



ENGINEERING COLLEGE

EXPLORE TO INVENT

CMR ENGINEERING COLLEGE

UGC AUTONOMOUS

Approved by AICTE-New Delhi | Affiliated to JNTUH | Accredited by NAAC & NBA

Dept. of Computer Science and Engineering

FACULTY HANDBOOK

2024-25





CMR
Founder

Shri Ch. Narasimha Reddy

Chairman, CMREC.

Sri. Ch. Narasimha Reddy, the founder chairman of CMR Engineering college is a highly evangelistic cultivator and decision maker with an interest in boosting education and flourishes to maintain CMRCET, CMRCP, CMREC and CMR schools at very richly standard. He works with a missionary ardor. He has effectively used his skills for the establishment and management of various professional educational institutions in providing quality education in the down-trodden through the CMR group. He cognizes the problems being confronted by the miserable and the needy sections of the society unerringly and meticulously and emphasized more on the passion as well as vision of the notion building exercise by producing socially conscious technocrats.



Shri Ch. Bhoopal Reddy

Vice-Chairman, CMREC.

Sri Ch. Bhoopal Reddy, B.Tech, MBA (London), the Vice Chairman of **CMR Engineering College**, is a young, visionary, and dynamic leader who has been a key driving force in steering CMREC towards excellence. With a progressive mindset, he is committed to shaping adaptable, innovative, and resilient minds capable of navigating complex challenges in today's competitive world. He actively embraces innovative ideas and cutting-edge techniques, integrating them into the institution's ecosystem to address prevailing challenges and set new benchmarks in technical education. His leadership fosters a culture of continuous learning and innovation. Sri Bhoopal Reddy is a strong advocate for empowering the teaching community—not only to produce skilled engineers but to cultivate technocrats who are passionate about national development and empathetic toward society. His forward-thinking approach and dedication continue to inspire both faculty and students alike.



Shri Ch. Srisailam Reddy

Secretary & Correspondent, CMREC.

Sri Ch. Srisailam Reddy, B.Tech, MIT (Australia), the Secretary and Correspondent of **CMR Engineering College**, is a visionary leader with exceptional acumen and a steadfast commitment to advancing technical education in India. With a deep-seated belief in nurturing quality education within an inspiring academic environment, he envisions elevating educational standards to produce technically proficient and socially responsible graduates. Driven by the mission of contributing to knowledge creation and its application to real-world challenges, Sri Srisailam Reddy dedicates his efforts toward the national goal outlined in the Vision 2020 – transforming India into a developed nation. He firmly believes that this can be achieved by fostering a generation of highly qualified, ethically grounded, and industry-ready engineers through CMREC. Under his dynamic leadership, the institution is committed to offering state-of-the-art engineering education, while instilling core values of honesty, integrity, and ethical conduct in every student.



Dr.A.S.Reddy, a name which spells supreme quality in the fields of Academics and Administration, has been rendering his untiring services as the Principal of CMR Engineering College for the past 9 years. He has completed his PG and PhD (Electrical Engineering) with a vast experience of over 20 years in the educational sector served at various Engineering Colleges across South India. His impeccable and proven track record of an able and a visionary administration has enabled him to excel in his leadership role, a fact acknowledged by the many prestigious awards he has won. These awards include the ‘Indira Gandhi Seva Ratna’, ‘Shining Image of India’, ‘Bharath Gaurav’, ‘Bharath Shiksha Ratan Award’, and ‘Rashtriya Vidya Saraswati Puraskar’ for his relentless contributions to the field of Academics. He has authored two Textbooks namely (“Principles of Electromagnetic Theory” and “Power System Operation and Control”) and has published about 45 papers in international journals and presented about 15 papers in National and International Conferences. He is guiding 8 Ph.D scholars under JNTU and 3 have been awarded. He published 10 patents. In both his roles, as an academician and as an administrator, his focus has always been on quality. He is an acclaimed scholar, accomplished teacher, and empathetic leader, Dr. A. S. Reddy touches hearts and stimulates minds

ABOUT DEPARTMENT OF CSE



Dr. Sheo Kumar is working as Professor and Head of Department of Computer Science and Engineering in CMR Engineering College, Kandlakoya (V), Medchal (M), Hyderabad, Telangana, India. He has 29 years of experience in teaching and 8 years of experience in the field of Research. He has published many papers in the peer-refereed National and International journals and conferences. He has received his Doctorate (Ph.D.) degree in Computer Science and Engineering from Sri J. J. T. University, Rajasthan. His research interests include Data mining and automated software testing , Machine Learning and Artificial Intelligence. He is Life time member of CSI and member of IEEE , ISOC, IAEAG. Presently he is guiding 4 research scholars. He has published two books titled “Database management system” and “Java Programming”. He has worked as student branch coordinator for CSI and IEEE. He has held different academic positions like Dean of academics, Nodal Officer (Examinations), Center Superintendent.

