

# **INSTITUTE OF ENGINEERING & MANAGEMENT**

# SALT LAKE, KOLKATA



Institute of Engineering & Management

# STRATEGIC PLAN

2021 - 2026

Date: 10/08/2020.





# **ABOUT INSTITUTE OF ENGIEERING & MANAGEMENT**

The IEM group is an acclaimed educational group amongst the industry-centred academic training organisations of today. IEM has set sublime standards in addressing the technical and managerial resource shortage in the new era of dynamic globalisation. The IEM group has risen to fame for its strong foundation in teaching and R&D in multifaceted areas. It aims to serve the future generation as well as the Nation through its commitment towards self-sufficiency and unmatchable excellence.

Since its inception, the IEM group has surpassed innumerable benchmarks of achievements and accreditations. Today IEM flaunts a colossal network of expansive operations led by an awe-inspiring student force who are the torchbearers of a better tomorrow.

The IEM Group has opened up the doors for young minds who dare to dream. It encourages the spirit of free enquiry and imagination. In this temple of learning, dreams take shape. The educational group attempts to inculcate the sense of human values and discipline in students to make them respectable human beings. It encourages learners to learn, to realize their potential and imbibe the best practices.

IEM is established in Kolkata in the IT hub of the state of West Bengal since 1989 as the first self-financed engineering college of the state, and since then IEM has been socially accredited as the best self-financed engineering institute of West Bengal and admits the best students from the top engineering merit list of WBJEE and JEE Main.

Right from its inception the placement cells of both IEM have consistently provided for 1 to 2 jobs on average for all its students.

- 1. IEM has ranked the 3rd best engineering college in West Bengal after IIT Kharagpur and NIT Durgapur by NIRF (National Institutional Ranking Framework), Ministry of HRD, Govt of India, amd 79th all across India, where all IITs, NITs
- 2. IEM has won the title of the "Jewel of the East" by Telegraph
- 3. IEM has won the title of "Picture Perfect" by ABP Group
- 4. IEM has achieved the best institute of India in Star News Award
- 5. IEM is successfully organizing international conferences for the last few years as mentioned below:

- i. IEEE IEMCON at University of British Columbia, Vancouver, Canada (http://ieee-iemcon.org/) since 2015
- ii. IEEE UEMCON at Columbia University, New York, USA (http://ieee-uemcon.org/) since 2016
- iii. IEEE CCWC, University of Nevada, Las Vegas (http://ieee-ccwc.org/) since 2017
- iv. IEEE IEMANTENNA, University of British Columbia, Vancouver, Canada (http://iemantenna.org/) in 2019
- v. IEEE IEMTRONICS at University of British Columbia, Vancouver, Canada (https://iemtronics.org/) since 2020

The educational group has one of the strongest Placement Cells in the country. Right from its inception both IEM have provided for 1 to 2 jobs on an average for all its students.



# PROGRAMMES OFFERED

Programme	Discipline	Department code
	Computer Science Engineering	CSE
	Electronics and Communication Engineering	ECE
	Information Technology	IT
	Mechanical Engineering	ME
	Electrical Engineering	EE
	Electrical and Electronics Engineering	EEE
	Artificial Intelligence and Machine Learning	AIML
B.Tech.	Internet of Things	IOT
	Internet of Things and Cyber Security including Block Chain Technology	IOTCSBT
	Computer Science and Business Systems	CSBS
	Artificial Intelligence	AI
BBA	Business Administration	BBA
BBA	Business Administration (Business Analytics)	BBA(BA)
BCA	Computer Applications	BCA



M.Tech	Electronics and Communication Engineering in VLSI and Micro Electronics	M.Tech.(ECE)
	Computer Science Engineering	M.Tech.(CSE)
	Computer Science and Business Systems	M.Tech(CSBS)
M.Sc.	Computer Science	M.Sc.(CS)
	Business Administration (FT)	MBA (FT)
MBA	Business Administration (General Management)	MBA (GM)
MCA	Computer Application	MCA

