validate and apply the knowledge acquired by our students is through project work. We place great importance

on the quality and execution of student projects as they not only deepen the understanding of subjects but also provide invaluable hands-on experience in translating theoretical knowledge into practical applications. Our project teams,

consisting of 4 to 6 students each, are guided by dedicated Faculty Guides who play a crucial role in helping the teams achieve their project objectives. Engaging in project work offers students several benefits, including:

Enhanced Subject Understanding: Project work leads to a more profound comprehension of the subject matter, allowing students to apply their knowledge in real-world scenarios.

Hands-On Practical Experience: Students gain practical experience, honing their skills and competencies by working on tangible projects.

Opportunity to Showcase Skills: Projects provide students with a platform to exhibit their skills and creativity, fostering a sense of accomplishment.

Teamwork and Communication Development: Collaborative project work promotes teamwork and communication skills, essential attributes in today's professional landscape.

Project Allocation Methodology

Our approach to project allocation is systematic and comprehensive:

Assignment of Project Coordinator: At the beginning of each academic year, the Head of the Department (HOD) appoints a Project Coordinator to oversee the project allocation process.

Diverse Team Formation: The Project Coordinator assembles project teams with a balanced mix of students, including those with varying academic performance levels, such as Best, Average, and slower learners. This diversity ensures well-rounded project teams.

Guide Allocation: Faculty members with expertise in specific areas of specialization and fields of interest are assigned as guides to project batches, aligning the students project topics with the faculties knowledge and experience.

Project Identification in Zeroth Review

Our zeroth review process ensures the selection of high-quality projects:

Multiple Project Ideas: Students are required to present a minimum of 2 to 3 project ideas or base papers that support their proposed project work.

Presentation Standards: Project presentations must include a minimum of 7 slides, detailing the project's objectives, methodology, expected outcomes, and relevance.

Project Identification & Allocation Parameters

Project allocation is based on rigorous evaluation criteria and rubrics, including:

Type of Model: Assessing the appropriateness and suitability of the chosen project model.

Choice of Technology: Evaluating the selection of technology in line with project goals.

Resource Utilization: Ensuring optimal use of available resources and materials.

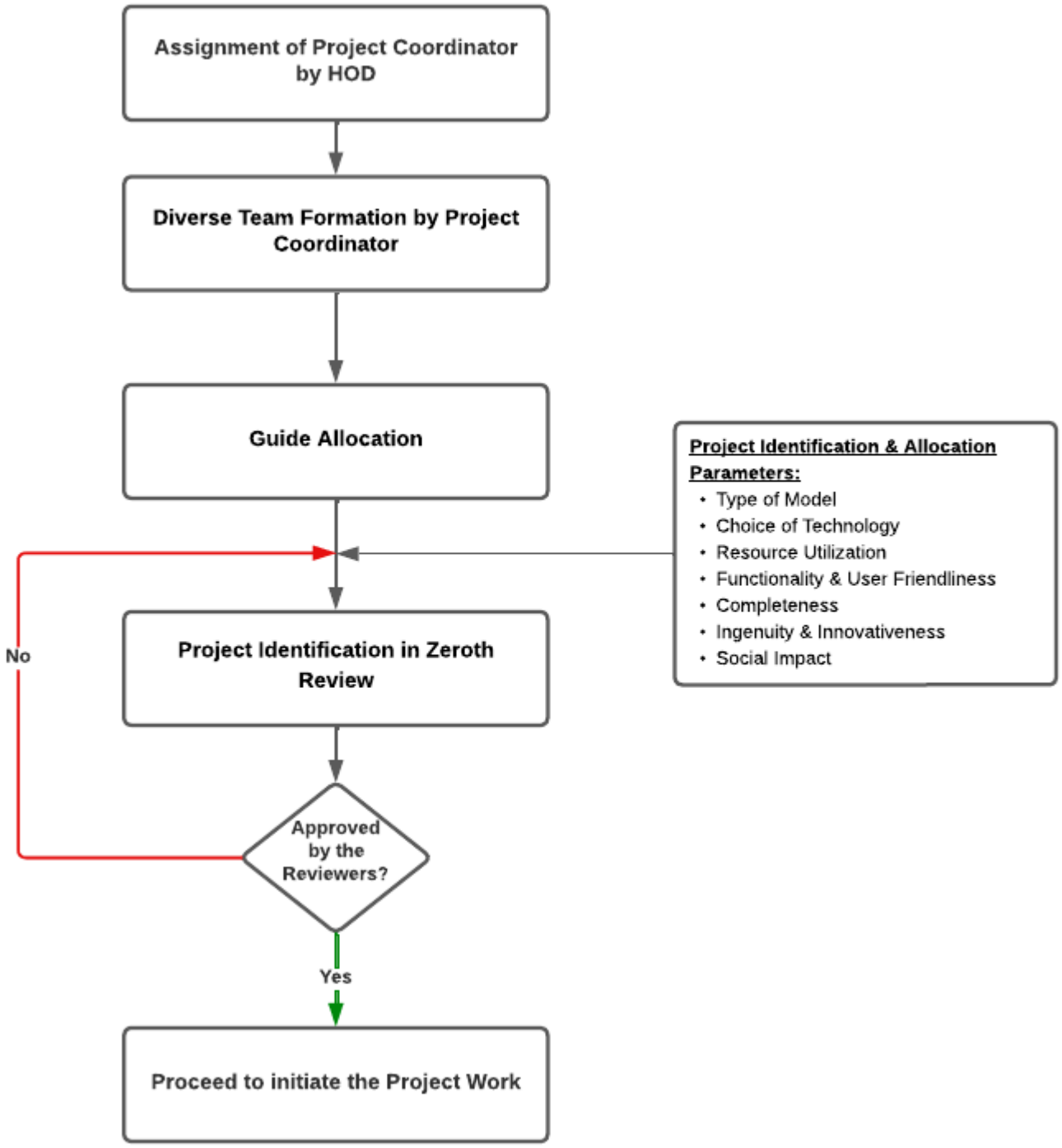
Functionality & User Friendliness: Evaluating the project's functionality and user-friendliness.

Aesthetic and Completeness: Assessing the overall aesthetics and completeness of the project, including documentation.

Ingenuity & Innovativeness: Recognizing creativity and innovation in project design.

Social Impact: Analyzing the potential social impact of the project on the community or industry.

Projects are subject to final approval by a reviewer committee, which thoroughly evaluates them based on the parameters mentioned above. This stringent evaluation process ensures that our students engage in meaningful, relevant, and high-quality project work, contributing to their holistic development and future success in their chosen fields.



B. Types and relevance of the projects and their contribution towards attainment of POs and PSOs (5)

In the field of Computer Science & Engineering, projects play a pivotal role in enhancing students' learning experiences and preparing them for real-world challenges. These projects span across various domains, each contributing uniquely to the attainment of Course Outcomes (COs) and Program Outcomes (POs) / Program Specific Outcomes (PSOs). Let's explore the relevance of projects in different Computer Science & Engineering domains and their alignment with COs, POs, and PSOs.

Domains in Computer Science & Engineering with Relevant Projects:

Artificial Intelligence (AI) and Machine Learning:

- Data Science and Big Data.
- Computer Vision.
- Cyber Security.

Internet of Things:

- Block chain and cryptocurrency.
- Software Development and Engineering.
- Web Development and Design.

Robotics:

- Computer Networks.
- Database Systems.
- Natural Language Processing (NLP).

Computer Graphics and Visualization:

- Cloud Computing and Distributed systems.
- Electric vehicle design and development.
- Mobile App Development.

Robotics and Automation:

- Bioinformatics and computational Theory.
- Game Development.
- Computer Ethics and Privacy.

Quantum Computing:

- Autonomous Systems and Robotics.
- Educational Technology.
- Health Informatics.

Drone Technology:

- E-Commerce Development.

Contribution to Course Outcomes (COs):

CO1: Identify and define the problem and technology to be adopted.

1. Students learn to identify engineering problems specific to their project domain.

2. They gain knowledge of relevant technologies and their applications.

CO2: Function as a team in the planning and execution of the project work.

1. Projects necessitate teamwork, enhancing collaboration and communication skills.

2. Planning and execution as a team will involve project management, time, and resource allocation.

CO3: Apply appropriate knowledge of engineering to achieve identified objectives of the project.

1. Students apply theoretical and practical engineering knowledge to solve real-world problems.

2. They adapt their skills to meet project objectives.

CO4: Fabricate a demonstrable output.

1. Project work often culminates in a physical or functional prototype, demonstrating their problem-solving abilities.

Alignment with Program Outcomes (POs) and Program Specific Outcomes (PSOs):

Every project undertaken is carefully mapped to the respective POs and PSOs of the Computer Science & Engineering program. This ensures that students are not only acquiring technical expertise but also developing skills and competencies

in line with the broader program objectives. Each project contributes to the program's mission of producing well-rounded and capable Computer Engineers ready to address the challenges of the industry.

In conclusion, projects in Computer Science & Engineering span various domains and are instrumental in helping students achieve the Course Outcomes, while also contributing to the fulfillment of Program Outcomes and Program Specific

Outcomes. These projects provide a comprehensive learning experience, equipping students with the knowledge, skills, and abilities required to excel in their future careers as Computer Engineers.

Project Alignment with Sustainable Development Goals (SDGs): Our student projects exemplify a conscientious alignment with the Sustainable Development Goals (SDGs), embodying a commitment to addressing global challenges and contributing to a sustainable future.

Mapping of Projects to POs/PSOs (2023-2024):

S No	Register Number	Student Name	Project Type	Project Title	Guide Name	Relevance of PO's / PSO's	Relevance of SDG
1	1991821024	ANUJ BHARTI	Society Oriented	Color picker chrome extension	Ms.Priyanka Kumari	**PO1, PO3, PO4, PO6**	**SDG 4**
	1991821023	ANKIT RAJ					
	1991821021	ANIKET RAJ					
	1991821019	AMAN KUMAR					
2	1991820024	SHIVAM SAURABH TIWARI	Society Oriented	Attendance Application through Face Dedication	Mr.Ragland Royal	**PO1, PO3, PO4, PO5, PO6, PO7, PSO1**	**SDG 4**
	1991820025	SHIVAM KUMAR SINGH					
	1991820028	SUSHANT KUMAR					
	1991820030	AYUSH KUMAR					

3	1991821009	RAVI SHANKAR TIWARI	Society Oriented	AI Chatbot	Mr.Ranjit Choudhary	**PO1, PO2, PO3, PO4, PO5, PO6, PO7, PSO1**	**SDG 4, SDG 9**
	1991821029	GAURAV KUMAR					
	1991821041	ROUSHAN KUMAR					
	1991821002	ANUDEEP KUMAR					
4	1991821035	NIKHIL SINGH	Society Oriented	Rock Scissor Paper Game using python	Mr.James	**PO3, PO4, PSO1**	**SDG 4**
	1991821016	ADITYA RAJ					
	1991821008	MD ZAINUL WARSI					
	1991821015	VIRAT SINGH					
5	1991821004	DIPPU RAJ	Society Oriented	SHASHA AI desktop voice assistance	Mr.Kumar	**PO1, PO2, PO3, PO4, PO5, PO6, PO7, PSO1**	**SDG 4, SDG 9**
	1991821012	SANJIV KUMAR					
	1991821014	UJJWAL RAJ					
6	1991821026	BEAUTY RAJ	Society Oriented	Attendance Management System	Ms.Meena Kumari	**PO3, PO4, PO5, PSO1**	**SDG 4**
	1991821001	ANJALI PRIYA					
	1991821042	SONALIKA KUMARI					
	1991820019	NISHU KUMARI					
	1991821038	RICHA KUMARI					
7	1991821007	JEETU KUMARI	Society Oriented	Generative AI	Ms.Ruby Kumari	**PO1, PO2, PO3, PO4, PO5, PO6, PO7, PSO1**	**SDG 4, SDG 9**
	1991821011	SAMBHAVNA BAJPEI					
	1991821010	SAKSHI GUPTA					
	1991821005	JAYA KUMARI					
	1991821013	SARIKA KUMARI					

Mapping of Projects to POs/PSOs (2022-2023):

S. No	Register Number	Name of the Student	Project Type	Project Title	Project Guide	Relevance of PO's / PSO's	Relevance of SDG
1	1991820012 1991820004 1991820602 1991820036	DEVRAJ AMARJEET KUMAR ATUL RAJ MOHIT KUMAR	**Society Oriented**	**E Commerce using Zango**	**Mr. Ragland Royal**	**PO1, PO2, PO3, PO4, PO5, PO6, PO7, PSO1, PSO2**	**SDG11**
2	1991820031 1991820035 1991820604	MOHIT KUMAR PRSAENJEET KUMAR AKASH DEEP (LE)	**Society Oriented**	**Weather App using Java Script**	**Mr. James T**	**PO1, PO2, PO3, PO4, PO5, PO6, PO7, PSO1, PSO2**	**SDG13**
3	1991820014 1991820005 1991820018	JAI SHREE AMIT KUMAR MOHAN KUMAR	**Society Oriented**	**Weather Information**	**Mr. James T**	**PO1, PO2, PO3, PO4, PO5, PO6, PO7, PSO1, PSO2**	**SDG13**
4	1991820010 1991820027 1991820023 1991820603	BANTY KUMAR SURYAMOHAN CHAUPAL SANJEET RAJ ANKIT SINGH (LE)	**Society Oriented**	**Digital Notice Board**	**Mr. Vivek Kumar**	**PO1, PO2, PO3, PO4, PO5, PO6, PO7, PSO1, PSO2**	**SDG08, SDG09**
5	1991820007 1991820020 1991820003	ARPAN KUMAR GUPTA PRINCE KUMAR AMARDEEP KUMAR	**Society Oriented**	**Voice Assistant**	**Mr. Kumar S**	**PO1, PO2, PO3, PO4, PO5, PO6, PO7, PSO1, PSO2**	**SDG09**
6	1991820006 1991820039	ARFA AZMAT ANSHU KUMARI	**Society Oriented**	**Static Website**	**Ms. Meena Kumari**	**PO1, PO2, PO3, PO4, PO5, PO6, PO7, PSO1, PSO2**	**SDG09, SDG11**
7	1991820040 1991820034 1991820038	RIMJHIM KUMARI ANNU SINGH PUJA KUMARI	**Society Oriented**	**Online Shopping using HTML & CSS**	**Ms. Priyanka Kumari**	**PO1, PO2, PO3, PO4, PO5, PO6, PO7, PSO1, PSO2**	**SDG09**

8	1991820041 1991820033 1991820016	ARYA NANDINI KHUSHI KUMARI KM PHULBASIYA KUMARI	**Society Oriented**	**Web development-Online shopping**	**Mr. Ragland Royal**	**PO1, PO2, PO3, PO4, PO5, PO6, PO7, PSO1, PSO2**	**SDG09**

Mapping of Projects to POs/PSOs (2021-2022):

S. No	Register Number	Name of the Student	Project Type	Project Title	Project Guide	Relevance of PO's / PSO's	Relevance of SDG
1	1991819005 1991819013 1991819018	RAJ SHREE ANI KUMARI PUJYA SHREE	**Society Oriented**	**GPC Media Application**	**Mr. Christal Anand**	**PO 1,PO2,PO3, PO4, PO5, PO6, PO7, PSO 1, PSO2**	**SDG09**
2	1991819001 1991819015 1991819037	LAKSHMI MISHARA MANISHA KUMARI ANSHU KUMARI	**Society Oriented**	**Face age and gender age using python and open Computer**	**Mrs. Jenitha K**	**PO 1,PO2,PO3, PO4, PO5, PO6, PO7, PSO 1, PSO2**	**SDG05**
3	1991819026 1991819030 1991819038	VISHAL KUMAR GAUTAM VICKEY KR SHARMA AJAY KUMAR	**Society Oriented**	**Hostel Management System**	**Mr. Vivek Kumar**	**PO 1,PO2,PO3, PO4, PO5, PO6, PO7, PSO 1, PSO2**	**SDG04, SDG17**
4	1991819004 1991819011 1991819017	LEIAYPEM AWUNGSHI KRANTI KUMARI NRIPATLE PAME	**Society Oriented**	**GPC Students Result Portal**	**Mrs. Jenitha K**	**PO 1,PO2,PO3, PO4, PO5, PO6, PO7, PSO 1, PSO2**	**SDG04, SDG08**
5	1991819007 1991819008 1991819009	VIKASH URAON ABHISHEK VERMA AKASH KUMAR	**Society Oriented**	**MED Host**	**Mr. Vivek Kumar**	**PO 1,PO2,PO3, PO4, PO5, PO6, PO7, PSO 1, PSO2**	**SDG09,SDG15**
6	1991819027 1991819024	AARYAMAN KUMAR RAUSHAN KUMAR	**Society Oriented**	**Movie Recommender System**	**Mr. K Gopala Krishna**	**PO 1,PO2,PO3, PO4, PO5, PO6, PO7, PSO 1, PSO2**	**SDG08**
7	1991819029 1991819028 1991819031	PREM JEET KUMAR SURYAJEET KUMAR BIPUL KUMAR	**Society Oriented**	**Spicy Zone Online Ordering Food System**	**Mr. K Gopala Krishna**	**PO 1,PO2,PO3, PO4, PO5, PO6, PO7, PSO 1, PSO2**	**SDG09, SDG11**

8	1991819016 1991819020 1991819035	JYOTI RAJ SIMRAN KUMARI GITANJALI KUMARI	**Society Oriented**	**Online Vehicle Repair System**	**Ms. Kanti Verma**	**PO 1,PO2,PO3, PO4, PO5, PO6, PO7, PSO 1, PSO2**	**SDG15**
9	1991819002 1991819012	SADAF HASHMI SUMAN RAY	**Society Oriented**	**Digital Library**	**Ms. Kanti Verma**	**PO 1,PO2,PO3, PO4, PO5, PO6, PO7, PSO 1, PSO2**	**SDG04**

Mapping of Projects to POs/PSOs (2020-2021):

S. No	Register Number	Name of the Student	Project Type	Project Title	Project Guide	Relevance of PO's / PSO's	Relevance of SDG
1	1991818008 1991818005 1991818012	RAJA PATEL BIBHA KUMARI PRAKASH KUMAR	**Society Oriented**	**GPC Online learning**	**Mr. Christal Anand**	**PO 1,PO2,PO3, PO4, PO5, PO6, PO7, PSO 1, PSO2**	**SDG04**
2	1991818002 1991818003 1991818010	AFREEN PARVEEN AKANCHHA KUMARI PRINCE KUMAR	**Society Oriented**	**Digital Clock**	**Mr. K Gopala Krishna**	**PO 1,PO2,PO3, PO4, PO5, PO6, PO7, PSO 1, PSO2**	**SDG12**
3	1991818011 1991817605 1991818001	PRASHANT KUMAR SINHA MANISH KUMAR SUJEET KUMAR	**Society Oriented**	**Attendance App(Android)**	**Mr. Ranjeet choudhery**	**PO 1,PO2,PO3, PO4, PO5, PO6, PO7, PSO 1, PSO2**	**SDG04**
4	1991818006 1991818007	SEEMAKUMARI ANJALI KUMARI	**Society Oriented**	**Sejal Online Shopping**	**Mr. Vivek Kumar**	**PO 1,PO2,PO3, PO4, PO5, PO6, PO7, PSO 1, PSO2**	**SDG07**
5	1991818009 1991818004 1991818013	DIVYANSH KUMAR AVINASH KUMAR ANUP KUMAR SAHANI	**Society Oriented**	**PDF reader**	**Ms. Kanti Verma**	**PO 1,PO2,PO3, PO4, PO5, PO6, PO7, PSO 1, PSO2**	**SDG08**

C. Process for monitoring and evaluation (5)

The successful execution and assessment of student projects are critical aspects of the academic journey, ensuring that the intended objectives are met. This process involves a structured approach to monitor and evaluate student projects, providing a comprehensive view of their progress and quality.

Here's an overview of the process:

Process for Monitoring

Review Schedule Establishment:

- As per the Academic Calender a tentative review schedule is prepared by the project coordinator.
- This schedule is approved by the Head of the Department (HOD) and displayed on the notice board for student reference.

Project Work Timetable:

- Weekly 2-4 hours are allotted in the timetable for project work to ensure dedicated time for project-related activities.

Regular Guidance:

- During the designated project hours, students are expected to regularly meet with their project guide to discuss and receive guidance on their project work.

Review Meetings:

- Three review meetings are scheduled during the semester to evaluate the progress and quality of the projects.
- During these reviews, students make a formal presentation to a committee, showcasing the progress made on their projects.

Marks Calculation:

- The total marks obtained in these three reviews are considered to decide on the overall performance of the project, contributing to the attainment of internal marks.
- The reviews are conducted as per the schedule with a team of panel members.

Student Project Diary:

- Continuous improvement in the project is tracked using the well-established student Project Diary, which contains various parameters, including project team details, general instructions, action plans, attendance records, weekly reports, and review performance along with rubrics.

Process for Evaluation

- The evaluation process is an integral part of ensuring the quality and progress of student projects:

Progression Assessment:

- ❖ The progression and evaluation of the work are discussed at every review by the project committee members and the project coordinator.
- ❖ These assessments and discussions are documented in the student project diary.

Assessment Criteria:

- ❖ Students are assessed based on the presentation and the progression of their work. Several rubrics are used to evaluate different aspects of the project at various stages.

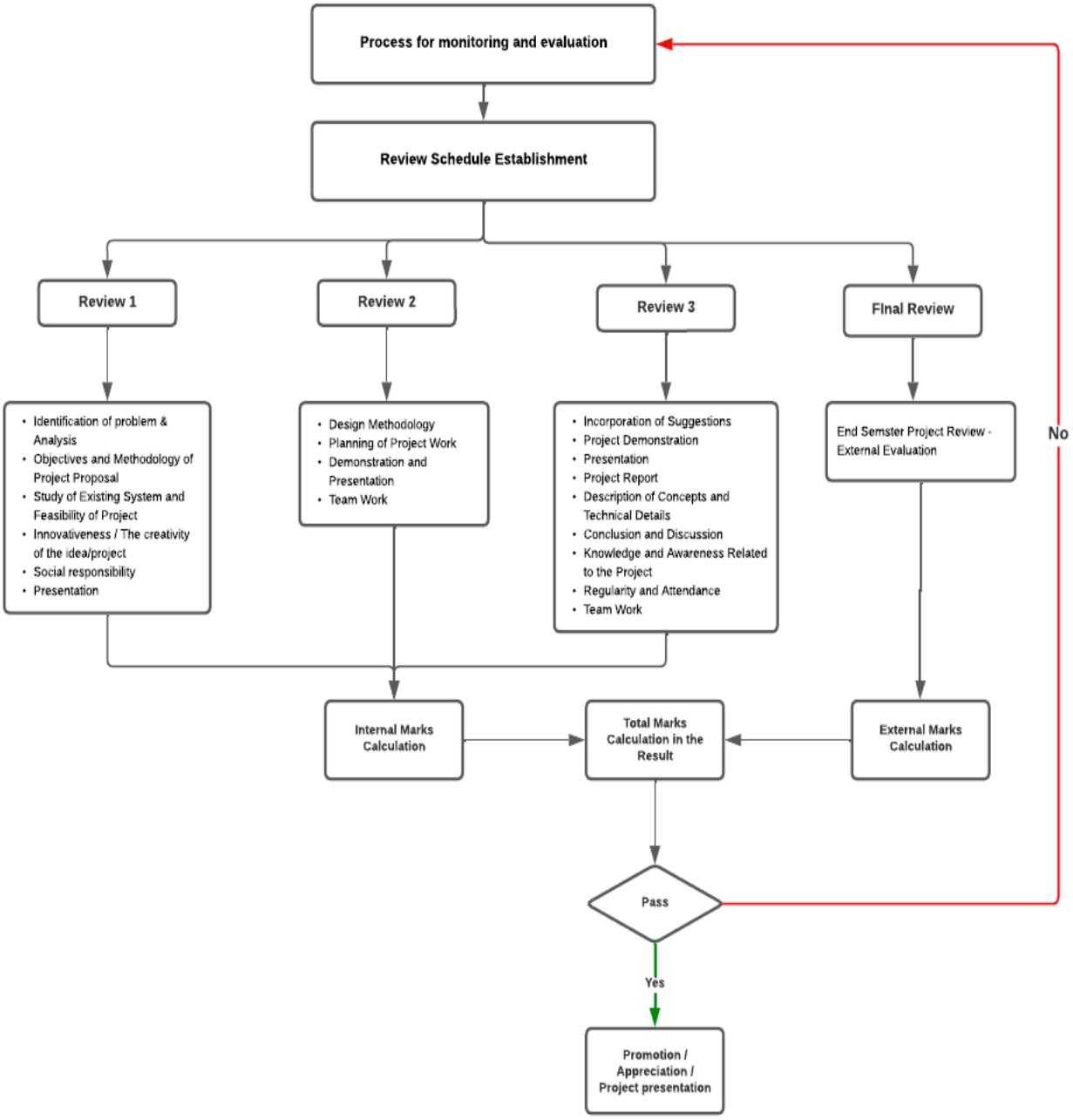
Evaluation of Reviews:

Review	Review Agenda	Rubrics parameter	Review Assessment Max. Marks
Review 1	Project Synopsis / Proposal Evaluation	● Identification of problem & ● Analysis ● Objectives and Methodology of ● Project Proposal ● Study of Existing System and ● Feasibility of Project ● Innovativeness / The creativity of ● the idea/project ● Social responsibility ● Presentation (Technical Content, ● Communication, Body language)	**30 Marks**
Review 2	Mid-Term Project Evaluation	● Design Methodology ● Planning of Project Work ● Demonstration and Presentation ● Team Work	**20 Marks**
Review 3	End Semester Internal Project Evaluation	● Incorporation of Suggestions ● Project Demonstration ● Presentation	**15 Marks**
Review 4	Project Report Evaluation	● Project Report ● Description of Concepts and ● Technical Details ● Conclusion and Discussion	**15 Marks**

	Evaluation by Guide	● Knowledge and Awareness Related ● to the Project ● Regularity and Attendance ● Team Work	**20 Marks**
Total (A%)			**100 Marks**

The total of 100 marks from all reviews will be converted into corresponding internal marks, as specified in the SBTE Bihar guidelines. All review marks are considered for internal assessment. Project evaluation marks adhere to SBTE, Bihar Guidelines.

In summary, the process for monitoring and evaluating student projects is a systematic and thorough approach to ensure the successful completion and assessment of these projects, contributing to students academic growth and achievement.



D. Process to assess individual and team performance (5)

The evaluation of student projects is a comprehensive process that assesses both individual and team performance. Throughout the project lifecycle, performance is continuously monitored and assessed through various stages and criteria:

Three Internal Reviews:

Students' performance is evaluated at three key review points during their project journey. These reviews are essential for tracking progress and quality. Specific parameters, as detailed in the table below, are used to assess students' work and contributions.

Internal Marks: 30 Marks

Final External SBTE Examinations (Viva Voce):

After completing all three internal reviews, students undergo a final external examination conducted by an external examiner appointed by the State Board of Technical Education (SBTE).

The viva voce examination assesses the students knowledge, presentation skills, and understanding of their project.

External Marks: 70 Marks

Total Evaluation:

The total marks evaluated for each student's project are the sum of the internal and external marks, amounting to a total of 100 marks.

This thorough assessment process ensures that students' individual and team performances are consistently monitored, helping them grow and achieve academic excellence.

E. Quality of deliverable, working prototypes (12)

The culmination of student projects involves the submission of fabricated projects and working prototypes. These deliverables are not only integral to the evaluation process but also serve as a testament to the students practical skills and

innovative capabilities. After the final viva voce examination, the projects are showcased and displayed in the respective laboratories, allowing others to learn from and be inspired by the work of their peers.

S.No	Name of the Project
1	Digital Notice Board

F. Papers published /Awards/ Recognition received by projects at State/ National level (5)

In addition to project completion, students are encouraged to extend their achievements in various ways:

National-Level Project Competitions:

Students are motivated to present their projects in prominent national-level project competitions, allowing them to gain recognition and learn from peers across the country.

Participation in BCST - Student Project Programmes:

Students are actively encouraged to participate in the Bihar Council on Science and Technology (BCST) - Student Project Programmes. These platforms provide opportunities for networking, exposure, and recognition at the state level.

LIST OF PROPOSALS SUBMITTED FOR STUDENT PROJECT PROPOSAL FOR 2021-2022

S.No	Department	Project Title	Student Members	Project Guide(s)	Relevant to SDGs
1	Computer Science & Engineering	PayRoll	1. Aaryaman Kumar 2. Premjeet Kumar 3. Akash Kumar 4. Vicky Kumar Sharma	Mr.Gopal krishna Mr.Vivek Kumar	SDG8, SDG11,

LIST OF PROPOSALS SUBMITTED FOR STUDENT PROJECT PROPOSAL FOR 2020-2021

S.No	Department	Project Title	Student Members	Project Guide(s)	Relevant to SDGs
1	Computer Science & Engineering	Vehicle Identification	1. Manish Kumar 2. Afreen Parveen 3. Prashant Kumar Sinha 4. Bibha Kumari	Mr.Gopal Krishna Mr.Vivek Kumar	SDG8, SDG9,SDG11
2	Computer Science & Engineering	Human Resource Management System	1. Avinash Kumar 2. Seema Kumari 3. Akancha Kumari 4. Anjali Kumari	Mr.Gopal Krishna Mr.Vivek Kumar	SDG3, SDG4

In summary, student projects not only provide an opportunity for hands-on learning and application of knowledge but also serve as a platform for recognition, publication, and skill development. The multifaceted approach to assessment

ensures that students' efforts and achievements are recognized and celebrated at both the institutional and broader academic levels.

2.2.5 Industry Interaction and Industry Internship/Training (30)

This section highlights GEMS Polytechnic Colleges initiatives and efforts in promoting industry interaction and contributing to community services.

A. Industry-supported Labs:

GEMS Polytechnic College maintains a strong connection with various industries, facilitating an enriched learning environment for its students**.**

This interaction includes:

Memorandum of Understanding (MoU) with Companies: The institution has established MoUs with leading companies, fostering collaboration and knowledge sharing.

List of MOUs

SL NO	Company/Organization
1	KP RELIABLE TECHNIQUE INDIA PVT LTD
2	JK & RAVINDRA AUTOMOBILES PVT LTD (Tata Motors)
3	RUAH TECH SOLUTIONS
4	REVEALER GLOBAL SOLUTIONS

3D Printing Lab: The college has a state-of-the-art 3D printing lab, supported by industry, to empower students with cutting-edge technology skills.

B. Delivery of appropriate Course work by Industry experts (5)

The Department Head and staff at GEMS Polytechnic College are committed to providing students with valuable insights from industry experts.

The following initiatives are undertaken:

Value-added Courses: The college arranges specialized courses, guest lectures, seminars, and workshops conducted by industry professionals to help students develop technical skills.

S. No	Date	Academic Year	Semester & Batch	Mode of Event (Guest Lecture / Workshop / Hands-on training, etc.)	Event Topic	Industry Expert (Designation & Company Details)	No.of Students Benefited	Relevance to POs & PSOs
1	18.08.2022	2021-2022	IV SEM 2020-2023 Batch	Guest Lecture	Python Program	Mr. Saurav Kumar (PMRF Department of Electrical Engineering)	28	PO 6 ,PS0 1 & PSO 2
2	8.5.2023 & 9.5.2023	2022-2023	VI SEM & IV SEM 2020-2023 BATCH 2021-2024 Batch	Workshop	Career Opportunity in Oracle Database Administration	Mr. HUMAISH ZAMAN YUSUFI Atos - Senior Consultant	60	PO 6 ,PSO1 & PSO 2
3	26.02.20234 to 4.3.2024	2023-2024	IV SEM 2022-2025	Hands-on training	Hands on Workshop on 7 Segment Counter with Logical Gates	Mr. Mathias	40	PO2, PO3,PO 4 PO5,PO 6,PO7, PSO1 & PSO 2

C. Industrial visits/tours for students (3)

The institution recognizes the importance of real-world exposure in an engineering curriculum. To provide practical knowledge and connect students with industry practices, they organize industrial visits, encompassing the following steps:

Industry Selection: Contacts are developed, and industry addresses are collected for planned visits.

Permission Requests: The Head of the Department approves letters requesting permission from the concerned industry, specifying the date, time, and the number of students accompanied by staff.

Academic Year-wise Visits: A comprehensive list of industry visits is organized on an annual basis.

S.No	Academic Year	Semester	Batch / Session	Industry Name & Location	No.of Students Visited	Relevance to POs & PSOs
1	2019-2020	III & V	2018-2021& 2019-2020	BRBCL , Nabinagar Aurangabad Bihar	27	PO 1, 3,4 ,5 PSO 1 & 2
2	2021-2022	V	2019-2022	BSNL Dalmianagar Rohtas Bihar	26	PO 1, 3,4,5 PSO 1 & 2
3	2022-2023	VI	2020-2023	BSNL Dalmianagar Rohtas Bihar	27	PO 1, 3,4 PSO 1 & 2
4	2023-2024	VI	2021-2024	BSNL Dalmianagar Rohtas Bihar		PO 1, 3,4 PSO 1 & 2

D. Industrial training/ internship (5)

At GEMS Polytechnic College, students are encouraged to pursue industrial training during their semester breaks. This process is facilitated by faculty members and includes engagement with industry experts and alumni. Furthermore, industrial training is an integral part of the State Board of Technical Education (SBTE) curriculum, ensuring high participation rates.

The process includes:

- Guidance and Support: Faculty members offer guidelines, suggestions, and contact details for internships, alongside recommendations and support from alumni working in relevant industries.
- High Participation: The majority of students successfully complete their internships, thanks to the inclusion in the SBTE curriculum.

S.No	Academic Year	Company Name & Location	No. of Students Attended	No.of Days
1	2023-2024	GIFT	40	25
2	2023-2024	CAD DESK INDIA JAIPUR	9	30
		BSNL AURANGABAD	7	30
		S O INFOTECH PVT.LTD NEW DELHI	2	30
		ORION EDUTECH ROHTAS	1	30
3	2022-2023	BSNL, GAYA	1	30
		BSNL, MOTIHARI	1	40
		IEEE	25	30
4	2021-2022	BSNL, SASARAM	2	7
		BSNL, GAYA	17	7
		WEBLINKINDIA, DELHI	1	5
		AAGAAZ TRAINING CENTER, PATNA	1	7
		ARDENT COMPUTECH, KOLKATA	3	7
		LANCO INFRATECH AND POWER PHASE, HARYANA	1	7
		PIXEL FLAME INFOTECH GAYA	1	7

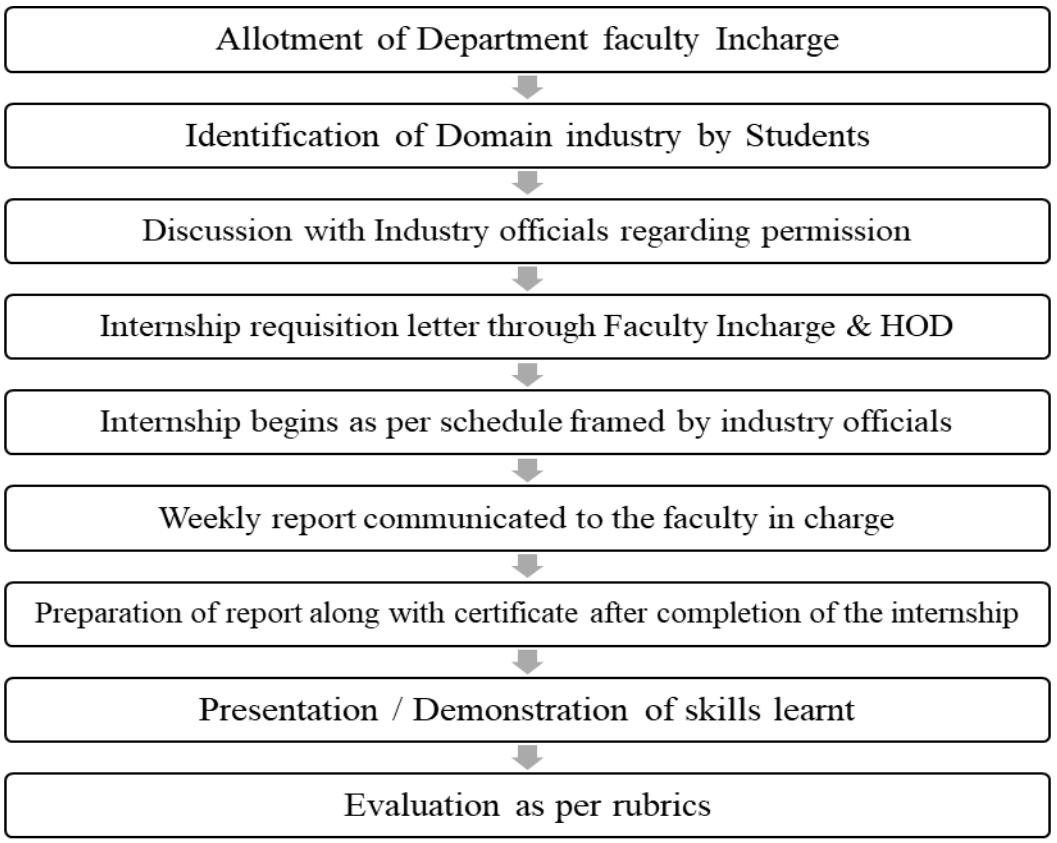
E. Post training/ internship Assessment (10)

After completing their training or internship, students at Gems Polytechnic College undergo a comprehensive assessment, which includes:

Submission of Reports and Certificates: Students are required to submit their in-plant training reports and certificates from the respective companies.

Presentation of Knowledge: Students present the knowledge and skills acquired during their training through PowerPoint presentations (PPTs).

Rubric-Based Assessment: Course teachers evaluate students based on attendance, presentation quality, acquired skills, and knowledge gained.



F.Contribution to Community related projects/activities (5)

In our commitment to fostering social responsibility and innovation, the Department of Computer Science & Engineering at Gems Polytechnic College empowers final-year students to channel their skills and knowledge towards community-related projects. We inspire our students to undertake initiatives that directly contribute to the betterment and upliftment of the community and society, fostering a culture of impactful engagement beyond the classroom.