VISION OF THE INSTITUTION:

- To be recognized as a premiere institution in offering value based and futuristic quality technical education to meet the technological needs of the society.

MISSION OF THE INSTITUTION:

- To impart value based quality technical education through innovative teaching and learning methods.
- To continuously produce employable technical graduates with advanced technical skills to meet the current and future technological.
- To prepare the graduates for higher learning with emphasis on academic and industrial research.

- **List of Associations in CMREC:**
 1. SIGICS – CSE Dept.
 2. ECMRON – ECE Dept
 3. METEOR – ME Dept
 4. SAINT – IT Dept

- **List of Clubs in CMREC:**
 1. Coding Club
 2. AI club
 3. Next Gen Communication & Networks club
 4. VEDA club
 5. Embtronics club
 6. Automobile Engineering Club
 7. ROBOTICS & Automation Club
 8. CHAMP Club
 9. Centre for Human Excellence
 10. Cubes Club
 11. Aakriti Club
 12. Smartvision Club
 13. Younify Radio Club
 14. Social media Club
 15. Photography Club
 16. Sports and Fitness Club
 17. Event Management Club
 18. Cultural Club

- **Student Chapters Established in CMREC:**
 1. IEI(Institution of Engineers)
 2. IEEE Students Chapter
 3. ISTE Students Chapter
 4. IETE Students Chapter
 5. CSI Students Chapter
 6. SAE INDIA Students Chapter

- **MoU's Established in CMREC:**
 1. End Now Foundation.
 2. Engineering Staff College of India(ESCI)
 3. Brain vision

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1. VISION, MISSION OF THE DEPARTMENT:

Department Vision, Mission and PEOs

VISION

To produce globally competent and industry-ready graduates in Computer Science & Engineering by imparting quality education with the know-how of cutting-edge technology and holistic personality.

MISSION

1. To offer high-quality education in Computer Science & Engineering in order to build core competence for the graduates by laying a solid foundation in Applied Mathematics and program framework with a focus on concept building.

2. The department promotes excellence in teaching, research, and collaborative activities to prepare graduates for a professional career or higher studies.

3. Creating an intellectual environment for developing logical skills and problem-solving strategies, thus developing and proficient computer engineers to compete in the current global scenario.

2. LIST OF PEOs, POs AND PSOs

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO 1: Excel in professional career and higher education by acquiring knowledge of mathematical computing and engineering principles.

PEO 2: To provide an intellectual environment for analyzing and designing computing systems for technical needs.

PEO 3: Exhibit professionalism to adapt current trends using lifelong learning with legal and ethical responsibilities.

PEO 4: To produce responsible graduates with effective communication skills and multidisciplinary practices to serve society and preserve the environment.

Program Outcomes (POs):

Engineering Graduates will be able to satisfy these NBA graduate attributes:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations
4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions
5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations
6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice
7. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice
8. **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings
9. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions
10. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environment
11. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change

Program Specific Outcomes (PSOs):

PSO1: Professional Skills and Foundations of Software development: Ability to analyze, design and develop applications by adopting the dynamic nature of Software developments.

PSO2: Applications of Computing and Research Ability: Ability to use knowledge in cutting edge technologies in identifying research gaps and to render solutions with innovative ideas.

3. DEPARTMENT PROFILE :

Introduction: The Department of Computer Science and Engineering was established in the year 2010 and offers both UG and PG programs under the JNTU Hyderabad. The Department has good infrastructural facilities apart from good faculty strength to impart high quality education in the changing technological and social scenario so as to make the students prepare for the students prepare for the global challenges.

Academic Programs: The four year B.Tech CSE program has an intake of 420 and two year M.Tech CSE has an intake of 12.