Duration of Curriculum for B.Tech./ BBA/ BCA/ MBA/ MCA / M.Tech./ M.Sc. degree programmes is as follows:

Programme	Duration
B.Tech.	4 years
BBA	3 years
BCA	3 years
MBA	2 years
MCA	2 years
M.Tech.	2 years
M.Sc.	2years



**GB** Members

	GB Members							
S.No.	Name	S.No.	Name					
1.	Prof. Ashok Pundir	2.	Dr. Sukhendu Samajdar					
	Dean of Faculty		Desferance & Discontinu					
	Dean of Faculty		Professor & Director					
	National Institute of Engineering (NITIE)		EKTA Incubation Centre					
	777h T -1							
	Vihar Lake,		BF 142, Sector 1, Salt Lake City,					
	Mumbai 400087		Kolkata 700064					
3.	Shri Amit Kiran Deb, IAS (Retd.)	4.	Prof. Ashok Kr. Dutta					
	DA – 38, Sector – I, Salt Lake,		50 John Des Beed Elea CD					
	DA = 36, Sector = 1, Sait Lake,		50, Jatin Das Road, Flat GB					
	Kolkata 700064		Kolkata – 700029					
5.	Shri Pranabesh Das	6.	Mr. M. K. Pathak					
	Director of Technical Education		Settlor Trustee					
			Sould Husice					
	Higher Education Department		International Foundation for Sustainable					
	Govt. of West Bengal, 'Bikash Bhavan'		Development					
	Gove of West Bengar, Bikasii Bhavali		4/1 Nepal Bhattacharya Street					
	10th floor, East Block, Salt Lake							
	Kolkata 700091		Kolkata 700026					
7.	Shri Aloke Mookherjea	8.	Prof. Goutam Pohit					
, .	Sin Priore Wookheijea	0.	Fior. Goutam Fornt					
	'Srijani', Flat – 2A		Department of Mechanical Engineering					
	B553, Hemanta Mukherjee Sarani		Indovenus I Iniversity					
	5555, Hemania Musherjee Saram		Jadavpur University					
	(Formerly Panditia Road Extension)		Jadavpur					
	Kolkata – 700029		Kolkata 700032					
9.	Prof. Manoj Mitra	10.	Dr. M. C. Seal					
	Dean of Faculty for Engg. & Technology		Plot No.6, Noni Gopal Roychowdhury					
	Jadavpur University, Jadavpur		Avenue					
			Kolkata 700014					
1.1	Kolkata – 700032	4.5						
11.	Prof. Dr. Satyajit Chakrabarti	12.	Prof. S. Chakrabarti					
	Professor		Director incering &					
			SE IEMAN					
			13/12/13/					

	Institute of Engineering & Management		Institute of Engineering & Management
	Sector – V, Salt Lake Electronics Complex		Sector – V, Salt Lake Electronics Complex
	Kolkata – 700091		Kolkata – 700091
13.	Mr. Samarendu Sarkar	14.	Prof. Banani Chakrabarti
	B Block, 245 Chittaranjan Park		Registrar
	New Delhi 110019		Institute of Engineering & Management
			Sector – V, Salt Lake Electronics Complex
			Kolkata – 700091
15.	Prof. (Dr.) Atul M. Gonsai		
	Professor,		
	Department of Computer Science		
	Saurashtra University		
	Gujarat,	J.	
	Rajkot – 360005		



#### **VISION OF THE INSTITUTE**

To be a globally recognized educational institution known for outcome based education and application oriented research.

#### MISSION OF THE INSTITUTE

To assist students to understand and enjoy the seamless nature of knowledge and encourage them to apply the acquired knowledge to practical use, so that they become worthy, socially responsible good human beings sought after for their leadership qualities.

To foster creativity, innovation, and excellence through example based teaching-learning process imparted in the most simple and easily comprehensible way.