Contribution to Community-related Project :

S.No	Academic Year	Activities	Student Members/ Faculty	Project Guide(s)/In-Charges	Contribution to Community-related
1	2021-2022	Community Development Program	Mr. Gopal Krishna	Mr. Gopal Krishna Mr. Vivek Kumar	As a Department of Computer Science & Engineering we conducted a community development program in Shivapur Government High School. We provided social awareness about Computers and Technology. Our team demonstrated computers and their parts functionality and also, we explained the evolution of the computers and computer science inventions of the world.
2			Mr. Vivek Kumar		
3			Mr. Marshall Horo		
4			Mr. Sanjay Kumar		
1			Sonalika Kumari		
2			Gamgam Kumari		
3			Nishu kumari		
4			Rimjhim Kumari		
5			Banty kumar		

Contribution to Community-related Activity :

Sl No	Date	Activities Name	Place	Chief -Guest	No of People Benefited
1	23/2/24	Free General Medical Camp	Pithampur	Dr. Shalini	
2	13/2/23	Girl's Protection Nation's Pride	Government Middle Middle School Jogiya	Ms. Kanti Verma Lecture CSE GEMS Polytechnic College	50
3	5/4/23	Free Health Awareness & Medical Camp	PithamPur Aurangabad Bihar	Mrs. Roja, the senior nurse of GEMS Polytechnic College,	75
4	8/8/2023	Tree plantation	GPC Campus	Principal GEMS Polytechnic College and All Dept. HODs.	55

5	11/8/2023	Free Health Awareness & Medical Camp	Tiwari Bigha	Mrs. Roja, the senior nurse of GEMS Polytechnic College,	127
6	8/9/2023	Free Health Awareness & Medical Camp	Deohara	Mrs. Roja, the senior nurse at GEMS Polytechnic College,	61
7	22/4/22	NSS Inaugural	GPC Auditorium	Mr. Piyush Paranjape, Regional Director, Ministry of Youth & Sports Affairs, Government of India,	100
8	9/9/22	Tree plantation & Awareness.	Jogiya High School Aurangabad Bihar	Mr. Arun Mukhiya Tengra Panchayat Aurangabad Bihar	60

2.2.6 Information Access Facilities and Student Centric Learning Initiatives (15)

A. Availability of facilities & Effective Utilization; specify the facilities, materials and scope for self-learning, Webinars, NPTEL Podcast, MOOCs etc (10)

In today's dynamic educational landscape, access to information and the implementation of student-centric learning initiatives are paramount. Here, we explore the facilities available for information access and the effective utilization of these

resources, along with initiatives that prioritize student-centered learning.

A. Availability of Facilities and Effective Utilization:

Central Library: Our central library is a treasure trove of knowledge. It offers textbooks and reference books covering a wide array of subjects related to the curriculum. In addition, students have access to books that can enhance their understanding and knowledge beyond their course requirements.

Department Library: The departmental library is another valuable resource. It houses books specifically tailored to the subjects within the department's curriculum. Furthermore, it includes supplementary materials that can deepen students' knowledge in their respective fields.

PowerPoint Presentations (PPTs): PPTs serve as a powerful teaching tool. Faculty members use them to deliver subject matter in a structured and point-wise manner, enhancing the efficiency of learning. The visual and organized format aids students comprehension.

E-Notes (PDF Format): E-Notes are shared with students through platforms like Google Classroom, email, and WhatsApp groups. These digital resources facilitate easy access to study materials, enabling students to study at their convenience.

Educational Videos: Multimedia content, including videos, audio, images, animations, and interactive material, enriches the learning experience. Educational YouTube channels are utilized to showcase real industry videos and animations that elucidate working principles. Videos provide students with control over their learning pace and the ability to revisit content as needed.

NPTEL Course Video Links: Specific curriculum topics are best understood through NPTEL video content. Course instructors compile lists of relevant topics and provide links for students to access these high-quality educational resources.

Website-Notes: Educational websites offer a plethora of resources, such as video tutorials, instructional lectures, DIY guides, self-help tutorials, interactive presentations, and animated explanations. These resources empower students to develop their learning skills and explore topics in depth.

Previous Semester Question Bank (Unit-Wise): Faculty members maintain a repository of previous semester question papers organized by unit. These resources are readily available to students, aiding their exam preparation and understanding of the course structure.

Multiple Choice Questions Bank (Unit-Wise): Similar to the question bank, unit-wise multiple-choice questions are available for students. These resources assist in self-assessment and reinforce the understanding of individual units.

Massive Open Online Courses (MOOCs): Our college is affiliated with prestigious platforms such as NPTEL, SPoken tutorial, IIT Bombay, and Cisco. Through these platforms, students receive comprehensive training, evaluations, and certifications, expanding their skill set and knowledge base.

B. Student Centric Learning Initiatives & Effective Implementation (5)

In addition to providing access to a wealth of resources, our institution is committed to implementing student-centric learning initiatives:

Personalized Learning Paths: We recognize that every student is unique, and their learning needs differ. We encourage personalized learning paths that allow students to choose study materials and resources aligned with their learning preferences and goals.

Interactive Learning Platforms: We promote the use of interactive online platforms and forums where students can engage with their peers and faculty members to discuss coursework, clarify doubts, and collaborate on projects.

Project-Based Learning: Practical application of knowledge is emphasized through project-based learning. Students are encouraged to undertake real-world projects that not only deepen their understanding but also enhance their problem-solving and critical-thinking abilities.

Continuous Feedback and Assessment: Regular assessments and feedback mechanisms are in place to monitor students progress and provide timely guidance for improvement.

Mentorship Programs: Faculty members act as mentors to students, providing academic and career guidance. This mentorship approach fosters a supportive learning environment.

Career Development Opportunities: Students are exposed to various career development initiatives, including internships, workshops, and seminars, to ensure their readiness for the job market.

In conclusion, our institution places a strong emphasis on information access facilities and the implementation of student-centric learning initiatives. We believe that by providing comprehensive resources and fostering a supportive and personalized learning environment, we equip our students with the knowledge and skills needed for success in their academic and professional journeys.

2.2.7 New Initiatives for embedding Professional Skills (15)

A. Employability skill enhancement Initiatives and effective implementation (8)

At GEMS Polytechnic College, we believe in preparing our students to excel in their careers. To achieve this, we have implemented a range of employability skill enhancement initiatives:

Institution's Innovation Council (IIC):

The Institution's Innovation Council (IIC) of GEMS Polytechnic College prepares the pathway for Entrepreneurial journey of students as per the guidelines of the Ministry of Education's Innovation Cell. It creates the awareness of Innovation, Design thinking, Problem solving and Startups by various activities such as assessments, Exposure Visit, Workshops on innovation and startups, IPR, Business model, Technologytransfer to market, etc. And continuously guiding in the path of entrepreneurship by providing opportunity Expert sessions, success stories of entrepreneurs, Internal Competitions, National LevelCompetitions Such as Smart India Hackathon. Incubation and pre-incubation facilities develop their creativity into innovative solutions of society problems and giving confidence to become entrepreneurs and make them job providers instead of Job seekers.

Sl.No.	Name of the Member & Designation	IIC Role
1	Mr. Ragunath A, Lecturer, EEE Dept	President
2	Mr. Robin S, Lecturer, EEE Dept	Vice-President
3	Mr. Johan Deva Raj, Lecturer, Mech Dept	Convener
4	Mr. Prabhu Nath, Lecturer, Mechanical Dept	Innovation Activity Coordinator
5	Mr. Victor Emmanuel, Lecturer, Civil Dept	Startup Activity Coordinator

6	Mr. Bhaskar Ranjan, Lecturer, EE Dept	Internship activity Coordinator
7	Mr. Simon V Antipas, Lecturer, EE Dept	IPR Activity Coordinator
8	Mrs. Catharine C, Lecturer, EE Dept	NIRF Coordinator
9	Mr. Kumar S, Lecturer, CSE Dept	Member
Student Members:		
10	Ms. Arya Nandini, 3rd CSE	Innovation coordinator
11	Mr. Ashish Kumar Sharma, 3rd EEE	Social media coordinator
12	Mr. Saurav Kumar, 3rd Mech	Member
13	Mr. Rohit Kumar, 2nd Mech	Innovation coordinator, Member
14	Mr. Pratyam Prakash , 2nd Civil	Startup coordinator
15	Mr. Aditya Kumar , 3rd EE	IPR coordinator
16	Mr. Prince Kumar, 3rd EE	Internship coordinator
External Member:		
17	Mr. Vishal Nair, Co-Founder, Lightnsalt Pvt. Ltd.	Member

S.No	Date	Activity	Duration	Focus on
1	14.10.23	Workshop on "Entrepreneurship and Innovation" as Career Opportunity	one/half day	interpersonal skill, critical thinking, creative thinking, practical entrepreneurial skills
2	31.10.23	Session on Problem Solving and Ideation Workshop	one/half day	innovation methodology, build on skills, tools, brainstorming, ideation
3	06.11.23	My Story - Motivational Session by Successful Entrepreneur/Start-up founder	one/half day	Risk taking, critical think, team building, rise capital, learn from failure
4	24.11.23 25.11.23	Exposure and field visit for problem identification	one day	village/ society/industry visit, interaction with key stakeholders
5	09.11.23	National Entrepreneurship Day-celebration	one/half day	Awareness on entrepreneurship & innovation,

				highlight the value of entrepreneurship, the role of innovation within society and role of younger generations for making India as an Innovation hub, expert talk, literary event, awards, demo of innovations
6	02.12.23	Workshop on Design Thinking, Critical thinking and Innovation Design	one/half day	Design thinking, critical thinking, innovative design, Q&A
7	16.12.23	Workshop on Entrepreneurship Skill, Attitude and Behaviour Development	one day	Presentation entrepreneur skill, attitude, behavior
8	24.01.24 25.01.24	Organize an Inter/Intra Institutional Innovation Competition/Challenge/Hackathon and Reward Best Innovations - Manage through YUKTI-NIR	one day	innovation competition, brochure with start date and end date, registration, evaluation, results, award ceremony
9	17.02.24	Organize an Expert talk on Process of Innovation Development, Technology Readiness Level (TRL); Commercialization of Lab Technologies & Tech-Transfer	one day	Innovation Development, Technology Readiness Level (TRL); Commercialization of Lab Technologies & Tech-Transfer
10	14.12.23	National Energy Conservation Day (India)- celebration	one/half day	India's contribution towards energy efficient nation, global warming & climate change awareness, encourage innovative solutions, motivate save energy, visual art, inviting expert, reward innovative ideas
11	16.01.24	National startup day-celebration	one/half day	Indian startup ecosystem, encourage people who create environment for startup, startup founder interaction, startup exhibition

Career Guidance & Higher Education Cell:
Choosing the right career path and pursuing higher education are critical decisions. Our dedicated cell provides students with comprehensive guidance and counseling, helping them make informed choices regarding their career and higher education options.

Training & Placement Cell:
The Training & Placement Cell plays a pivotal role in honing students' soft skills. We offer training sessions on communication, leadership, teamwork, and problem-solving. Students are coached on resume preparation, group discussions, and mock interviews to enhance their employability**.**

Para Academic Department:
Our Para Academic Department complements the academic curriculum by offering skill-focused courses and workshops. These courses are designed to enhance practical skills, making students job-ready upon graduation.

B. Personality development related Initiatives & effective implementation (7)

We understand that academic excellence is just one aspect of a student's holistic development. Personality development is equally important. To foster well-rounded individuals, we have initiated several personality development programs:

Communication Skills Workshops: Effective communication is the cornerstone of professional success. Regular workshops and activities are conducted to enhance students' verbal and written communication skills.

Leadership and Team Building: Leadership qualities and the ability to work in teams are highly valued in the professional world. Students are encouraged to participate in leadership and team-building exercises to develop these skills.

Cultural and Artistic Pursuits: Art and culture play a vital role in personality development. Students have opportunities to engage in cultural activities, including music, dance, and theater, allowing them to explore their creative side.

Mindfulness and Stress Management: In today's fast-paced world, stress management is crucial. We offer programs on mindfulness and stress management techniques to help students maintain their mental well-being.

Ethics and Values Education: Our institution places a strong emphasis on ethics and values. Workshops and seminars on ethical behavior and values-based decision-making are integral to our curriculum.

Industry Interaction: Students regularly interact with industry professionals through seminars, guest lectures, and industrial visits. These interactions provide insights into the professional world and help students align their skills with industry expectations.

Mentorship Programs: Faculty members and experienced professionals serve as mentors to students, providing guidance on personal and professional development.

In conclusion, GEMS Polytechnic College is committed to preparing students not only for academic success but also for a successful and fulfilling professional life. Our initiatives in employability skill enhancement and personality

development reflects our dedication to nurturing well-rounded individuals who are ready to excel in their chosen careers and contribute positively to society.

2.2.8 Co-curricular & Extra Curricular Activities (10)

At GEMS Polytechnic College, we believe in nurturing well-rounded individuals, and our commitment to this holistic development is reflected in the diverse co-curricular and extra-curricular activities we organize for our students. These activities play a pivotal role in enhancing their overall personality and preparing them for the challenges of the world beyond academics.

GPC-NDLI CLUB Activities:

The GPC-NDLI (National Digital Library of India) Club is a hub of intellectual engagement and enrichment. We organize a variety of events throughout the academic year, including:

- **Reading Skill Competition:** Encouraging a love for reading and improving comprehension skills among students.
- **Elocution Competition:** Providing a platform for students to hone their public speaking and oratory skills.
- **Decoding Competition:** Challenging students to decipher complex problems, fostering critical thinking.
- **Quiz Competition:** Promoting knowledge acquisition and healthy competition among students.
- **Orientation Program**: Guiding students on the effective utilization of digital resources for research and learning.
- **Poster Presentation**: Encouraging creativity and effective communication through visual displays.

Sports Day: Our annual Sports Day is a celebration of physical fitness, teamwork, and sportsmanship. Held once a year, this two-day event brings together students from all three academic years. It features a wide range of sports events that not only provide physical exercise but also instill values of discipline, dedication, and fair play.

Sl.No	Events Date		Events Name	List of Events Conducted	Chief Guest
	Date From	Date To			
1	16/02/2023	17/02/2023	GPC Sports Meet 2023	• 100m Race • 200mRace • 400m Race • 1500m Race • Discus Throw • Shot Put • Long Jump • 4x100m Relay	Dr. Vikas Prasad Principal of Govt. Polytechnic college Dehri &

				• Cricket (Group) • Football (Group) • Throw Ball (Group) • Kabaddi (Group)	Dr. Chandra Shekhar Singh Secretary, SBTE Bihar
2	23/03/2022	24/03/2022	Annual Sports Meet 2022	• 100m Race • 200mRace • 400m Race • 1500m Race • Discus Throw • Shot Put • Long Jump • 4x100m Relay • Cricket (Group) • Football (Group) • Throw Ball (Group) • Kabaddi (Group) • Volleyball (Group)	Dr.Shree Bhagwan Singh , Secretary SBTE ,Bihar, & Mr. Vijayant ,Sub-Divisional Magistrate Aurngabad.
3	26/11/2021	27/11/2021	GPC Sports Meet 2021	• 100m Race • 200mRace • 400m Race • 1500m Race • Discus Throw • Shot Put • Long Jump • 4x100m Relay • Cricket (Group) • Football (Group) • Throw Ball (Group) • Kabaddi (Group) • Volleyball (Group)	Mahabali Singh Kushwaha Member of the Lok Sabha

Morphosis Tech Fest:

The Morphosis Tech Fest is a highlight of our academic calendar. Held annually and open to students from all three years, this two-day extravaganza showcases technical prowess and creativity.

S .No	Date From	Date To	Event Name	List of Event Conducted	Chief Guest
1	27/07/2023	28/07/2023	MORPHOSIS 2023	• Singing Solo • Singing Group • Paper Presentation • Metallic Art • Technical Quiz • Photography • Debate • Just a Minute • Best Out of Waste • Cooking Without Fire • Short Film • Typing Speed • Paper Wings	Ms. Deborah Charles Principal GEMS English School Ratanpura Aurangabad Bihar
2	26/11/2021	27/11/2021	MORPHOSIS 2021	• Technical Debate • Technical Quiz • Young Scientist • Cooking Without Fire • Photography • Paper Presentation	Mr. Emerson Associate Director Gems Technical Institutions

				• Short Film • Project Expo • Best Out of Waste • Story Making • Typing Speed • Treasure Hunt • Paper Wings • Singing	
3	30/11/2019	30/11/2019	MORPHOSIS 2019	• Paper Presentation • Poster Presentation • Poetry and Recitation • Technical Quiz • Short Film • Photography • Singing	Mr. Jeyaseelan Mr. Joshua Mr. Judson Mr. Daniel Murugan Mr. King salem

Morphosis Tech Fest is an opportunity for students to not only showcase their technical skills but also collaborate, innovate, and push the boundaries of their knowledge.

NSS (National Service Scheme):

The NSS unit at GEMS Polytechnic College actively engages in community service and social responsibility. Each academic year, NSS student and faculty volunteers participate in a range of activities, including:

- Tree Plantation: Contributing to environmental conservation.
- Social Awareness Programs: Promoting awareness about critical societal issues.
- Cleaning the Environment (Swachh Bharat): Actively participating in cleanliness drives.


GEMS POLYTECHNIC
NOT ME BUT YOU
मेरे लिऐ नहीं आपके लिऐ
National Service Scheme
NSS Unit
OPPO Reno8 5G


NOT ME BUT YOU
WORLD ENVIRONMENTAL DAY
JUNE 5
NOT ME
BUT YOU
NATIONAL SERVICE SCHEME
GEMS POLYTECHNIC COLLEGE

भारत सरकार
युवा कार्यक्रम एवं खेल मंत्रालय
राष्ट्रीय सेवा योजना, क्षेत्रीय निदेशालय
C विंग, 7वां तल,
कर्पूरी ठाकुर सदन, सी.जी.ओ. कॉम्प्लेक्स
आशियाना – दीघा रोड, पटना – 800 025
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सत्यमेव जयते

Government of India
Ministry of Youth Affairs & Sports
Regional Directorate of NSS
"C" Wing, 7th Floor,
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F.No. .52/ NSS/RD/PAT/2020/ 3399 - 3402

Date – 17-11-2021

To,

The Principal
GEMS Polytechnic College,
Ratanpura, Aurangabad, Bihar

Subject: Opening of new NSS Unit - reg.

Sir,

With reference to the email dated 12th and 15th September- 2021, it is hereby to inform you that initially this office may provide approval to open Self Finance Unit of NSS for your college. With the passage of time, this office may approve your NSS unit as Govt. Funded Unit after reviewing the level of progress of NSS in your college. A short note regarding the NSS has been attached with this letter along with the form which is to be submitted to this office, duly filling up all details.

Thus, it is requested to you to submit duly filled up form so that this office may provide approval for opening the NSS Unit in your college.

Yours Faithfully,

for (Peeyush Paranjape)
Regional Director

Copy to:

1. The Director, Directorate of NSS, Govt. of India, Ministry of Youth Affairs & Sports, New Delhi-110011
2. The Under Secretary (NSS), Govt. of India, Ministry of Youth Affairs & Sports, Shastri Bhavan, New Delhi-110001
3. The SNO cum Director, Department of Art, Culture & Youth Development, Govt. of Bihar, Patna, Bihar

SL NO	Academic Year	Event	Date	Place
1	2022-2023	NSS Inaugural	22/4/2022	GPC Auditorium
2		NSS Rally and Awareness Program on Environment	9/9/2022	Jogiya
3		Free Health Awareness & Medical Camp	5/4/2023	Pritampur
4		Free Health Awareness & Medical Camp	11/8/23	Tiwaribigha
5		Meri Life : One Student one Plant	8/8/23	GPC
6		Free Health Awareness & Medical Camp	8/9/23	Deohara
7		Free Health Awareness & Medical Camp	26/10/23	Jagdispur
8	2023-2024	Adventure Camp : Hatkoti Himachal Pradesh	31/12/23-8/1/24	Hatkoti Himachal Pradesh
9		Free General Medical Camp	23/2/24	Pritampur

In conclusion, our co-curricular and extra-curricular activities are an integral part of the educational experience at GEMS Polytechnic College. These activities not only enrich students' lives but also help them develop a well-rounded personality, enhancing their academic, physical, and social skills while instilling values that will serve them well in their future endeavors.

Criterion 3

Course Outcomes and Program Outcomes

3 COURSE OUTCOMES AND PROGRAM OUTCOMES (100)

Define the Program specific outcomes

PSO1	Ability to develop computer programs in the area related to Algorithms, DBMS, Software Design, Programming Languages and Networking.
PSO2	To enable diploma , to acquire programming and development competence, to sustain in academia as well as in industry.

3.1 Establish the correlation between the courses and the POs and PSOs (20)

3.1.1 Course Outcomes :

(*SAR should include* ***course outcomes of one course from each semester of study,*** *however, should be prepared for all courses) (5)*

Course Name : C101 **Course Year : 2022-23**

Course Name	Statements
C101.1	Illustrate necessary background in trigonometry and appreciate the importance of the geometric study as well as for the calculation and the mathematical analysis.
C101.2	Use a pattern linking in coordinate geometry, the connection between algebra and geometry through graphs of lines and curves.
C101.3	Demonstrate the basic algebraic manipulation with complex numbers & Partial fractions.
C101.4	Solve simple values of factorial notations on Permutation, Combination & expansion of binomial theorem
C101.5	Solve systems of linear equations by using the matrices & determinants.

Course Name : C114 **Course Year : 2022-23**

Course Name	Statements
C114 .1	Interpret the basic principles of computer literacy through basic internet skills and networks.
C114 .2	Show and explain the basic computer hardware components.
C114 .3	Construct a basic webpage platform.
C114 .4	Interpret the internet, Intranets and Extranets of IT Systems.
C114 .5	Understand the basic office tools in IT Systems.
C114 .5	Summarize the ethical issues and cyber security issues related to IT Systems.

Course Name : C202 **Course Year : 2022-23**

Course Name	Statements
C202 .1	Explain the software and its applications
C202 .2	Develop programming logic through algorithms and flowcharts.
C202 .3	Describe C language and Characteristics
C202 .4	Explain the structure and model of the C programming language.
C202.5	Define the function concepts and principles.
C202.6	Use simple data structures like arrays, stacks and pointers.
C202.7	Develop the programs in C language.

Course Name : C215 **Course Year : 2022-23**

Course Name	Statements
C215 .1	Understand Fundamental concepts of Python.
C215 .2	Develop simple python programs using conditionals and looping.
C215 .3	Apply Knowledge to Decompose a Python program into functions.
C215 .4	Define Read and write data from/to files in Python Programs.
C215 .5	Explain the use of packages and run a project in real-time Application.

Course Name : C303 **Course Year : 2022-23**

Course Name	Statements
C303 .1	Explain the structure and model of the Java programming language.
C303 .2	Identify the syntax and semantics of java programming language and OOP.
C303 .3	Able to apply java programming features and concepts for solving problems.
C303 .4	Demonstrate the concepts of polymorphism and inheritance.
C303.5	Describe the concepts of Multithreading and Exception handling in Java.
C303.6	Write Java programs to implement conditional and control statements.

Course Name : C315 **Course Year : 2022-23**

Course Name	Statements
C315 .1	To Understand the essential security services, concepts of risk, threats, vulnerabilities, and attack.
C315 .2	To Know the goals of end-to-end data security & the importance of ethical and legal issues in computer security.
C315 .3	To learn standard Symmetric & Asymmetric encryption algorithms.
C315 .4	To study/learn the methods of Key Management, Digital Signature and Encryption Process.
C315.5	To study about futuristic Cryptographic Techniques & Web Security Protocols.
C315.6	Learn the concept of trusted computing and the Web security Protocol.

3.1.2 CO-PO matrices of courses selected in 3.1.1(Six matrices to be mentioned; one per semester from 1st to 6th semester) (5)

1 . Course Name : C101

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
C101.1	3	1	-	-	-	-	-	-	-
C101.2	3	1	-	-	-	-	-	-	-
C101.3	3	1	-	-	-	-	-	-	-
C101.4	3	1	-	-	-	-	-	-	-
C101.5	3	1	-	-	-	-	-	-	-
Average	**3**	**1**	-	-	-	**-**	-	**-**	**-**

2 . Course Name : C114

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
C114.1	3	-	-	-	-	-	1	-	-
C114.2	3	-	-	2	-	-	-	-	-
C114.3	3	-	2	2	-	1	-	2	1
C114.4	3	-	-	-	-	-	-	-	-
C114.5	3	-	-	2	-	-	1	1	1
Average	**3**	**-**	**2**	**2**	-	**1**	**1**	**1.5**	**1**

3 . Course Name : C202

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
C202.1	3	2	-	-	-	-	2	1	1
C202.2	3	3	1	1	1	2	3	3	3
C202.3	3	2	-	-	-	-	1	1	1
C202.4	3	2	-	-	-	-	1	2	2
C202.5	3	2	-	-	-	-	-	2	2
C202.6	3	3	-	-	-	-	-	3	3
C202.7	3	1	-	-	1	2	1	3	3
Average	**3**	**2.14**	**1**	**1**	**1**	**2**	**1.6**	**2.14**	**2.14**

4 . Course Name : C215

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
C215.1	3	-	-	-	-	-	-	1	-
C215.2	2	-	-	-	-	-	-	2	-
C215.3	3	2	1	-	-	-	2	1	-
C215.4	3	-	2	2	-	-	-	2	-
C215.5	3	2	2	3	1	2	3	3	-
Average	**2.8**	**2**	**1.67**	**2.5**	**1**	**2**	**2.5**	**1.8**	**0.00**

5 . Course Name : C303

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
C303. 1	3	-	-	-	-	-	1	2	1
C303. 2	3	1	1	-	-	1	2	2	1
C303. 3	3	1	1	-	-	1	2	2	1
C303. 4	3	1	1	1	1	-	1	2	1
C303. 5	3	1	-	-	-	-	-	3	
C303. 6	3	1	1	1	1	1	1	2	1
Average	**3**	**1**	**1**	**1**	**1**	**1**	**1.4**	**2.17**	**1**

6 . Course Name : C315

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
C315. 1	3	2	1	1	-	-	2	3	3
C315. 2	2	2	1	-	-	-	2	3	2
C315. 3	2	1	1	1	-	-	1	3	2
C315. 4	2	2	1	-	-	-	2	3	2
C315. 5	3	2	1	1	-	-	3	3	2
C315.6	3	2	1	-	-	-	2	3	2
Average	**2.5**	**1.83**	**1**	**1**	**-**	**-**	**1.83**	**3**	**2.17**

3.1.3 - A Program level Course-PO matrix of all courses Including first year courses (10)

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
C101	3	1	-	-	-	-	-	-	-
C102	3	1	-	-	-	-	-	-	-
C103	2	1.6	-	-	1.5	-	-	-	-
C104	1.75	-	-	-	-	-	-	-	-
C105	3	1.25	1.26	1.2	1	1.8	2	-	-
C106	3	2	-	3	1.33	-	-	-	-
C107	3	1	1	3	2	1	2	-	-
C108	3	-	-	-	3	2	3	-	-
C109	1.75	-	1.5	2	1	-	1.5	-	-
C110	-	-	-	-	1	-	-	-	-
C111	2	-	-	1	1	-	1	-	-
C112	3	1	-	-	-	-	-	-	-
C113	2.8	1.25	1	-	-	-	-	-	-
C114	3	-	2	2	-	1	1	1.5	1
C115	3	-	1.5	-	-	-	-	-	-
C116	3	1.2		-	2	-	-	-	-
C117	2	2	-	-	-	-	-	-	-
C118	3	1.5	2	1.5	-	2	1.33	1.5	1.67
C119	2.63	1.75	-	-	-	-	-	-	-
C120	3	1.2	-	1.6	1.5	2	2	-	-
C121	3	2	1	-	-	-	-	2	2.33
C122	3	1.33	1	1.33	1	1	1.33	2	1.5
C123	3	2	-	-	1	-	2	-	-
C201	3	3	-	-	-	-		-	-
C202	3	2.14	1	1	1	2	1.6	2.14	2.14

C203	3	1.5	1	-	-	1	1	1	-
C204	2.6	-	-	-	-	-	-		-
C205	2.8	-	2.67	2.25	-	-	-	2.6	-
C206	3	3	1.67	1.5	1	1.67	1.33	3	3
C207	3	-	-	-	-	-	-		-
C208	-	2	2.75	3	-	2	2.33	2	-
C209	3	1	1.75	1	-	-	1	1.25	1.5
C210	2.25	1.5	1.25	1.33	1	1	-	1	1.25
C211	1.75	2.25	3	-	-	1.5	1.75	2.5	-
C212	3	1	1	-	1	-	1.25	2	1
C213	3		1	1.8	1	1	-	2	1
C214	3	1.33	-	-	-	-	1	2.4	1
C215	2.6	2	1.67	2.5	1	2	2	1.8	
C216	3	1	1.67	1	-	1	-	-	-
C217	3	1	2	2.67	1	-	-	2	1
C218	3	1.5	1	3	-	-	-	3	1
C219	2.67	3	2.33	1.75	1.5	2	3	1.5	-
C220	2.5	1	-	2.67	2.75	1.75	1.5	1.5	2.5
C221	3	1	1	1	-	-	-	3	1.25
C301	3	-	-	-	-	-	-	2	2.6
C302	2.6	2	-	-	-	-	1	2	1.5
C303	3	1	1	1	1	1	1.4	2.17	1
C304	2.8	-	-	1.67	-	1.5	-	1	1.5
C305	1.8	1.6	-	1	-	1	-	-	-
C306	2	2.25	3	2.67	2	1.75	2	2	-
C307	2.33	1.33	2	1.4	1.2	1	2.33	2.33	1
C308	3	3	2.75	3	2	1.5	2	2.5	1.67
C309	2.75	2.67	2	-	1.33	1	1.25	1	1.33

C310	3	2.2	2	1.25	1	1.33	1.8	1.8	2
C311	1.5	1	1.5	-	-	-	1.33	1.25	1
C312	2	2	1.86	1.33	2.43	2	2	1.4	1.57
C313	2.4	2	2.2	2	-	2.2	1.8	2.4	
C314	3	1.33	2	1	-	1	1	2.2	2
C315	2.5	1.83	1	1	-	-	1.83	3	2.17
C316	-	-	-	-	2	-	3		
C317	3	2.75	2	-	1	1	1	1.25	1.75
C318	3	1.5	1	-	2	2.33	3	1	
C319	2	2	1.8	2	2	2	-	2.25	2
C320	2.5	1	-	2.5	2.75	15	1.25	1.75	2.5
C321	3	3	2.25	1.5	1.33	2.75	2.25	2	2.5

3.2 Attainment of Course Outcomes (40)

3.2.1 Describe the assessment processes used to gather the data upon which the evaluation of Course Outcome is based (10)

The assessment processes for evaluating Course Outcomes (COs) at our institution encompass both direct and indirect methods, ensuring a comprehensive understanding of student learning a

Types of Assessment:

- Direct Assessment
- In Direct Assessment

Direct Assessment:

- Direct assessment involves the evaluation of students' performance through various activities and examinations directly related to the course.

Here are the direct assessment processes used:

Internal Examination Assessment:

- Internal assessments are carried out based on students' performance in Class Tests. Three Class Tests, each addressing a specific portion of the syllabus, and one optional Model Exam are conducted as per the academic calendar.
- Class Tests carry different weightage, with Class Test I covering 30% of the syllabus and its

associated COs, Class Test II covering 35%, Class Test III covering 35%, and the Model Exam CO1 to CO5.

- Assessment of students' performance in these examinations is conducted by the course faculty in charge.

Board Examination Assessment:

- Board examinations are conducted by the State Board of Technical Education (SBTE) for each course.
- These exams account for a significant portion of the CO attainment, with a maximum of 70 marks and a duration of 3 hours.
- The results obtained by students in these board exams are collected by the Class advisor from the SBTE web portal, and result analysis is performed . CO attainment is analyzed as an average based on this SBTE mark analysis.

Assignment:

- Assignments are a critical component of reinforcing learning and aligning with COs.
- Two assignments, each carrying 25 marks, are scheduled before specific Class Tests.
- Assignments are mapped to specific COs to ensure they directly address the intended learning outcomes.

Seminar:

- Seminars are used as a platform for students to showcase their understanding of the subject.
- Faculty in charge evaluates these seminars using rubrics.

Laboratory Experiments:

- Laboratory experiments are designed to address specific COs.
- The assessment includes evaluating students on theoretical concepts, execution, calculations, viva-voce, and record notes, totaling 50 marks.

Student Projects:

- Student projects, including minor projects in the second year and major projects in the final year, are comprehensively assessed through a combination of internal and external evaluations.
- Three internal reviews assess project progress, and a final external examination (Viva Voce) evaluates students' knowledge, presentation skills, and understanding of their project.
- The total evaluation for each project includes internal and external marks, totaling 100 marks.

Indirect Assessment:

- Indirect assessment is conducted by gathering data through surveys and feedback from students.
- This method helps in understanding the effectiveness of the courses in a more holistic manner

Course-End Survey:

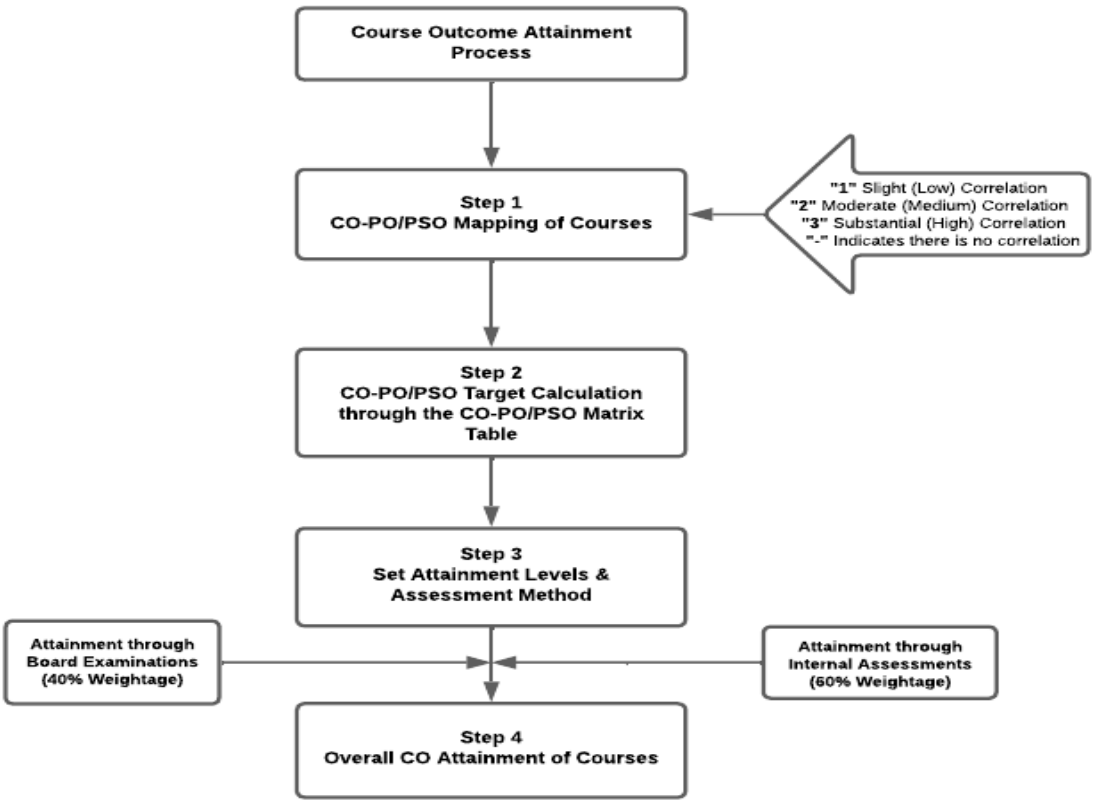
- A course-end survey is administered for every theory course, and individual students pursuing the program are also surveyed.

- These surveys are conducted online through a cloud-based software platform.
- Survey questions are carefully mapped to specific COs, ensuring that the feedback received directly relates to the intended learning outcomes.
- Ratings provided by students are aggregated, and the overall percentage of ratings is computed. This provides valuable insights into the effectiveness of the courses and whether COs are bein

These robust assessment processes, comprising both direct and indirect methods, help ensure that the evaluation of Course Outcomes at our institution is comprehensive, transparent, and an essential feedback for continuous improvement and curriculum development.

3.2.2 Record the attainment of Course Outcome of all courses with respect to set attainment levels (30)

In order to ensure that courses meet their intended learning objectives, it is essential to record the attainment of Course Outcomes (COs) in alignment with the predefined attainment levels. This process is crucial for maintaining and enhancing the quality of education. Here, we outline a systematic approach to record and assess the attainment of Course Outcomes, utilizing a combination of CO-PO/PSO mapping, target calculation, and attainment assessment.



Step 1: CO-PO/PSO Mapping of Courses

- Course Outcome (CO) attainment begins with a clear understanding of the Program Outcomes (POs) and Program-Specific Outcomes (PSOs) to which they are linked.

- This mapping e program goals, making it easier to assess how well the course is contributing to these objectives.

All the courses together must cover all the POs (and PSOs). For a course, we map the COs to POs through the CO-PO matrix and to PSOs through the CO-PSO matrix as shown below.

The various correlation levels are:

Correlation Number	Correlation
1	Slight (Low) Correlation
2	Moderate (Medium) Correlation
3	Substantial (High) Correlation
-	Indicates there is no correlation

Step 2: CO-PO/PSO Target Calculation through the CO-PO/PSO Matrix Table

Once the mapping is complete, we calculate the target attainment levels for each Course Outcome. This is achieved through a matrix table that outlines the relationships between COs, POs, the needs and expectations of each course, taking into consideration the overall program goals.

Step 3: Set Attainment Levels & Assessment Method:

To assess a course, we consider 40% of the total marks selected by the program. This allocation helps us evaluate the course outcomes based on a significant portion of the assessment process .

Set Attainment Levels:

For each course, we have established specific attainment levels, which are as follows:

Measuring Course Outcomes attained through Internal Assessments:

The procedure to decide on attainment level is as follows:

In order to decide the attainment in internal performance of students, the marks obtained in each internal assessment instrument such as assignments, class tests, Lab Evaluation, Major and they are compared with the set average score of the whole class in respective internal assessment instruments.

Attainment Level 1:	● This level is achieved when **40 - 49%** of the students score more than 40% of the marks in the respective internal assessment instruments for the course. It indicates a basic level of achievement of course outcomes.
Attainment Level 2:	● When **50 - 59%** of the students score more than 40% of the marks in the respective internal assessment instruments, the course attains Level 2. This signifies a higher level of attainment.

Attainment Level 3:	● The highest level is attained when **60% or more** of the students score more than 40% of the marks in the respective internal assessment instruments. This reflects an excellent level of achievement of course outcomes.