Faculty: The Department currently has 68 dedicated faculty members. Many of them are actively engaged in research across a wide range of areas relevant to both industry and society. Their research interests include **Machine Learning, Deep Learning, Artificial Intelligence, Cloud Computing, Internet of Things (IoT), Neural Networks, and Blockchain Technology.**

To ensure students stay updated with the latest developments, the department regularly organizes seminars and workshops. Additionally, faculty members participate in staff development programs to continuously enhance their skills and knowledge.

4. EVENTPLANNER:

SEM I

S.NO	DATE & MONTH	NAME OF THE EVENT
1	08.07.2024 to 07.12.2024	Commencement of B.Tech class work IV-I
2	17.07.2024	Holiday Muharram
3	29.07.2024	Commencement of B.Tech class work III-I
4	29.07.2024	Commencement of B.Tech class work II-I
5	07.08.2024	Webinar on Artificial Intelligence and Machine learning
6	15.08.2024	Independence day
7	17.08.2024	Guest Lecture On Logic and Knowledge Representation in AI
8	26.08.2024	Holiday Janmashtami
9	02.09.2024 to 07.09.2024	I MID Exams for IV-I
10	05.09.2024	Teachers Day
11	07.09.2024	Holiday Ganesh chaturthi
12	10.09.2024	Industrial Visit Report –BRAHMOS AEROSPACE, Hyderabad
13	14.09.2024	Webinar on “The Future of Java: What Developer Needs to Know”
14	15.09.2024	Engineers Day
15	16.09.2024	Holiday Eid e Milad ul Nabi
16	16.09.2024 to 20.09.2024	STTP on Cryptography and Network Security

17	21.09.2024	Parent Teacher Meeting (IV-I) Students
18	30.09.2024 to 05.10.2024	I MID Exams for II-I & III-I
19	02.10.2024	Holiday Gandhi Jayanthi
20	07.10.2024 to 12.10.2024	Dussehra Vacation
21	19.10.2024 to 20.10.2024	6th IEEE International conference on Cybernetics,Cognition & Machine Learning Application, Germany
22	26.10.2024	Parent Teacher Meeting (II-I & III-I) Students
23	29.10.2024	Industrial Visit Report – NRSC
24	31.10.2024	Holiday Diwali
25	09.11.2024	Webinar on“GENERATIVE AI TOOLS AND BUSINESS IMPACT”
26	09.11.2024	Guest Lecture on “Java Web Application Build and Deployment”
27	11.11.2024 to 16.11.2024	II MID Exams for IV-I
28	12.11.2024	Workshop on Mega Generative AI Workshop
29	13.11.2024	Workshop on Entrepreneurship and Innovation as a Career Opportunity
30	15.11.2024	Holiday Guru Nanak Jayanthi
31	18.11.2024 to 23.11.2024	Preparation Holidays and Practical examination

32	25.11.2024 to 07.12.2024	End semester & Supplementary Examinations IV-I
33	02.12.2024 to 07.12.2024	II MID Exams for III-I & II-I
34	09.12.2024 to 14.12.2024	Preparation Holidays and Practical examination III-I & II-I
35	16.12.2024 to 28.12.2024	End semester & Supplementary Examinations III-I & II-I