To continuously upgrade knowledge base of our manpower, improve infrastructure and use of latest technology/pedagogical tools, and update curriculum through periodic feedback from stakeholders to enable students to meet professional requirements and their expectations.

### **OUALITY POLICY OF THE INSTITUTE**

We, at Institute of Engineering & Management are committed to the Society in making our Students live a purpose as responsible citizens with Ethical Values through provision of Quality Technical Education and continually improve to become a World Class Technological Institute. Graduate, Post Graduate, and Doctoral students are known for their hard work, competence, disciplined life, socially responsible professional conduct & intellectual and moral integrity.



## STRATEGIC PLAN IDENTIFIES THE FOLLOWING ROAD TARGETS FOR AY 2021-2030

To attain NAAC A++ grade during 2nd Cycle Accreditation.

To be ranked among TOP 30 engineering institutions in NIRF Ranking.

To secure TOP 50 position in ARIIA Ranking 2025.

Promote industry-institution collaboration with top MNCs.

- Establish Centres of Excellence in upcoming engineering fields like advanced materials and manufacturing, artificial intelligence, energy and internet of things.
- Incubate successful start-ups creating innovative products and business models using the knowledge and technologies developed by the Institution.

Provide an invigorating work environment for faculty and staff.

- Improve the involvement of alumni in all the aspects of Institutions development by collaborating with them in placements, guest lecture, mentoring students in various projects, mentoring incubate, research and development, consultancy.
- Collaboration with various industries in the field of Research & Development and consultancy.
- Collaboration with Institutions around the world to promote quality higher education and for supporting students/faculty exchange programmes.



# **STRATEGIC PLAN DEVELOPMENT (2021 - 26)**

The Strategic Plan 2021-2026 has been developed in the context of the capacity expansion of the Institute as mandated by the AICTE norms. Given this setting, the broad objectives for the next spell are clear before us. These include the creation of the requisite infrastructure for the expansion, betterment of teaching and learning process, increasing the faculty strength and increasing the number of research activities and the research output. These goals have been formulated in a manner that builds on the strengths of the institute and the aspirations of the faculty, staff and students.

The vision for IEM lay out by Strategic Plan 2021-2026 is to be in the top 10 private institutes, by being a regional leader in research and education, which will benefit society around us and the environment. The key pillars that will help the institute achieve this vision are course programmes, research, engagement with industry and entrepreneurial activity. True to its vision statement, the college aims to consistently provide and sustain an invigorating work environment that fosters a culture of excellence, innovation and entrepreneurship.

The key focus areas are identified through the gap analysis, with respect to the global developments, performance of the competitors and the perceived status of the Institution.

Preferences of the potential students in seeking admission (during admission of first year students), assessing the preference of the parents and potential students factors that influence the admission criteria as perceived by the potential students, assessing the state of the institute in comparison with that of emerging / competing institutions (through surveys / ranking process followed by the popular magazines & AICTE and rating given by the Accreditation Authorities). The key participants in the strategic planning include Members of the Governing Body, Faculty members, Students, Representatives from the Industry and the Parents.

The short term planning time horizon is one year (Department Development Plan) and the long term planning time horizon is five years (Perspective long term Plan). These time horizons for planning are set on the basis of cycle time involved in the academic activities (one academic assessment period, revision of academic regulations and curriculum and time involved in two consecutive quality assurance assessment planned). Long term sustainability measures are included in the strategic plan, Work systems and the work groups are continuously sensitized to understand the importance of being a sustainable institution. Innovative programmes, renovation of curriculum, introduction of novel teaching methods, and continuous focus on research and development, developments and factors that result in the success of the competitors, industry and societal requirements, and stern focus on the vision of the institution are promoted as the sustenance measures in the Institute. The senior members of faculty along with the Heads of the Department and Governing Body review the status of the plan and also to analyze the achievements.