Measuring Course Outcomes attained through Board Examinations:

The results of SBTE Examinations are not available explicitly co-relating to individual CO. So, we have considered the SBTE examination results as the average basis of attainments of all comparisons of all students' results of each.

The department set a target average percentage of 40% for all courses.

The procedure to decide on attainment level is as follows:

Attainment Level 1:	● If 40 - 49% of students score more than the set target average percentage in ● the final examination, the attainment level is considered to be: 1 ● It indicates a basic level of achievement of course outcomes.
Attainment Level 2:	● If 50 - 59% of students score more than the set target average percentage in the final Examination, the attainment level is considered to be: 2 This signifies a higher level of attainment.
Attainment Level 3:	● If 60% or more students score more than the set target average percentage in the final examination, the attainment level is considered to be: 3 This reflects an excellent level of achievement of course outcomes.

Step 4: CO Attainment of Courses:

Overall Course Outcome Attainment:

● To assess the attainment of Course Outcomes, we use a combination of direct assessment methods:

Direct COs Attainment Assessments:

Internal Examination Assessment (Weightage: 60%)

● Internal examinations play a vital role in evaluating how well students have achieved the Course Outcomes.

● A significant weightage of 60% is assigned to this assessment method.

● Justifi internal assessments are designed by the instructors, allowing them to tailor questions directly to the COs.

● This level of customization ensures a more focused assessment of CO attainment.

Board Examination Assessment (Weightage: 40%)

● Board examinations, being external assessments, provide an objective measure of student performance related to Course Outcomes.

- The weightage of 40% attributed to this assessment met the impartiality and standardization of board examinations, ensuring a reliable measure of CO attainment.

Direct COs Attainment Assessments:

Direct Assessment	Percentage of Weightage
Internal Examination Assessment	60%
Board Examination Assessment	40%
Total Direct COs Attainment	**100%**

This structured approach to recording and evaluating the attainment of course outcomes allows our institution to maintain a clear and transparent system for assessing the effectiveness of o can continuously monitor and improve the quality of education we provide and ensure that our students achieve the intended learning outcomes.

The attainment of course outcome of all courses for the academic year 2022-2023:

Course Code	Course Name	Attainment through Internal Assessment	Attainment through Board Examination	Overall CO Attainment
C101	Mathematics - I	1.75	1.20	2.95
C102	Applied Physics - I	1.47	1.20	2.67
C103	Applied Chemistry - I	1.38	1.20	2.58
C104	Communication Skills in English	1.34	1.20	2.54
C105	Engineering Graphics	1.80	1.20	3
C106	Applied Physics Lab - I	1.80	1.20	3
C107	Applied Chemistry Lab	1.80	1.20	3
C108	Communication Skills in English Lab	1.80	1.20	3
C109	Engg. Workshop Practice	1.80	1.20	3

C110	Sports & Yoga		1.20	1.20
C111	KYP/IT Essential/Python /Others	1.80	1.20	3
C112	Mathematics - II	1.15	1.20	2.35
C113	Applied Physics - II	1.13	1.80	2.93
C114	Introduction to IT Systems	1.74	1.20	2.94
C115	Fundamental of Electrical & Electronics . Engg.	1.52	0.97	2.50
C116	Engineering Mechanics	1.70	1.20	2.90
C117	Applied Physics - II Lab	1.80	1.20	3
C118	Introduction to IT Systems Lab	1.80	1.20	3
C119	Fundamental of Electrical & Electronics . Engg Lab	1.46	1.07	2.53
C120	Engineering Mechanics Lab	1.44	0.96	2.4
C121	MOOCS	1.80	1.20	3
C122	IT Essential	1.80	1.20	3
C123	Environmental Science	1.80	-	1.80
C201	Discrete Mathematics	1.22	1.20	2.42
C202	Computer programming through C	1.20	1..20	2.40
C203	Computer Organization & Architecture	1.46	1.20	2.66
C204	Digital Electronic & Microprocessor	0.77	1.20	1.97
C205	Web Technology	1.12	1.20	2.32
C206	Computer programming through C (LAB)	1.80	1.20	3
C207	Digital Electronic &	-	-	-

	Microprocessor (LAB)			
C208	Web Technology (LAB)	1.80	1.20	3
C209	Computer Organization & Architecture (T.W)	1.80	1.20	3
C210	Summer Internship I (4 weeks) after II Semester	1.80	1.20	3
C211	Python	1.80	1.20	3
C212	Operating System	1.46	1.20	2.66
C213	Database Management System	1.65	1.20	2.83
C214	Data Structure & Algo. Using C	1.55	1.20	2.75
C215	Python Programming	1.78	1.20	2.98
C216	Computer Graphics	0.73	1.20	1.93
C217	Database Management System (LAB)	1.80	1.20	3
C218	Data Structure & Algo. Using C (LAB)	1.80	1.20	3
C219	Python Programming (LAB)	1.80	1.20	3
C220	MOOCs / SWAYAM / SPOKEN TUTORIAL / Others (T.W)	1.80	1.20	3
C221	Operating System (Case Study Linux)(T.W)	1.80	1.20	3
C301	Mobile Computing	1.80	1.20	3
C302	Computer Hardware & Networking	1.45	1.20	2.65
C303	OOP through JAVA	1.59	1.20	2.79
C304	Multimedia Technology	1.80	1.20	3

C305	Environmental Science	1.80	1.20	3
C306	Computer Hardware & Networking Lab	1.80	1.20	3
C307	OOP through JAVA Lab	1.80	1.20	3
C308	Multimedia Technology Lab	1.80	1.20	3
C309	Summer Internship (6 weeks) after IV semester	1.80	1.20	3
C310	Minor Project	1.80	1.20	3
C311	MOOCS Course	1.80	1.20	3
C312	Entrepreneurship and startup	1.63	1.20	2.83
C313	Software Engineering	1.80	1.20	3
C314	A) Data Sciences: Data Warehousing and Data Mining	1.29	1.20	2.49
C315	A) Computer Network Security	1.80	1.20	3
C316	Indian Constitution	1.66	1.20	2.86
C317	Data Sciences: Data Warehousing and Data Mining Lab	1.80	1.20	3
C318	Entrepreneurship & start up (TW)	1.80	1.20	3
C319	Software Engineering (TW)	1.80	1.20	3
C320	Course Under Moocs /NPTEL/ Others TW	1.80	1.20	3
C321	Major Project & Seminar	-	1.20	1.20

3.3 Attainment of Program Outcomes and Program Specific Outcomes (40)

3.3.1 Describe assessment tools and processes used for assessing the attainment of each POs and PSOs as mentioned in Annexure 1 (10)

In the realm of education, the attainment of Program Outcomes (POs) and Program Specific Outcomes (PSOs) is of paramount importance to ensure that educational goals and objectives of various assessment tools and processes are utilized. This section will delve into the assessment methods employed, detailing both direct and indirect methodologies, the weightage assigned to

Assessment Tools and Processes:

The following are the types of assessments tools used for attainment process:

- Direct Method of Attainment
- Indirect Method of Attainment

Direct Method of Attainment:

- The direct method of assessing the attainment of Program Outcomes and Program Specific Outcomes is primarily focused on evaluating students' performance in a tangible and quantifiable more holistic manner.

Examinations:

- Both Internal and Board Examinations: These examinations are conducted regularly and rigorously to gauge students comprehension, knowledge, and skills in each course.

Indirect Method of Attainment:

- The indirect method involves assessing the attainment of outcomes through more qualitative means, capturing the students perspectives and feedback. This approach includes:

Surveys:

Student and Alumni Surveys:

- Gathering feedback from current students and alumni to understand their perceptions of the program's effectiveness in preparing them for the real world.

Exit Surveys:

Conducted as students graduate to gain insight into their overall educational experience.

Industrial Visits:

Learning from real-world experiences by engaging in visits to industries relevant to the program.

- Attainment Process:
- Weightage Allocation:

In determining the attainment levels of Program Outcomes and Program Specific Outcomes, a specific weightage allocation is applied. The overall attainment is achieved through a combination of direct and indirect attainment.

Attainment	Percentage of Weightage
Direct Attainment	80%
In Direct Attainment	20%
Total Attainment	100%

Direct Attainment:

Direct attainment comprises a significant portion of the overall assessment, accounting for 80% of the total attainment. The 100% direct attainment is achieved by considering the following:

Internal Assessment:

Internal assessments, including class tests and assignments, contribute 60% to the direct attainment.

SBTE End Semester Examination:

The final 40% of the direct attainment is based on the performance of students in the State Board of Technical Education (SBTE) end-semester examinations.

Indirect Attainment:

Indirect attainment plays a complementary role, accounting for 20% of the total attainment. To achieve 100% indirect attainment, the program follows a structured approach:

Course-End Surveys:

These surveys are conducted for each theory course, allowing for the collection of valuable insights from students about their experiences and learning outcomes.

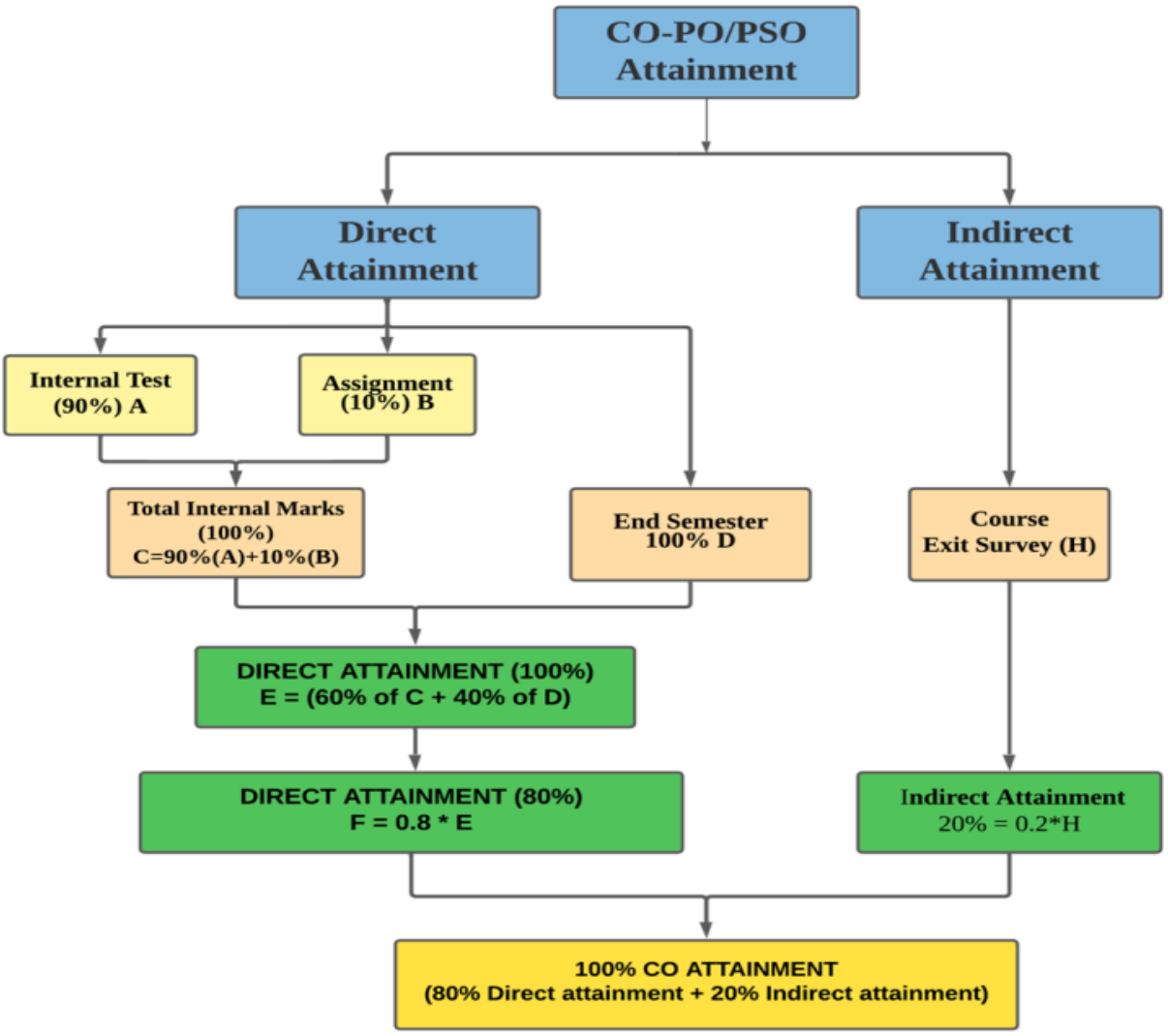
Final Attainment:

The final 100% attainment, which represents the comprehensive evaluation of Program Outcomes and Program Specific Outcomes, is calculated as a combination of 80% from direct attainment.

Theory Course Internal / External Examination Attainment Plan						
	S.No	**Evaluation**	**Exams**	**Syllabus**	**Outcome Weightage**	**Total Marks**
Direct Attainment	1	**Internal**	CLASS TEST - 1	30%	30%	35
	2		CLASS TEST - 2	60%	30%	35
	3		CLASS TEST - 3	80%	30%	35
	4		Assignment - 1	1st 50%	5%	25
	5		Assignment - 2	2nd 50%	5%	25
	Overall Internal Outcome Weightage				100%	
	Internal Exam Outcome Attainment for 60% (A)				60%	

	6	**External**	SBTE END SEMESTER	100%	100%	100
	External Exam Outcome Attainment for 40% (B)				40%	
	Total Direct Outcome Attainment for 100% (A+B)				100%	
	Total Direct Outcome attainment for 80% (C)				**80%**	
Indirect Attainment	Course End Survey				100%	
	Course End Survey for 20% (D)				**20%**	
Total Attainment Direct + Indirect (C+D)					**100%**	

By using these well-defined assessment tools, processes, and weightage allocations, our educational institution ensures a thorough evaluation of the attainment of Program Outcomes and Program Specific Outcomes. This systematic approach helps us in continuously enhancing the quality of education and meeting the expectations of our students and stakeholders.



3.3.2 Provide results of evaluation of each PO & PSO (30)

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
C101	2.96	0.98	-	-	-	-	-	-	-
C102	2.67	0.89	-	1.78	0.89	-	-	-	-
C103	3.00	2.00	1.20	1.60	2.20	1.00	2.00	-	-
C104	1.48	-	-	-	-	-		-	-
C105	3.00	1.25	2.60	1.20	1.00	1.80	2.00	-	-
C106	3	2	-	3	1.33	-	-	-	-
C107	3	1	1	3	2	1	2	-	-
C108	3	-	-	-	3	2	3	-	-
C109	1.75	-	1.50	2	1	-	1.50	-	-

C110	-	-	-	-	0.40	-	-	-	-
C111	2	-	-	2	2	-	2	1	
C112	2.35	0.78	-	-	-	-	-	-	-
C113	2.73	1.22	0.98	-	-	-	-	-	-
C114	2.94	-	1.96	196	-	0.98	0.98	1.47	0.98
C115	2.50	0.83	-	-	-	-	-	-	-
C116	2.90	1.16	-	-	1.94	-	-	-	-
C117	2	2	-	-	-	-	-	-	-
C118	3	1.50	2	1.50	-	2	1.33	1.50	1.67
C119	2.22	-	-	1.69	-	-	-	-	-
C120	2.40	0.96	-	1.28	1.20	1.60	1.60	-	-
C121	3	2	1	-	-	-	-	2	2.33
C122	3	1.33	1	1.33	1	1	1.33	2	1.50
C123	1.80	1.20	-	-	0.60	-	1.20	-	-
C201	2.42	2.42	-	-	-	-	-	-	-
C202	2.40	1.94	1.83	1.60	1.74	2.20	2.14	1.71	1.71
C203	2.66	1.33	0.89	-	-	-	0.89	0.89	
C204	1.71	-	-	-	-	-	-	-	-
C205	2.16	-	2.06	1.74	-	-	-	2.01	-
C206	3	3	1.67	1.50	1	1.67	1.33	3	3
C207	1.75	2.25	3	-	-	1.50	1.50	2.50	-
C208	2.50	2.50	3	-	-	2.50	2.75	2.50	-
C209	3	1	1.75	1	-	-	1	1.25	1.50
C210	2.25	1.50	1.25	1.33	1	1		1	1.25
C211	1.75	2.25	3	-	-	1.50	1.75	2.50	-
C212	2.66	0.89	0.89	-	0.89	-	1.11	1.77	0.89
C213	2.85	-	0.95	1.71	0.95	0.95	-	1.90	0.95
C214	2.75	1.22	-	-	-	-	0.92	2.20	0.95

C215	2.58	1.98	1.66	2.48	0.99	1.98	1.98	1.79	-
C216	1.93	0.64	1.08	0.64	-	0.64	-	-	-
C217	3	2.33	1.67	1	1.50	2	1	2	2
C218	2.80	2.80	1	-	1.50	2	-	3	2.80
C219	1.75	2.25	3	-	-	1.50	1.50	2.25	-
C220	2.50	1	-	2.67	2.75	1.75	1.50	1.50	2.50
C221	3	1	1	1	-	-	-	3	1.25
C301	2.76	2.76	2.02	2.14	2.02	2.14	2.02	2.07	2.39
C302	2.36	2.36	2.36	1.97	0.98	0.98	0.98	1.57	1.48
C303	2.65	1.92	1.77	0.88	0.88	0.88	0.88	1.77	2.06
C304	1.68	1.20	1.35	1.20	1.50	0.90	0.60	1.50	0.84
C305	1.80	1.80	1.40	1	1.20	1.60	1	1	2
C306	2	2.25	3	2.67	2	1.75	2	2	-
C307	2.33	1.33	2	1.40	1.20	2.33	2.33	2.33	1
C308	3	3	2.75	3	2	1.50	2	2.50	1.67
C309	2.75	-	-	-	2	-	1.25	1	1.33
C310	3	2.20	2	1.25	1	1.33	1.80	1.80	2
C311	1.50	1	1.50	-	-	-	1.33	1.25	1
C312	1.88	1.88	1.75	1.25	2.29	1.88	1.88	1.32	1.48
C313	2.40	2	2.20	2		2.20	1.80	2.40	-
C314	2.49	2.32	1.66	0.83	0.83	0.83	0.83	1.83	1.66
C315	1.50	1.10	0.60	0.60	-	-	1.10	1.80	1.30
C316	-	-	-	-	1.90	-	2.86	-	-
C317	3	2.75	2	-	1	1	1	1.25	1.75
C318	3	2.67	1.33	-	2	2.33	3	2	2
C319	2	2	1.80	2	2	2	-	2.25	2
C320	2.50	1	-	2.75	2.75	1.50	1.25	1.25	2.75
C321	1.20	1.20	0.90	0.60	0.53	1.10	0.90	0.80	1

PO & PSO Attainment Level

Course	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
Direct Attainment	1.95	1.35	1.34	1.30	1.17	1.22	1.23	1.45	1.35
InDirect Attainment	0.47	0.40	0.36	0.27	0.28	0.31	0.30	0.39	0.33
PO Attainment	2.42	1.75	1.70	1.57	1.45	1.53	1.53	1.84	1.68

Criterion 4

Student's Performance

Table 4.1 Intake Information:

Item	2023-24 (CAY)	2022-23 (CAYm1)	2021-22 (CAYm2)	2020-21 (CAYm3)	2019-20 (CAYm4)	2018-19 (CAYm5)
Sanctioned intake strength of the program((N)	60	48	48	48	48	60
Total number of students, admitted through state level counseling (N1)	51	48	45	41	37	0
Number of students, admitted through Institute level quota (N2)	0	0	0	0	0	13
Number of students, admitted through Lateral Entry (N3)	0	0	4	1	0	5
Total number of students admitted in the programme(N1 + N2 + N3)	51	48	49	42	37	18
Enrolment Ratio=(N1+N2)/N	**85%**	**100%**	**93.75%**	**85.42%**	**77.08%**	**21.67%**

Table 4.2 Students Information who have successfully graduated without backlogs in any semester/year of study

Year of Entry	Total No.of students admitted in the program (N1 + N2 + N3)	Number of students who have successfully graduated without backlogs in any semester/year of study		
		I Year	*II Year*	*III Year*
2023-2024	51	0	0	0
2022-2023	48	20	0	0
2021-2022	49	4	4	0
2020-2021 LYG	42	8	8	8
2019-2020 LYGm1	37	7	3	3
2018-2019 LYGm2	18	5	2	2

4.3 Students Information who have successfully graduated with backlogs in any semester/year of study

Year of Entry	Total No.of.Students admitted in the program (N1 + N2 + N3)	Number of students who have successfully graduated stipulated period of study (Total No.of with backlog +without Backlog)		
		I Year	*II Year*	*III Year*
2023-2024	51	*0*	*0*	*0*
2022-2023	48	36	0	0
2021-2022	42	28	34	0
2020-2021 LYG	49	30	28	26

2019-2020 LYGm1	37	30	28	27
2018-2019 LYG m2	18	13	15	15

4.1 Enrolment Ratio

Year	N From Table 4.1	N1 +N2 (from Table 4.1)	Enrollment Ratio [(N1+N2/N)*100]
2023-24	60	51	85
2022-23	48	48	100
2021-22	48	49	93.75

Average [(ER1+ER2+ER3)/3]:92.91

4.2.1 Success rate without Backlog in any year of study

Item	Last Year Graduate, (LYG)	Last Year Graduate Minus 1 Batch, (LYGm1)	Last Year Graduate Minus 2 Batch, (LYGm2)
	2020-23	**2019-22**	**2018-21**
Total number of students (admitted through state level counseling + admitted through Institute on level quota + actually admitted through lateral entry) (N1 + N2 + N3)	42	37	18
Number of students who have passed without backlogs in the stipulated period	8	3	2
Success index (SI)	**0.19**	**0.08**	**0.11**
Average SI	**0.13**		

SI= (Number of students who have passed from the program without backlog)/ (Number of students admitted in the first year of that batch plus actually admitted in 2nd year via lateral entry)

Average SI = Mean of success index (SI) for past three batches

4.2.2 Success rate with backlog in stipulated period

Item	Last Year Graduate, (LYG)	Last Year Graduate, (LYGm1)	Last Year Graduate Minus 1 Batch, (LYGm2)
	2020-21	**2019-2020**	**2018-2019**
Total number of students (admitted through state level counseling + admitted through Institute on level quota+ actually admitted through lateral entry) (N1 + N2 + N3)	42	37	18
Number of students who have passed with backlogs in the stipulated period	26	27	15
Success index (SI)	0.62	0.73	0.83
Average SI	**0.72**		

SI= (Number of students who have passed from the program without backlog)/ (Number of students admitted in the first year of that batch plus actually admitted in 2nd year via lateral entry)

Average SI = Mean of success index (SI) for past three batches

4.3 Academic Performance in First Year

Academic Performance	**2022-23 (CAYm1)**	**2021-2022 (CAYm2)**	**2020-2021 (LYG)**
Mean of CGPA or Mean Percentage of all successful students (X)	7.84	7.69	9.01
Total no. of successful students (Y)	36	28	30
Total no. of students appeared in the examination (Z)	41	34	35

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

Assessment [2.5* Average API]: 17.45

4.4 Academic Performance in Second Year

Academic Performance	**2021-2022 (CAYm1)**	**2020-2021(CAYm2)**	**2019-2020(LYG)**
Mean of CGPA or Mean Percentage of all successful students (X)	7.66	8.28	8.29
Total no. of successful students (Y)	34	26	25
Total no. of students appeared in the examination (Z)	34	33	33
API = X* (Y/Z)	**7.66**	**6.52**	**6.28**

[Average API = (AP1 + AP2 + AP3)/3]: 6.82

Assessment [2.0* Average API]: 13.64

4.5 Academic Performance in Final Year

Academic Performance	2020-2021 (CAYm1)	2019-2020(CAYm2)	2018-2019(LYG)
Mean of CGPA or Mean Percentage of all successful students (X)	8.24	8.09	7.92
Total no. of successful students (Y)	26	25	14
Total no. of students appeared in the examination (Z)	26	25	15
API = X* (Y/Z)	**8.24**	**8.09**	**7.39**

[Average API = (AP1 + AP2 + AP3)/3]: 7.91

Assessment [1.5* Average API]: 11.86

4.6 Placement, Higher Studies and Entrepreneurship

Item	Last Year Graduate, (LYG)	Last Year Graduate, Minus 1 Batch (LYGm1)	Last Year Graduate Minus 2 Batch, (LYGm2)
	2020-21	**2019-20**	**2018-19**
Total No. of Final Year Students (N)	26	28	15
No. of students placed in companies or Government Sector (X)	24	17	1
No. of students admitted to higher studies (Y)	2	5	8
No. of students turned entrepreneur in the respective field of engineering/technology (Z)	0	0	0
Placement Index (P) : (1.25X + Y +Z)/N	**1.23**	**0.85**	**0.7**

Average Placement= [(P1 + P2 + P3)/3]: 0.93

Assessment [40 * Average Placement] = 37.08

Assessment Year 2022-23 (CAYm1)

Batch Year: 2020-2023					
S.no.	**Name of the student**	**SBTE Register No.**	**Name of the Employer / Institution**	**Appointment No**	**Category (X / Y / Z)**
1	1991820002	ABHISHEK KUMAR	Apollo Tyres, Ltd	AP/P-GPC/DET-2023/CSE-001	X
2	1991820003	AMARDEEP KUMAR	Apollo Tyres, Ltd	AP/P-GPC/DET-2023/CSE-002	X
3	1991820004	AMARJEET KUMAR	Apollo Tyres, Ltd	AP/P-GPC/DET-2023/CSE-003	X
4	1991820005	AMIT KUMAR	Apollo Tyres, Ltd	AP/P-GPC/DET-2023/CSE-004	X
5	1991820006	ARFA AZMAT	Apollo Tyres, Ltd	AP/P-GPC/DET-2023/CSE-005	X
6	1991820007	ARPAN KUMAR GUPTA	Apollo Tyres, Ltd	AP/P-GPC/DET-2023/CSE-006	X
7	1991820010	BANTY KUMAR	Apollo Tyres, Ltd	AP/P-GPC/DET-2023/CSE-007	X
8	1991820012	DEVRAJ	Apollo Tyres, Ltd	AP/P-GPC/DET-2023/CSE-008	X
9	1991820014	JAI SHREE	Apollo Tyres, Ltd	AP/P-GPC/DET-2023/CSE-009	X
10	1991820016	KM PHULBASIYA KUMARI	Apollo Tyres, Ltd	AP/P-GPC/DET-2023/CSE-010	X
11	1991820018	MOHAN KUMAR	Apollo Tyres, Ltd	AP/P-GPC/DET-2023/CSE-011	X
12	1991820020	PRINCE KUMAR	Apollo Tyres, Ltd	AP/P-GPC/DET-2023/CSE-012	X

13	1991820023	SANJEET RAJ	Apollo Tyres, Ltd	AP/P-GPC/DET-2023/CSE-014	X
14	1991820027	SURYAMOHAN CHAUPAL	B. P. Mandal College of Engineering, Madhepura	B.TECH	**Y**
15	1991820031	MOHIT KUMAR	Apollo Tyres, Ltd	AP/P-GPC/DET-2023/CSE-015	X
16	1991820033	KHUSHI KUMARI	Apollo Tyres, Ltd	AP/P-GPC/DET-2023/CSE-016	X
17	1991820034	ANNU SINGH	Apollo Tyres, Ltd	AP/P-GPC/DET-2023/CSE-017	X
18	1991820035	PRSAENJEET KUMAR	Apollo Tyres, Ltd	AP/P-GPC/DET-2023/CSE-018	X
19	1991820036	ATUL RAJ	Apollo Tyres, Ltd	AP/P-GPC/DET-2023/CSE-019	X
20	1991820038	PUJA KUMARI	Apollo Tyres, Ltd	AP/P-GPC/DET-2023/CSE-020	X
21	1991820039	ANSHU KUMARI	Government Engineering college,Arwal	B.TECH	**Y**
22	1991820040	RIMJHIM KUMARI	Apollo Tyres, Ltd	AP/P-GPC/DET-2023/CSE-021	X
23	1991820602	AKHILESH KUMAR	Apollo Tyres, Ltd	AP/P-GPC/DET-2023/CSE-022	X
24	1991820603	ANKIT SINGH	Apollo Tyres, Ltd	AP/P-GPC/DET-2023/CSE-023	X
25	1991820604	AKASH DEEP	Apollo Tyres, Ltd	AP/P-GPC/DET-2023/CSE-024	X
26	1991820041	ARYA NANDINI	Shershah Engineering College, Sasaram	B.TECH	Y

No. of students placed in companies or Government Sector (X)	**23**
No. of students admitted to higher studies (Y)	**3**
No. of students turned entrepreneur in the respective field of engineering/technology (Z)	**0**

Assessment year 2021-22 (CAYm2)

Batch Year: 2019-2022					
S.no	**Name of the student**	**SBTE Register No.**	**Name of the Employer / Institution**	**Appointment No**	**Category (X / Y / Z)**
1	VIKASH URAON	1991819007	LAYAM SOLUTIONS	LFS.A.3307917.Y.B	X
2	SUMA RAY	1991819012	WIPRO	Not Specified	X
3	MANISHA KUMARI	1991819015	GIL GURGAON	Not Specified	X
4	PUJYA SHREE	1991819018	JOYSON SAFETY SYSTEMS	Not Specified	X
5	LEIYAPEM AWUNGSHI	19991819004	Ienergizer	T2298909	X
6	LAKSHMI MISHRA	1991819001	LPU UNIVERSITY	B.TECH	Y
7	NRIPATLE PAME	1991819017	SAGE UNIVERSITY	B.TECH	Y
8	AJAY KUMAR	1991819038	KP RELIABLE	GEMS/CSE/2022/038	X
9	AARYAMAN KUMAR	19918219028	KP RELIABLE	GEMS/CSE/2022/027	X

10	RAUSHAN KUMAR	1991819024	KP RELIABLE	GEMS/CSE/2022/024	X
11	ANI KUMARI	1991819013	KP RELIABLE	GEMS/CSE/2022/013	X
12	AKASH KUMAR	1991819009	KP RELIABLE	GEMS/CSE/2022/009	X
13	VICKEY KUMAR SHARMA	1991819030	KP RELIABLE	GEMS/CSE/2022/030	X
14	PREM JEET KUMAR	1991819029	KP RELIABLE	GEMS/CSE/2022/029	X
15	VISHAL KUMAR GAUTAM	1991819026	KP RELIABLE	GEMS/CSE/2022/026	X
16	ANSHU KUMARI	1991819037	KP RELIABLE	GEMS/CSE/2022/037	X
17	GITANALI KUMARI	1991819035	KP RELIABLE	GEMS/CSE/2022/035	X
18	BIPUL KUMAR	1991819031	KP RELIABLE	GEMS/CSE/2022/031	X
No. of students placed in companies or Government Sector (X)					**16**
No. of students admitted to higher studies (Y)					**2**
No. of students turned entrepreneur in the respective field of engineering/technology (Z)					**0**

Assessment Year 2020-21 (CAYm3)

Batch Year: 2018-19					
S.no.	**Name of the student**	**SBTE Register No.**	**Name of the Employer / Institution**	**Appointment No**	**Category (X / Y / Z)**
1	RAJA PATEL	1991818008	VIKRAM AYURVASTRA	Not Specified	X
2	RAVI RANJAN KUMAR	1991818601	STYLE MY CATALOG	Not Specified	X
No. of students placed in companies or Government Sector (X)					**2**
No. of students admitted to higher studies (Y)					**0**
No. of students turned entrepreneur in the respective field of engineering/technology (Z)					**0**

4.7 Professional Activities:

4.7.1 Professional Societies/Student Chapters and organizing technical events

A. Availability of Professional Societies/ Chapters & relevant Activities

In the Department of CSE at GEMS Polytechnic College, we actively encourage students to participate in various professional societies and department associations. These platforms provide students with opportunities for skill development,networking, and enhancing their knowledge.
Here are the key organizations and their relevant activities:

Professional Society/Chapters:

S.No	Name of the Professional Society	Institutional Membership	Student Chapter Membership	Number of Students Registered
1	Indian Society for TechnicalEducation (ISTE)	IM-2867	BH-09	15

BH – 09

The Indian Society for Technical Education

FOUNDED 1968

Devoted to Promotion of Quality and Standards in Technical Education

This is to certify that
the Executive Council has approved the formation of an

ISTE STUDENT CHAPTER

at

GEMS POLYTECHNIC COLLEGE
AURANGABAD, BIHAR

With all privileges granted by the Consititution of the Society

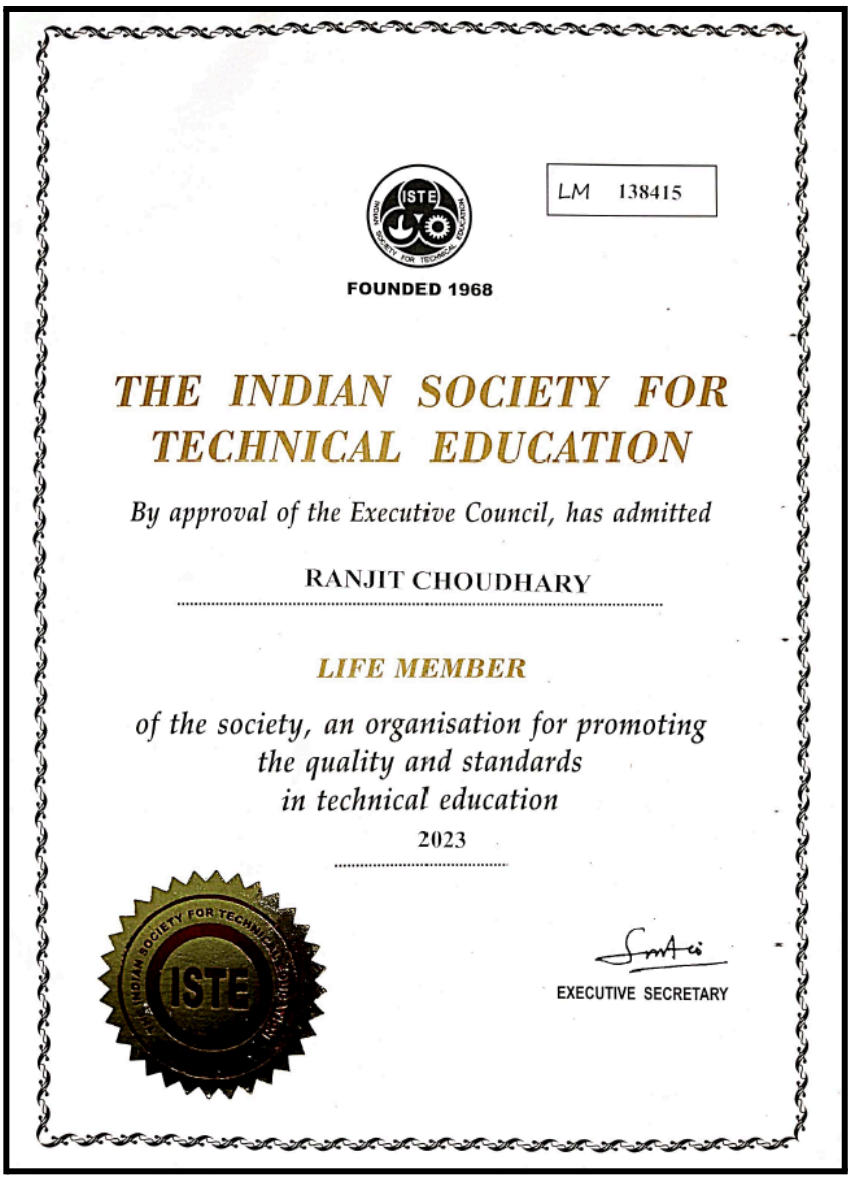
2021

Executive Secretary, ISTE

Institutional Membership Details

S.No	Name of the Staff	Name of the Professional Society	Membership ID
1	Mr.Ranjit Choudhary	Indian Society for TechnicalEducation (ISTE)	LM-138415
2	Mrs.Jenitha K	Indian Society for TechnicalEducation (ISTE)	LM-138414

ID & Certificate Attachment:



Indian Society for Technical Education

IIT Delhi Campus, Katwaria Sarai, Shaheed Jeet Singh Marg, New Delhi- 110016
Ph: 011-26963431, 26513542 Web: www.isteonline.in

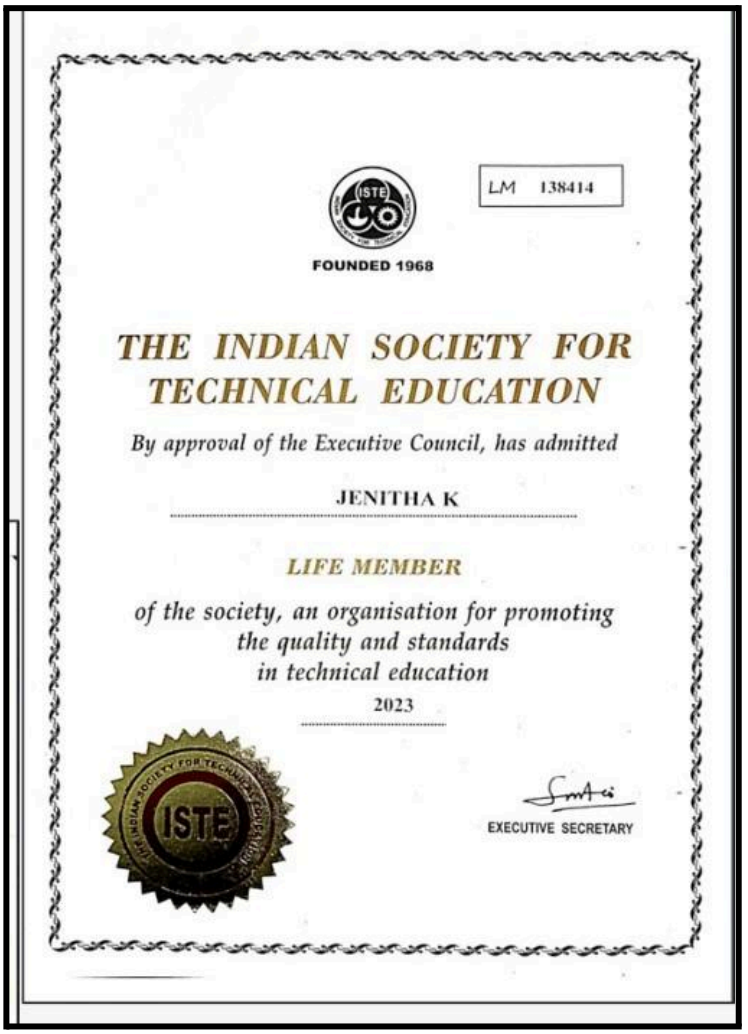
Name: JENITHA K

M.No: LM 138414

Year: 2023

Executive Secretary

LIFE MEMBERSHIP CARD



LM 138414

FOUNDED 1968

THE INDIAN SOCIETY FOR TECHNICAL EDUCATION

By approval of the Executive Council, has admitted

JENITHA K

LIFE MEMBER

of the society, an organisation for promoting the quality and standards in technical education

2023

EXECUTIVE SECRETARY

Recent Activities

Technical Quiz:

- ISTE conducts regular technical quizzes, allowing students to test their knowledge and problem-solving skills.