SEM II

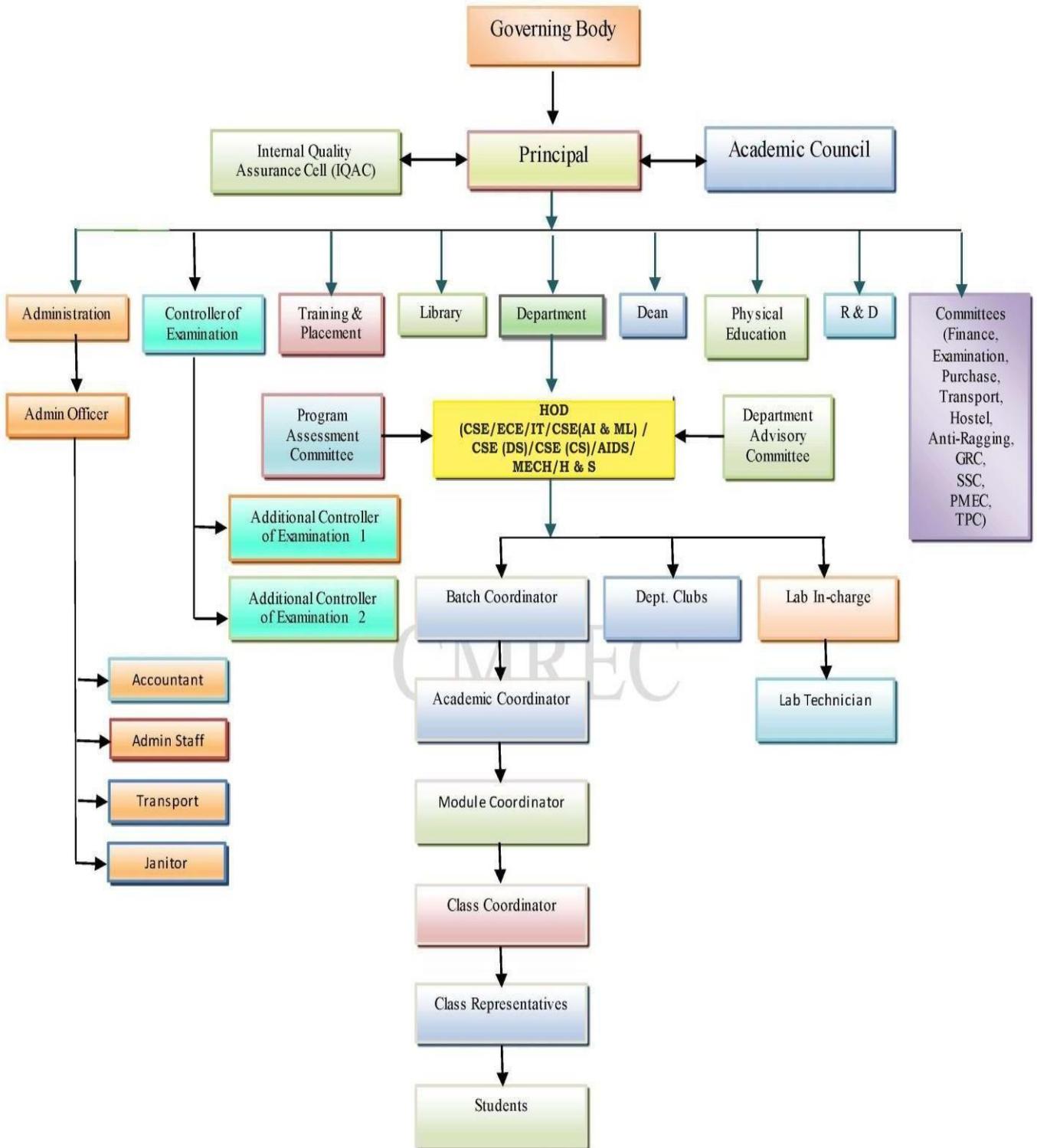
S.NO	DATE & MONTH	NAME OF THE EVENT
1	09.12.2024 to 30.04.2024	Commencement of B.Tech class work IV-II
2	25.12.2024	Holiday Christmas
3	30.12.2024	Commencement of B.Tech class work II-II
4	30.12.2024	Commencement of B.Tech class work III-II
5	31.12.2024	Freshers Day For First Year
6	01.01.2025	Holiday-New Year
7	10.01.2025	Guest Lecture on “ AI Tools ” CSI Events
8	11.01.2025 to 15.01.2025	Holiday-Makar Sankranti
9	26.01.2025	Happy Republic Day
10	29-01-2025	Seminar conducting on Career oppurtunities
11	01-02-2025	Guest Lecture on “Performance Analysis of Classification Algorithms in Machine Learning”
12	03.02.2025 to 06.02.2025	I MID Exams for IV-II
13	14-02-2025	Industrial Visit T Hub for III year Students
14	15-02-2025	Guest Lecture on Process of Innovation Development Technology Readiness Level(TRL),Commercialization of lab Technologies