# STRATEGIC PLAN IMPLEMENTATION AND MONITORING

Following flow chart (Figure 1) depicts the planning, monitoring, reviewing and verifying the strategic plan of the institute.

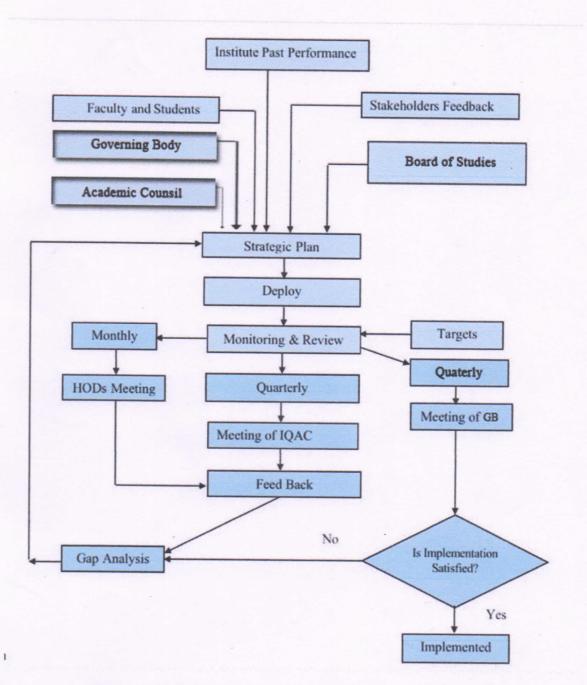


Figure 1 Flow Chart representing Institutional Strategic Plan



The strategic plan has set the targets or goals for infrastructure, Faculty Excellence, Students intake, Internationalization, Branding, Accreditations, Research, Collaborations, Financial sustainability, etc., which also illustrate the ways of achieving the targets and goals over the timeline. A team of Senior Professors are involved in monitoring the implementation of the strategic plan. The progress in achievement of the targets is reviewed periodically. The strategic plan is given below as in tables.

Table 1: Strategic Plan for Infrastructure

I	Academic Years	2021-'22	2022-'23	2023-'24	2024-'25	2025-'26	
S.No	Key Progress Area (KPA)	Progressive Enhancement Targets (PET) - Year-Wise					
1	Smart class (AV Hall)	2	2	2	All Dept.	All Dept.	
2	Modernization lab	2	2	2	2	2	
3	IEDC	6	22	28	28	30	
4	Centre of Excellence	1	2	2	3	5	
5	Library – e books	50	50	50	60	60	
6	Additional seminar hall facility	2	1	2	_		
7	Introduction of new UG & PG courses	UG-2	PG-1	UG-1 & PG-1	PG-1	UG-1	
8	e-Governance	LMS(IEMCR P) with teaching and learning & Fee payment	Student related portals	All academic process	Continuous improvement		
9	Sports Facilities	Additional Mini golf court	Additional Table Tennis, Volleyball court	Addition al Hand Ball court	Additional Football turf	Indoor stadium	
10	Incubation cell (Start up's)	2	2	5	7	8	
11	FAB Lab	Planning	Establishm ent	Enhance & Improve			