Project Expo:

- Students can showcase their innovative projects in Project Expos, fostering creativity and teamwork.

Guest Lectures:

- We invite experts and industry professionals to deliver insightful guest lectures, exposing students to real-world applications of their studies.

Webinars:

- ISTE organizes webinars on various engineering topics, ensuring that students are up-to-date with the latest industry trends and technologies.

Department Associations:

Name of the Association: BOOT-Up

Relevant Activities:

Orientation Program:

- At the beginning of each academic year, BOOT-Up conducts an orientation program for first-year students.
- This program helps newcomers become acquainted with the department, faculty, and their peers, ensuring a smooth transition into college life.

Farewell Program:

- BOOT-Up organizes a heartfelt farewell program for final-year students, bidding them farewell as they prepare to embark on their professional journey.
- It's a memorable event that acknowledges their contribution to the department.

Guest Lectures:

- We regularly host guest lectures, where industry experts and alumni share their experiences and insights, bridging the gap between academia and the practical world.

Participating in these societies and associations not only enriches students' academic experiences but also equips them with valuable skills and networks that are essential for their future careers. These activities contribute to the holistic development of students in the Department of Computer Science & Engineering at GEMS Polytechnic College.

Office Bearers of the Association CAY (2023-2024)			
Sl.No	**Name of the Student**	**Designation**	**Class**
1	SAMBHAWNA BAJPEI	Student Chairman	3rd year/CSE
2	SAKSHI GUPTA	Student Vice Chairman	3rd year/CSE
3	ANUJ BHARTI	Student Secretary	3rd year/CSE
4	ANANYA BAJPEI	Joint Secretary	2nd year/CSE
5	SHIVAM KUMAR SINGH	Treasurer	3rd year/CSE
6	NAVNEET MISHRA	Executive Member	2nd year/CSE
7	ANNU KUMARI	Executive Member	2nd year/CSE
8	MEGHA RAJ	Executive Member	2nd year/CSE

Office Bearers of the Association CAY (2022-2023)			
Sl.No	**Name of the Student**	**Designation**	**Class**
1	DEVRAJ	Student Chairman	3rd year/CSE
2	JAI SHREE	Student Vice Chairman	3rd year/CSE
3	PRINCE KUMAR	Student Secretary	3rd year/CSE
4	AYUSH KUMAR	Joint Secretary	2nd year/CSE
5	SANJEET RAJ	Treasurer	3rd year/CSE
6	SUSHANT KUMAR	Executive Member	2nd year/CSE

7	SHIVAM KUMAR SINGH	Executive Member	2nd year/CSE
8	SAMBHAWNA BAJPEI	Executive Member	2nd year/CSE

Office Bearers of the Association CAYm1 (2021-2022)			
Sl.No	**Name of the Student**	**Designation**	**Class**
1	NRIPATLE PAME	Student Chairman	3rd year/CSE
2	KRANTI KUMARI	Student Vice Chairman	3rd year/CSE
3	PUJYA SHREE	Student Secretary	3rd year/CSE
4	JAI SHREE	Joint Secretary	2nd year/CSE
5	RAJ SHREE	Treasurer	3rd year/CSE
6	DEVRAJ	Executive Member	2nd year/CSE
7	PRINCE KUMAR	Executive Member	2nd year/CSE
8	SANJEET RAJ	Executive Member	2nd year/CSE

B. Number, quality of engineering events

Professional Excellence in Engineering:

At the Department of Computer Science & Engineering, GEMS Polytechnic College, we take pride in our numerous high-quality engineering events. These events, meticulously organized and executed, serve as dynamic platforms for knowledge exchange, networking, and skill development. Our commitment to professional activities enriches the academic journey, ensuring our students are well-prepared for the challenges of the engineering world.

List of Event/Activities under Professional Society:

S.N	Date	Name of the Event/Activity	Name of the Resource person with Designation
1	26-02-2024	Hands on workshop on 7 Segmant Counter with logic gates	**Ms.Mathiyas Kiebler** Trainer, Sparkle
2	08-09-2023	Career Guidance	**Mr.Sankar G** Associate Manager - Employee Relations Apollo Tyres
3	04-09-2023	Career Guidance	**Mr. Pankaj Kumar Dubey**, HR , KP Reliable Technique India Pvt Ltd
4	01-08-2023	Career Guidance	**Mr. Nitish Prakash Surya,** Youth Coach and Author, Engineers Academy, Patna
5	27-06-2023	Technical Quiz	**Mrs. Chinthiya** Lecturer GEMS Polytechnic college
6	12-05-2023	Light Up	**Mrs. Catherine,** Lecturer GEMS Polytechnic college
7	08-05-2023	Workshop on Career Opportunities in Oracle Database	**HUMAISH ZAMAN YUSUFI** , Atos - Senior Consultant
8	28-02-2023	National Science Day - QUIZ competition, Poster presentation.	**Mr. Ragunath A.** IIC president GEMS Polytechnic College
9	11-01-2023	Guest Lecture - National Startup Day	**Mr.Abraham Dennyson**. B.Tech,MBA, PGD-PHN Senior manager-Program analyst at Project Concern International.
10	30-01-2023	Leadership talk with AICTE Chairman	**Mr.Abhay Jere** Chief Innovation Officer, Ministry of

			Education. & Dr. T G Sitharam, AICTE chairman
11	11-01-2023	Guest Lecture - National Startup day	**Mr.Abraham Dennyson**. B.Tech, MBA, PGD-PHN Senior manager-Program analyst at Project Concern International.
12	03-09-2022	Technical quiz	ISTE Student Chapter
13	30-08-2022	Career Guidance	**Dr. P. K. Rao,** Training and Placement Expert, Department of Science and Technology, Patna, Bihar

List of Event/Activities under Department Association:

S.N	Date	Name of the Event/Activity	Department Association
1	07-03-2024	Orientation Program	BOOTUP Association Dept.of.CSE.
2	08-09-2023	Farewell for 2020-23 Batch	BOOTUP Association Dept.of.CSE.
3	09-05-2023	Orientation Program	BOOTUP Association Dept.of.CSE.
4	15-12-2022	Orientation Program	BOOTUP Association Dept.of.CSE.
5	24-09-2022	Orientation Program	BOOTUP Association Dept.of.CSE.
6	27-06-2022	Farewell for 2019-22 Batch	BOOTUP Association Dept.of.CSE.
7	15-09-2021	Farewell for 2018-21 Batch	BOOTUP Association Dept.of.CSE.
8	08-08-2019	Orientation Program	BOOTUP Association Dept.of.CSE.

4.7.2 Publication of Technical Magazines, Newsletters, etc

A. Quality & Relevance of the contents and print Material

In our relentless pursuit of knowledge dissemination and fostering a culture of learning and innovation, the Department of CSE at GEMS Polytechnic College proudly presents "MiLESTONE " – our semi-annual technical newsletter.

Name of the Newsletter:**MiLESTONE**
Publication Period:**Half-Yearly**

Academic Year	News Letter	Publication Details
2022-23 (Even Semester)	**MiLESTONE** *A Half yearly Newsletter*	**Vol.5 No.5** **Edition: Jan-June**
2022-23 (Odd Semester)	**MiLESTONE** *A Half yearly Newsletter*	**Vol.4 No.4** **Edition: July-Dec**
2021-22 (Even Semester)	**MiLESTONE** *A Half yearly Newsletter*	**Vol.3 No.3** **Edition: Jan-June**
2021-22 (Odd Semester)	**MiLESTONE** *A Half yearly Newsletter*	**Vol.2 No.2** **Edition: July-Dec**
2020-21 (Even Semester)	**MiLESTONE** *A Half yearly Newsletter*	**Vol.1 No.1** **Edition: Jul-Sep**

Note: Click here too get the newsletter:
https://drive.google.com/file/d/1EnxKj1cGmKX5GUsV8yQi4wmiDrqhjjfl/view?usp=drive_link

Quality and Relevance of Contents:

- Our newsletter,MiLESTONE, stands as a testament to our commitment to provide valuable and relevant content to our students and faculty.
- Here's what setsMiLESTONE apart:

Eco-Friendly Approach:

- In an effort to minimize our ecological footprint, we have adopted an eco-friendly approach to the printing process.
- We limit the number of physical copies, focusing on sustainability, and sparing resources.
- Printed copies are meticulously preserved within the department for future reference.

Digital Distribution:

- To ensure that our content reaches the widest possible audience, we have adopted a digital distribution model.
- Each issue of MiLESTONE is converted into PDF format.
- These PDF copies are then distributed to both students and faculty through their official email accounts and official WhatsApp groups.

Content Highlights:

- The contents ofMiLESTONE are carefully curated to cater to the diverse interests and informational needs of our readers.

Our newsletter typically features

Technical Articles:

- In-depth articles authored by both students and faculty, exploring various facets of mechanical engineering, current industry trends, and research developments.

Student Spotlights:

- Highlighting exceptional student achievements, projects, and experiences within the department.

Faculty Contributions:

- Sharing the knowledge and expertise of our esteemed faculty members, covering topics of academic and industrial relevance.

Alumni Stories:
Narratives from our successful alumni who share their journeys and provide insights for the aspiring engineers.

Upcoming Events:
Announcements of departmental seminars, workshops, and other academic events to keep our community informed.

Student and Faculty Achievements:
Recognizing and celebrating the accomplishments of our talented individuals.

MiLESTONE is not just a newsletter; its a platform that showcases the brilliance and innovative spirit within the Department of **CSE** at **GEMS Polytechnic College**. Through our eco-conscious approach, we aim to conserve resources and ensure that knowledge is readily accessible to all, furthering our commitment to learning and sustainability.

B. PARTICIPATION OF STUDENTS FROM THE PROGRAM

Our department's technical newsletter is a collective effort that thrives on the contributions of both faculty and students. This collaborative initiative not only disseminates knowledge but also nurtures a sense of community and engagement within the Department of CSE. The editorial board, consisting of five members, plays a pivotal role in curating and creating these informative publications.

Editorial Board Composition:

Editorial Role	Responsible Person	Responsibilities
Chief Editors	**Mr. Ranjit Choudhary,** Head of the Department /CSE. **Mr. Ravi Kumar,**Sr.Lecturer / Mech	● The Chief Editor, often a senior faculty member, oversees the entire publication process. ● They provide guidance, ensure the quality of content, and maintain the overall consistency of the newsletter
Faculty Advisors	Class Advisors of 1st, 2nd &3rd year of study	● A faculty advisor works closely with the editorial team and serves as a mentor to student contributors. ● They offer valuable insights, helping students refine their articles and contributions.
Student Editors	1 student from 1st, 2nd &3rd years of study	● The student editor, typically an experienced student from the department, collaborates with faculty and students to coordinate the news letters content. ● They ensure that articles are on-topic and align with the publications objectives
Student Writer /Contributor	Students from 1st, 2nd & 3rd year of study	● Students actively engage in creating content for the newsletter. ● They craft articles, reports, and pieces that reflect their insights, experiences,and interests in computer engineering.

		• These contributions may include research findings, project updates, or reflections on department activities

Participation of Students in the Publication of Technical Newsletters:
Our department strongly encourages students to actively participate in the publication of technical newsletters. Here's how students can get involved:

Article Contributions:
- Students can contribute articles on topics related to mechanical engineering, including their research findings, project updates, or personal experiences.
- These contributions are invaluable for sharing knowledge and fostering a sense of camaraderie.

Editorial Team Roles:
- Students have the opportunity to join the editorial team, taking on roles such as student editor, writer, or design specialist.
- These roles not only enhance their writing and design skills but also provide a chance to influence the content and aesthetics of the newsletter

Peer Review:
- Students can engage in the peer review process, offering constructive feedback on articles and content submitted by their peers.
- This involvement ensures the quality and accuracy of the publication.

Department Events Coverage:
- Students can report on departmental events, seminars, workshops, and activities.

These reports help capture the essence of department life and highlight the achievements and endeavors of their fellow students.

Highlighting Excellence:
- Acknowledging top performers in End Semester examinations, college toppers, champions in inter-college competitions, and the finest final year projects.

The active participation of students not only enriches the content of our technical newsletters but also fosters a sense of ownership and pride in their department's publications. Its a collaborative effort that strengthens the academic and creative bonds within the Department of CSE at GEMS Polytechnic College.

4.7.3 PARTICIPATION IN INTER-INSTITUTE/STATE/NATIONAL EVENTS BY STUDENTS OF THE PROGRAM OF THE STUDY

Empowering Excellence Beyond Borders:

Students in the Department of CSE at GEMS Polytechnic College actively engage in a wide array of inter-institute, state, and national events. These young talents enthusiastically participate in competitions, technical symposia, and innovation challenges, showcasing their skills and knowledge on regional and national platforms. Their dedication and achievements contribute significantly to the reputation of our institution, inspiring future leaders in the field of mechanical engineering.

Academic Year:2023-24

S.N	Name of the Student	Register Number	Event Description	Event Level (Inter-Institute/State/National Level)	Name of the Participating Institute/Organisation	Participated/ Prize won
1	MANGALAM TIWARI	1991821034	Shot-put	Inter Institute	Sityog Institute of Technology	II Prize
2	UTKASH KUMAR	1991822047	Cricket	Inter Institute	Sityog Institute of Technology	Winner
3	PREETI KUMAR	1991822031	Kabaddi	Inter Institute	Sityog Institute of Technology	Winner
4	RICHA KUMARI	1991821038	Long Jump	Inter Institute	Sityog Institute of Technology	Participated
5	NISHU KUMARI	1991820019	Kabaddi	Inter Institute	Sityog Institute of Technology	Winner
6	NISHU KUMARI	1991820019	Long Jump	Inter Institute	Sityog Institute of Technology	Participated
7	ANISHA RANJAN	1991822007	Long Jump	Inter Institute	Sityog Institute of Technology	Participated
8	MANGALAM TIWARI	1991821034	Kabaddi	Inter Institute	Sityog Institute of Technology	Runner

9	ANIKET RAJ	1991821021	Volley Ball	Inter Institute	Sityog Institute of Technology	Participated
10	AMAN KUMAR	1991821019	Volley Ball	Inter Institute	Sityog Institute of Technology	Participated
11	ANKIT RAJ	1991821023	Volley Ball	Inter Institute	Sityog Institute of Technology	Participated
12	RIYA KUMARI	1991821039	Kabaddi	Inter Institute	Sityog Institute of Technology	Winner
13	VIRAT KUMAR	1991821015	Cricket	Inter Institute	Sityog Institute of Technology	Winner

Academic Year:2022-23

S.N	Name of the Student	Register Number	Event Description	Event Level (Inter-Institute/State/National Level)	Name of the Participating Institute/Organisation	Participated/ Prize won
1	ABHISHEK KUMAR	1991820002	Celesta'23	State Level	IIT Patna	Participated
2	AMIT KUMAR	1991820005	Celesta'23	State Level	IIT Patna	Participated
3	MOHAN KUMAR	1991820018	Celesta'23	State Level	IIT Patna	Participated
4	JAISHREE	1991820014	Celesta'23	State Level	IIT Patna	Participated
5	PUJA KUMARI	1991820038	Celesta'23	State Level	IIT Patna	Participated
6	RIMJHIM KUMARI	1991820040	Celesta'23	State Level	IIT Patna	Participated
7	ARFA AZMAT	1991820006	Celesta'23	State Level	IIT Patna	Participated

8	BANTY KUMAR	1991820010	Celesta'23	State Level	IIT Patna	Participated
9	AMARJEET KUMAR	1991820004	Celesta'23	State Level	IIT Patna	Participated
10	DEVRAJ	1991820012	Celesta'23	State Level	IIT Patna	Participated
11	KUSHI KUMARI	1991820033	Celesta'23	State Level	IIT Patna	Participated
12	KM PHULBASIYA KUMARI	1991820016	Celesta'23	State Level	IIT Patna	Participated
13	ARYA NANDINI	1991820041	Celesta'23	State Level	IIT Patna	Participated
14	ANSHU KUMARI	1991820039	Celesta'23	State Level	IIT Patna	Participated

Academic Year: 2020-21

S.N	No.of Students	Register Number	Name of the Event	Event Level (Inter-Institute /State/National Level)	Name of the Participating Institute/Organisation	Participated/ Prize won
1	Bibha Kumari	1991818005	Vocational Training	State Level	BSNL Dalmia Nagar	Participated
2	Afreen Parveen	1991818002	Vocational Training	State Level	BSNL Dalmia Nagar	Participated
3	Seema Kumari	1991818006	Vocational Training	State Level	BSNL Dalmia Nagar	Participated
4	kanchha Kumari	1991818003	Vocational Training	State Level	BSNL Dalmia Nagar	Participated
5	Anjali Kumari	1991818007	Vocational Training	State Level	BSNL Dalmia Nagar	Participated

6	kanchha Kumari	1991818003	Web Design and Development using PHP	Inter College	GEMS Polytechnic College	Participated
7	Afreen Parveen	1991818002	Web Design and Development using PHP	Inter College	GEMS Polytechnic College	Participated
8	Anjali Kumari	1991818007	Basics of Block Chain Technology	Inter Institute	Sri Eshwar college of Engineering	Participated
9	Anjali Kumari	1991818007	Web Design and Development using PHP	Inter Institute	GEMS Polytechnic College	Participated
10	Bibha Kumari	1991818005	Web Design and Development using PHP	Inter Institute	GEMS Polytechnic College	Participated
11	Anjali Kumari	1991818007	The Next Generation	Inter Institute	Sri Eshwar college of Engineering	Participated
12	Anjali Kumari	1991818007	Education 4.0 & Online Open Resources	Inter Institute	St.Joseph College of Engineering	Participated
13	Seema Kumari	1991818006	Digital Transformation	Inter Institute	Sri Eshwar college of Engineering	Participated
14	Seema Kumari	1991818006	How Passionate Developers built ZOHO into a world class	Inter Institute	Sri Eshwar college of Engineering	Participated
15	Seema Kumari	1991818006	The Space Scientists-Mission Adithya	Inter Institute	Jansons Institute of Technology	Participated
16	Afreen Parveen	1991818002	Online Interactive Course on Web Designing	Inter Institute	Sri Eshwar College of Engineering	Participated

Criterion 5

Faculty Information and Contributions

5 FACULTY INFORMATION AND CONTRIBUTIONS (150)

Name	University Degree	Area of Specialization	Contribution to the program(% load)				Research Paper Publications	Faculty receiving Ph. D / M. Tech during the Assessment year	Current Designation	Initial Date of Joining	Association Type	At present with Institute
			CAY (2023-24)	CAY m1(2022-23)	CAY m2(2021-22)	CAY m3(2020-21)						
Ranjit Choudhary	M.E/M.Tech	Computer Application	100	100	100	100			HOD	06/07/2015	Regular	Yes
Chrisal Anand S	M.E/M.Tech	Information Technology	0	100	100	100			Sr.Lecturer	19/06/2018	Regular	No
Gopala Krishna Kunchala	M.E/M.Tech	Computer Science	0	100	100	100			Sr.Lecturer	22/08/2019	Regular	No
Vivek Kumar	M.E/M.Tech	Software Engineering	0	80	70	100			Sr.Lecturer	06/05/2019	Regular	No
Kanti	B.E/B.Tech	Computer Science and Engineering	0	100	34	50			Lecturer	26/11/2020	Regular	No
		Computer	100	100	100	0			Lecturer	01/07/2021	Regular	Yes

Jenitha K	M.E/M.Tech	Science and Engineering										
James. T	B.E / B. Tech	Computer Science and Engineering	100	0	0	0			Lecturer	03.04.2023	Regular	Yes
Priyanka kumari	B.TECH	Computer Science and Engineering	100	0	0	0			Lecturer	01.03.2023	Regular	Yes
Raglan d Royal	B.TECH	Computer Science and Engineering	100	0	0	0			Lecturer	17.09.2020	Regular	Yes
Meena Kumari	B.E/B.Tech	Computer Science and Engineering	100	0	0	0			Lecturer	16/06/2023	Regular	Yes
Kumar S	B.E/B.Tech	Computer Science and Engineering	43	0	0	0			Lecturer	22/06/2023	Regular	Yes
Anugrah Ashish Kumar	B.E	Electronics and Communication	40						Lecturer	01.12.2022	Regular	Yes

		Engineering										
Sumit Kumar Singh	M.Tech	Electronics and Communication Engineering	50	0	0	33			Sr. Lecturer	05.07.2015	Regular	Yes
Mr. Sujeet Kumar Saksena	B.TECH	Mechanical Engineering	50	0	0	0			Lecturer	5/10/2023	Regular	Yes
Yogesh C	M.Sc	Mathematics	0	0	25	25			Lecturer	15/10/2020	Regular	No
Nithish Chandra	M.E/M.Tech	Mechanical & Production Engineering	0	0	20	0			Lecturer	16/01/2020	Regular	No
Himanshu Kumar Singh	B.E/B.Tech	Bio-Technology	10	10	15	25			Lecturer	13/02/2017	Regular	Yes
Jaslin Christy S	MA (English)	English	0	20	0	33			Lecturer	24/06/2019	Regular	No
Rajat Kumar	M.E/M.Tech	Highway Engineering	0	0	33	25			Lecturer	06/07/2015	Regular	No

Sherin Rebecca Empress A	MA (English)	English	0	50	0	20			Lecturer	23/11/2020	Regular	Yes
Sumit Kumar Singh	M.E/M.Tech	VLSI & Micro-	0	0	0	33			Sr.Lecturer	06/07/2015	Regular	Yes
Bhaskar Ranjan	M.E/M.Tech	Power Electronics	0	0	0	25			Sr.Lecturer	26/09/2016	Regular	Yes
Daddanala Sanjeeva Kumar	M.Sc (Maths)	Mathematics	33	20	0	25			Lecturer	12/11/2020	Regular	Yes
K. Catharine	B.E/B.Tech	Electronics and Communication Engineering	60	33	33	0			Lecturer	19/07/2021	Regular	Yes
Ketu Kumar Sahitya	B.E/B.Tech	Electrical and Electronics Engineering	0	0	25	0			Lecturer	14/06/2021	Regular	Yes
Sam Heflin P	MA (English)	English	0	0	0	0			Lecturer	03/02/2021	Regular	No

Kukkamalla Velangi Babu	M. Sc (Physics)	Physics	0	33	50	0			Lecturer	16/12/2021	Regular	Yes
Robin S	B.E/B.Tech	Electronics and Communication Engineering	0	0	50	0			Sr.Lecturer	06/07/2015	Regular	Yes
Ravi Kumar Saksena	B.E/B.Tech	Mechanical Engineering	100	50	10	0			Lecturer	16/07/2018	Regular	Yes
Prabhu Nath	B.E/B.Tech	Mechanical Engineering		30	0	0			Lecturer	28/12/2022	Regular	Yes
Chiruguri Victor Emmanuel	M.E/M.Tech	Structural Engineering	0	25	0	0			Lecturer	28/10/2021	Regular	Yes
Jegan Raj I	M.E/M.Tech	Avionics	0	33	0	0			Sr.Lecturer	06/07/2015	Regular	Yes
Ruby Kumari	B.E/B.Tech	Computer Science and Engineering	50	0	0	0			Lecturer	18.10.2023	Regular	Yes

5.1 Student-Faculty Ratio (SFR) (25)

Year	N	F	SFR
2023-24 (CAY)	157	10.36	15.15
2022-23(CAYm1)	148	8.84	16.74
2021-22(CAYm2)	149	7.65	19.48

Average SFR : 24.14
Assessment SFR : 25

5.1.1. Provide the information about the regular and contractual faculty as per the format mentioned below:

Year	Total number of regular faculty in the department	Total number of contractual faculty in the department
CAY (2023-24)	9	0
CAYm1(2022-23)	13	0
CAYm2(2021-22)	14	0

5.2 Faculty Qualification (25)

5.2.1 Faculty Qualification Index (20)

	X	Y	F	FQ = 2 x [(10X + 7Y) / F)]
2023-24	3	6	6.00	24.00
2022-23	3	2	6.00	14.67
2021-22	5	2	6.00	21.33

Average Assessment : 20

5.2.2 Availability of Faculty/principal of that discipline with PhD. Qualification (5)
5.3 Faculty Retention (20)

Description	2022-23 (CAYm1)	2023-24 (CAY)
No of Faculty Retained	8	14
Total No of Faculty	13	14
% of Faculty Retained	62	100

Average : 81.00
Assessment Marks : 15.00

5.4 Faculty as participants in Faculty development/training activities conducted by other organizations (30)

Name of the faculty	Max 5 Per Faculty			
	2020-21 (CAYm3)	2021-22 (CAYm2)	2022-23(CAY1)	2023-24 (CAY)
Bhaskar Ranjan	5.00	5.00	5.00	0.00
Christal Anand S	1.00	0.00	3.00	0.00
Gopala Krishna Kunchala	2.00	0.00	3.00	0.00
Himanshu kumar Singh	2.00	0.00	0.00	4.00
Jegan Raj I	2.00	0.00	0.00	0.00
Jenitha K	2.00	0.00	0.00	0.00
James. T	0.00	0.00	0.00	5.00

Ragland Royal	0.00	0.00	0.00	5.00
Priyanka Kumari	0.00	0.00	0.00	5.00
Meena Kumari	2.00	0.00	0.00	5.00
Ruby Kumari	2.00	0.00	0.00	4.00
Kumar S	0.00	0.00	2.00	5.00
K Catharine	0.00	5.00	0.00	5.00
Ketu Kumar Sahitya	0.00	2.00	0.00	0.00
Nitish Chandra	5.00	2.00	0.00	0.00
Prabhu Nath	0.00	0.00	2.00	5.00
Ranjit Choudhary	3.00	0.00	0.00	5.00
Ravi Kumar Saksena	2.00	0.00	0.00	5.00
Sumit Kumar Singh	0.00	0.00	5.00	5.00
Vivek Kumar	3.00	0.00	3.00	0.00
Sum	31.00	14.00	23.00	58.00
RF = Number of Faculty required to comply with 25:1 SFR as	6.28	5.96	5.92	6.28
Assessment [6*(Sum / 0.5RF)](Marks limited to 30)	30.00	30.00	30.00	30.00

Average Assessment over 3 years (Marks limited to 30): 30.00

5.4. a. Organized/ Conducted FDPs and STTP by this department at State / National Level (12)

In our relentless pursuit of academic excellence, the Department of Computer Science & Engineering at GEMS Polytechnic College has taken a leadership role in organizing Programs (FDPs) and Short Term Training Programs (STTPs) at both the state and national levels. These initiatives are a testament to our commitment to fostering a continuous engineering community. Join us on this journey of knowledge enhancement and skill development.

S.NO	ACADEMIC YEAR	PROGRAM CONDUCTED DATE		PROGRAM TYPE(WORKSHOP/FDP/STTP)	NAME OF THE PROGRAMME	RESOURCE PERSONS/INSTITUTIONS/ ORGANIZATIONS
		FROM	TO			
1.	2023-2024	26-02-2024	04-03-2024	WORKSHOP	7- Segment Counter with logical Gates	Mr. Mathias Kiebler, Trainer - Sparkle
2.	2022-2023	06/11/2023	10/11/2023	FDP	FDP ON PYTHON 3.4.3	Spoken Tutorial, IIT Bombay
3.	2022-2023	10/04/2023	11/04/2023	FDP	Two days FDP on NBA Orientation	Dr. VijayaLaxmi Biradar GPC Governing Council Member,Director IQAC,Kalinga University Raipur Chhattisgarh
4.	2022-2023	8/05/2023	9/05/2023	WORKSHOP	Workshop Career Opportunities Oracle In Database Administration	Humaish Zaman Yusufi Atos - Senior Consultant
5.	2021-2022	25/07/2022	29/07/2022	FDP	One Week FDP on "SharpeningYour Interpersonal skills (SYIS)"	International Training Partners, Colorado Springs.

6.	2021-2022	31/07/2021	1/08/2021	FDP	FDP on“Challenges of the Teaching Profession”	1.Dr. Y. Dayakar, Retd Professor of Zoology, Government Degree College, A.P 2. Ramgopal Challa Principal GEMS Polytechnic College
7.	2020-2021	02/07/2021		FDP	Course Outcome and Program	Dr.J.Satheesh Kumar

5.5 Product development, Consultancy, Manufacturing contracts, testing contracts (8)

S.No	Nature of work	Consultant Person
1.	College Website Development/Maintenance	Mr.James T
2.	System Administration	Mr.James T Mr.Ragland Royal

3.	Networking/ CCTV Maintenance	Mr.James T Mr.Ragland Royal
4.	ERP/LMS	Mr.James T Mr.Ragland Royal
5.	G-suite/ Drive Maintenance	Mr.James T
6.	Automation of Bell Ringing	Mr.James T Mr.Ragland Royal

5.6 Faculty Performance Appraisal and Development System (FPADS) (30)

A. A well-defined FPADS instituted for all the assessment years (5)

GEMS Polytechnic College is committed to ensuring the highest standards of education and faculty performance. To achieve this, we have established the Annual Faculty Performance assessment years. This transparent system assesses the performance of our faculty members and provides them with valuable feedback while considering career progression opportunities.

Operating Authorities:

- The Director
- The Principal
- The Dean of Academics
- Head of the Department (HoD)
- Human Resource Officer

Summary of FPADS Points:

Part	Parameters		Max. Points
A	Educational Qualification & Experience (Max 20 Points)		
	A.1	Educational Qualifications	10
	A.2	Experience	10
B	Teaching & Learning Process (Max 150 Points)		
	B.1	Teaching, Learning & Evaluation Process	50

	B.2	Students feedback	50
	B.3	Result Analysis	50
C	Research & Development (Max 50 Points)		
	C.1	Awards / Honors & Membership in Professional Societies	10
	C.2	Online Certification Courses / Attended FDP, Workshop	10
	C.3	Research Paper /Books / Chapter Publications	10
	C.4	NITTT Trainings Certificate	10
	C.5	Consultancy	10
D	Department Development Activities		60
E	Institute Development Activities		50
F	Contribution to Society		50
G	Annual Confidential Report (ACR)		20
Total (Max Points 100)			400
Total Appraisal score on 10 Point scale			10

B. Its implementation and effectiveness (15)

Operating Procedure
Our AFPADS operates as follows:

Eligibility:

Faculty members who have completed one year of employment at our institution are eligible for the annual performance appraisal program.

Communication:

At the beginning of each academic year, we circulate a detailed circular outlining the objectives and the process of the Performance Appraisal Program to all employees.

Appraisal Form:

Employees are required to fill out the Performance Appraisal Form, which assesses them on various parameters, including job proficiency, interpersonal relationships, communication

Evaluation:

The submitted appraisal forms are evaluated, and each field is weighted against a predetermined scorecard to calculate the final score for each employee.

Performance Appraisal Meeting:

An appraisal meeting is scheduled with each employee. This meeting involves a panel consisting of the Management, including the HoD, Dean of Academics, Principal, and Director

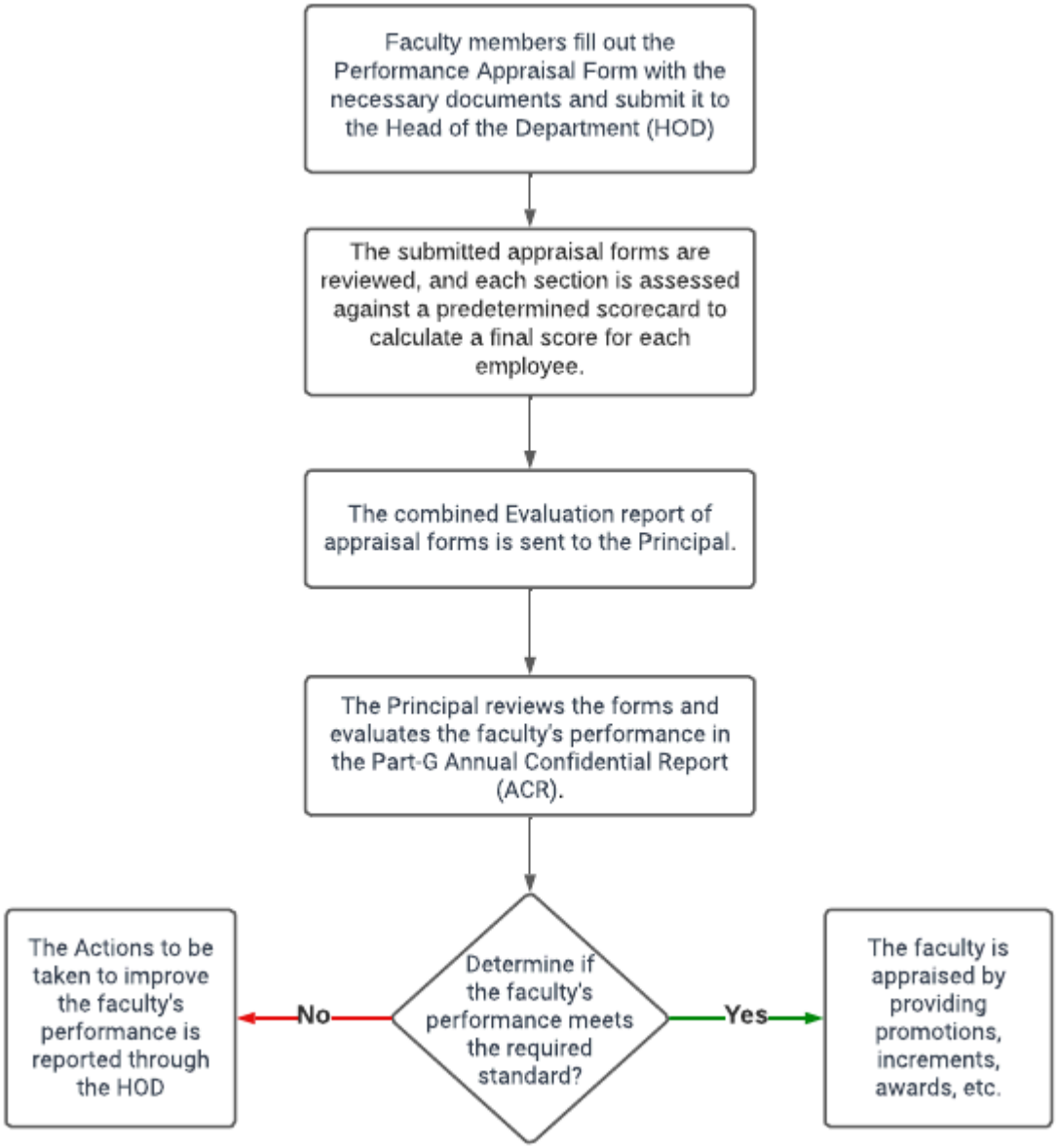
Discussion Points:

During the Appraisal Meeting, several crucial areas are discussed, including:

- Reviewing and confirming an understanding of the essential job functions, annual goals, and performance standards.
- Recognizing strengths and achievements.
- Identifying areas requiring improvement and establishing agreements on how to achieve improvement.
- Identifying areas where education, training, or development opportunities are needed, along with strategies for development.
- Discussions and confirmations about the steps the employee and the institution will take to accomplish self-development goals.

Outcome:

- Based on the scores from individual performance assessments, the management decides on monetary increments and promotions. This system provides a fair and transparent basis of hard work and dedication to our institution.
- The Annual Faculty Performance Appraisal and Development System (AFPADS) at GEMS Polytechnic College is a cornerstone of our commitment to academic excellence and continues to excel in their roles while pursuing opportunities for advancement within our institution.



C. Details of qualification up-gradation of faculty (10)

Empowering Faculty through Continuous Professional Development:

At GEMS Polytechnic College, we recognize that for our faculty to be effective educators, they must not only be experts in their respective subjects but also proficient in the art of teaching and knowledge dissemination. To address this need for continuous improvement, we have implemented a comprehensive program for qualification up-gradation of our faculty, in line with the "National Initiative for Technical Teachers Training (NITTT)" proposed jointly by the Ministry of Human Resource Development (MHRD) and the All India Council for Technical Education (AICTE).

Details of Qualification Up-gradation of Faculty:

National Initiative for Technical Teachers Training (NITTT)

The NITTT initiative focuses on equipping technical teachers with the necessary pedagogical skills to effectively impart knowledge and skills to students. This initiative is vital, especially for faculty members in technical education who play a pivotal role in shaping the future of our students.

Key Features of the NITTT Program:

Eligibility:

All faculty members of AICTE-approved Technical Institutes with less than five years of service are eligible to participate in this initiative. It is particularly beneficial for aspiring teachers in the technical education sector.

Mandatory Stage-I Modules:

For lecturers of Polytechnic colleges who joined after 1st March 2014, there are eight mandatory online modules available on the NITTT platform (www.nittt.ac.in). These modules are designed to enhance the skills and knowledge necessary for effective teaching.

Module 1: Orientation towards Technical Education & Curriculum Aspects (40 hours)
Module 2: Professional Values, Ethics, Ecology & Sustainable Development (40 hours)
Module 3: Communication Skills, Modes, and Knowledge Dissemination (20 hours)
Module 4: Instructional Planning and Delivery (40 hours)
Module 5: Technology-Enabled Learning and Lifelong Self-Learning (40 hours)
Module 6: Effective Modes of Student Assessment and Evaluation (40 hours)
Module 7: Creative Problem Solving, Innovation, and Meaningful R&D (40 hours)
Module8: Miscellaneous Aspects (Institutional Management & Administrative Procedures) (40 hours)

Certification:

Faculty members must successfully complete the above-mentioned modules, followed by industry and mentor-based training. Certification from NITTT is a crucial aspect of the qualification up-gradation process, and it is instrumental both for clearing probation and for seeking promotions within the institution.

Support from GEMS Polytechnic College

In line with our commitment to the professional development of our faculty, GEMS Polytechnic College provides financial support for the one-time registration of faculty members on the NITTT portal. This support ensures that our educators have the resources and opportunities to enhance their pedagogical skills, fostering a culture of continuous improvement in teaching and knowledge

Through the National Initiative for Technical Teachers Training (NITTT) and the support of GEMS Polytechnic College, our faculty members are better equipped to provide high-quality technical education and contribute to the holistic development of our students, ensuring that they are well-prepared for the challenges of the modern world.