		and Tech -Transfer
15	17-02-2025 to 21-02-2025	One week National Level Faculty Development Program on AI Tools
16	20-02-2025	A Seminar Conducting on Overseas Education
17	21-02.2025	Industrial Visit T works for II year Students
18	26.02.2025	Holiday-Mahashivratri
19	04.03.2025 to 08.03.2025	I MID Exams for II-II& III-II
20	07-03-2025 to 08-03-2025	7th IEEE International conference on Empowering Gen Alpha & Beta : AI Driven Educational Systems
21	08.03.2025	Happy Womens day
22	14.03.2025	Holiday-Holi
23	15.03.2025	Parent Teacher Meeting (III-II) & (II-II)
24	30.03.2025	Holiday Ugadi
25	31.03.2025	Holiday-Ramadan
26	04.04.2025 to 08.04.2025	II MID Exams for IV-II
27	06.04.2025	Holiday-Rama Navami
28	09.04.2025 to 14.04.2025	Preparation Holidays and Project Evaluation IV-II
29	14.04.2025	Holiday - Ambedkar Jayanthi
30	16.04.2025 to 30.04.2025	End semester & Supplementary Examinations IV-II
31	18.04.2025	Holiday-Good Friday
33	28.04.2025 to 03.05.2025	II MID Exams for III-II & II-II

33	05.05.2025 to 31.05.2025	Summer Vacation
34	02.06.2025 to 07.06.2025	Preparation Holidays and Practical examination III-II & II-II
35	07.06.2025	HOLIDAY BAKRI EID
36	09.06.2025 to 21.06.2025	End semester & Supplementary Examinations III-II & II-II

5. ORGANIZATIONAL SETUP :

Organization Chart



MANAGEMENT COMMITTEE

The Management Committee is the implementation and reviewing body for making suggestions to the Governing Body. It formulates the policies for consideration of the Governing Body. The Management Committee is constituted with the following members:

1. Chairman : Sri. Ch. Narsimha Reddy
2. Vice-Chairman : Sri. Ch. Bhoopal Reddy
3. Secretary : Sri. Ch. Srisailam Reddy

Frequency of Meeting: The Management Committee meets at least once in six months or as the case may be to take stock of academic, administrative, maintenance and developmental activities and to implement the policies. The committee suggests measures / recommendations to the Governing Body for better prospects in the respective areas. The committee has the authority to invite any of the members of advisory council as per need. The Minutes of the meeting are recorded and circulated. The decisions are communicated to the HOI through proper channel, time to time.

Functions: The roles and responsibilities of the management committee are to,

1. Guide on vision, mission, and quality policy and strategy development at institution level.
2. Provide guidelines to constitute Governing Body, Academic Counsel, IQAC, and Institutional Advisory committee, NBA/NAAC Steering Committee, Finance and Audit Committees for effective functioning of the institution.
3. Advice on issues related to academic-administration, infrastructure, accounts, audits, finance, budgeting, industry-interaction, consultancy, R&D and extension services.
4. Maintain appropriate student teacher ratio and appoint staff members accordingly.
5. Provide guidelines on process, metrics and levels of feedback to be collected from stakeholders for mutual interest and welfare.
6. Initiate disciplinary actions on the staff and students through Secretary & Correspondent.
7. Recommend on introduction of new courses/programmes, variations in intake in existing courses and curriculum development to meet the global challenges.
8. Provide guidelines for establishment of new facilities and procurement of equipment & materials, from time to time.
9. Deliberate and decide on such other issues as the case may be.
10. Communicate to the Governing Body the decisions taken by the management committee, from time to time, for necessary recommendations.

CHAIRMAN

The Chairman is the honorary administrator, chairs all the meetings of CMRGI and executes all the policy decisions through the Secretary & Correspondent and the Principal. The Chairman represents the CMRGI/CMREC before any Statutory Regulatory Authority of the State/Central Governments and in all official conventions. The Chairman leads all the official delegations with external agencies and looks after academics, development of education and overall growth of institution.

The Roles and Responsibilities of the Chairman:

1. Advise to adapt innovative practices in all the areas of academic-administration.
2. Provide guidelines to develop strategic alliances to bridge the academic gaps if any found.
3. Advise the Secretary & Correspondent and/or Principal to formulate various expert teams/search- committees particularly at senior administration level to lead institutional leadership, curriculum development, R&D, consultancy, Innovation, Incubation and entrepreneurship.
4. Provide strategic advice to attract admissions and highly qualified professionals & administrators.
5. Address the students/alumni/staff/stakeholders every year on institutional policy & development.
6. Guide Secretary & Correspondent on budget, R&D revenue generation and other policies.
7. Institution of scholarships, fellowships, studentships, medals, prizes, awards and certificates.
8. Communicate the road map & blue-print of the vision to the stakeholders on various occasions.
9. Motivate the faculty to apply for various sponsored research projects/proposals and Accreditations/Certifications/Ranking agencies.
10. Advice on new UG/PG programs, academic flexibility/diversity, delegation to national/international alliances and take-up foreign assignments & staff/student exchange programs.
11. Suggest on appointment of auditor, seek advice on legal/court cases and lay down service rules.
12. Advice on approvals of investments in movable/immovable property and related title transfers.
13. Accept and approve endowments for specific purpose(s).