Table 2: Strategic Plan for Teaching – Learning

	Academic Years	2021-'22	2022-'23	2023-'24	2024-'25	2025-'26
S.No	Key Progress Area (KPA)	Prog	(PET) - Year-V	Vise		
1	Interdisciplinary courses / Projects	2 / Dept.	2 / Dept.	2 / Dept.	2 / Dept.	2 / Dept.
2	NIRF Ranking	Within 200 Ranking	Within 200 Ranking	Within 150 Ranking	Within 100 Ranking	Within 50 Ranking
3	ISO	Surveillance audit	Surveillance audit	Recertification 9001:2015	Surveillance audit	Surveillance audit
4	Professional Society tie-up	1/ Dept.	1/ Dept.	1/ Dept.	1/ Dept.	1/ Dept.
5	Institutional Rankings	QS E-Lead & THE Ranking	QS E-Lead, THE, QS - i-Gauge rating & ARIIA Ranking	QS E-Lead, THE & ARIIA Ranking	QS E-Lead, QS-i-Gauge rating, THE & ARIIA Ranking	QS E-Lead, THE & ARIIA Ranking
6	Innovative Teaching & Learning	Enhance & Improve	Enhance & Improve	Enhance & Improve	Enhance & Improve	Enhance & Improve
7	Outcome based education (OBE)	Enhance & Improve	Enhance & Improve	Enhance & Improve	Enhance & Improve	Enhance & Improve
8	NBA	ECE, ME & MBA	IT renewal & CSE	CSE renewal	_	AIDS & CSBS
9	NAAC	Recertification, AQAR	AQAR	AQAR	AQAR	AQAR
10	No. of Course with Video Lectures	2 Subjects per Dept. / Year	2 Subjects per Dept. / Year	2 Subjects per Dept. / Year	2 Subjects per Dept. / Year	2 Subjects per Dept. / Year
11	Industrial Collaborated Courses	1 Industry / Dept.	1 Industry / Dept.	1 Industry / Dept.	1 Industry / Dept.	1 Industry / Dept.
12	Leadership course in the curricula	Planning	Roll-out	_	_	_
13	CDIO Curricula	Planning	Launching	Continuous Improvement	Continuous Improvement	Continuous Improvement
14	IET Accreditation	Planning	Planning	Targeted	oineering &	

Table 3: Strategic Plan for Students Related

	Academic Years	2021-'22	2022-'23	2023-'24	2024-'25	2025-'26	
S. No	Key Progress Area (KPA)	Area Progressive Enhancement Targets (PET) - Y					
1	Admission (UG)	90%	95%	100%	100%	100%	
2	Placement (UG)	85%	85%	85%	90%	90%	
3	Admission (PG)	75%	80%	85%	90%	100%	
4	Lateral Entry Admission	50%	60%	70%	80%	90%	
5	Institutional scholarships	20%	20%	20%	25%	30%	
6	Average Cut-off	130	135	140	145	150	
7	GATE - Appeared	25%	25%	30%	30%	30%	
8	GATE - Qualified	30% of registered count	30% of registered count	35% of registered count	35% of registered count	35% of registered count	
9	Higher Education	15%	15%	15%	15%	15%	
10	Entrepreneur Development	7	8	9	10	11	



Table 4: Strategic Plan for Faculty Related

	Academic Years	2021-'22	2022-'23	2023-'24	2024-'25	2025-'26	
S.No	Key Progress Area (KPA)	Progressive Enhancement Targets (PET) - Year-Wise					
1	Pass % (UG)	80	>=85	>=90	>=90	>=90	
2	Pass % (PG)	90	>=95	>=95	>=95	>=95	
3	Faculty Avg. Experience	7	8	9	10	10	
4	Student-Faculty Ratio	1:20	1:20	1:15	1:15	1:15	
5	Attrition Rate	12%	10%	< 10%	< 10%	< 5%	
6	Publication per Faculty	80%	90%	100%	100%	100%	
7	Number of Doctorate	30%	40%	45%	50%	55%	
8	Workshop / FDP Attended - External	2 / Faculty	3 / Faculty	4 / Faculty	4 / Faculty	4 / Faculty	
9	Industrial Training	2 / Dept.	2 / Dept.	3 / Dept.	4 / Dept.	4 / Dept.	
10	Faculty with Industry Experience	3 / Dept.	3 / Dept.	4 / Dept.	5 / Dept.	5 / Dept.	