List of Teaching Faculties undergoing / Completed NITTTR Stage-1 Modules:

Sl.No	Name of the Faculty	NITTTR ID	Module Status
1	Mr. James T	20232126794	Module 1 is in Progress
2	Ms. Meena Kumari	20231126796	Module 1 is in Progress
3	Ms Priyanka Kumari	20231126795	Module 1 is in Progress
4	Ms. Ruby Kumari	20231126797	Module 1 is in Progress
5	Mr. Kumar S	20232126798	Module 1 is in Progress
6	Mr. Ragland Royal	20232126793	Module 1 is in Progress
7	Mrs. Jenitha K	20211117566	1 & 2 Module are completed Successfully
8	Mr. Ravi Kumar Saksana	20202114048	1, 2, 3, 6 & 8 Module are completed Successfully

Certification:

Faculty members must successfully complete the above-mentioned modules, followed by industry and mentor-based training. Certification from NITTT is a crucial aspect instrumental both for clearing probation and for seeking promotions within the institution.

No: 11/2023/1/M2/34683

अखिल भारतीय तकनीकी शिक्षा परिषद्

प्रमाणपत्र

प्रमाणित किया जाता है कि

जेनिता के

एनआईटीटीटी पंजीयन क्रमांक :20211117566

ने

राष्ट्रीय तकनीकी शिक्षक प्रशिक्षण पहल

के अंतर्गत

मॉड्यूल 2 : वृत्तिक आचार नीति और संधारणीयता

को सफलता पूर्वक पूर्ण किया।

All India Council for Technical Education (AICTE)

Certificate

This is to certify that

JENITHA K

NITTT Registration No:20211117566

has successfully completed

Module 2 : Professional Ethics and Sustainability

of

National Initiative for Technical Teachers Training

Director NITTTR, Bhopal	Director NITTTR, Chandigarh	Member Secretary AICTE	Director NITTTR, Chennai	Director NITTTR, Kolkata

FEBRUARY 2022

List of Teaching Faculties Completed through NPTEL

Academic Year: 2020 - 2021

S. No	Name of the Faculty	Title of the FDP / Trainings	Period of FDP / training Completed	Institute Organized	No.of days of FDP / Trainings	Total No.of Days	Marks obtained (Max 5 Points)
1	Mr. Ranjit Choudhary	NBA Accreditation and Teaching and Learning in Engineering (NATE)	Jan-April 2022 (12 Week Course)	NPTEL	8	8	3

Academic Year: 2022 - 2023

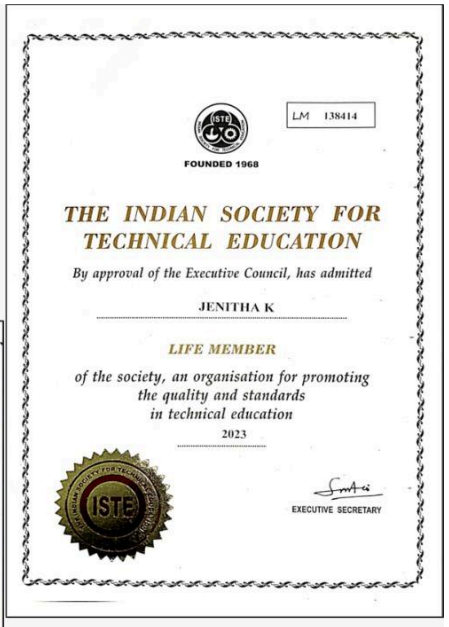
S. No	Name of the Faculty	Title of the FDP / Trainings	Period of FDP / training Completed	Institute Organized	No.of days of FDP / Trainings	Total No.of Days	Marks obtained (Max 5 Points)
1	Mr. Ranjit Choudhary	Python for Data Science	Jan-Feb 2022 (4 Week Course)	NPTEL	3	3	3
2	Mr. S. Christal Anand	Python for Data Science	Jan-Feb 2022 (4 Week Course)	NPTEL	3	3	3
3	Mr. K. Gopala Krishna	Python for Data Science	Jan-Feb 2022 (4 Week Course)	NPTEL	3	3	3
4	Ms. Jenitha K	Python for Data Science	Jan-Feb 2022 (4 Week Course)	NPTEL	3	3	3

S. No	Name of the Faculty	Title of the FDP / Trainings	Period of FDP / training Completed	Institute Organized	No.of days of FDP / Trainings	Total No.of Days	Marks obtained (Max 5 Points)
1	Mr. S. Christal Anand	Machine Learning with Python	21 to 25 March 2022	NITTTR	5	15	3
		Leadership in Academics	21 to 25 Feb 2022	NITTTR	5		
		Data Science	13 to 15 July 2022	NITTTR	5		
2	Mr. Vivek Kumar	Artificial Intelligence	14 to 18 Feb 2022	NITTTR	5	20	3
		Community Development	7 to 11 Feb 2022	NITTTR	5		
		Effective Teaching	28th Feb to 4th Mar 2022	NITTTR	5		
		Pattern Recognition	21 to 25 Mar 2022	NITTTR	5		
3	Mr. K. Gopala Krishna	Quality Assurance through Accreditation (NBA Guidelines)	14 to 18 Mar 2022	NITTTR	5	25	4
		NBA Accreditation for Polytechnic and Engineering Colleges	7 to 11 Mar 2022	NITTTR	5		
		Effective Teaching	28th Feb to 4th Mar	NITTTR	5		

			2022				
		Thesis and Research Paper Writing	21 to 25 Feb 2022	NITTTR	5		
		Artificial Intelligence	14 to 18 Feb 2022	NITTTR	5		
4	Ms. Jenitha K	Thesis and Research Paper Writing	21 to 25 Feb 2022	NITTTR	5	5	3

List Of Faculty having ISTE Membership :

Sl.No	Name of the faculty	Department	Registration Status	Registration Confirmation Mail received	Approval Mail Received	Payment Done	ISTE Life Membership Number
1	Mr.Ranjit Choudhary	Dean of Academics	Yes	Yes	Yes	Yes	LM - 138415
2	Mrs.Jenitha	Sr.Lecturer / Computer Science & Engineering	Yes	Yes	Yes	Yes	LM - 138414



Support from GEMS Polytechnic College

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the resources and opportunities to enhance their pedagogical skills, fostering a culture of continuous improvement in teaching and knowledge dissemination.

Through the National Initiative for Technical Teachers Training (NITTT) and the support of GEMS Polytechnic College, our faculty members are better equipped to provide high-quality tech
of our students, ensuring that they are well-prepared for the challenges of the modern world.

Criterion 6

Facilities and Technical Support

6 FACILITIES AND TECHNICAL SUPPORT (100)

6.1 Availability of adequate, well equipped classrooms to meet the curriculum requirements (10)

In line with AICTE norms, our Computer Science & Engineering department at **GEMS Polytechnic College** is equipped with sample and well-furnished classrooms. These facilities are thoughtfully designed to cater to the specific curriculum requirements of the department, ensuring a conducive learning environment for our students.

Sl. No.	Class Room	Carpet Area	Shared / Exclusive	Seating Capacity	Availability of Smart facilities	Weekly utilization
1	**Room No:1109 (1st Year)**	66 sqm	Exclusive	60	Blackboard, Projector, Speakers, Internet LAN Connection, Notice Board, Different Charts	6 Days
2	**Room No:1110 (2nd Year)**	66 sqm	Exclusive	60	Blackboard, Smart Board, Projector, Speakers, Internet LAN Connection, Notice Board, Different Charts	6 Days
3	**Room No:1114 (3rd Year)**	66 sqm	Exclusive	60	Blackboard, Projector, Speakers, Internet LAN Connection, Notice Board, Different Charts	6 Days
4	**Drawing Hall**	132 sqm	Shared	60	Blackboard	During Drawing class
5	**Seminar Hall**	448.7sqm	Shared	300	Projector, Audio System	During Seminar, Guest Lectures, Workshops, Association Events

6.2 Availability of adequate and well-equipped workshops, Laboratories and Technical manpower to meet the curriculum requirements (40)

A. Adequacy (10)

At **GEMS Polytechnic College,** the Department of Mechanical Engineering ensures the availability of well-equipped laboratories and workshops to meet the curriculum requirements. Adequate provisions are in place:

Efficient Equipment: All laboratories are furnished with efficient equipment, enabling students to conduct practical work during scheduled hours and beyond based on their interests. Both SBTE curriculum-prescribed experiments and additional ones are conducted, enriching the students' practical knowledge.

Organized Storage: Equipment and consumables are stored in designated racks for easy access by faculty, technicians, and students.

Facility and Notice Boards: The laboratories are equipped with sufficient furniture, blackboards, and notice boards for effective teaching and information dissemination. Internet LAN connections are provided as needed.

List of Lab Names:

Sr.	Name of the Laboratory	Room No	Name of the Important equipment (costing more than Rs.30,000/-)
1	System Maintenance Lab	1209 A	Networking Equipment (including Switches, Routers, LAN Cable) Intel i3 with 512GB, Monitor 18.5" UPS-35Nos
2	Database Lab	1112	Networking Equipment (including Switches, Routers, LAN Cable), Intel i3 9th Gen, Monitor 18.5", UPS-35 Nos
3.	Networks Lab	1113	Networking Equipment (including Switches, Routers, LAN Cable), Intel i3, 6KVA online UPS
4	Programming Lab	1111	Networking Equipment (including Switches, Routers, LAN Cable),Intel i5 8 GB RAM, 21.5" Monitor, 15KVA Online UPS

B. Quality of Labs/workshop (20)

The emphasis is on the quality and practical application of knowledge in the laboratories and workshops:

Importance of Practical Work:
Laboratories take precedence over theoretical classes as they allow students to engage in application-oriented practical work.

Dedicated Instructors:
Each laboratory has a designated faculty in-charge to facilitate the development of complete practical knowledge among students.

Student Involvement:
Students actively participate in practical work under the guidance of faculty members, and they maintain observation notes, ensuring immediate faculty review.

Safety and Cleanliness:
Cleanliness and safety are paramount. Safety measures, including water cans, first aid boxes, and fire extinguishers, are maintained, and students are required to adhere to safety attire and practices.

Information Display:
Display boards conveying do's and don'ts, the list of experiments (syllabus), and equipment specifications are provided to enhance student awareness.

C. Technical Manpower support –Eligible and Adequate (10)

The department is supported by eligible and adequate technical manpower, ensuring that students receive guidance and assistance as needed in the laboratories. Faculty members and technical support staff work together to create a conducive and knowledge-rich environment for our students.

At **GEMS Polytechnic College,** we are committed to providing students in the Department of **Computer Science & Engineering** with well-equipped quality laboratories and the necessary technical support to meet their curriculum requirements, fostering a dynamic and hands-on learning experience.

Sr.	Name of the Laboratory	No. of students per setup (Batch Size)	Name of the Important equipment (costing more than Rs.30,000/-)	Weekly utilization status (all the courses for which the lab is utilized)	Technical Manpower support		
					Name of the technical staff	Designation	Qualification
1	**System Maintenance Lab**	1 to 2	Networking Equipment (including Switches, Routers, LAN Cable) Intel i3 with 512GB, Monitor 18.5” UPS-35Nos	15 Hours	Mr.Bishal	Lab Assistant	Diploma
2	**Database Lab**	1 to 2	Networking Equipment (including Switches, Routers, LAN Cable), Intel i3 9th Gen, Monitor 18.5”, UPS-35 Nos	15 Hours	Mr.Sanjay	Lab Assistant	BCA
3.	**Networks Lab**	1 to 2	Networking Equipment (including Switches, Routers, LAN Cable), Intel i3, 6KVA online UPS	15 Hours	Mr.James Marandi	Lab Assistant	Diploma
4	**Programming Lab**	2 to 4	Networking Equipment (including Switches, Routers, LAN Cable),Intel i5 8 GB RAM, 21.5” Monitor, 15KVA Online UPS	15 Hours	Mr.James Marandi	Lab Assistant	Diploma

6.3 Additional facilities created for improving the quality of learning experience in laboratories (20)

A. Facilities (10)

In pursuit of enhancing the quality of the learning experience within laboratory settings, our institution has embarked on a comprehensive endeavor to establish state-of-the-art facilities. The New facilities are designed to provide students with an enriched and engaging educational environment.

The following are some of the key features and facilities introduced:

Sr. No.	Facility Name
1	Prototype of Computer Components models
2	High Speed Internet Access
3	Virtual Lab
4	LAN Testing Instrument
5	Air Conditioning
6	Router, Switches & Hub
7	Previous semester Projects models & Reports
8	Display charts
9	NPTEL Video Lectures
10	Projector and Display Screens
11	Remote Learning Facilities
12	Engaging Learning Resources

B. Effective Utilization (5)

It is not enough to merely introduce new facilities; ensuring their effective utilization is equally crucial.

Sr. No.	Facility Name	Utilization
1	Prototype of Computer Components models	a. Enhance hands-on understanding of Computer Components concepts. b. Encourage creative design and experimentation with physical models.
2	High Speed Internet Access	a. high-speed internet connection, as its essential for research, online collaboration, and accessing online resources.

3	Virtual Lab	a. Provide a safe environment for conducting experiments and simulations. b. Enable remote access for students to practice and learn at their convenience.
4	LAN Testing Instrument	a. Familiarize students with Local Area Network testing skills. b. Develop skills in detecting connection defects and quality assessment.
5	Air Conditioning	a. Comfortable room temperature and ventilation to create a conducive learning environment.
6	Router, Switches & Hub	a. Introduce students to know and work on the given model for assessment. b. Prepare students for roles in handling networks related defects in industries.
7	Previous semester Projects models & Reports	a. Serve as references for future projects and learning. b. Showcase successful project outcomes and encourage knowledge sharing.
8	Display charts	a. Visual aids for better comprehension of complex concepts. b. Create an interactive and engaging learning environment in the lab.
9	NPTEL Video Lectures	a. Offer supplementary learning resources for theoretical concepts. b. Support a blended learning approach by providing expert-led content.
10	Projector and Display Screens	a. Projectors or large display screens for instructors to demonstrate concepts and for presentations.
11	Remote Learning Facilities	a. In addition to physical infrastructure, consider integrating technology for remote learning, including video conferencing equipment and collaboration software for hybrid or online classes.
12	Engaging Learning Resources	a. Providing access to online courses, tutorials, and educational websites to complement classroom learning.

C. Relevance to POs/PSOs (5)

Sr. No.	Facility Name	Utilization	Relevance to POs / PSOs
1	Prototype of Computer Components models	a. Enhance hands-on understanding of Computer Components concepts. b. Encourage creative design and experimentation with physical models.	PO4, PSO1, PSO2
2	High Speed Internet Access	a. high-speed internet connection, as its essential for research, online collaboration, and accessing online resources.	PO3, PO4, PSO1, PSO2
3	Virtual Lab	a. Provide a safe environment for conducting experiments and simulations. b. Enable remote access for students to practice and learn at their convenience.	PO2, PO6, PO7, PSO1
4	LAN Testing Instrument	a. Familiarize students with Local Area Network testing skills. b. Develop skills in detecting connection defects and quality assessment.	PO3, PO4, PSO1, PSO2
5	Air Conditioning	a. Comfortable room temperature and ventilation to create a conducive learning environment.	
6	Router, Switches & Hub	a. Introduce students to know and work on the given model for assessment. b. Prepare students for roles in handling networks related defects in industries.	PO3,PO4,PSO1, PSO2
7	Previous semester Projects models & Reports	a. Serve as references for future projects and learning. b. Showcase successful project outcomes and encourage knowledge sharing.	PO6, PSO2
8	Display charts	a. Visual aids for better comprehension of complex concepts. b. Create an interactive and engaging learning environment in the lab.	PO2, PO6, PO7, PSO1
9	NPTEL Video Lectures	a. Offer supplementary learning resources for theoretical concepts. b. Support a blended learning approach by providing expert-led content.	PO2, PO6, PO7, PSO1
10	Projector and Display Screens	a. Projectors or large display screens for instructors to demonstrate concepts and for presentations.	PO3, PO6, PO7, PSO2

11	Remote Learning Facilities	a. In addition to physical infrastructure, consider integrating technology for remote learning, including video conferencing equipment and collaboration software for hybrid or online classes.	PO2, PO6, PO7, PSO1
12	Engaging Learning Resources	a. Providing access to online courses, tutorials, and educational websites to complement classroom learning.	PO2, PO6, PO7, PSO1

Sr. No	Facility Name	Details	Reason(s) for creating facility	Utilization	Areas in which students are expected to have enhanced learning	Relevance to POs/PSOs
1	Prototype of Computer Component models	The Prototype of computer components models consists of various scaled-down physical models representing mechanical systems, components, and mechanisms.	This facility has been established to provide students with tangible examples of computer components systems and to facilitate hands-on learning.	a. Enhance hands-on understanding of Computer Components concepts. b. Encourage creative design and experimentation with physical models.	This facility enhance students' understanding of mechanical concepts component interactions, and the application of theoretical knowledge to real-world systems.	PO4, PSO1, PSO2
2	High Speed Internet Access	Ensuring high-speed internet access in laboratory settings is paramount for optimizing the learning experience. A robust and reliable network infrastructure, including sufficient bandwidth, secure wireless connectivity, and advanced security measures, lays the foundation for seamless access to online resources, collaborative tools, and educational	By prioritizing these aspects, educational institutions can leverage technology to its fullest potential, providing students and instructors with a platform that enhances the quality and effectiveness of laboratory-based learning experiences	a. High-speed internet connection, as its essential for research, online collaboration, and accessing online resources	Students are expected to experience enhanced learning through technology integration, critical thinking development, global awareness, and the cultivation of adaptable skills, preparing them for success in a dynamic and interconnected world.	PO3, PO4, PSO1, PSO2

		content. Scalability, remote access options, and proactive technical support further contribute to a dynamic and resilient learning environment. .				
3	Virtual Lab	The Virtual Lab is a computer-based platform that simulates various mechanical engineering experiments and processes.	The Virtual Lab has been established to provide students with a safe and accessible environment for conducting experiments, simulations, and enhancing understanding of theoretical concepts.	a. Provide a safe environment for conducting experiments and simulations. b. Enable remote access for students to practice and learn at their convenience. c. This facility enhances students' problem-solving skills, understanding of complex mechanical systems, and their ability to analyze and interpret experimental results.	This facility enhances students' problem-solving skills, understanding of complex mechanical systems, and their ability to analyze and interpret experimental results.	PO2, PO6, PO7, PSO1
4	LAN Testing Instrument	To improve the quality of learning experiences in laboratories for LAN testing instruments, additional facilities may include dedicated testing stations with high-performance computers, advanced networking hardware for real-time	Establishing a LAN testing instrument facility is crucial to provide students with hands-on experience, align education with industry demands, and enhance their practical skills for successful careers in networking.	a. Familiarize students with Local Area Network testing skills. b. Develop skills in detecting connection defects and quality assessment.	Students in LAN testing instrument facilities are expected to gain enhanced skills in network configuration, troubleshooting, and cybersecurity, preparing them for roles in network administration and ensuring practical proficiency in real-world networking	PO3, PO4, PSO1, PSO2

		simulations, and comprehensive instrument libraries. Furthermore, the integration of remote access capabilities, hands-on workshops, and expert guidance can enhance student proficiency in LAN testing, fostering a practical and enriched learning environment.			scenarios. Additionally, hands-on experience with the latest LAN testing tools cultivates expertise in diagnosing and optimizing Local Area Networks, fostering a deep understanding of evolving networking technologies.	
5	Profile Projector	The Profile Projector is an optical measurement instrument used for accurate measurement and inspection of 2D profiles and features on various workpieces.	This facility has been established to provide students with the ability to perform precise dimensional measurements and inspect the profiles and features of mechanical components.	a. Aid in precision measurement and inspection of workpieces. b. Teach students how to analyze and document geometric features. c. Students can use the Profile Projector to measure and inspect workpieces, assess geometric tolerances, and perform quality control on machined parts.	This facility enhances students' skills in precision measurement, geometric dimensioning and tolerancing (GD&T), and quality control techniques.	PO3, PO5, PO6, PO7, PSO2,
6	Router, Switches & Hub	The computer lab is equipped with high-performance routers to manage network traffic efficiently, switches for fast and secure data transfer among devices, and hubs for basic connectivity, providing a robust	Establishing routing, switches, and hubs in a computer lab is vital for creating a robust and efficient network infrastructure, facilitating seamless communication and data transfer	a. Introduce students to know and work on the given model for assessment. b. Prepare students for roles in handling networks related defects in industries.	The implementation of routers, switches, and hubs in the computer lab enhances students' learning by providing a seamless and efficient network infrastructure, facilitating fast and secure data transfer,	PO3,PO4,PSO1,PSO2

		infrastructure for seamless communication and collaboration among users and devices. Regular updates and monitoring ensure the reliability and security of the network infrastructure.	among devices. This setup supports collaborative learning, enhances connectivity, and ensures the smooth operation of various networking activities within the lab.		collaborative projects, and hands-on networking exercises, fostering a dynamic and interactive educational experience. This technology backbone ensures reliable connectivity, enabling students to engage with online resources, access virtual labs, and participate in collaborative learning environments.	
7	Previous semester Projects models & Reports	This facility comprises physical models and comprehensive project reports from previous semesters in the Department of Mechanical Engineering. Models and reports cover a range of mechanical systems and innovative projects undertaken by students in earlier semesters.	To provide valuabl reference and learning resources for current students To encourage knowledge sharing and showcase successful projects To deepen the understanding of project design, execution, and documentation.	a. Serve as references for future projects and learning. b. Showcase successful project outcomes and encourage knowledge sharing. c. Students can study physical models to gain hands-on insight into engineering concepts. Project reports serve as detailed guides for project development and analysis. Learning from the experiences and outcomes of past projects.	Improved project development and documentation skills Enhanced problem-solving and critical thinking abilities. Deeper understanding of mechanical engineering concepts and practical applications.	PO6, PSO2

8	Display charts	This facility includes visually engaging charts covering various mechanical engineering topics. Charts complement the curriculum and are designed for interactive learning.	To enhance visual learning and understanding of complex mechanical concepts. To create an engaging and interactive learning environment. To support students' exploration of theoretical concepts through visual aids.	a. Visual aids for better comprehension of complex concepts. b. Create an interactive and engaging learning environment in the lab. c. Students can use the charts during lab sessions to reinforce theoretical knowledge. Charts facilitate discussions, explanations, and interactive learning. They serve as quick references for key concepts.	Improved visual and conceptual understanding of mechanical engineering topics. Enhanced problem-solving skills through visual representation of problems. Increased engagement and participation in lab activities.	PO2, PO6, PO7, PSO1
9	NPTEL Video Lectures	This facility includes visually engaging charts covering various mechanical engineering topics. Charts complement the curriculum and are designed for interactive learning.s	To supplement classroom learning with expert-led video content. To offer an additional resource for understanding complex topics. To facilitate self-paced learning and revision.	a. Offer supplementary learning resources for theoretical concepts. b. Support a blended learning approach by providing expert-led content. c. Students can watch video lectures to reinforce classroom learning. The videos offer in-depth explanations of complex concepts. Students can use them for self-study and exam preparation.	Improved understanding of complex mechanical engineering concepts Enhanced problem-solving abilities through expert guidance. Increased flexibility in learning and study methods.	PO2, PO6, PO7, PSO1
10	Projector and Display Screens	The computer lab is equipped with high-resolution projectors for effective	Installing projector and display screens in a computer lab enhances visual learning by	a. Projectors or large display screens for instructors to demonstrate concepts and for	Students benefit from enhanced learning in the computer lab wit projectors and display screens, as	PO3, PO6, PO7, PSO2

		presentations and interactive learning, along with large display screens to facilitate group discussions and enhance visibility, creating an immersive and collaborative environment for students and instructors. Regular maintenance ensures optimal performance and a seamless visua experience.	enabling effective presentations and collaborative discussions, fostering an immersive and interactive educational environment for students and instructors. This multimedia setup facilitates dynamic content delivery an engagement.	presentations.	these tools facilitate dynamic visual presentations, interactive discussions, and multimedia content delivery, fostering a more engaging and immersive educational experience. The visual aids promote effective communication of complex concepts, aiding comprehension and knowledge retention among students.	
11	Remote Learning Facilities	The computer lab is equipped with video conferencing tools, webcams, and microphones to facilitate seamless remote learning experiences, allowing students to participate in virtual classes, engage with online resources, and collaborate with peers. Reliable high-speed internet access ensures a stable connection for effective remote learning sessions.	Establishing remote learning facilities in a computer lab enables seamless virtual education, offering students access to online classes, collaborative tools, and interactive resources, ensuring flexibility and continuity in learning regardless of physical location. The setup supports remote engagement, fostering a dynamic and inclusive	a. In addition to physical infrastructure, consider integrating technology for remote learning, including video conferencing equipment and collaboration software for hybrid or online classes.	Remote learning facilities in the computer lab enable students to access virtual classes, collaborate seamlessly online, and engage with diverse educational resources, fostering flexibility and inclusivity in learning experiences. This setup encourages self-directed learning, allowing students to explore content at their own pace and adapt to a variety of digital tools for interactive and personalized education.	PO2, PO6, PO7, PSO1

			educational experience.			
12	Engaging Learning Resources	The computer lab offers access to interactive simulations, educational software, and multimedia content, fostering engaging learning experiences. In addition, collaborative online platforms and virtual labs provide students with dynamic tools for hands-on exploration and group-based learning.	Implementing engaging learning resources in a computer lab promotes active student participation through interactive simulations, multimedia content, and collaborative online platforms, enhancing the overall learning experience. This approach cultivates a dynamic and stimulating educational environment, fostering student curiosity and knowledge retention.	a. Providing access to online courses, tutorials, and educational websites to complement classroom learning.	Engaging learning resources in the computer lab, such as interactive simulations and collaborative online platforms, promote active student participation, fostering a dynamic and stimulating educational environment. This approach enhances critical thinking, problem-solving skills, and knowledge retention, creating a more effective and immersive learning experience.	PO2, PO6, PO7, PSO1

6.4 Laboratories: Maintenance and overall ambiance (10)

A. Maintenance of Laboratory Equipment:

Equipment and Software Provision: All laboratories are equipped with hardware and software in accordance with the curriculum and syllabus requirements.

Periodic Service and Maintenance: Regular service and maintenance of laboratory equipment are ensured to keep them in optimal working condition.

Uninterruptible Power Supply (UPS): An uninterruptible power supply is provided in computer laboratories to prevent data loss and equipment damage during power fluctuations.

Identification and Numbering: Personal computers and equipment are numbered for easy maintenance and identification.

Software and System Upgradation: Software and system upgrades are carried out as needed to meet curriculum demands and technological advancements.

Antivirus and Security: Antivirus software is installed and regularly updated to safeguard computers from malware and security threats.

Entry Registers: IN-OUT entry registers are maintained to track laboratory usage.

Consumables: Consumables are purchased each academic year to ensure the smooth conduct of laboratory experiments.

Consumable Issue Registers: Registers for issuing and tracking consumables are maintained for efficient stock management.

Stock Verification: Internal stock verification is conducted annually, and action reports are prepared to address any discrepancies.

Extended Laboratory Hours: Laboratories are available beyond regular working hours when necessary to accommodate student needs.

Student Resources:
1. Laboratory manuals are prepared and provided to students for reference.
2. Technical informative charts are displayed in laboratories.
3. Innovative projects are showcased in laboratories to inspire and engage students.

Information Displays: Practical session timetables, experiment lists, equipment lists, and safety measures are prominently displayed in all laboratories.

B. Overall Ambiance:

Illumination and Ventilation: All laboratories are designed with sufficient AC to ensure proper illumination and ventilation, creating a comfortable working environment.

Safety Measures: The floors are regularly cleaned to maintain a dust-free environment conducive to laboratory work.

The above-mentioned outlines for maintaining laboratory equipment and ensuring a conducive overall ambience in the laboratories cover equipment provision, regular maintenance, software updates, security measures, consumables management, extended laboratory hours, lighting, ventilation, and safety precautions. This comprehensive approach contributes to the efficient functioning of laboratories and creates a comfortable and safe learning environment for students and staff.

6.5 Availability of computing facility in the department (10)

Sr. No	No Of Computer terminals	Students Computer Ratio	Details of Legal Software	Details of Networking	Details of Printers, Scanners etc.
1	90	1:2	MS Windows OS	ISHAN-50Mbps	Projector, Speakers,

6.6 Language lab (10)

Availability:

1. In today's rapidly evolving professional landscape, effective communication has become a fundamental prerequisite for success in any career.
2. The imperative to cultivate such skills is a widely acknowledged phenomenon in contemporary society.
3. Recognizing the critical importance of communication, both the All India Council for Technical Education (AICTE) and the **State Board of Technical Education (SBTE)** in Bihar place significant emphasis on nurturing students' communicative skills.
4. As technology has seamlessly integrated into every aspect of human life, it has extended its influence into the field of communication.
5. Our Language Lab serves as a cornerstone for the development of our students language and communication skills.
6. It harnesses the power of advanced audio and video systems to fortify students' abilities in learning, reading, writing, and speaking.

Key Features of our Language Lab:

Location: Our well-equipped Language Lab is situated on the second floor in room no. 1109.
Ambiance: The lab is fully air-conditioned, providing a comfortable and conducive environment for language learning.
Software: We utilize the **ORELL Talk Smart Version software,** offering students access to state-of-the-art language learning tools.

Oréll Talk

Installation Certificate

This is to certify that M/s. Gems Polytechnic College, Pirtampur, Bihar has installed OréllTalk, the world's most recognised Language Lab Software to learn any language in the most sophisticated way and the license of the software will remain active until the validated expiry.

Online / Offline Version (Specify URL) : Orell Talk Smart Version (1+30 consoles)

Installed on : 05/07/2021 License Mode / Expiry Date : Lifetime Perpetual

Authorized Signatory

Oréll

Orell Technosystems (India) Pvt Ltd.

Reg. office : 1st Floor, BCG Tower, Opp CSEZ, Seaport- Airport Road, Kakkanad, Cochin - 682037, Kerala , India

Shared - With all departments:
Our Language Lab is a resource shared across all academic departments, fostering cross-disciplinary language development and promoting a collaborative learning atmosphere.

Beneficiaries:
The Language Lab caters to students across all three academic years, including 1st, 2nd, and 3rd-year students, ensuring a comprehensive and continuous development of language and communication skills throughout their academic journey.

Infrastructure:

Name of the Software	ORELL Talk Smart Version
No.of Computers	30
No.of Head Phones	30
LCD Projector	1
Sound System	1

Number of Computer Terminals: With a total of 30 computer terminals, each student enjoys an individual workstation, maintaining a favorable student-computer ratio of 1:1.

Available Facilities: The lab is equipped with essential facilities, including an LCD projector, microphones and headphones, computers with internet connectivity, and a media player with a sound system, creating an enriching and immersive learning environment.

Utilization: The Language Lab offers a wide array of activities and exercises that empower students to enhance their language and communication skills effectively. Here are some of the key ways in which the lab is utilized:

Listening Practice:
Students engage in listening exercises, sharpening their comprehension skills as they follow passages and answer questions.

Enhancing Language Proficiency:
The language lab is a valuable resource for students to improve their language skills through interactive exercises and real-life simulations.

Personalized Learning:
It offers a tailored learning experience, allowing students to practice listening, speaking, and writing in a controlled environment at their own pace.

Multi-Lingual Support:
The language lab caters to a variety of languages, enabling learners to explore and master different languages effortlessly.

Pronunciation and Accent Improvement:
Students can work on perfecting their pronunciation and reducing their accents by utilizing the lab's audio and visual aids.

Assessment and Feedback:
The lab also provides a platform for instructors to evaluate students' progress and offer constructive feedback to help them refine their language abilities.

Criterion 7

Continuous Improvements

7.1 Actions taken based on the results of evaluation of each of the POs and PSOs (25)

POs Attainment Levels and Actions for Improvement- (2022-23)

POs	Target Level	Attainment Level	Observations
PO 1: Basic and Discipline-specific knowledge			
PO1	2.70	2.42	"Students fell short of the target value (2.70) in applying knowledge of basic mathematics, science and engineering fundamentals with an attainment value of 2.42."
Action 1: ● Implement additional support measures such as Bridge Courses, Remedial classes, and Assignments to strengthen students' understanding of fundamental concepts in mathematics and science. **Action 2:** ● Conduct regular assessments and offer feedback to promptly address areas of difficulty in both basic and discipline-specific knowledge for timely intervention and support.			
PO 2: Problem analysis			
PO2	1.70	1.75	Target achieved Successfully .
Action 1: ● Target Need to increase.			
PO 3: Design/ development of solutions			
PO3	1.72	1.70	"The attainment value of 1.70 Slightly falls short of the target value of 1.72 in designing solutions for well-defined technical problems and assisting with the design of systems components or processes to meet specified needs ."
Action 1: ● Arranged workshops and seminars to enhance programming skills and foster interest in developing mini projects.			

PO 4: Engineering Tools, Experimentation and Testing			
PO4	1.82	1.57	"The attainment value of 1.57 moderately falls below the target value of 1.82 in applying modern engineering tools and appropriate techniques for conducting standard tests and experimentation."
Action 1: ● Established peer-to-peer learning and support groups to foster collaboration and knowledge-sharing among students in the domain of engineering tools and experimentation. **Action 2:** ● Encouraged subject teachers to provide additional assistance, clarify doubts, and offer guidance to students, particularly those facing challenges with the utilization of modern engineering tools and techniques.			
PO 5: Engineering practices for society, sustainability and environment			
PO5	1.47	1.45	A lag of 0.2 Observed ,.
Action 1: ● To know industry needs and social aspects, students visit industries to enrich their reasonable information with the impact of enhanced practices on engineering". **Action 2:** ● Educated to special environmental projects related to computer applications, in which worldwide and ecological problems are enhanced, with respect to utilization of energy"			
PO 6: Project Management			
PO6	1.58	1.53	"The attainment value of 1.53 suggests slightly low performance, falling below the target value of 1.58, in Project Management: using engineering management principles individually, as a team member, or as a leader to manage projects and effectively communicate about well-project management."
Action 1: ● Project reviews are conducted regularly.			

<table>
<tr><td colspan="4">PO 7: Life-long learning</td></tr>
<tr><td>PO7</td><td>1.70</td><td>1.53</td><td>“The attainment value of 1.53 moderately falls below the target value of 1.70 , in Life-long learning: the ability to analyze individual needs and engage in updating in the context of technological changes.”</td></tr>
<tr><td colspan="4">Action 1:
● Students are motivated to undergo online courses.
Action 2:
● Students are encouraged to participate in various technical competitions and events.</td></tr>
<tr><td colspan="4">PSO:1 Ability to develop computer programs in areas related to Algorithms, DBMS, Software Design, Programming Languages and Networking.</td></tr>
<tr><td>PSO1</td><td>1.92</td><td>1.84</td><td>The attainment value of 1.84 indicates moderately below the target value of 1.92 , in the ability to develop computer programs in areas related to Algorithms, DBMS, Software Design, Programming Languages, and Networking.</td></tr>
<tr><td colspan="4">Action 1 :
● We organize technical programs through Boot -UP association activities and technical forums to enhance knowledge.
Action 2 :
● We encourage students to engage in technical events to strengthen their knowledge and propose innovative ideas.</td></tr>
<tr><td colspan="4">PSO:2 To enable diploma, to acquire programming and development competence, to sustain in academia as well as in industry</td></tr>
<tr><td>PSO2</td><td>1.65</td><td>1.68</td><td>Target Achieved Successfully.</td></tr>
<tr><td colspan="4">Action 1:
● Target Need to increase.</td></tr>
</table>

7.2 Improvement in Success Index of Students without the backlog (10)

Items	Latest Passed out Batch (2020-21)	Latest Passed out Batch minus 1 (2019-20)	Latest Passed out Batch minus 2 (2018-19)
Success Index (from 4.2.1)	0.19	0.08	0.11

7.3 Improvement in Placement and Higher Studies (10)

Items	Latest Passed out Batch (2020-21)	Latest Passed out Batch minus 1 (2019-20)	Latest Passed out Batch minus 2 (2018-19)
Placement Index (from 4.6)	1.23	0.85	0.70

7.4 Improvement in Academic Performance in Final year (10)

Items	Latest Passed out Batch (2020-21)	Latest Passed out Batch minus 1 (2019-20)	Latest Passed out Batch minus 2 (2018-19)
Academic Performance Index (from 4.3)	6.84	7.81	7.89

7.5 Internal Academic Audits to Review Complete Academics & to Implement Corrective Actions on Continuous Basis (10)

Items	2022-23 (CAYm1)	2021-22 (CAYm2)	2020-21 (CAYm3)
Internal Academic Audits	3	4	3

7.6 New Facility created in the Program (10)

Items	2022-23 (CAYm1)	2021-22 (CAYm2)	2020-21 (CAYm3)
New Facility Created	Online UPS Connection in Labs	Internet Connection	Smart Board in Classroom

Institute Level Criteria

Criterion 8

Student Support System

8 STUDENT SUPPORT SYSTEMS (50)

8.1 Mentoring system to help at individual level (10)

In our institution, we have implemented a robust mentoring system aimed at providing comprehensive support to our students on an individual level. This system has been designed to cater to various aspects of students' academic and personal development. In this article, we will delve into the details of our mentoring system and highlight its effectiveness.

Type of Mentoring:

- Our mentoring program encompasses different facets of a student's journey, including professional guidance, career advancement, course-specific assistance, laboratory-specific support, and all-round personal development.
- This multifaceted approach ensures that students receive tailored guidance based on their unique needs and aspirations.

Faculty Involvement:

- To make this system effective, we have dedicated 4 to 5 experienced faculty members per class who serve as mentors.
- These mentors are carefully selected based on their expertise and willingness to engage with students on a personal level.

Student-to-Mentor Ratio:

- We maintain a low student-to-mentor ratio, with each mentor responsible for a group of 10 to 15 students.
- This ensures that mentors can provide personalized attention to each student under their care.

Frequency of Meetings:

- Our mentoring program encourages regular interactions.
- Mentors meet with their assigned students either once a month or twice a semester, depending on the specific needs and goals of the students.

Contact Hours:

- To accommodate students' schedules, mentor-mentee meetings are scheduled during the zeroth hour, from 3:50 pm to 4:40 pm.
- This time slot allows for uninterrupted discussions and ensures that students can focus on their academic and personal growth.

Specific Mentor Profile:

- Our mentoring system relies on a comprehensive mentor profile that includes various aspects of the students life and performance.

This profile encompasses:

- **Personal Details:** Understanding each student's background, interests, and aspirations.
- **Academic & Non-Academic Performance:** Analyzing academic achievements, as well as involvement in extracurricular activities.
- **Attendance Performance:** Tracking attendance to identify potential issues or patterns.
- **Parents Interaction:** Encouraging communication with parents to ensure a holistic support network.
- **Non-Compliance Details**: Addressing any non-compliance issues or disciplinary concerns.
- **Mentor-Mentee Meeting Details**:Documenting the progress and outcomes of each mentoring session.

Efficacy of Our Mentoring System:

Our mentoring system has proven to be highly effective in several ways:

Improved Academic Performance:

- Students who actively engage with their mentors tend to perform better academically.
- The personalized guidance helps them set and achieve their academic goal**s.**

Enhanced Career Prospects:

- By receiving guidance on career choices and development, students are better equipped to make informed decisions about their future.

Personal Growth:

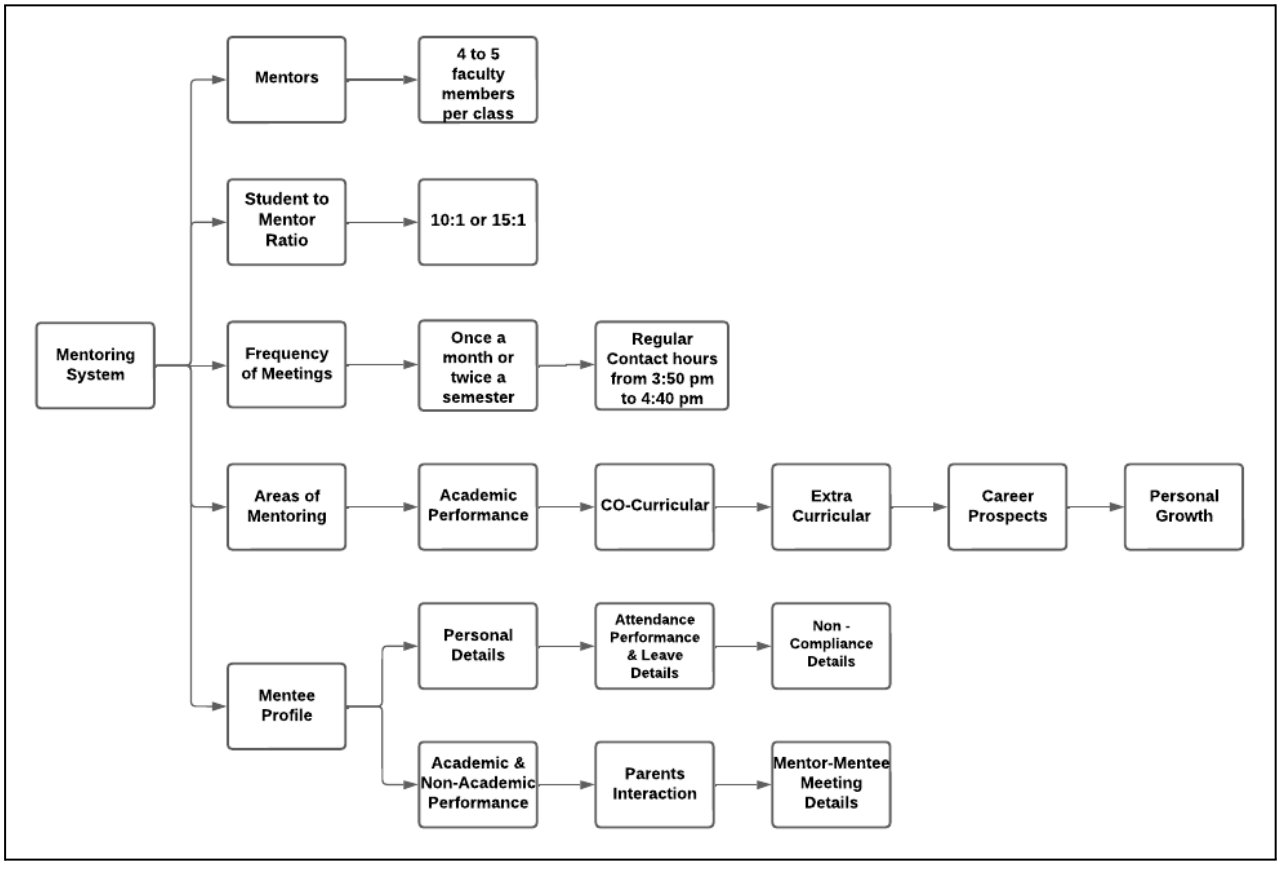
- The all-round development aspect of our mentoring system fosters personal growth, including improved communication skills, confidence, and leadership abilities.

Retention and Satisfaction:

- Our system has contributed to higher student retention rates and overall satisfaction among students and their families.

Early Intervention:

- Through the mentor profile, we can identify and address issues promptly, ensuring that students receive the support they need when they need it.



In conclusion, our institution's mentoring system has been meticulously designed to cater to the individual needs of our students. By providing professional guidance, personalized support, and regular interactions, we aim to empower our students to excel academically and personally. The proven efficacy of this system underscores its value in nurturing the potential of each student..

8.2 Feedback analysis and reward/ corrective measures taken, if any (10)

- Feedback collected for all courses: YES/NO;
- Specify the feedback collection process;
- Average Percentage of students who participate;
- Specify the feedback analysis process;
- Basis of reward/ corrective measures, if any;
- Indices used for measuring quality of teaching & learning and summary of the index values for all courses/teachers;
- Number of corrective actions taken.

A. Methodology being followed for feedback collection, analysis and its effectiveness (5)

Feedback is an integral part of our commitment to continuous improvement in the quality of education. It serves as a valuable tool for assessing and enhancing the teaching and learning experience within our institution.
Feedback collected for all courses: **YES**

Specify the feedback collection process:
Direct Feedback from the Students:

- We leverage technology through the **Campus management software** to allow students to provide their valuable input on their educational experiences.

Interactive Feedback:

- In addition to online feedback, key academic figures who include Director, Principal, Dean of Academics, or HoD engage in face-to-face interactions with students, fostering a more comprehensive understanding of their needs.

Average Percentage of students who participate:

- Approximately 80% of students from each class actively participate in the feedback process, ensuring a representative sample.

Specify the feedback analysis process:

Feedback Form Preparation:

- Feedback forms are meticulously designed, incorporating various parameters and collectively totaling 100%.
- These parameters encompass a wide range of aspects relevant to teaching and course delivery.

Timing of Feedback:

- At the middle and end of each semester, students are provided with the opportunity to share their feedback, enabling a holistic evaluation.

Distribution via CMS:

- Feedback forms are seamlessly assigned to students through the Campus Management Software (CMS), allowing students to rate faculty members on designated parameters during assigned hours using computer systems.

Feedback Compilation:

- Each department compiles the received feedback, calculates numerical ratings, and aggregates the data, forming a comprehensive view of faculty performance.

Click here to get Student Online Feedback:
https://drive.google.com/file/d/1xS1QxqNxPGumceSk6vJkyYlzrUQlUmcE/view?usp=drive_link

Basis of reward/ corrective measures, if any:

a. Rewards:

✓ **Feedback for Faculty Performance Appraisal:**

- Feedback from students plays a pivotal role in faculty performance appraisal, contributing to a comprehensive evaluation.

✓ **Recommended for the Best Faculty Award:**

- Faculty members who consistently receive positive feedback may be recommended for the Best Faculty Award during official functions, recognizing their dedication and excellence.

b. Corrective Measures:

✓**Counseling for Underperforming Faculty:**

- Faculty members scoring below 75% out of 100% receive dedicated counseling sessions from the Head of the Department, Dean of Academics, and the Principal.
- These sessions aim to help faculty members improve their academic performance and enhance the learning experience for students.

✓ **Documentation of Performance Improvements:**

- The progress made through counseling is meticulously recorded in the faculty appraisal records, ensuring accountability and tracking improvements over time.

✓ **Enhancing Teaching Methodologies:**

- Feedback serves as a catalyst for appropriate changes in teaching methodologies, tailored to address the specific needs and preferences of students.

✓ **Encouragement for Professional Development:**

- Faculty members are actively encouraged to participate in and organize Faculty Development Programmes, workshops, seminars, and conferences.
- These opportunities help faculty members stay updated and continually improve their teaching skills.

Indices used for measuring quality of teaching & learning and summary of the index values for all courses/teachers:

Feedback is gathered through a set of questions employing a 4-point scale, including aspects as follows:

1. Teacher punctuality.
2. Coverage of relevant topics beyond the syllabus.
3. Effectiveness in delivering technical/course content.
4. Communication skills.
5. Use of teaching aids.
6. Motivation of students for learning.
7. Support for practical demonstrations.
8. Support for hands-on training.
9. Responsiveness to student feedback.
10. Willingness to offer help and advice to students.
11. Consistency in evaluating and returning assignments and test papers.
12. Syllabus coverage as prescribed by SBTE Board.

The average rating achieved in the feedback summary form is used as indices, and these indices are accessible for all faculty members at the department level.

B. Record of corrective measures taken (5)

At our institution, we place a strong emphasis on the continuous improvement of our teaching and learning processes. To ensure that corrective measures are effectively implemented in response to feedback from students, we have established a systematic and accountable approach.

Below are the key elements of our process for recording corrective measures:

Communication of Corrective Actions:

- When corrective measures are deemed necessary based on the feedback analysis, an official action letter is generated from the principal's office.
- This letter is then sent to the concerned faculty member.

Intermediary Involvement:

- The process of communicating corrective actions is facilitated through the involvement of key academic figures, including the Dean of Academics and the Head of the Department.
- These individuals play a pivotal role in ensuring that the feedback is appropriately addressed.

Timing of Corrective Actions:

- Corrective actions are initiated either once per semester or on a need-based basis, depending on the nature and urgency of the feedback.
- This flexible approach allows us to tailor our intervention to the specific requirements of each situation.

Meticulous Documentation:

- One of our guiding principles is transparency and accountability.
- To uphold these values, all corrective actions are meticulously documented.

- Separate files are maintained to record the details of each corrective measure, including the nature of the feedback, the action taken, the timeline for improvement, and any other relevant information.

By adhering to this structured approach, we not only demonstrate our commitment to addressing feedback effectively but also ensure that the process is transparent, accountable, and conducive to the continuous enhancement of the teaching and learning experience at our institution.

8.3 Feedback on facilities (5)

A. Student feedback on facilities, analysis and corrective action taken (5)

At **GEMS Polytechnic College,** we are committed to providing a conducive and enriching environment for our students, parents, and staff. To ensure that our facilities meet their needs and expectations, we have established an effective feedback system.

.

Student Feedback on Facilities:

To gather valuable insights from our students regarding the facilities and amenities, we employ several methods:

Suggestion Box:

- In both the Principal's office and hostels, we have placed suggestion boxes. Students can use these boxes to share their feedback concerning facilities and other issues anonymously.

Online Feedback Form:

- We also utilize digital platforms such as Google Forms and Campus Management(CMS) software to collect general feedback on facilities from students.
- This allows for efficient data collection and analysis.

Feedback Categories:

In the feedback forms, we inquire about various Facilities and Amenities available on the GEMS Polytechnic Campus. Students rate these aspects on a 5-point scale. The categories include Campus Atmosphere & Cleanliness, Measures Taking Ragging and Women Harassment, Central and Digital Library Facility, Internet/Wi-Fi Facility, Canteen Facility, Laboratories & Workshop, Medical Facility, Hostel Facility, Sports Facility, Transport Facility, Training and Placement Facility and Extra-Curricular Activity.

Other Stakeholder Feedback:

In addition to student feedback, we actively seek input from other stakeholders:

Alumni Feedback:

- During Alumni Meet events, we collect feedback from our alumni, which is then analyzed to identify areas for improvement.

Parent Feedback:

- Parents meetings provide an opportunity for parents to share their feedback on facilities.
- The respective Head of the Department reviews this feedback and proposes actions for improvement.

Reporting Issues:

- Any issues related to facilities can be reported through faculty coordinators, Heads of Departments, and the Dean of Academics.
- These reports are forwarded to the Principal and Director for necessary action.

Analysis and Corrective Action Taken:
To address the feedback received, we follow a systematic approach:

Feedback Analysis:

- The administrative team thoroughly analyzes the feedback, identifying areas that require attention.

Action Plan and Budget Proposal:

- Based on the analysis, an action plan is formulated, along with a budget proposal to rectify the identified issues.

Prioritization:

- Prioritization is done based on the urgency and necessity of each issue. This ensures that critical concerns are addressed promptly.

Major Issues Resolved:

- As a result of our feedback-driven approach, we have successfully resolved several significant issues for the benefit of our students, including:

Improved Internet Speed:	● The internet speed has been enhanced to 90 Mbps to facilitate better connectivity for academic and research purposes.
Wi-Fi Connectivity:	● Wi-Fi connectivity has been extended to both the college and hostel areas, allowing students greater access to online resources.
Enhanced Library Resources:	● Additional books have been added to our library to expand the range of academic resources available to students.
Dedicated Computer Lab:	● A separate computer center has been established to ensure maximum student utilization and accessibility.
Transport Facilities:	● Bus facilities have been provided for students traveling to SBTE end-semester examination centers, making transportation more convenient

Improved Training and Placement Cell:	● Our Training and Placement Cell has been well-equipped and strengthened based on student feedback, enhancing career development opportunities.
Water Facility in Hostel:	● After receiving feedback from students regarding facilities, a new RO Water Purifier plant was installed in the Hostel block, and it's now operating efficiently.

At **GEMS Polytechnic**, we are committed to continually enhancing our facilities based on feedback from our valued stakeholders, ensuring a supportive and conducive learning environment for all.

8.4 Career Guidance, Training, Placement (20)

A. Availability:

At our institution, we are committed to providing holistic support to our students' career aspirations. To achieve this, we have established two dedicated cells:

Career Guidance & Higher Education Cell:

This cell focuses on offering comprehensive career counseling and guidance services, helping students make informed decisions about their academic and professional paths. We also assist students in gaining admission to renowned higher education institutions.

Career Guidance & Higher Education Cell Constitution:

Sl.No	Role	Name of the Members	Designation
1	Convenor	Mr. Rama Gopal Challa	Principal
2	Co-Convenor	Mr. Ranjith Choudary	Dean of Academics
3	Co-ordinator	Ms. Jensika Rani	Sr.Lecturer/ CIVIL
4	Committee Chair	All HoDs	
5	Internship Coordinator:	All Department TPOs	
6	Department Counselor	Mrs. Chinthiya	Lecturer/ CIVIL
7		Mr. Sanjeeva	Lecturer/ EE
8		Mr. Ragunath	Lecturer/ EEE
9		Ms. Meena Kumari	Lecturer/ CSE
10		Mr. Himanshu Kumar Singh	Lecturer/ MECH

Training and Placement Cell:
Our exclusive Training and Placement Cell is designed to continuously enhance our students skills and assist them in securing suitable employment opportunities while they are still pursuing their studies.

Training and Placement Cell Constitution:

Sl.No	Role	Name of the Members	Designation
1	Convenor	Mr. Rama Gopal Challa	Principal
2	Co-Convenor	Mr. Ranjit Choudhary	Dean of Academics
3	Co-ordinator	Ms. Jensika Rani	Sr.Lecturer/ CIVIL
4	Committee Chair	All HoDs	
5	Industry Liaison Officer	Ms. Jensika Rani	Sr.Lecturer/ CIVIL
6	Training Coordinator	All Department TPO	
7	Department-wise data analyst	All Department TPOs	
8	Department Counselor	Mr. Sujin	Lecturer/ CIVIL
9		Mr. Anugrah Ashish	Lecturer/ EE
10		Mr. David	Lecturer/ EEE
11		Ms. Kumar	Lecturer/ CSE
12		Mr. Johan	Lecturer/ MECH

B. Management:

1. Career Guidance:
Career Counseling by Experts:

- Our students benefit from guidance provided by senior academicians and industry experts who help them navigate the complex world of career choices.

Industry Interaction:

- To provide real-world insights, we regularly invite human resource personnel from various industries to interact with our students, ensuring they are well-prepared for the job market.

Higher Education Support:

- We guide and support students in their quest to secure admissions in esteemed higher education institutions, helping them advance their academic journeys.

2. Training and Placement Cell:

Training Facilities:

- Our Training and Placement Cell is equipped with state-of-the-art facilities and offers a range of training programs.
- These include soft skills development, confidence-building, and personal experts.

Industry Exposure:

- We encourage students to directly engage with industry professionals to explore potential career opportunities.
- This exposure helps them understand industry expectations and requirements.

Skill Development:

- To enhance employability, we provide skill-based training in technical, analytical, and logical areas.
- Our students receive training from both internal trainers and industry experts.

Student Engagement:

- Beyond traditional training, we encourage students to participate in various events such as paper presentations, technical symposia, and project displays.
- These activities foster innovative thinking and enhance managerial skills.

Value-added Courses:

- Each department conducts value-added courses in their specialized areas to bridge any gaps in the curriculum, ensuring that our students are well-prepared for their chosen fields.

Placement Activities:

List of Training Activities for Placements:

SL. No.	Topic
1	Self-Introduction - Practical & Training
2	Communication and Interactive skills
3	The art of survival in the workplace
4	Group Discussion – 1
5	Overview of Entrepreneurship, Start-up and Core company details and recruitment
6	Group Discussion – 2

7	Resume and CV preparation
8	Personality Development
9	Mock Interview – 1
10	Mock Interview – 2
11	Comments and Feedback, any lacking topic can be overviewed

Department Coordinators:
Each department appoints a coordinator responsible for addressing career guidance and training needs within that department.

Training and Placement Officer (TPO):
Our TPO collaborates with department coordinators to formulate and execute placement strategies, ensuring that students are well-prepared for the job market.

Industry Databases:
We provide students with access to industry databases, empowering them to make informed decisions about their careers.

C. Effectiveness:

- The effectiveness of our Career Guidance Cell & Training, Placement Cell is evident through the successful placement of our students in esteemed organizations.
- Our students consistently demonstrate enhanced skills, confidence readiness for the workforce.
- We measure our effectiveness through placement rates, feedback from both students and employers, and the continued growth and success of our alumni in their chosen fields.
- We remain dedicated to continue improving our services to ensure the ongoing success of our students.

Placement Details

Academic Year	Department	No. of Final Year Students	Total No. of Final Year Students	No. of students placed in companies or Government Sector	No. of students admitted to higher studies	No. of students turned entrepreneur	Total Number of Students	Over all %
2020 - 2023 (LYG)	CIVIL	42	137	41	1	0	130	95%
	CSE	26		24	2	0		
	EE	23		23	0	0		

	EEE	23		16	2	0		
	MECH	23		21	0	0		
2019 - 2022 (LYGm1)	CIVIL	48	166	33	8	0	145	87%
	CSE	28		17	5	0		
	EE	34		27	3	0		
	EEE	26		20	6	0		
	MECH	30		16	10	0		
2018 - 2021 (LYG m2)	CIVIL	20	65	4	12	0	53	82%
	CSE	15		1	8	0		
	EE	14		11	2	0		
	EEE	6		3	3	0		
	MECH	10		4	5	0		
2017 - 2020 (LYG m3)	CIVIL	16	65	7	4	0	48	74%
	CSE	14		6	3	0		
	EE	15		7	5	1		
	EEE	5		2	1	0		
	MECH	15		9	3	0		

List of our Recruiters

WINDCARE INDIA Private Limited	GLOBAL COMPOSITE UAE	Apollo Tyres Pvt Ltd	Dhoot Transmission Pvt Ltd
Qcon - Qatar Engineering & Construction Company W.L.L	ANAND GROUP	SHREE CEMENT LIMITED	
KP Reliable technique India Pvt Ltd	JK RAVINDRA & TATA MOTORS	SHREE CEMENT	
DHARMARAJ & SONS ENGINEERING & CONSTRUCTION	Nobel Hygiene		

8.5 Entrepreneurship Cell/Technology Business Incubator (5)

A. Availability:

Entrepreneurship Cell initiatives at GEMS Polytechnic College are conducted within the framework of the **Institutions Innovation Council (IIC)**. At **GEMS Polytechnic College**, we recognize the increasing opportunity for entrepreneurship in India. To nurture and develop the entrepreneurial spirit among our students, we have established an Entrepreneurship Development Cell (EDC). Our aim is to empower a significant percentage of students to become technocrat entrepreneurs who can contribute to wealth generation and employment opportunities in our country.

- Entrepreneurship Cell initiatives at GEMS Polytechnic College are conducted within the framework of the Institutions Innovation Council (IIC).
- The Institutions Innovation Council (IIC) at GEMS Polytechnic College is a dynamic and proactive initiative designed to empower students in their entrepreneurial journey.
- Established in accordance with the guidelines provided by the Ministry of Educations Innovation Cell, it is a resource-rich hub for nurturing innovation and entrepreneurial spirit among students.
- The IIC offers a plethora of resources and facilities to students, making it readily accessible to those with a drive to innovate and create startups.
- These resources include dedicated spaces for ideation and innovation, a state-of-the-art technology lab, a well-stocked library of entrepreneurship and innovation-related literature, and access to leading-edge equipment and prototyping and experimentation.
- Moreover, the council maintains strong networks with industry experts, mentors, and venture capitalists to provide students with expert guidance.

B. Management:

- The management of the IIC is characterized by a commitment to fostering innovation and entrepreneurship at Gems Polytechnic College.
- A team of experienced faculty members, innovation experts, and business professionals oversee the council's activities.
- This diverse team ensures that students receive well-rounded guidance, from the technical aspects of innovation to the intricacies of business development.
- Furthermore, the IIC holds regular meetings and workshops to evaluate the needs of students and create tailored support plans for budding entrepreneurs.
- This proactive management approach ensures that every student's entrepreneurial journey is adequately supported.
- The council also maintains an open-door policy, encouraging students to reach out for guidance and mentorship whenever they require it.

The Composition of Institution's Innovation Council (IIC):

Sl.No	Name of the Member & Designation	IIC Role
1	Mr. Ragunath A, Lecturer, EEE Dept	President
2	Mr. Robin S, Lecturer, EEE Dept	Vice-President
3	Mr. Johan Deva Raj, Lecturer, Mech Dept	Convener
4	Mr. Prabhu Nath, Lecturer, Mechanical Dept	Innovation Activity Coordinator
5	Mr. Victor Emmanuel, Lecturer, Civil Dept	Startup Activity Coordinator
6	Mr. Bhaskar Ranjan, Lecturer, EE Dept	Internship activity Coordinator
7	Mr. P. Kumaraswamy, Sr. Lecturer, Mech Dept	IPR Activity Coordinator
8	Mrs. Catharine C, Lecturer, EE Dept	NIRF Coordinator
9	Mr. Kumar S, Lecturer, CSE Dept	Member
Student Members:		
10	Ms. Rumana Akhtar-CSE 1st year	Member
11	Ms. Sambhavna Bajpai-CSE 3rd year	Innovation Coordinator
12	Mr. Nikhil Singh-CSE 3rd year	IPR Coordinator
13	Mr. Ayush Raj-CSE 2nd year	Member
14	Ms. Megha Raj-CSE 2nd year	Internship Coordinator
15	Mr. Vivek Ranjan- Mech 3rd year	Member
16	Mr. Kishlay Kumar- Mech 1st year	Member
17	Mr. Shashank Pandey- Mech 2nd year	Startup Coordinator
18	Ms. Priyanka Kumari Singh- Mech 2nd year	Innovation Coordinator
19	Mr. Mahtab Alam- Mech 2nd Year	Member
20	Mr. Pratyam Prakash- Civil 3rd Year	Startup Coordinator
21	Ms. Manisha Kumari-Civil 3rd Year	Internship Coordinator
22	Ms. Komal Kumari-Civil 2nd Year	Member
23	Mr. Amir Subhani-Civil 2nd Year	Member
24	Mr. Shivam kumar- Civil 1st Year	Member
25	Mr. Abhijit Thakur- EEE 3rd Year	Social Media Coordinator
26	Mr. Ravi Shankar Kumar- EEE 3rd Year	Member
27	Ms. Awantika Singh-EEE 3rd Year	Member
28	Mr. Deepraj Kumar-EEE 2nd Year	Member
29	Mr. Raushan Kumar-EEE 2nd Year	Member

30	Ms. Kirti kumari verma-EEE 2nd Year	Member
31	Mr. Raj Kumar- EE 3rd Year	Startup Coordinator
32	Ms. Sneha Kumari- EE 3rd Year	Internship Coordinator
33	Mr. Suryamani Kumar- EE 2nd Year	Innovation Coordinator
34	Mr. Sumit Kumar- EE 2nd Year	Member
35	Mr. Omprakash Singh-EE 1st Year	Member
External Member:		
36	Mr. Vishal Nair, Co-Founder, Light Salt Pvt. Ltd.	Member

C. Effectiveness:

The effectiveness of Gems Polytechnic College's IIC in encouraging entrepreneurship and incubation is evident through the myriad activities and initiatives it undertakes. The IIC fosters an environment of creativity, innovation, and problem-solving among students through various means:

IIC Activities Semester Wise Plan:

S.No	Activity	Duration	Participation	Focus on	Incharges
A.1	Workshop on "Entrepreneurship and Innovation" as Career Opportunity	one/half day	min 40 students, max faculty	Interpersonal skill, critical thinking, creative thinking, practical entrepreneurial skills	**Mr.Robin** Mr. Raghunath
A.2	Session on Problem Solving and Ideation Workshop	one/half day	min 40 students, max faculty	Innovation methodology, Build on skills, Tools ,Brainstorming, ideation	**Mr. Johan Deva Raj** Mr. Prabhunath
A.3	My Story - Motivational Session by Successful Entrepreneur/Start-up founder	one/half day	min 40 students, max faculty	Risk taking, critical think, team building, rise capital, learn from failure	**Mr.Robin** Mrs. Catharine
A.4	Exposure and field visit for problem identification	one day	Min 40 students, max faculty	village/ society/industry visit, interaction with key stakeholders	**Mr. Bhaskar Ranjan** Mr. Johan Deva Raj
C.1	National Entrepreneurship Day- celebration	one/half day	min 40 students, max faculty	Awareness on entrepreneurship & innovation, highlight the value of entrepreneurship, the role of innovation within society and role of younger generations for making India as an Innovation hub, expert talk, literary event, awards, demo of innovations	**Mr.Victor Immanuel** Mr. Robin

A.5	Workshop on Design Thinking, Critical thinking and Innovation Design	one/half day	min 40 students, max faculty	Design thinking, critical thinking, innovative design, Q&A	**Mr.Victor Immanuel** Mr.Prabhunath
A.6	Workshop on Entrepreneurship Skill, Attitude and Behaviour Development	one day	min 40 students, max faculty	Presentation entrepreneur skill, attitude, behavior	**Mr.Kumar S** Mr. Bhaskar Ranjan
A.7	Organize an Inter/Intra Institutional Innovation Competition/Challenge/Hack athon and Reward Best Innovations - Manage through YUKTI-NIR	one day	max students possible, max faculty	innovation competition, brochure with start date and end date, registration, evaluation, results, award ceremony	**Mr. Raghunath** Mr Johan Deva Raj
A.8	Organize an Expert talk on Process of Innovation Development, Technology Readiness Level (TRL); Commercialisation of Lab Technologies & Tech-Transfer	one day	min 40 students, max faculty	Innovation Development, Technology Readiness Level (TRL); Commercialisation of Lab Technologies & Tech-Transfer	**Mr.Kumar S** Mrs. Catherine
C.2	National Energy Conservation Day (India)-celebration	one/half day	min 50 students, max faculty	india's contribution towards energy efficient nation, global warming & climate change awareness, encourage innovative solutions, motivate save energy, visual art, inviting expert, reward innovative ideas	**Mr.Prabhunath** Mr. Bhaskar Ranjan
C.3	National startup day-celebration	one/half day	min50 students, max faculty	indian startup ecosystem, encourage people who create environment for startup, startup founder interaction, startup exhibition	**Mr. Raghunath** Mr Victor Immanuel

IMPACT LECTURE SESSION on Innovation and entrepreneurship:

GEMS Polytechnic College, Aurangabad, Bihar, organized an impactful lecture series on Innovation and Entrepreneurship as part of the MoEs IIC, AICTE Sponsored program. The event, held on July 19, 2022, featured distinguished speakers. Joseph Paul Arackalan, Manager of Incubation Centre IIT Patna, presented on "Innovation and Entrepreneurship," followed by Mahendra Kumar Gupta, Founder of Udyamita Sanskar Foundation, who discussed "Entrepreneurship Ecosystem and Journey to Start-up." The lectures aimed to inspire faculty members, students, and anyone interested in innovation. E-certificates were provided to participants.

GEMS
POLYTECHNIC COLLEGE
NH-2 Jogiya More, Ratanpura,
Aurangabad, Bihar - 824121

MoE's INNOVATION CELL (GOVERNMENT OF INDIA)
INSTITUTION'S INNOVATION COUNCIL (Ministry of HRD Initiative)

IMPACT LECTURE SESSIONS

Sponsored by

MoE's Innovation Cell (MIC), AICTE - New Delhi

19.07.2022

SESSION 1

10:30 AM - 12:00 PM

LECTURE 1

Innovation & Entrepreneurship

02:00 PM - 03:30 PM

LECTURE 2

Entrepreneurship Eco System & Journey to Start Up

Guest Speakers

Online Session

MR. JOSEPH PAUL ARACKALAN
Manager,
Incubation Centre
IIT Patna

MR. MAHENDRA KUMAR GUPTA
Founder, Udyamita Sanskar Foundation
CEO - INurture Incubation FOundation

SCAN TO REGISTER

E-Certificate will be provided to all the participants

CONTACT US

Mr. Ragunath
IIC President
Lecturer
Department of EEE

ragunath@gemspolytechnic.edu.in
+91 90033 28207

Innovation Ambassador Training at GEMS Polytechnic College, Bihar:

Innovation Ambassador Training at GEMS Polytechnic College, Bihar Foundation Level Training (June 30 - July 30, 2021): Bhaskar Ranjan from GEMS Polytechnic College, Bihar, successfully completed the Innovation Ambassador training at the Foundation Level. The training, consisting of 16 sessions with a total of 30 contact hours, was conducted online by MoEs Innovation Cell & AICTE. Ranjans participation reflects a commitment to fostering innovation within the academic community.

Advanced Level Training (IIC Calendar Year 2021-2022):

- **Bhaskar Ranjan,** a dedicated member of GEMS Polytechnic College, Bihar, furthered his expertise by completing the Innovation Ambassador training at the Advanced Level.
- This advanced training comprised 15 sessions totalling 30 contact hours and was conducted online by MoEs Innovation Cell & AICTE during the IIC Calendar year 2021-2022.
- **Bhaskar Ranjans** proactive engagement underscores his dedication to advancing innovation within the educational landscape.

Bhaskar Ranjan, a dedicated member of GEMS Polytechnic College, Bihar, furthered his expertise by completing the Innovation Ambassador training at the Advanced Level. This advanced training comprised 15 sessions totalling 30 contact hours and was conducted online by MoE's Innovation Cell & AICTE during the IIC Calendar year 2021-2022. Ranjan's proactive engagement underscores his dedication to advancing innovation within the educational landscape.

The Institution's Innovation Council at Gems Polytechnic College is a beacon of innovation, entrepreneurship, and creativity. It empowers students to not only pursue their dreams but also create transformative solutions for societal challenges. With its well-managed resources and a range of effective initiatives, the IIC plays a pivotal role in encouraging students to embark on the entrepreneurial journey, making a meaningful impact in the world of innovation and startups.

Ministry of Education
MoE's INNOVATION CELL (GOVERNMENT OF INDIA)
INSTITUTION'S INNOVATION COUNCIL

This is to certify that

BHASKAR RANJAN

of

GEMS POLYTECHNIC COLLEGE, Bihar

has undergone Innovation Ambassador (IA) training 'Advanced Level' (Total 15 Sessions of 30 contact hours) conducted in online mode by MoE's Innovation Cell & AICTE during the IIC calendar year 2021-22.

Dr. Abhay Jere
Chief Innovation Officer
MoE's Innovation Cell

Mr. Dipan Sahu
Assistant Innovation Director
MoE's Innovation Cell

Date of Issue: 14-10-2022

E-certificate No: IA/Advance/110321

IIC ID: IC202014412

We remain committed to fostering a culture of entrepreneurship and innovation, equipping our students with the tools they need to succeed in the ever-evolving business landscape.

Criterion 9

Governance, Institutional Support and Financial Resources

9 GOVERNANCE, INSTITUTIONAL SUPPORT AND FINANCIAL RESOURCES (75)

9.1 Organization, Governance and Transparency (25)

9.1.1 State the Vision and Mission of the Institute (5)

Vision of the Institute

Empowering the young minds with holistic education and futuristic skills to be a valuable resource for the State and Nation.

Mission of the Institute

Mission No	Mission Statement
M1	To provide professional education thereby producing technically competent engineers with moral and ethical values.
M2	To train students and provide them with leading resources to address problems faced by industry and society.
M3	To encourage doers to embrace learning and achieve their personal best in building their emotional, social and physical well-being.

9.1.2 Governing body, administrative setup, functions of various bodies, define rules procedures, recruitment and promotional policies (5)

A. List the Governing Body Composition; their memberships, functions, and responsibilities (02)

Governing Council:

Governance is the key activity that acts as a bridge between the management and stakeholders. The institution has a strong council made up of different luminaries from various walks of life that devices all policies and decisions related to both academic and administration.

- To ensure the efficiency and effectiveness of the governing council, a number of academic and administrative bodies have been formed with duties and responsibilities.
- The governing council of the college meets in a year, to discuss various issues and aspects contributing to the development of the college.
- During the meeting the suggestions from the planning and monitoring board are resolved. It chalks out a roadmap in order to achieve the goals of the institution.

Functions of Governing Council:

- Amend and approve policies from time to time.
- To Uphold the legal stature of the college in line with the policies of AICTE, State Government and affiliating board (SBTE, Bihar) or any other board SBTE, Bihar.

- Construction and maintenance of infrastructure and amenities for the institution.
- Review of academic performance of the institution and suggest remedial measures, if required.
- Mobilizes funds and utilizes the resources maximum, towards the development of the institution.
- Introduction of new programs and/or increasing intake/closure of programs/reduction in intake.
- Implement the recommendations of the planning and monitoring board.
- Review of highlighted feedback summary of stakeholders and planning for corrective actions towards the satisfaction of stakeholders.

Composition of Governing Council:

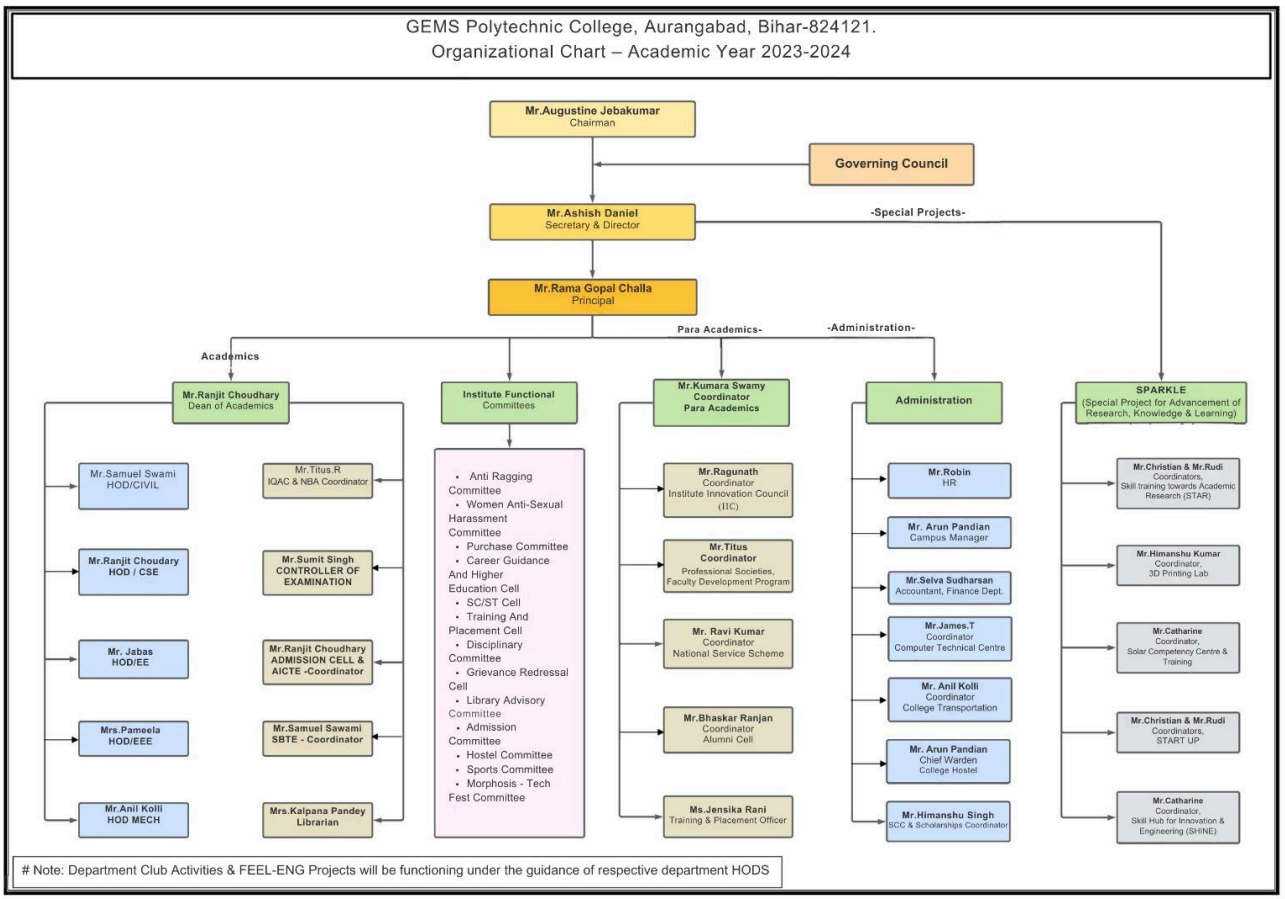
Sl.No	Name	Affiliation	Position
Members nominated by the Trust/Management :			
1.	**Mr.Augustine Jebakumar**	General Secretary, GEMS	Chairman
2.	**Mr.Ashish Daniel**	Secretary, GPC	Member
Educationist / Industrialist to be nominated by the Management :			
3.	**Dr. B. Priestly Shan**	Pro Vice Chancellor, Academic Affairs at Alliance University, Karnataka	Member
4.	**Dr. G. Bansal Rajkumar**	Principal, Sri Krishna Polytechnic College, Coimbatore, Tamil Nadu.	Member
5.	**Dr. Samrajesh Devakadacham**	Professor, Department of Computer Science and Engineering, Kuwait College of Science and Technology, Kuwait	Member
6.	**Dr. Vijayalaxmi biradar**	Director IQAC Kalinga University Raipur, Chhattisgarh	Member
7.	**Mr.Kirupakaran Samuel Asir**	Reliability Engineer - Planning & Reliability, Qatar Aluminum (**Qatalum**)	Member
Principal of the College:			
8.	**Mr.Ramagopal Challa**	Principal	Ex - officio Member Secretary

Members nominated by the Director/ Principal :			
9.	**Mr. Ranjit Choudhary**	Dean of Academics	Member
10.	**Mr.Titus**	NBA Coordinator	Member
Affiliating Board nominee (nominated by the Board):			
11.	**Dr.Sanjay Kumar**	Assistant Secretary, SBTE, Bihar	Ex - officer member

Administrative Body Organizational Setup:

The organizational setup of GEMS Polytechnic College is designed to ensure efficient governance and leadership. At the helm is the Principal, overseeing daily operations, guided collectively by the experienced Governing Council, as depicted in the organizational chart. This collaborative structure fosters effective management and strategic direction for the institute.