Table 5: Strategic Plan for Co-Curricular (Students)

1	Academic Years	2021-'22	2022-'23	2023-'24	2024-'25	2025-'26		
S. No	Key Progress Area (KPA)	Progressive Enhancement Targets (PET) - Year-Wise						
1	Publication (UG &PG) – Journal / Conference	50%	75%	100%	100%	100%		
2	Product based Projects (UG&PG)	3 / Dept.	4 / Dept.	4 / Dept.	4 / Dept.	4 / Dept.		
3	Workshop / Seminar Attended	10 / Year	10 / Year	15 / Year	25 / Year	30 / Year		
4	Industrial Visit per Dept.	1 / Year	2 / Year	2 / Year	2 / Year	2 / Year		
5	On Job Training	1 / Student	1 / Student	2 / Student	2 / Student	2 / Student		
6	Internship	8 Weeks	8 Weeks	8 Weeks	10 Weeks	12 Weeks		
7	Foreign Language courses	2 Language	2 Language	2 Language	2 Language	2 Language		
8	Patents/Grants	1 / Dept.	2 / Dept.	2 / Dept.	3 / Dept.	3 / Dept.		
9	Association Activities	6 / Dept.	6 / Dept.	6 / Dept.	6 / Dept.	6 / Dept.		



Table 6: Strategic Plan for Extra Curricular (Supplementary Process)

	(ouppremation)								
Ac	eademic Years	2021-'22	2022-'23	2023-'24	2024-'25	2025-'26			
S.No	Key Progress Area (KPA)	Pro	(PET) - Year-V	Vise					
		Intra College Football Tournament,	Inter College Football Tournament,	Inter College Football Tournament,	Inter College Football Tournament,	Inter College Football Tournament,			
1	Tournaments @ Level	Intra College Cricket Tournament,	Inter College Cricket Tournament,	Inter College Cricket Tournament,	Inter College Cricket Tournament,	Inter College Cricket Tournament,			
		Intra College Volleyball Tournament,	Inter College Volleyball Tournament,	Inter College Volleyball Tournament,	Inter College Volleyball Tournament,	Inter College Volleyball Tournament,			
		Intra College Basketball Tournament,	Inter College Basketball Tournament,	Inter College Basketball Tournament,	Inter College Basketball Tournament,	Inter College Basketball Tournament,			
		Marathon	Corporate Cricket Tournament,	Corporate Cricket Tournament,	Corporate Cricket Tournament,	Corporate Cricket Tournament,			
			Marathon,	Marathon,	Marathon,	Marathon,			
			Cyclothon	Cyclothon	Cyclothon	Cyclothon			
2	Alumni Association	1	1	2	2	3			
3	Club Activities	10	10	12	15	15			
4	NSS / RRC / YRC	5/ Semester	5/ Semester	5/ Semester	6/ Semester	8/ Semester			



Table 7: Strategic Plan for Research and Development Strategy

	Academic Years	2021-'22	2022-'23	2023-'24	2024-'25	2025-'26	
S. No	Key Progress Area (KPA)	Progressive Enhancement Targets (PET) - Year-					
1	Research FDP / Seminar / Workshop (5 days)	2 / faculty	2 / faculty	2 / faculty	2 / faculty	3 / faculty	
2	Ph.D. completion	1 / Dept.	2 / Dept.	2 / Dept.	3 / Dept.	3 / Dept.	
3	Ph.D. registration per Department	2	4	5	6	7	
4	Ph.D. Supervisor Recognition	2 new	2 new	2 new	3 new	3 new	
5	Funded Project - applied (10 - 15 lakhs)	10 Nos.	10 Nos.	12 Nos.	12 Nos.	15 Nos.	
6	Sponsored seminar / workshop conducted	5 / Dept.	7 / Dept.	7 / Dept.	9 / Dept.	9 / Dept.	
7	International Conference	2 / Stream	2 / Stream	2 / Stream	2 / Stream	3 / Stream	
8	Major Faculty Project Sanctioned	1 Nos.	2 Nos.	3 Nos.	4 Nos.	4 Nos.	
9	Funded Student Project	2 / Dept.	2 / Dept.	4 / Dept.	4 / Dept.	4 / Dept.	
10	MoU with industry	2 / Dept.	3 / Dept.	3 / Dept.	3 / Dept.	3 / Dept.	
12	Consultancy work	2 / Dept.	2 / Dept.	3 / Dept.	4 / Dept.	5 / Dept.	
13	Patent Published	2 / Dept.	3 / Dept.	4 / Dept.	4 / Dept.	5 / Dept.	
14	Establishment of R&D Labs	1 Dept.	1 Dept.	1 Dept.	1 Dept.	1 Dept.	