Administrative chart shows the hierarchy setup in the college:



Internal Quality Assurance Cell (IQAC):

The Internal Quality Assurance Cell (IQAC) is a cornerstone of GEMS Polytechnic Colleges commitment to academic excellence and continuous improvement. IQAC plays a pivotal role in the institution adheres to high-quality benchmarks and parameters. Here, we delve into the functions and composition of the IQAC at GEMS Polytechnic College.

Functions of IQAC:

Creating a Quality Culture:

- One of the primary functions of the IQAC is to instill a culture of quality throughout the institution.
- This involves setting standards, monitoring adherence to these standards, and fostering a commitment to excellence among all stakeholders.

Assessment of Teaching-Learning Processes:

- The IQAC conducts a thorough assessment of the effectiveness of teaching and learning methods.
- This ensures that students receive a high-quality education that aligns with the institution's mission and vision.

Review and Assessment of Action Taken Reports:

- The IQAC reviews and assesses Action Taken Reports related to course and program outcomes.
- This process helps in identifying areas that require improvement and tracking the progress of corrective measures.

Assessment of Feedback Responses:

- Gathering feedback from students, parents, alumni, and other stakeholders is integral to maintaining quality.
- The IQAC analyzes this feedback to identify areas for enhancement and to ensure that the concerns and suggestions of all constituents are addressed.

Coordination of Quality-Related Activities:

- The IQAC acts as a central agency within the institution for coordinating quality-related activities.
- This includes the adoption and dissemination of best practices in education and administration, promoting a culture of innovation and excellence.

Composition of the IQAC:

The IQAC at GEMS Polytechnic College is a diverse body composed of individuals who bring varied perspectives and expertise to the quality assurance process. The composition of the IQAC includes:

- ➔ **Senior Leaders of the Institution**: To provide strategic guidance and leadership.
- ➔ **Senior Faculty Members from Each Department**: To ensure representation from all academic areas.

- ➔ **Students:** To incorporate the perspectives of the primary beneficiaries of education.
- ➔ **Alumni:** To bring insights from graduates who have experienced the institution's offerings.
- ➔ **Society and Industry Representatives:** To bridge the gap between academia and real-world requirements, fostering relevance and alignment with industry needs.

Composition of the IQAC:

S. No	Role	Designation	Name	E-Mail Id
1.	Chairman	Director	Mr. Ashish Daniel	ashishdaniel@gemsbihar.org (mailto:ashishdaniel@gemsbihar.org)
2.	Member from Management	Associate Director	Mr. Emerson (GEMS Technical Education)	emerson@gemsbihar.org
3.	Senior Administrative Officers	Principal	Mr. Rama Gopal Challa	principal@gemspolytechnic.edu.in
		Dean of Academic	Mr. Ranjit Choudhary	academicdean@gemspolytechnic.edu.in (mailto:academicdean@gemspolytechnic.edu.in)
		NBA coordinator	Mr. Titus.R	titus@gemspolytechnic.edu.in (mailto:titus@gemspolytechnic.edu.in)
4.	Members	Head of the Departments	Mr. Anil Kolli, HoD/ MECH	anil@gemspolytechnic.edu.in
			Mr. Jabas Edwin Raj, HoD/EE	jabas@gemspolytechnic.edu.in
			Miss. Pameela, HoD/ EEE	pameela@gemspolytechnic.edu.in
			Mr. Samuel Prakash Swami, HOD/CE	samuel@gemspolytechnic.edu.in

			Mr Ravi Kumar Saksena HOD(I/c) / CSE.	ravi@gemspolytechnic.edu.in
		Faculties to represent all levels	Mr. Sumit Kumar Singh, COE	coe@gemspolytechnic.edu.in
			HR & Sr. Lecturer, EEE	robin@gemspolytechnic.edu.in
5.	Nominee from	Nominee from	Grama Panchayat, Sarpanch	
		Students	Rimjhim Kumari,	rimjhim20040cse@gemspolytechnic.edu.in
		Alumni	Ms Nargis Parween, JE, DoR & LR, Govt. of Bihar	nargispareen57@gmail.com
6.	Nominee from	Employers	Mr.P Jebastian, HR, Manager,Windcare Pvt Ltd- Chennai	hrd@windcareindia.com
		Industrialists/ Stakeholders	Mr.Arunjay Kumar, JK Ravindra-TATA, Aurangabad,Bihar	aks@jkraautomobiles.com
7.	Member Secretary	Coordinator	Mr Arun Pandian Sr. Lecturer, MECH.	arun@gemspolytechnic.edu.in

In conclusion, the IQAC at GEMS Polytechnic College is a pivotal institution within the college, dedicated to fostering a culture of quality, ensuring the effectiveness of educational processes, and facilitating the continuous improvement of the institution's academic and administrative activities. Through its diverse composition and rigorous functions, the IQAC plays a vital role in maintaining the institution's commitment to excellence.

Program Advisory Council (PAC):

Objective:

- To create quality culture and adapt best practices in academics to keep the pace with changing educational environment and expectation and supporting the departments to achieve the vision by remaining up to date with the latest requirements of the industry and incorporating necessary components in the curriculum to the furthest extent.
- The PAC consists of the HoD, Senior faculty members, The Dean (Academics), and the NBA coordinator Department's faculty members, Student Representatives, Alumni Members, Industry Experts to periodically monitor departmental activities and evaluate parameters related to teaching learning process and offer suggestions for continuous improvement**.**

Functions of Program Advisory Committee (PAC)

The PAC gives guidelines to the department related to the following areas:

- Formation/Revision of the Vision and Mission of the Department
- Formation of Program Educational Objectives.
- Redefine existing PEOs, aligning of PEO's to the mission statements and defining program-specific outcomes.
- Formulation of workable solutions for improvement in the following areas
- Quality of Teaching Learning Process
- Industry Institution Interaction.
- Increase the employability of students.
- Inclusion of topics beyond the syllabus to meet the PEO and PO and bridge the existing gap by encouraging students to do additional experiments in labs and through expert talks in areas beyond the scope of the syllabus.
- Suggest improvement in academic plans and recommend standard practices/systems for attainment of PEOs.
- Encourage for industry-institute interactions to bridge up curriculum/industry gap and suggest quality improvement initiatives to enhance employability.
- To propose necessary action plans for Student projects, value-added training courses, internships, and skill development of students, required for entrepreneurship development and quality improvement to meet PEOs.Monitoring the attainments of Program Outcomes (POs), Program Specific Outcomes (PSOs) and Program Educational Objectives (PEOs).
- Evaluating program effectiveness and proposing necessary changes.
- Measuring the extent of adherence to planned activities and calendar of events.
- Suggesting ways and means to reduce the curriculum gaps in achieving POs and PSOs.
- Preparing periodic reports on program activities, progress, status or other special reports for management.
- **Faculty motivation:** Attend / organize workshop / seminar / FDP, paper publication, development of models / lab.
- **Student motivation:** Attend/participate in technical competitions, paper presentation, mini projects/models, social / cultural events, skill development programs.
- Interacting with students facilitating the attainment of POs, PSOs and PEOs.
- Interact with stakeholders and PAC to facilitate the attainment of POs, PSOs, and PEOs.

Formulation of workable solutions for improvement in the following areas:

- Quality of Teaching Learning Process.
- Industry Institution Interaction.
- Increase the employability of students.
- Inclusion of topics beyond the syllabus to meet the PEO and PO and bridge the existing gap through encouraging students to do additional experiments in labs and through expert talks in areas beyond the scope of the syllabus.

Suggest improvement in academic plans and recommend standard practices/systems for attainment of PEOs.

- Encourage for industry-Institute interactions to bridge up curriculum/industry gap and suggest quality improvement initiatives to enhance employability.
- To propose necessary action plans for Student projects, Value added training courses, internships, skill development of students, required for entrepreneurship development and quality improvement to meet PEOs.Monitoring the attainments of Program Outcomes (POs), Program Specific Outcomes (PSOs) and Program Educational Objectives (PEOs).
- Student motivation: Attend/participate in technical competitions, paper presentation, mini projects/models, social / cultural events, skill development programs.
- Interacting with students facilitating the attainment of POs, PSOs and PEOs.
- Interact with stakeholders and PAC to facilitate the attainment of POs, PSOs, and PEOs.

PAC Composition:

The PAC consists of members hailing from prestigious institutions and industry experts. It includes representation from alumni, departmental Heads, Senior faculty, and student representatives across all academic years. Additionally, the composition comprises the dean of academics and the NBA coordinator. The present composition of the PAC is as follows:

Sl.No	Name	Affiliation	Position	Email Id & Mobile Number
1.	Mr.Ranjit Choudhary	Head of the Department	Convenor	ranjit@gemspolytechnic.edu.in & 8124517713
2.	Mr.Ranjit Choudhary	Dean of Academics	Member	academicdean@gemspolytechnic.edu.in & 8124517713
3.	Mr.Titus R	NBA Coordinator	Member	nba@gemspolytechnic.edu.in & 9304706901
4.	Mrs. Jenitha K	Dept. Senior Faculty Representative	Member	jenitha@gemspolytechnic.edu.in
5.	Mr. Ragland Royal	Dept. Senior Faculty	Member	ragland@gemspolytechnic.edu.in
6.	Mr. Humaish	Industry	Member	humaish.yusufi@atos.net & 8928880131

	Zaman Yusufi-Atos (Senior Consultant)	Representative		
7.	Mr. Priya Pankaj Kumar	Academia Representative	Member	kumar.priyapankankaj@gmail.com & 9931099433 Assistant Professor, CSE, Sher Shah Engineering College, Sasaram
8.	Kranti Kumari	Alumni Representative	Member	kranti19011cse@gemspolytechnic.edu.in
9.	Ayush Raj	2nd Year Student Representative	Member	ayush22cseo4@gemspolytechnic.edu.in
10.	Sambhavna Bajpei	3rd Year Student Representative	Member	sambhawna21011cse@gemspolytechnic.edu.in

B. Minutes of the meetings and action-taken reports (01)

At GEMS Polytechnic College, meticulous records of the minutes of meetings and action-taken reports are diligently maintained. This includes records from the governing body, the administrative setup, and the functions of various bodies.

Furthermore, it encompasses the documentation of defined rules and procedures, recruitment and promotional policies. These records are preserved under the supervision of the respective faculty incharges, ensuring transparency, accountability and effective decision-making throughout the institution's operations.

C. The published service rules, recruitment and promotional policies and procedures with year of publication (01)

Service Rules:

Staff Leave Policies (Version 3.1):

Leave-Policy Term:

The following Leave Policy is applicable for the period from July 1, 2023, to June 30, 2024.

Eligibility:

All regular full-time teaching faculties of our Institution are eligible to apply for leaves as outlined in this policy. This will be subject to the condition that leave can't be claimed as a matter of right and leave sanctioning authority may refuse or revoke leave of any kind except on medical grounds.

Request & Approval:

- The teaching faculties must submit a leave application through the designated leave management system Campus Management Software (CMS) to their Head of the Department well in advance, with reasonable notice.
- The leave application should be submitted in advance, except in cases of unforeseen circumstances or emergencies.
- Approval is subject to the operational needs of the institution and may be granted at the discretion of the management.
- The teaching faculties are expected to return to work promptly upon the completion of their approved leave. Any leaves taken with permission beyond the allotted or approved leave would be considered a Loss Of Pay (LOP).
- Kindly refrain from requesting "Loss of Pay (LOP)" as there is no category or provision for it.
- Failure to complete the biometric attendance entry will result in faculty being considered to be leave, such failures can be corrected on VMEDULIFE up-to twice a month.
- Employees in their notice period cannot request or take any leave.

Reimbursement:

- If an employee does not utilize more than 50% of their Casual Leaves (CLs) within a year, the remaining entitled CLs will be encashed as basic pay.
- Round-trip Travel Allowance (TA) will be provided to all individuals whose hometown is located more than 500 km away.

Policy Category:

The leave policy is structured into the following categories:

- Teaching Faculty
- Librarian, Accountant, Clinical Staff
- Non-Teaching Faculty & Office Assistant

Leave Policy - Teaching Faculty

Types of Leave	Allotted days	Approval Authority	Remarks
Leave (CL)	12	HoD & Dean of	1 CL will be credited every month that can be accumulated and up to 3 days availed at a time. 2 CL will be approved by HOD More than 2 CL will be approved by the Dean ofAcademics.
Medical leave(ML)	6	HoD & Dean of Academics	Less than 3 days can be approved by HOD CL and 3ML can be clubbed during emergencies and needs Dean's Approval.
On Duty (OD)	-	Dean & Principal	The institution will grant on-duty leave for tasks associated with purchasing, promotions, and official meetings (SBTE, AICTE, DRCC etc.)
Bereavement	3- 6	Principal/director	In the case of a death in the immediate family. 3

Leave (BL)			days for travel less than 500 km and 6 days for more than 1500 km
Special leave (SL)	8	Dean & Principal	Special leave may be granted when a teaching faculty member wishes to attend or contribute to conferences/ seminars / symposia / practical training/workshops. In or out of India shall be entitled to special leave for up to 8 days in a calendar year. (Please support such applications with the invitation and your contribution to such events)
Maternity Leave (MTL)	90/120	Principal & Director	Maternity leave is up to three months(90 days) and can be taken anytime during the pregnancy or after delivery as per the choice of the particular worker. Anyone who wants to avail leaves before delivery will have a plan within the routine grant of four months only. For Post Delivery Complications, C-section delivery and instrumental delivery, an additional 1 month can be availed. This leave will be paid only if the employee has completed 11 months at GEMS.
Paternity leave (PL)	3 - 6	Principal & Director	Paternity Leaves may be granted for 3 days before or up to 30 days from the date of delivery of the child. 3 days are granted for staff with travel distances less than 500 km and 6 days for distances greater than1500 km.
Annual leave (AL)	30	Principal & Director	The employees who have completed 11 months of service as of the first day of their vacation will be eligible for annual leave. The employee has to be present on the closing date of college and on the opening date of college failing to be present, the number of holidays falling in between will be considered as a Loss of Pay (LOP).
Marriage Leave (MRL)	3 - 6	Principal & Director	Leave allocation is determined by the distance. If the distance exceeds 1500 km, an allotment of 6 days will be provided. Conversely, for distances less than 500 km, a total of 3 days will be allocated.

Late Coming / Early Going	2 per month	HOD	A maximum of two instances of arriving late or leaving early is permitted within a month. Late arrivals up to 50 minutes past 8:45 am will be considered permissible as an instance of late coming. Similarly, early departures between 3:50 pm and 4:40 pm will be considered as an instance of early going. Every third occurrence of Late Coming (LC) or Early Going (EG) will be considered as 1 Casual Leave (CL). *(Ex. 3-5 LC/EG =1CL,* *6-8 LC/EG = 2CL, 9-11 LC/EG = 3CL)*

Leave Policy - Librarian, Accountant, Clinical Staff:

Types of Leave	**Allotted days**	**Approval Authority**	**Remarks**
Casual leave (CL)	10	HoD & Dean of Academic	1 CL will be credited every month that can be accumulated and up to 3 days availed at a time. 2 CL will be approved by HOD More than 2 CL will be approved by the Dean of Academics.
Medical Leave (ML)	4	HoD & Dean of Academics	Less than 3 days can be approved by HOD CL and 3ML can be clubbed and needs Dean's Approval.
On Duty (OD)	-	Dean & Principal	The institution will grant on-duty leave for tasks associated with purchasing, promotions, and official meetings (SBTE, AICTE, DRCC etc.)
Bereavement Leave (BL)	3- 6	Principal/ Director	In the case of a death in the immediate family. 3 days for travel less than 500 km and 6 days for more than 1500 km.
Maternity Leave (MTL)	90/120	Principal & Director	Maternity leave is up to three months(90 days) and can be taken anytime during the pregnancy or after delivery as per the choice of the particular worker. Anyone who wants to avail leaves before delivery will have a plan within the routine grant of four months only. For Post Delivery Complications, C-section delivery and instrumental delivery, an additional 1 month can be availed. This leave will be paid only if the employee has completed 11 months at GEMS Polytechnic.

Paternity Leave (PL)	3 - 6	Principal & Director	Paternity Leaves may be granted for 3 days before or up to 30 days from the date of delivery of the child. 3 days are granted for staff with travel distances less than 500 km and 6 days for distances greater than 1800 km.
Annual Leave (AL)	25	Principal	The employee who has completed 11 months of service as of the first day of their vacation will be eligible for annual leave. The employee has to be present on the closing date of college and on the opening date of college failing to be present, the number of holidays falling in between will be considered as a Loss of Pay (LOP).
Marriage Leave (MRL)	3 - 6	Principal & Director	Leave allocation is determined by the distance. If the distance exceeds 1500 km, an allotment of 6 days will be provided. Conversely, for distances less than 500 km, a total of 3 days will be allocated.
Late Coming / Early Going	2 per month	HOD	A maximum of two instances of arriving late or leaving early is permitted within a month. Late arrivals up to 50 minutes past 8:45 am will be considered permissible as an instance of late coming. Similarly, early departures between 3:50 pm and 4:40 pm will be considered as an instance of early going. Every third occurrence of Late Coming (LC) or Early Going (EG) will be considered as 1 Casual Leave (CL). *(Ex. 3-5 LC/EG =1CL,* *6-8 LC/EG = 2CL, 9-11 LC/EG = 3CL)*

Leave Policy - Non-Teaching Staff, Office Assistant

Types of Leave	**Allotted days**	**Approval Authority**	**Remarks**
Casual Leave (CL)	9	HoD & Dean of Academics	1 CL will be credited every month that can be accumulated and up to 3 days availed at a time. 2 CL will be approved by HOD More than 2 CL will be approved by the Dean of
Medical Leave (ML)	3	HoD & Dean of academics	Less than 3 days can be approved by HOD CL and 3ML can be clubbed and needs Dean's Approval.

On Duty (OD)	-	Dean & Principal	The institution will grant on-duty leave for tasks associated with purchasing, promotions, and official meetings (SBTE, AICTE, DRCC etc.)
Bereavement Leave (BL)	3- 6	Principal/ Director	In the case of a death in the immediate family. 3 days for travel less than 500 km and 6 days for more than 1500 km .
Maternity Leave (MTL)	90/120	Principal & Director	Maternity leave is up to three months(90 days) and can be taken anytime during the pregnancy or after delivery as per the choice of the particular worker. Anyone who wants to avail leaves before delivery will have a plan within the routine grant of four months only. For Post Delivery Complications, C-section delivery and instrumental delivery, an additional 1 month can be availed. This leave will be paid only if the employee has completed 11 months at GEMS Polytechnic.
Paternity Leave (PL)	3 - 6	Principal & Director	Paternity Leaves may be granted for 3 days before or up to 30 days from the date of delivery of the child. 3 days are granted for staff with travel distances less than 500 km and 6 days for distances greater than 1800 km.
Annual Leave (AL)	15	Principal	The employee who has completed 11 months of service as of the first day of their vacation will be eligible for annual leave. The employee has to be present on the closing date of college and on the opening date of college failing to be present, the number of holidays falling in between will be considered as a Loss of Pay (LOP).
Marriage Leave (MRL)	3 - 6	Principal &	Leave allocation is determined by the distance. If the distance exceeds 1500 km, an allotment of 6 days will be provided. Conversely, for distances less than 500 km, a total of 3 days will be allocated.
Late Coming / Early Going	2 per Month	HODA	A maximum of two instances of arriving late or leaving early is permitted within a month. Late arrivals up to 50 minutes past 8:45 am will be considered permissible as an instance of late coming. Similarly, early departures between 3:50 pm and 4:40

			pm will be considered as an instance of early going. Every third occurrence of Late Coming (LC) or Early Going (EG) will be considered as 1 Casual Leave (CL). *(Ex. 3-5 LC/EG =1CL,* *6-8 LC/EG = 2CL, 9-11 LC/EG = 3CL)*

Recruitment Policy in GEMS Polytechnic College:

At GEMS Polytechnic College, the recruitment of faculty and staff is conducted in strict adherence to the guidelines and norms set forth by the State Board of Technical Education, Bihar (SBTE) and the All India Council for Tech Education (AICTE). Our comprehensive recruitment procedure ensures that we identify and onboard talented individuals who align with our institutions values and goals. Here is an overview of our recruitment process:

Manpower Requirement Estimation:

- The Head of the Departments (HODs) plays a pivotal role in estimating the manpower requirements, both for teaching and non-teaching positions.
- HODs are required to submit a detailed report outlining the anticipated staffing needs at least three months before the start of each semester. This report is forwarded to the Human Resource Officer (HRO).

HRO Review and Vacancy Sorting:

- The HRO meticulously reviews the submitted reports from HODs, which outline the staffing requirements.
- Based on the inputs provided, the HRO collaborates with department heads to sort and identify the specific vacancies that need to be filled.

Formal Announcement:

- A formal announcement is made through various means of advertisement to communicate the availability of positions to prospective candidates.
- These advertisements help attract suitable candidates to apply for the open positions.

Faculty Recruitment Poster

Interview Evaluation sheet

GEMS POLYTECHNIC COLLEGE

(Approved by AICTE, Govt. of India, F. No Northern/2015/1 - 2474317051)
NH - 2, Jogiya More, Ratanpura, Bharthouli (P.O) Aurangabad, Bihar – 824 121

INTERVIEW EVALUATION

Name of the Candidate :.....

Qualification :.....

Date of Interview :.....

Position :.....

Department :.....

Please use the following numbers to indicate the rating.

5 – Exceptional, 4 – Better than average, 3 – Capable / Average, 2 – Poor, 1 – Not acceptable, N/A – Not observed

CANDIDATE EVALUATION BY THE INTERVIEWER

S.No.	SKILL	RATING
1	Relevant educational background	
2	Related work experience	
3	Technical Knowledge	
4	Communication / Listening Skills	
5	Attitude / Confidence level	
6	Presentation / Appearance	
7	Stress tolerance	
8	Professional Demeanour	
9	Interpersonal Skills	
10	Integrity	

Overall Impression Rating :

Hiring recommendation after completion of interview : Hire Not Hire

NAME OF THE INTERVIEWER **DESIGNATION** **SIGNATURE**

Profile Screening:

- The HRO takes on the responsibility of screening the profiles of candidates who respond to the job postings.
- Candidates are selected based on criteria such as educational qualifications, relevant industry or academic experience, age, location of residence, and other job specifications.

Interview Selection:

- Shortlisted candidates are invited for interviews, which may be conducted in either online or offline mode.
- The interview panel comprises key stakeholders, including the Director, Principal, Dean of Academics, HR representatives, and the respective HODs. Senior lecturers may also be part of the interview panel.

Performance Evaluation:

- The Management carefully reviews the performance of candidates during the interview process.
- In addition to assessing qualifications, the panel evaluates the candidates suitability in terms of attitude, cultural alignment with the organizational values, and stability.

Appointment and Terms of Employment:

- Candidates who successfully pass the interview stage are offered faculty positions.
- The details of employment, including monetary and non-monetary benefits, are discussed with the selected candidate.
- A mutually agreed-upon date of joining is scheduled.

Issuance of Appointment Letter:

- If the candidate satisfies the expectations of both the Management and the respective HOD, an Appointment Letter is issued.
- The Appointment Letter, including the date of joining, is duly signed by the Director and issued through the Principal and the HR department.
- The recruitment procedure at GEMS Polytechnic College ensures that we bring in qualified and capable individuals who contribute to the institution's academic excellence and adhere to our organizational culture. Our commitment to follow established norms and guidelines underscores our dedication to maintaining high standards in education.

Promotion Policies in GEMS Polytechnic College:

At GEMS Polytechnic College, we place significant importance on the professional growth and development of our staff members. Our promotion policies are designed to recognize and reward employees for their dedication, educate qualifications, experience, and performance. We believe that promoting our staff is not just about recognizing their past achievements but also about encouraging their potential to assume higher responsibilities and continue contributing to the institution's growth. Here are the key aspects of our promotion policies:

Holistic Evaluation Criteria:

- Promotions in our institution are based on a holistic evaluation of staff members.
- We take into account not only their educational qualifications and experience but also their performance, dedication, and potential to assume higher responsibilities.

Experience and Performance-Based:

- Promotion and increment decisions are made by considering a staff member's experience and overall performance.
- Those who consistently demonstrate excellence in their roles and show the potential for growth are recognized and rewarded accordingly.

Annual Increments and Promotions:

- The management at GEMS Polytechnic College regularly reviews and implements annual increments and promotions in various grades.
- These increments are based on an assessment of each staff member's contributions to the institution.

Transparent Decision-Making:

- Our management takes effective and transparent decisions regarding promotions.
- The details of these decisions are shared with the concerned staff members and are incorporated into the proceedings of the meetings of the managing committee.
- This transparency ensures that staff members are aware of the institution's appraisal and action plans, promoting a culture of openness and shared goals.

Reimbursement of Professional Society Membership Fee:

- We encourage staff members to engage with professional societies by reimbursing 50% of their annual or life membership fee for one national or international professional society.
- This not only promotes professional networking but also supports continuous learning and development.

Sl.No	Name of the faculty & Designation	ISTE Life Membership Number	Total paid Amount	Reimbursement Amount
1.	Mr.Rama Gopal Challa, Principal	**LM - 138376**	₹3,540.00	₹1,770.00
2.	Mr.Ranjit Choudhary, Dean of Academics	**LM - 138415**	₹3,540.00	₹1,770.00
3.	Mr.Titus R, Sr.Lecturer / Mech	**LM - 138357**	₹3,540.00	₹1,770.00
4.	Mrs.Jenitha, Sr.Lecturer / CSE	**LM - 138414**	₹3,540.00	₹1,770.00
5.	Mr.Samuel Prakash Swami, HoD / Civil	**LM - 138380**	₹3,540.00	₹1,770.00
6.	Ms .Jensika rani J, Sr.Lecturer / Civil	**LM - 138375**	₹3,540.00	₹1,770.00

7.	Mr .R .Jabas Edwin Raj, HoD / EE	**LM - 138362**	₹3,540.00	₹1,770.00
8.	Mr. Ganeshbabu M, Lecturer / EE	**LM - 138394**	₹3,540.00	₹1,770.00
9.	Mrs. Pameela M, HoD / EEE	**LM - 138384**	₹3,540.00	₹1,770.00
10.	Mr. Ragunath A, Sr.Lecturer / EEE	**LM - 138385**	₹3,540.00	₹1,770.00
11.	Mr.Anil kolli,HoD / Mech	**LM - 138363**	₹3,540.00	₹1,770.00
12.	Mr.Arun Pandian P, Sr.Lecturer / Mech	**LM - 138364**	₹3,540.00	₹1,770.00
Total Amount Reimbursed to the Faculties				**₹21,240.00**

Financial Support for Novice Faculties:

Recognizing that early-career faculty members may need additional support, we provide financial assistance for registration in the National Initiative for Technical Teachers Training to faculty members with less than five years of experience.

This support helps them access resources and training that aid in their professional development. Our promotion policies at GEMS Polytechnic College are rooted in the belief that recognizing and nurturing the potential of our staff members benefits both the individuals and the institution as a whole. We are committed to fostering an environment of growth, learning, and continuous improvement, ensuring that our staff members are motivated and well-equipped to meet the evolving needs of our students and the education sector.

S.NO	Academic Year	No.of Faculties	Reimbursement Amount Per Head	One time Registration Fee
1	**2020 - 2021**	24	₹2,000.00	₹ 48,000.00
2	**2021 - 2022**	3	₹2,000.00	₹ 6,000.00
3	**2022 - 2023**	4	₹2,000.00	₹ 8,000.00
4	**2023-2024**	6	₹2,000.00	₹ 12,000.00
Total Amount		**37**	₹2,000.00	**₹ 74,000.00**

D. Extent of awareness among the employees/students (01)

In GEMS Polytechnic College, a robust system is in place to ensure that crucial information concerning the governing body, administrative structure, functions of various bodies, defined rules and procedures, as well as recruitment and promotional policies, is effectively disseminated. The college leverages its website as a central hub for this information, making it easily accessible to all. Additionally, various meetings are held to keep employees and students informed, promoting transparency and understanding throughout the institution. This proactive approach to communication ensures that everyone within the college community remains well-informed and engaged with the institution's policies and procedures.

9.1.3 Decentralization in working and grievance redressal mechanism (5)

A. List the names of the faculty members who have been delegated powers for taking administrative decisions (02)

B. Specify the mechanism and composition of grievance redressal cell including Anti Ragging Committee & Sexual Harassment Committee (03)

In an academic institution, the efficient management of administrative decisions and the establishment of effective grievance redressal mechanisms are paramount to fostering a conducive and secure environment for both faculty and students. Decentralization in working and grievance redressal mechanisms play a vital role in ensuring the well-being of all stakeholders. Here, we elaborate on the key aspects of this decentralized approach:

A. Delegation of Administrative Powers

This institution strongly believes in recognizing the unique skills and passion possessed by its faculty members. As part of this belief, faculty members are provided with opportunities and empowerment to take on additional roles beyond their designated responsibilities. This delegation of administrative power not only acknowledges their specialized skills but also enables them to showcase their capabilities. It leads to a more dynamic and responsive administrative structure.

In an academic institution, the efficient management of administrative decisions and the establishment of effective grievance redressal mechanisms are paramount to fostering a conducive and secure environment for both faculty and students. Decentralization in working and grievance redressal mechanisms play a vital role in ensuring the well-being of all stakeholders.

List of Faculty members who have been delegated powers for taking Administrative Decisions:

The details of committees along with the names of coordinators as well as the responsibilities of each committee are given below:

S.No.	Name of the Committee / Cell	Coordinators / Person In-charge	Functions and Responsibilities
1	Anti Ragging Committee	**Mr.Anil Kolli,** HoD/Mech	a. Prevent and address incidents of ragging within the institution. b. Create awareness and educate students about the consequences of ragging and the anti-ragging measures in place.
2	Women Anti-Sexual Harassment Committee	**Mrs.Chinthiya,** Sr.Lecturer/Civil	a. Ensure a safe and harassment-free environment for women within the institution. b. Investigate and address complaints related to sexual harassment and take appropriate actions against the offenders.
3	Purchase Committee	**Mr.Arun Pandian,** Sr.Lecturer/Mech	a. Manage and oversee the procurement and purchasing processes of the institution. b. Ensure transparency, fairness, and compliance with procurement policies and regulations.
4	Career Guidance And Higher Education Cell	**Ms.Jensika Rani,** Sr.Lecturer/Civil	a. Provide students with information and guidance on career opportunities and higher education options. b. Organize workshops, seminars, and counseling sessions to help students make informed career and education choices.
5	SC/ST Cell	**Mr. David Naik Vadithe,** Lecturer/EEE	a. Promote the welfare and upliftment of students from Scheduled Castes (SC) and Scheduled Tribes (ST). b. Address issues related to the discrimination, harassment, and challenges faced by SC/ST students.
6	Training And Placement Cell	**Ms.Jensika Rani,** Sr.Lecturer/Civil **Mr.Bhaskar Ranjan,** Sr.Lecturer/EE	a. Facilitate job placement and internships for students. b. Collaborate with companies and industries to organize campus recruitment drives and provide career development support.
7	Institution Innovation Council (IIC)	**Mr. Ragunath,** Sr.Lecturer/EEE	a. Foster an entrepreneurial spirit among students. b. Provide resources, training, and mentorship to students interested in starting their own businesses.

8	Disciplinary Committee	**Mr.Anil Kolli,** HoD/Mech	a. Maintain discipline and order within the institution. b. Investigate and address cases of student misconduct and violations of the institution's code of conduct.
9	Grievance Redressal Cell	**Mr.Anil Kolli,** HoD/Mech	a. Receive and resolve grievances and complaints from students and staff. b. Ensure that concerns and issues raised by members of the institution are addressed in a fair and timely manner.
10	Examination Cell	**Mr.Sumit Kumar,** COE	a. Organize and manage the examination and assessment processes. b. Ensure the integrity, security, and fairness of the examination system.
11	Library Advisory Committee	**Mr.Titus,** Sr.Lecturer/Mech	a. Advise on the development and improvement of library resources and services. b. Recommend acquisitions, subscriptions, and policies related to the library.
12	Alumni Association Cell	**Mr.Bhaskar Ranjan,** Sr.Lecturer/EE	a. Maintain connections with alumni and engage them in the institution's activities. b. Organize alumni events, networking opportunities, and fundraising initiatives.
13	Admission Committee	**Mr.Ranjit Choudhary,** Dean of Academics	a. Oversee the admission process for new students. b. Establish admission criteria and ensure a fair and transparent admission system.
14	Hostel Committee	**Mr.Arun Pandian**, Sr.Lecturer/Mech	a. Manage and maintain the hostel facilities for students. b. Address issues related to hostel accommodation, safety, and amenities.
15	Sports Committee	**Mr. Anugrah Ashish**, Lecturer/ EE **Mrs.Kalpana Pandey,** Librarian	a. Promote sports and physical activities within the institution. b. Organize sports events, competitions, and support student athletes.
16	Morphosis - Tech Fest Committee	**Mr. Ganeshbabu M** Lecturer/EE **Mr.Sudhir Kumar,** Lecturer/MECH	a. Plan and organize the institution's tech fest or similar events. b. Coordinate activities, competitions, and workshops related to technology and innovation during the fest.

B. Grievance Redressal Mechanisms
Grievance Redressal Committee:

Composition:
The Grievance Redressal Committee is composed of the Principal, Head of Departments, and staff members, creating a diverse group to address various concerns.
Grievance Redressal Committee in the Institute and Appointment of OMBUDSMAN by the Committee. As per All India Council for Technical Education (Establishment of Mechanism for Grievance redressal) Regulations, 2012, F. No. 37-3/Lega112012, dated 25.05.2012).

Composition of Grievance Redressal Committee:

S. No.	Name	Designation	Position
1	Mr. Rama Gopal Challa	Principal	Chairman
2	Mr. Sandy William	Advocate Ms. 1325/2014	OMBUDSMAN
3	Mr. Anil Kolli	HOD / Mech	Convener
4	Mr. Ranjit Choudhary	Dean of Academics	Member
5	Mr. Sumit Kumar Singh	Sr.Lecturer / EEE	Member
6	Mr. Robin	HR	Member

Mechanism:

- The committee analyzes all grievances and suggestions submitted through the suggestion box.
- It strictly adheres to the guidelines provided by AICTE (All India Council for Technical Education).
- Regular meetings are conducted to ensure that grievances raised are addressed in a timely and effective manner, fostering an environment of continuous improvement.

Anti-Ragging Committee:
Composition:
The Anti-Ragging Committee is headed by the Principal and consists of dedicated members.
Anti-Ragging Committee as per All India Council for Technical Education notified regulation for prevention and prohibition of ragging in AICTE approved technical institutions vide No. 37-3/Legal/AICTE/2009 dated 01.07.2009.
Composition of Anti-Ragging Committee:

S. No.	Name	Designation	Position
1	Mr. Rama Gopal Challa	Principal	Chairman
2	Mr. Anil Kolli	HOD - Mech	Coordinator
3	Mr. Ranjit Choudhary	Dean of Academics	Member

4	Mr.Arun Pandian	Sr.Lecturer/Mech	Member
5	Mrs.Pamela	HOD - EEE	Member

Mechanism:

- The institution collects undertaking forms from all students and parents/guardians at the time of admission.
- The contact details of committee members are readily available in various places, including the Handbook, Display Boards, and the institution's website.
- To ensure a safe and ragging-free environment, an Anti-Ragging squad will form, which conducts regular inspections in different areas like food courts, bus stops, restrooms, hostels, and vehicle stands.
- The presence of CCTV cameras in strategic locations adds an extra layer of security by monitoring and deterring ragging activities.

Women Anti-Sexual Harassment Cell:

Composition:

- This cell is led by senior women faculty members who serve as presiding members and mentors.

Composition of Women Anti-Sexual Harassment Cell:

S.No.	Name	Designation	Position	Mobile Number
1	**Mr. Rama Gopal Challa**	Principal	Chairman	8340231074
2	**Mrs.Chinthiya**	Sr.Lecturer/Civil	Coordinator	8525999487
3	**Mr. Ranjit Choudhary**	Dean of Academics	Member	8124517713
4	**Mrs.Kalpana Pandey**	Librarian	Member	9304240631
5	**Mrs.Catharine**	Lecturer / EE	Member	7010065904

Mechanism:

- The Women Anti-Sexual Harassment Cell plays a pivotal role in ensuring a safe and inclusive environment.
- It actively promotes awareness and follows the guidelines prescribed by AICTE.
- Any student or staff member who experiences harassment can approach this committee at any time.
- Immediate and strict corrective measures are undertaken to address the issue.
- The cell also conducts awareness campaigns through meetings to encourage reporting against any form of suppression, thereby empowering individuals to stand up against harassment.

In conclusion, decentralization in administrative decision-making and the existence of robust grievance redressal mechanisms, including Anti-Ragging and Anti-Sexual Harassment Committees, ensure that the institution operates smoothly, promoting a safe and inclusive environment for all its members. This approach empowers faculty members to contribute their unique skills and capabilities, while also providing a responsive system for grievance redressal and safety.