#### **LONG TERM GOALS (2021-2026)**

#### LG 1. To Create Centres of Excellence.

 Creation of Centres of Excellence (COE) by utilizing the resources and expertise in each cluster.

#### LG 2. To Provide Modern Infrastructure Facility.

- Develop infrastructure for carrying out R&D activities.
- Academic infrastructure to be strengthened further
- Strengthen campus wide networking.
- Modernization of laboratories.
- Up-gradation of Central Library.

#### LG 3. To have 85% of Faculty with PhD qualification

- Encourage faculty to register for Ph.D.
- Support faculty who have already registered to complete their Ph.D.
- Recruitment of faculty with Ph.D. from premier Institutions in specialized area/industry expertise.

# LG 4. To introduce new UG and PG Programs and enhance the intake of existing programs.

- Explore the possibilities of adding new UG and PG programs (based on the availability of resources and industry demand).
- Enhance intake across programs depending upon the demand.

# LG 5. To facilitate students to become entrepreneurs (incubation centre).

- Conduct Business Plan and Idea Competition.
- Encourage more campus companies to provide start-up opportunities for our students.
- Provide the necessary infrastructure for incubating the ideas.
- Bring in mentors to hand hold the students with innovative ideas.
- Provide the seed fund to develop prototype.

# LG 6. To make use of technologies for providing skill sets and additional self-learning.

- Adopt digital learning, e-learning solutions, and interactive sessions.
- Encourage self-learning techniques.
- Adopt blended learning to maximize student learning.



# LG 7. To collaborate with Foreign/National institutions of higher learning and research organizations.

- Collaborate with reputed Foreign universities/Institution.
- Faculty exchange programs.
- · Partnership programs.
- Collaborate with universities/Institution of repute for research activities.
- Best practices from reputed academia & industry to bring holistic learning experiences.
- Study abroad program for students in reputed institutes in Singapore, USA, Canada, and Australia.

# LG 8. To establish collaborative laboratories with the support of industry.

- Set up laboratories to pursue research with son of the reputed companies.
- Create experiential learning opportunities by providing live industry projects.

#### LG 9. Strengthening the conduction of social activities.

• The College plans to increase the conduction of social activities to create strong connectivity with neighborhood Community through various departments and committies of the college.



# SHORT TERM GOALS (2021-2023)

# SG 1. NAAC Accreditation & NBA Accreditation for all eligible programs.

- It is required to get all the eligible UG & PG programs accredited by NBA from time to time.
- To have accreditation status by NAAC from time to time.

### SG 2. Strengthen the campus Facilities and Support systems.

- Augmenting the laboratories to stay relevant.
- Online access to material on website, to further augment library resources to meet the growing needs in academia and research.
- To upgrade the internet bandwidth to support the continuous utilization of the increased usage to cater to the entire campus including hostel requirements.

## SG 3. Enhance the Output in Research and Consultancy.

- To enhance the quality of research publications by motivating faculty to publish in SCI journals.
- Focus on increasing the external funded research projects Research with international collaborations.
- Fostering Industry sponsored R&D projects.
- Enhanced Consultancy projects.

# SG 4. Introduce New UG and PG Programs.

- Explore the possibilities of adding new Programs by assessing the requirements in the emerging areas.
- The institute can plan to offer interdisciplinary programs.