9.1.4 Delegation of financial powers (5)

At our college, we uphold the principles of democratic and decentralized administration, fostering a culture of shared responsibility and active participation in decision-making. To achieve this, we have established various committees at ensuring effective governance and nurturing leadership qualities among our esteemed staff members.

These committees play a pivotal role in our institution, as they are entrusted with the authority to make financial decisions within their respective domains. This delegation of financial powers is not merely an administrative choice strategic move that has yielded significant benefits for our college community:

Enhanced Involvement:

- Delegating financial powers to various committees has created a sense of ownership and involvement among our faculty members.
- They have a direct say in how resources are allocated and utilized, which strengthens their connection to the institution.

Speed and Efficiency:

- By distributing financial authority, we have streamlined our administrative processes.
- This decentralization ensures quicker responses to financial matters, leading to more agile and efficient administration.

Effective Governance:

- Our committees, equipped with delegated financial powers, are better equipped to address the unique needs and challenges within their domains.
- This tailored approach to decision-making contributes to the effective governance of our college.

In essence, our commitment to delegation of financial powers aligns with our broader vision of fostering a collaborative and accountable community. It empowers our faculty members to shape the future of our institution while ensuring that financial decisions are made swiftly and effectively.

We believe that this democratic and decentralized approach not only serves our colleges interests but also enriches the professional development of our staff members, creating a stronger and more resilient educational environment.

S.No	Designation	Particulars Limit to Sanction	Limit to Sanction
1	**Principal**	Procurement of Equipments, Service Maintenance and promotion of academics Development activities.	**Below Rs.1 Lakh**
2	**HoDs**	Procurement of laboratory	**Below Rs.10,000/-**

		Consumables, Stationeries, Service and Maintenance	
3	**Coordinators**	To spend for their committee activities	**Rs.5,000/-**

9.1.5 Transparency and availability of correct/unambiguous information in public domain (5)

At **GEMS Polytechnic College,** we are dedicated to ensuring transparency, clarity, and accuracy of information provided to our stakeholders. To achieve this, we employ various channels to disseminate important information and maintain an open line of communication.

College Website:

- We utilize our college website to share information related to institutional policies, rules, and various processes.
- This platform serves as a central hub for accessing essential information, promoting transparency in our operations

Notice Boards:

- Our notice boards, strategically located at the main entrance, department corridors, and classrooms, serve as physical sources of information.
- We use these boards to communicate proposed activities to both staff and students, ensuring that everyone is informed.

Orientation Programs:

- During orientation programs, we provide detailed information about various institutional and departmental activities.
- Comers become familiar witThis comprehensive overview helps new our institution's offerings.

SBTE Board Circulars:

- We maintain an official WhatsApp group and utilize official email IDs to share SBTE Board Circulars with our students.
- This ensures that critical updates and announcements reach students promptly.

Academic Calendar:

- Our academic calendar includes essential dates such as examination schedules, holidays, and events.
- It is circulated to all students and staff members, facilitating effective planning and utilization of facilities.

Transparency in Assessment:

- After each internal assessment test, we return corrected answer scripts to students.
- This practice promotes transparency and allows students to seek clarification in the evaluation process.

Department Newsletters:

- Our department newsletters, published once per semester, provide insights into departmental activities.
- This information is also available on the department's dedicated page on the college's official website.

AICTE Approval and SBTE Affiliation:

- As a college approved by **AICTE,** New Delhi, and affiliated with **SBTE**, Bihar, we make all relevant information and approval letters accessible on our website.
- This ensures that our stakeholders have easy access to the details of our affiliations and approvals.

We believe that by maintaining transparency and making information readily available, we empower our stakeholders to make informed decisions, participate actively in our institutions activities, and contribute to our collective growth and success.

9.2 Budget Allocation, Utilization, and Public Accounting at Institute level (10)
Summary of current financial year's budget and actual expenditure incurred(for the institution exclusively)in the three previous financial years.

Table 1 - CFYm1 2022-23			
INCOME		**Actual expenditure**	
Fee	₹61,329,583.00	Recurring including salaries	₹37,301,451.00
Govt.	₹0.00	Non Recurring	₹5,324,015.00
Grants	₹0.00	Special Projects/Any other, specify	₹0.00
Other Sources	₹0.00		
Total Income	**₹61,329,583.00**	**Total Expenditure**	**₹42,625,466.00**
Total No. of Students			**489**

Table 2 - CFYm2 2021-22			
INCOME		**Actual expenditure**	
Fee	₹28,146,510.00	Recurring including salaries	₹30,899,976.00
Govt.	₹0.00	Non Recurring	₹4,658,132.00
Grants	₹0.00	Special Projects/Any other, specify	₹0.00
Other Sources	₹0.00		
Total Income	**₹28,146,510.00**	Total Expenditure	₹35,558,108.00
Total No. of Students			**507**

Table 3 - CFYm3 2020-21			
INCOME		**Actual expenditure**	
Fee	₹19,270,917.00	Recurring including salaries	₹17,262,183.00
Govt.	₹0.00	Non Recurring	₹1,968,603.00
Grants	₹0.00	Special Projects/Any other, specify	₹0.00
Other Sources	₹0.00		
Total Income	**₹19,270,917.00**	**Total Expenditure**	**₹19,230,786.00**
Total No. of Students			438

Table 4 - CFYm4 2019-20			
INCOME		**Actual expenditure**	
Fee	₹29,780,944.00	Recurring including salaries	₹19,295,842.00
Govt.	₹382,418.00	Non Recurring	₹4,104,805.00
Grants	₹0.00	Special Projects/Any other, specify	₹0.00
Other Sources	₹0.00		
Total Income	₹30,163,362.00	Total Expenditure	₹23,400,647.00
Total No. of Students			**348**

9.2.1 Adequacy of Budget Allocation (4)

At our institution, the allocation of funds is a meticulous process that aligns with the availability of financial resources. These funds are disbursed in accordance with the approved budget, and their utilization is closely monitored by a dedicated accounts section. We take pride in ensuring that our budget allocations meet the needs of both individual departments and the institution as a whole.

Our institutions budget allocation procedure follows a well-defined framework:

Annual Budget Preparation:

- The process begins in February/March each year, in anticipation of the upcoming academic year starting in June.
- Heads of departments, in collaboration with various offices, work under the guidance of the Principal to formulate budgets that cater to the specific requirements of each department.

Comprehensive Coverage:

- The budget encompasses all functional departments within the institution, including academic departments, placement services, accounts, library, purchase, hostel management, physical education, IT system administration, transportation maintenance.
- This comprehensive approach ensures that no critical area is overlooked.

Scrutiny and Consideration:

- The projections provided by individual departments are subjected to rigorous scrutiny and assessment, forming the basis for the institution-level budget.
- This thorough evaluation process guarantees that each department's essential needs are addressed.

Governing Council Approval:

- The consolidated budget, reflecting the needs and priorities of the entire institution, is presented to our Governing Council for approval.
- This step ensures transparency and accountability in the budgeting process.

Release of Budget:

- Upon approval by the Governing Council, the budget is officially released for utilization through our main finance office.
- This allows departments to access the allocated funds as needed.

In addition to the annual budget, we have mechanisms in place to accommodate additional allocations in special cases that may arise during the year. Our institution places a strong emphasis on responsible financial management to ensure that essential requirements are met without disruption to the smooth operation of the institution.

From the very inception of our college, the management has consistently demonstrated its commitment to providing an adequate budget that supports our educational mission and enables us to offer a high-quality learning environment and take pride in the transparency, diligence, and responsibility with which we handle our budget allocation process.

9.2.2 Utilization of allocated funds (4)

Our institution places great importance on the responsible and efficient utilization of allocated funds to ensure that resources are effectively managed to support our academic and operational needs.

Here's how we manage the utilization of allocated funds:

Empowered Department Heads:

- Each department head is granted the authority to utilize the approved budget as projected by their respective departments, as and when required within the academic year.
- This decentralization of financial responsibility allows for greater flexibility in addressing department-specific needs.

Administrative Oversight:

- The allocation of funds is overseen by the administrative team, led by the Principal.
- These funds are disbursed and managed by the Principal and the Heads of the Departments in accordance with the approved allocation.
- In cases where additional funds are needed beyond the budgeted amount, such requests are subject to approval by the Chairman as necessary.

Initiating Procurement:

- Actions related to procurement of laboratory equipment, the enhancement of existing lab facilities, and the purchase of consumables are initiated by the respective department heads.
- Upon approval by the Principal, funds are released to the central finance office to facilitate these essential activities.

Diverse Expense Categories:

- Over the past three years, our budget has been thoughtfully utilized to cover various expenses, including staff salaries, infrastructure development, equipment purchases, consumables, contingencies, and travel, among others.
- This allocation ensures that all aspects of our institutions functioning are adequately funded.

Financial Oversight:

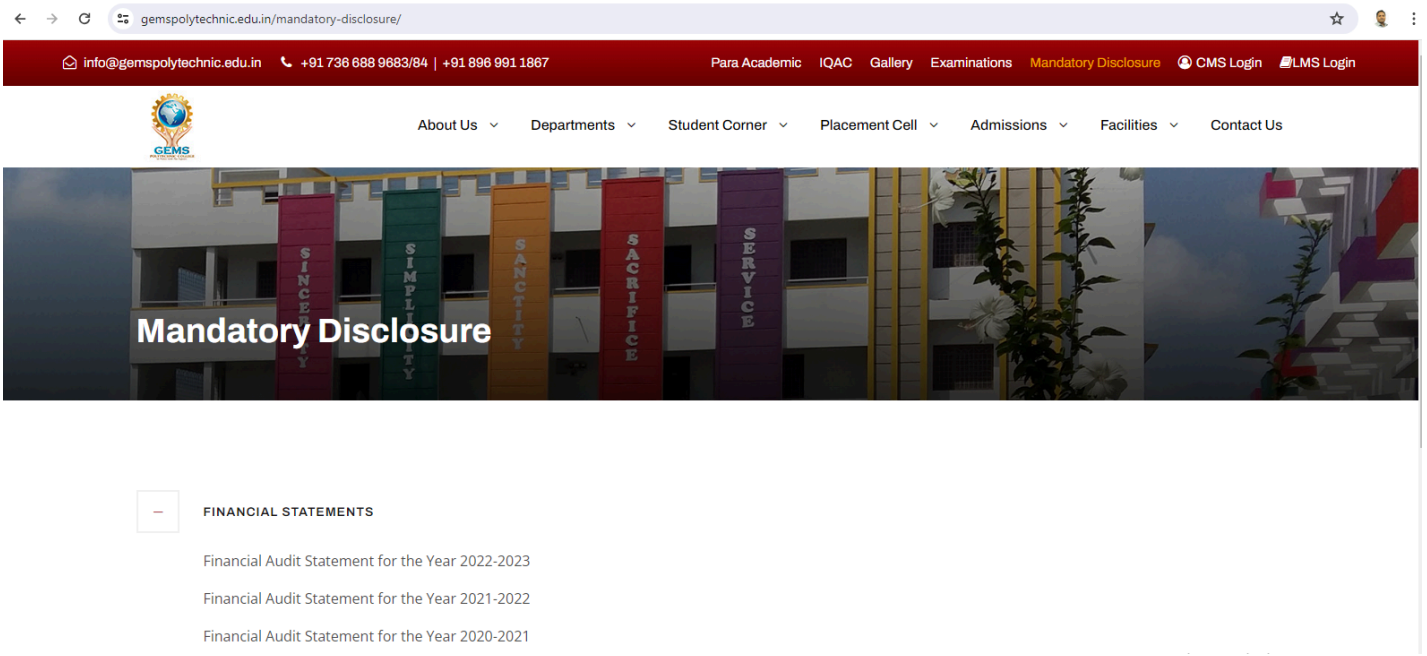
- To maintain transparency and adherence to financial delegation guidelines, the utilization of the budget is closely monitored by the Purchase and Accounts Departments.
- These departments verify the proper allocation of funds during procurement and payment processes, ensuring compliance with established financial protocols.

By implementing these comprehensive measures, we strive to ensure that allocated funds are utilized efficiently and effectively, aligning with the institution's goals and objectives. Our commitment to responsible financial management accountability is unwavering, as we continuously work to enhance the educational experience and infrastructure at our institution.

9.2.3 Availability of the audited statements on the institute's website (2)

At GEMS Polytechnic College, transparency and accountability are of utmost importance to us.

- As part of our commitment to open and honest financial practices, we make the audited statements of accounts for our institution readily accessible on the College website.
- This initiative ensures that our stakeholders, including students, faculty, parents, and the broader community, have easy access to crucial financial information, promoting trust and transparency in our operations.



9.3 Department Specific Budget Allocation, Utilization (5)

9.3.1 Adequacy of Budget Allocation (2)

The allocation of funds for the Department of Computer Science & Engineering is a critical aspect of ensuring the smooth operation of academic activities and the enhancement of the learning environment.

The institution justifies the adequacy budget allocation through a well-structured process:

Budget Proposal Alignment:

- The budget allocation aligns with the Department Proposed Budget.
- The allocated funds are judiciously spent to cover various expenses, and this spending is meticulously monitored by the Budget Incharge of the department.

Incorporating Stakeholder Input:

- The department collects projections from individuals, laboratory in-charges, and faculty members.
- These inputs are thoroughly scrutinized and considered when formulating the department's budget.

Curriculum-Driven Equipment Allocation:

- Additional equipment and consumables required for laboratory facilities are considered based on curriculum revisions.
- The appropriate budget is allocated to ensure that students have access to up-to-date equipment and resources.

Planning for Academic Year:

- Programs and events for the entire academic year are meticulously planned, and detailed budgets are forecasted to support their successful execution.

Flexibility for Additional Expenditure:

- The budget also accounts for unforeseen additional expenses that may arise during the year.
- This ensures that the department has the necessary resources to address unexpected needs.

Approval Process:

- The finalized budget is submitted to the principal through the Overall Budget Coordinator for final approval.
- This process ensures transparency and accountability in budget allocation.

Supplemental Allocations:

- In cases where the allocated budget may prove insufficient, additional allocations are made to address special requirements, thereby ensuring that the department can effectively meet its goals.

Table 1 :: CFY 2022-23

Total Budget 1060620.00		Actual expenditure (till...): 1052515.00	
Non Recurring	Recurring	Non Recurring	Recurring
1032300.00	28320.00	1026600.00	25915.00

Table 2 :: CFYm1 2021-22

Total Budget 471110.00		Actual expenditure (till...): 465530.00	
Non Recurring	Recurring	Non Recurring	Recurring
450000.00	21110.00	446000.00	19530.00

Table 3 :: CFYm2 2020-21

Total Budget 16185.00		Actual expenditure (till...): 15589.00	
Non Recurring	Recurring	Non Recurring	Recurring
0.00	16185.00	0.00	15589.00

Table 4 :: CFYm3 2019-20

Total Budget 2415925.00		Actual expenditure (till...): 2349526.27	
Non Recurring	Recurring	Non Recurring	Recurring
2365600.00	50325.00	2300239.36	49286.91

9.3.2 Utilization of allocated funds (3)

The efficient utilization of allocated funds is of paramount importance to deliver quality education and maintain high standards in the Department of Computer Science & Engineering.

The institution demonstrates how funds were utilized during last three assessment years:

Lab Equipment Procurement:

- A significant portion of the allocated funds is utilized for the procurement of laboratory equipment.
- This ensures that students have access to state-of-the-art tools and technology for their practical education.

Upgradation of Lab Facilities:

- Funds are allocated for the upgradation of existing lab facilities to ensure that the infrastructure remains modern and conducive to effective learning.

Consumables Purchase:

- The budget is used to purchase consumables necessary for the day-to-day functioning of laboratories, guaranteeing that students have access to the materials they need.

Academic Events:

- Funds are utilized for conducting various academic events such as seminars, workshops, conferences, symposiums, and other educational programs.
- The utilization of funds for these events requires prior approval by the Principal to maintain financial transparency.

Variance Monitoring:

- As the budgets are derived from individual laboratory levels and consolidated to form the departments budget, the variance between the budget and utilization is kept to a minimum.
- Any increase in expenditure is closely monitored, and control measures are taken to stay within budget limits.

Prior Approval for Unbudgeted Expenses:

- Any unbudgeted expenses require prior approval from the management before spending, ensuring that funds are used judiciously and in alignment with the department's goals.

Detailed Utilization Reports:

- The department maintains detailed utilization reports to track the expenditure of allocated funds.
- These reports provide transparency and accountability in the utilization of funds.

In conclusion, the Department of Computer Science & Engineering at GEMS Polytechnic College follows a meticulous process for budget allocation and utilization, ensuring that funds are allocated based on needs, transparently spent, and effectively utilized to provide quality education and support academic endeavors. This commitment to financial accountability and excellence contributes to the department's continued success.

Utilization reports for the current year and previous years are maintained and are available for reference:

Table: Utilization of budget				
Financial Year	**Budget Proposed in Rs.**	**Budget Sanctioned In Rs.**	**Actual Expenditure in Rs.**	**Percentage of Utilization**
2022-2023	₹1,060,620.00	₹1,060,000.00	₹1,052,515.00	99.29%
2021-2022	₹471,110.00	₹470,000.00	₹465,530.00	99.05%
2020-2021	₹16,185.00	₹16,000.00	₹15,589.00	97.43%
2019-2020	2,415,925.00	2,400,000.00	2,349,526.27	97.90%

9.4 Library and Internet (20)

Details of zero deficiency report:

9.4.1 Quality of learning resources (hard/soft) (10):

A. Availability of relevant learning resources including e-resources and Digital Library (7)
B. Accessibility to students (3)

Library Network & Automation:

At GEMS Polytechnic College, our commitment to enhancing the learning experience extends to our library facilities. We are proud to announce that our central library is fully automated, thanks to the integration of Cloud-based Campus Management software known as **VMEDULIFE.**

Here's how this automation benefits our students and faculty:

Effortless Access:

- With VMEDULIFE, both students and faculty members gain convenient access to their library-related information.
- This includes details such as book issuance, returns, due dates, and fine information.
- You can access these details effortlessly through the VMEDULIFE mobile app or the computer system, using your personal login credentials.

Online Public Access Catalog (OPAC):

- We provide an Online Public Access Catalog (OPAC) service that allows easy searching and retrieval of library resources.
- This service is accessible to both faculty and students through the VMEDULIFE platform.
- Additionally, you can access the OPAC service directly via this link: https://portal.vmedulife.com/public/library/#/gems-polytechnic-Pitampura

We believe that this automation not only simplifies library management but also empowers our academic community with efficient and user-friendly tools for academic success. Explore the world of knowledge at GEMS Polytechnic College through our automated library network powered by VMEDULIFE.

Availability of relevant learning resources including e-resources and Digital Library:

At GEMS Polytechnic College, we take pride in offering a comprehensive array of learning resources in our central library, catering to the diverse needs of our students and faculty. Here's a glimpse of what you can find:

1	**Text Books for Circulation:**	Our collection of textbooks covers a wide range of subjects, available for borrowing by students. These books provide the core material needed for academic coursework.
2	**Reference Books (Not for Circulation):**	In addition to textbooks, we have an extensive collection of reference materials that include encyclopedias, dictionaries, and specialized reference books. These resources are for in-library use and provide valuable insights for research and reference.
3	**Student Project Reports (Not for Circulation):**	Past student project reports are available for reference, providing a valuable resource for those seeking inspiration or guidance in their own projects.
4	**International / National Journals:**	Our library subscribes to a variety of international and national journals, offering the latest research and insights in various fields. These journals are essential for staying updated in your area of study.
5	**Competitive Exam Books:**	We have a dedicated section with books and study materials to help students prepare for competitive exams, enabling them to excel in various entrance tests and competitive assessments.
6	**Non-Fiction Storybooks:**	Our collection includes non-fiction books that cover a wide range of subjects, providing an opportunity for leisure reading and broadening your knowledge horizons.
7	**Dictionary and Encyclopedia:**	Access to dictionaries and encyclopedias to aid in research, reference, and language improvement.
8	**Daily Newspapers**	Stay informed about current events, trends, and developments with daily newspapers available in the library.

Digital Library:	
Availability of digital library content :	Yes
Availability of an exclusive server :	Yes
Availability over Intranet/Internet :	Yes
Availability of exclusive space/room :	Yes
Number of users per day :	**25**
E-books Availability:	**Yes**
NPTEL Resources.	**Available**

Accessibility to students:
At GEMS Polytechnic College, we prioritize students' accessibility to knowledge and resources. We are dedicated to fostering an environment where students can access the resources they need to excel in their academic pursuits and personal development.

Here's how our central library ensures a conducive environment for learning:

Library Hours:
Monday to Friday: 9:00 a.m. to 4:40 p.m.
Saturday: 9:00 a.m. to 3:30 p.m.
Sunday and Government Holidays: Closed

Stay Informed:
- Keep abreast of current events with our daily newspaper subscriptions, available in both Hindi and English.

Academic Resources:
- Our library subscribes to academic journals at regular intervals, providing students with access to the latest research and scholarly publications.
- Efficiently locate books and resources using our user-friendly Library Online Public Access Catalog (OPAC).

Exam Preparation:
- We offer a comprehensive collection of books specifically tailored to assist students in their program-wise competitive examinations and civil service exam preparation.

Empowering Initiatives:
- As part of the GPC-NDLI Club, we organize a range of events and competitions to empower and enrich the student community.

Reprography Facility:
- To further support your academic endeavors, we provide a reprography facility within the library.
- Students can easily obtain photocopies of non-copyrighted materials at a minimal cost.

NDLI Club Initiatives:

- GEMS Polytechnic College's NDLI Club (Registration Number: INBRNC3K4TTETNZ) organizes diverse student-centric events, including reading sessions, essay competitions, spell bees, poster and model presentations, and engaging quizzes, aimed at fostering holistic student development.
- As part of the GPC-NDLI Club, we organize a range of events and competitions to empower and enrich the student community.
- GEMS Polytechnic College earns recognition as one of Bihar, India's top-performing NDLI Clubs. Exceptional achievement in educational endeavors acknowledged.

Ministry of Education
Government of India

Indian Institute of Technology
Kharagpur

National Digital Library of India

CERTIFICATE OF REGISTRATION

This is to certify that
"GEMS Polytechnic College"
is registered as an **NDLI Club** under the
National Digital Library of India.

NDLI CLUB PARTNER
National Digital Library of India
- LEARN. SHARE. GROW. -

Registration Number- **INBRNC3K4TTETNZ**

Date of Registration- **08/04/2021**

Validity Extended Up-to- **08/04/2024**

:

Prof. Kalyan Prasad Sinhamahapatra
Joint Principal Investigator
National Digital Library of India Project
Chairman
Central Library IIT Kharagpur
Professor
Aerospace Engineering, IIT Kharagpur

Dr. B. Sutradhar
Joint Principal Investigator
National Digital Library of India Project
Librarian
Central Library IIT Kharagpur

शिक्षा मंत्रालय MINISTRY OF EDUCATION | INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR | G20 भारत 2023 INDIA | Azadi Ka Amrit Mahotsav

This

CERTIFICATE OF APPRECIATION

Is hereby granted to

GEMS Polytechnic College

Adjudged as One of The Best Performing NDLI Clubs in Bihar, India.

This certifies that the NDLI Club has displayed outstanding performance and unwavering dedication in promoting knowledge and learning through the National Digital Library of India (NDLI).

Through their remarkable efforts, they have successfully utilized the resources offered by the NDLI platform to foster a culture of continuous learning and digital literacy. Their commitment to organizing informative events, workshops, and study sessions has greatly contributed to the intellectual growth of its members and the wider community.

Their exceptional performance serves as an inspiring example of how a passion for learning can make a significant impact. Their achievements will serve as an inspiration to others, demonstrating the transformative power of digital resources and a passion for learning.

In recognition of their outstanding achievements, we proudly present this certificate as a token of appreciation and encouragement.

Congratulations on their remarkable performance, dedication, and contributions to promoting knowledge and learning.

EVENT PARTNERS
National Digital Library of India
- LEARN. SHARE. GROW. -

National Digital Library of India | NDLI Club

Prof. K. P. Sinhamahapatra
Joint Principal Investigator
National Digital Library of India Project
Chairman
Central Library IIT Kharagpur
Professor
Aerospace Engineering, IIT Kharagpur

Dr. B. Sutradhar
Joint Principal Investigator
National Digital Library of India Project
Librarian
Central Library IIT Kharagpur

9.4.2 Internet (10):

Name of the Internet provider	• **ISHAN (Primary),** • **BIG-DATA (Secondary)**
Available bandwidth	• **50Mbps (Primary),** • **40Mbps (Secondary)**
WiFi availability	• **Main Block Ground Floor Lobby and** • **2nd Floor Lobby with Indoor Access Points.** • **Hostel Block with an Outdoor Access Point.**
Internet access in labs, classrooms, library and offices of all Departments	• **Smart boards in classrooms,** • **Labs with computers,** • **Department libraries** • **Central Library, and** • **Office.** • **They are connected with a wired network through managed and unmanaged network switches.**
Security arrangements	• **Wijungle -** Unified Network Security Gateway with an active subscription till October 2026

9.5 Institutional Contribution to the Community Development (5):

At GEMS Polytechnic College, we are deeply committed to fostering community development and giving back to society. Our institutional efforts in this regard are coordinated through the GPC Community Development Cell, which plays a pivotal role in organizing various programs and initiatives aimed at enhancing the well-being of the community. Some of our significant contributions include:

1. Medical Camps:
Our students and staff members actively participate in organizing medical camps to provide essential healthcare services to the underprivileged and marginalized sections of the community.

2. Tree Plantation:
We believe in the significance of environmental sustainability and undertake tree plantation drives to contribute to a greener and healthier environment.

3. Basic Education for Village School Students:
We take pride in extending our educational resources to nearby village school students, offering them basic education and opportunities for personal growth.

4. Teaching Moral and Ethical Values:
Our commitment to holistic development extends to teaching moral and ethical values to the students of nearby village schools, instilling important life lessons.

5. Computer Systems Awareness and Training:
In today's digital age, computer literacy is crucial. We provide awareness and basic training on computer systems to students in neighboring village schools to empower them with technological skills.

6. Road Safety Awareness:
Promoting road safety is a priority. Our road safety awareness programs aim to educate the community on safe and responsible road practices.

National Service Scheme (NSS):
The National Service Scheme is an integral part of our commitment to community development. It serves as a platform for students to actively contribute their services for the betterment of the community and the nation while nurturing a sense of social responsibility.

Some of the notable NSS programs organized and implemented include:

1. Basic Technical Training for Rural Youths:
We empower rural youths with essential technical skills through specialized training programs, equipping them for better employment opportunities.

2. Road Safety Awareness Programs:
Our efforts to promote road safety extend to NSS initiatives, aiming to create awareness and reduce road accidents.

3. Medical Camps:
In line with our overall mission, medical camps are organized by NSS to provide healthcare services and support to those in need.

4. Tree Plantation:

Our commitment to environmental sustainability is further exemplified by tree plantation activities conducted under the NSS banner.

NSS PROGRAM SUMMARY DETAILS					
S.No	**Name of the Activity**	**Date**	**Place**	**No.of GPC Students/Volunteers Participated**	**Beneficiaries (No.of People benefitted & Place)**
1	NSS Inaugural	22/4/22	GPC Auditorium	Mr. Piyush Pranjape, Regional Director, Ministry of Youth & Sports Affairs, Government of India,	100
2	AWARENESS PROGRAM ON NSS DAY AND ENVIRONMENT DAY.	09 -09 -2022	Jogiya High School Aurangabad Bihar	Mr. Arun Mukhiya Tengra Panhayat Aurangabad Bihar	JOGIYA
3	Girl's Protection Nation's Pride	13/2/23	Government Middle Middle School Jogiya	Ms . Kanti Verma Lecturer CSE GEMS Polytechnic College	50
4	Free Health Awareness & Medical Camp	5/4/23	Pritampur Aurangabad Bihar	Mrs. Roja, Senior Nurse, GEMS Polytechnic College,	75
5	MERI LIFE- ONE STUDENT ONE TREE	8/8/2023	GPC Campus	Principal, GEMS Polytechnic College and All Dept. HODs.	55
6	Free Health Awareness & Medical Camp	11/8/2023	Tiwari Bigha	Mrs. Roja, Senior Nurse, GEMS Polytechnic College,	127
7	Free Health Awareness & Medical Camp	8/9/2023	Deohara	Mrs. Roja, Senior Nurse, GEMS Polytechnic College,	61
8	Free Health Awareness & Medical Camp	26 -10- 2023	JAGDISH PUR	Students - 5 members Staff- 17 members	140

NATIONAL SERVICE SCHEME (NSS) - ACTIVITIES

In the past years, GEMS Polytechnic College has been bustling with impactful NSS activities. From environmental clean-up drives to health awareness campaigns, our students have been actively engaged. With a spirit of service and dedication, we've left a positive mark on our community. Join us as we continue to make a difference in the years to come!

NSS Inaugration on 22th April 2022

NSS Rally at Jogiya on 9th Sep 2022

Girl's Protection Nation's Pride at Jogiya School on13th Feb 2023

Free Health Awareness & Medical Camp at Pritampur on 5th April 2023

Meri Life : One Student one Plant on 8th August 2023

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NATIONAL SERVICE SCHEME (NSS) - ACTIVITIES

In the past years, GEMS Polytechnic College has been bustling with impactful NSS activities. From environmental clean-up drives to health awareness campaigns, our students have been actively engaged. With a spirit of service and dedication, we've left a positive mark on our community. Join us as we continue to make a difference in the years to come!

NSS Volunteers are conducting Nukkad Drama in Village to raise awareness about environmental conservation.

Mr. Arun, the Panchayat Mukhiya of Tengra, is addressing villagers during an NSS program.

Celebrating Republic Day 2024

2 students from GPC Participated 10 Days Adventure Camp at Hatkoti Himachal Pradesh 30th Dec 2023 to 8th Jan 2024

Free General Medical Camp at Pritampur on 22nd February 2024

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NOT ME BUT YOU
WORLD ENVIRONMENTAL DAY
JUNE -5
NOT ME
BUT YOU
NATIONAL SERVICE SCHEME
OPPO Reno8 5G


OPPO Reno8 5G

भारत सरकार
युवा कार्यक्रम एवं खेल मंत्रालय
राष्ट्रीय सेवा योजना, क्षेत्रीय निदेशालय
C विंग, 7वां तल,
कर्पूरी ठाकुर सदन, सी.जी.ओ. कॉम्पलेक्स
आशियाना – दीघा रोड, पटना – 800 025
फो० : 0612–2952934
ई–मेल : nssrcpatna@gmail.com
patna-nss@nic.in

सत्यमेव जयते

Government of India
Ministry of Youth Affairs & Sports
Regional Directorate of NSS
"C" Wing, 7th Floor,
Karpoori Thakur Sadan, CGO Complex
Ashiyana - Digha Road, Patna - 800 025
Phone.: 0612-2952934
E-mail : nssrcpatna@gmail.com
patna-nss@nic.in

F.No. .52/ NSS/RD/PAT/2020/ 3399 - 3402

Date – 17-11-2021

To,

The Principal
GEMS Polytechnic College,
Ratanpura, Aurangabad, Bihar

Subject: Opening of new NSS Unit - reg.

Sir,

With reference to the email dated 12th and 15th September- 2021, it is hereby to inform you that initially this office may provide approval to open Self Finance Unit of NSS for your college. With the passage of time, this office may approve your NSS unit as Govt. Funded Unit after reviewing the level of progress of NSS in your college. A short note regarding the NSS has been attached with this letter along with the form which is to be submitted to this office, duly filling up all details.

Thus, it is requested to you to submit duly filled up form so that this office may provide approval for opening the NSS Unit in your college.

Yours Faithfully,

for (Peeyush Paranjape)
Regional Director

Copy to:

1. The Director, Directorate of NSS, Govt. of India, Ministry of Youth Affairs & Sports, New Delhi-110011
2. The Under Secretary (NSS), Govt. of India, Ministry of Youth Affairs & Sports, Shastri Bhavan, New Delhi-110001
3. The SNO cum Director, Department of Art, Culture & Youth Development, Govt. of Bihar, Patna, Bihar

9.6 Alumni Performance and Connect (10):

At GEMS Polytechnic College, we value the continued association and contributions of our alumni. Here's how we foster a strong bond with our alumni and leverage their experiences for the betterment of our institution and students:

Alumni Association:

- The GEMS Polytechnic College Alumni Association has been established, and all former students are members of this association.
- This association serves as a platform to cultivate a sense of belonging and unity among our alumni, encouraging them to excel in their respective fields.

Alumni Association Constitution:

Sl.No	Role	Name of the Members	Designation
1.	President	Mr. Rama Gopal Challa	Principal
2.	Vice President	Mr. Ranjit Choudhary	Dean of Academics
3.	Secretary	Ms. Jensika Rani	Sr.Lecturer/ CIVIL
4.	Treasurer	Mr. Robin	Sr.Lecturer/ EEE
5.	Committee Chair	All Dept. HoDs	
6.	Event Coordinator	Mr. Ganesh / Mrs. Catharine	Lecturer/ EE
7.	Membership Coordinator	Mr. Bhaskar Ranjan	Lecturer/ EE
	Communication Coordinators	All Department Incharges	
8.	Department Incharge	Mr. Daniel Swami	Lecturer/ CIVIL
9.		Mrs. Catharine	Lecturer/ EE
10.		Mr. Ketu kumar	Lecturer/ EEE
11.		Ms. Priyanka	Lecturer/ CSE
12.		Mr. Sudhir Kumar	Sr.Lecturer/ MECH

GEMS POLYTECHNIC COLLEGE

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

NOTABLE ALUMNI

Daniel V. Richardson
2017-2020
Software Developer
Shloklabs, Coimbatore, TN

Priyanka Kumari
2017-2020
Lecturer
GEMS Polytechnic College

Ruby Kumari
2017-2020
Lecturer
GEMS Polytechnic College

Rishu John
2017-2020
Junior Software Developer
PIE Info Comm Pvt. Ltd.

James Marandi
2017-2020
CTC/Lab Assistant
GEMS Polytechnic College

Bishal Sonar
2017-2020
Office/Lab Assistant
GEMS Polytechnic College

Piyush Kumar
2017-2020
Junior Software Developer
PIE Info Comm Pvt. Ltd.

Anup Sahani
2018-2021
Trainer
GIFT - GEMS Institute of
Future Technology, Bihar

Manisha Kumari
2018-2021
Operator Engineer
Gabriel India Ltd. Gurgaon,
Haryana

Leiyapem Awungshi
2019-2022
Asst. Executive C.S.
Ienergizer-Noida

Prasanjeet Kumar
2019-2022
Software Engineer
DATAMATRIX, Ghaziabad,
UP

Vikash Uraon
2019-2022
Operator Engineer
Yazaki India Pt. Ltd.

Aryaman Kumar
2019-2022
Software Developer
Cognigent

Ani Kumari
2019-2022
Software Developer
Cognigent

Pujya Shree
2019-2022
Operator Engineer
Joyson Anand Abhishek
Safety Systems Pvt. Ltd.

Jyoti Kumari
2019-2022
Operator Engineer
K P Reliable

Annual Alumni Meetings:

- Each academic year, we organize meetings to engage with our alumni.
- This forum allows them to share their valuable insights and perspectives, contributing to the institution's growth and development.

Infrastructure Enhancement:

- We take alumni feedback seriously, using it to guide our efforts in improving the infrastructure of our institution.
- Their input helps us create a better learning environment for current and future students.

Guest Lectures:

- Our commitment to holistic education extends to involving alumni in giving lectures to our students.
- These sessions aim to improve students' attitudes, provide real-world insights, and inspire them through alumni success stories.

2ND ALUMNI MEET' 2022

The strong connection between our institution and our alumni network is a testament to the lasting impact of a GEMS Polytechnic College education. We cherish our alumni's accomplishments and continue to draw upon their expertise to shape the future of our students and our institution.

Part C

Declaration by the Institution

GEMS POLYTECHNIC COLLEGE

(Approved by AICTE, Govt. of India, F. No. Northern/2015/1-2474317051)

Affiliated to SBTE, Bihar
ISO Certified 9001:2015

S. Ashish Daniel
Secretary & Director

C. Rama Gopal
Principal

Declaration

I undertake that, the institution is well aware about the provisions in the NBA's accreditation manual concerned for this application, rules, regulations, notifications and NBA expert visit guidelines in force as on date and the institutes hall fully abide by them.

It is submitted that the information provided in this Self Assessment Report is factually correct.

I understand and agree that an appropriate disciplinary action against the Institute will be initiated by the NBA. In case, any false statement/information is observed during pre-visit, visit, postvisit and subsequent to grant of accreditation.

Date : **19/04/2024**
Place : **Aurangabad, Bihar**

Head of the Institute
Name : **Rama Gopal Challa**
Designation: **Principal**

Signature : Ramgopal 19/04/2024

PRINCIPAL
GEMS Polytechnic College
Ratanpura, Aurangabad
Bihar-824121

Seal of the Institution : GEMS Polytechnic College Date: 19/04/24 Ratanpura, Aurangabad,Bihar-824121

NH - 2. Jogiya More, Ratanpura, Aurangabad, Bihar - 824121
Website: www.gemspolytechnic.edu.in E-mail: polytechnic@gemsbihar.org
07070066877, 7366889683, 7366889684

Annexure 1

Program Outcomes and Program-Specific Outcomes

PROGRAM OUTCOMES (POs)

PO1. Basic and Discipline-specific knowledge:
Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.

PO2. Problem analysis:
Identify and analyze well-defined engineering problems using codified standard methods.

PO3. Design/ development of solutions:
Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.

PO4. Engineering Tools, Experimentation and Testing:
Apply modern engineering tools and appropriate techniques to conduct standard tests and measurements.

PO5. Engineering Practices for society, sustainability and the environment:
Apply appropriate technology in the context of society, sustainability, environment and ethical practices.

PO6. Project Management:
Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.

PO7. Life-long learning:
Ability to analyze individual needs and engage in updating in the context of technological changes.

(B) PROGRAM SPECIFIC OUTCOME (PSOs)

PSOs Number	PSOs Statement
PSO1	Ability to develop computer programs in areas related to Algorithms, DBMS, Software Design, Programming Languages and Networking.
PSO2	To enable diploma, to acquire programming and development competence, to sustain in academia as well as in industry.

GEMS
POLYTECHNIC COLLEGE
We Produce World Class Engineers

Empowering to Excel

Contact:

Mr. Ranjit Choudhary,
Head of the Department,
Department of Computer Science & Engineering,
GEMS Polytechnic College,
NH-2, Jogiyamore, Aurangabad, Bihar-824121.
Phone: 8124517713
Mail ID: csehod@gemspolytechnic.edu.in