# SG 5. Introduce Multidisciplinary courses /Projects

- Introduce multidisciplinary courses (cluster approach: Institutional electives)
- Encourage multidisciplinary projects

# SG 6. Development of new Curriculum

- Periodically design and develop for UG and PG Programs post academic autonomy
- Introduce course end survey
- Introduce industry relevant courses
- Encourage interdisciplinary projects



# SG 7. Foster Creativity and Innovation.

- Establishing Centres of Excellence.
- Establish Incubation Centres.
- Apply for more patents to protect IP.
- Explore possibility of patent commercialization.

## SG 8. Improve teaching learning Process.

- Implement pedagogical innovations: OBE, active learning, open ended experiments. Extended classrooms (virtual class rooms): Lecture capturing.
- Blended learning: E-learning, virtual labs, MOOCs, Social learning.
- Comprehensive course implementation.

# SG 9. Organizing Technical Events.

- Conduct events in cutting edge technologies and recent trends & developments across various domains.
- Conduct Seminars & Expert Lectures through professional bodies.
- Increase industrial visits and make it more accountable.
- Conduct international conferences/symposia and pre-conference workshops.

# SG 10. Enhance Industry Institute Collaborations.

- Enhancing the number of MOUs with Industry and revisiting the existing MOUs based on its merits.
- Adjunct Faculty: Industry experts delivering part of the courses
- Collaboration with Industries for research and innovative projects.
- Increasing the connect with the Industry through guest and expert lectures

# SG 11. Infrastructure requirement for e-Governance

- Creation of database for online submission of documents for approval to regulatory bodies.
- Automate academic administrative process and develop metrics to assess the performance from time to time.
- Create a database to maintain the student records online.
- Create process for examination and evaluation activities with secured database.



# **SWOC ANALYSIS**

#### **INSTITUTIONAL STRENGTHS**

- Introduced Industry Supported B. Tech. Programmes.
- Advanced Teaching-Learning Process and Industry Trained Faculty members.
- International Collaborations and Exposure.
- Discipline Centered Institution.
- Extraordinary Placement Record.
- Foreign Language Classes.
- National and International Industrial Visit.
- Study abroad program for students in reputed institutes in Singapore, USA, Canada, and Australia.
- > Smart Class Rooms and State of the Art Sports Infrastructure.
- Excellent Proctorship.
- Updated Curriculum and Syllabi.
- Well Equipped Laboratories.
- > IEDC Laboratory.
- Book Bank for every student admitted per year.
- ➤ IoT & Robotics Kit Supplied per student.
- > I-Pad Distribution for PG students.
- > Student Free-ship facility for financially weak students.

#### INSTITUTIONAL WEAKNESSES

- Lack of Govt. Funded Projects.
- Lack of Testing projects
- More national level diversity in student admission.
- M. Tech program needs to be revitalized to attract more students.

#### **INSTITUTIONAL OPPORTUNITIES**

- > Effective utilization of online resources for Teaching and Learning.
- Bridging the gap between Industry and Academia.
- Alumni Support for Placements, Consultancy and Collaborative Work.
- GOI-MHRD Initiatives
- Smart maker festival & Hack-A-Thon
- Preparing Students to Appear for Competitive Exams.
- > FDP and MDP program for faculty quality enhancement.
- Signing of MoU with Industry for Collaborative Research and Development.
- Tie up with Foreign Universities and Indian Universities.
- Value Added Course as per the Industry requirements.
- Study abroad program for students in reputed institutes in Singapore, USA, Canada, and Australia.
- Student and faculty research exposure & collaborative approaches via International Conferences. (more than 30 International Conferences per Year).

#### INSTITUTIONAL CHALLENGES

- Admission in M.Tech Departments.
- NIRF Rank Attainment (Target Rank within 30).

Note: "T" in SWOT changed to be "C" for SWOC

Because the term Threat is originated from military strategy, Using "C" as Challenge or Constrains is recommended to create more positive attitude.





श्रद्धावान लभते ज्ञानम् Good Education, Good Jobs