14. Provide basic information to develop vision, mission & quality policies.
15. Advice on appointment of Principal, Professor-Emeritus and Visiting-Professors under any state/ central government schemes.

SECRETARY & CORRESPONDENT

The Secretary & Correspondent is the ultimate authority in all matters concerning the CMR Group of Institutions. He plays a pivotal role as a Nerve Centre for the wellbeing and continuous development of the Institution. He is the Chairman of the Governing Body and coordinates the entire system of the institution.

The Roles and Responsibilities of the Secretary & Correspondent are to, Represent CMREC in all transactions with the Governments, statutory bodies, other institutions or individuals concerned in all matters.

1. Monitor the functioning of the institutional head, the Principal and instruct the Principal to attend the legal/court cases, if any
2. Represent and delegate the institution to all statutory agencies with his team such AICTE, Department of Technical Education, Universities and Welfare Board.
3. Appoint, withdraw, transfer, separate, dismiss, terminate, re-instate the Principal, the Deans, the Professors, the Heads of various Departments/Cells at the same level, change location, designation and compensation at the discretion based on the severity of the case.
4. Exercise discretionary powers to waive the fee arrears from the students.
5. Execute the decisions of the Board of Management after ratification in Governing Body.
6. Appoint the Principal, the Staff and issue the relevant orders.
7. Sanction all kinds of leaves to the Principal.
8. Open and operate the bank accounts jointly with the Principal/Coordinator for the tuition fees, examinations, associations, projects, and schemes of state/central government.
9. Approve and release salaries, financial transactions and other bills of expenditure.
10. Adapt innovative practices in all the areas of academic-administration.
11. Develop strategic alliances to bridge the gap through industry-institution interface.
12. Appoint members for GB, AC, IQAC, FAC, IAC, SCM and such other committees.
13. Lead institution towards R&D, consultancy, innovation, incubation and entrepreneurship.
14. Lay-down measures to attract, maintain and sustain highly qualified faculty above the norms.

15. Ensure to implement policy decisions and important instructions.
16. Fix the fees and other charges payable by the students as per the recommendations of the Finance Committee and as approved by the State Govt./University, from time to time.
17. Institute scholarships, fellowships, studentships, medals, prizes and certificates on approval of the Governing Body.
18. Instruct team members to formulate academic strategies for the institution and guide the staff in the right direction.
19. Examine the recommendations of the College Academic Council and submit to Governing Body for implementation.
20. Guide in the preparation of a strategic plan for academics, research, training, development and extension activities.
21. Advise on starting of new programs, closure of any existing programs and increase/decrease in intake into any program.
22. Call, examine and sanction the budget and allocate the same under various heads.
23. Appoint an auditor and provide guidelines for mandatory financial disclosures.
24. Approve service rules, emoluments, traveling allowances for teaching and non-teaching staff in the college as per prevailing norms and at discretion.
25. Approve investments on movable/immovable property and related title transfers.
26. Advise the Principal on redress of the grievances of the students/staff and regarding the stand of the institute and the government as per existing acts along with their amendments.
27. Approve international alliances, student-faculty exchange programs and foreign travel grants.
28. Authorize the Principal to procure equipment, stationery and any other financial commitment/obligation which is necessary to run the institution, time to time.
29. Perceive any other role or responsibility at the discretion of the Chairman and the Members.

GOVERNING BODY

The Governing body (GB) of the institute has been constituted as per the norms of UGC. The Governing body consists of academicians, administrators, industrialists and philanthropists to formulate various policies, provide guidelines for decision making, utilization of financial resources and identify suitable welfare measures for stake holders.

The Governing Body comprises chairman who is the Secretary and Correspondent of MGRES, four members from MGRES, four members each from industry / academia /

technology / education nominated by MGRES, one UGC nominee, one JNTUH nominee, one Govt. of Telangana State nominee, one industrialist / technologist / educationalist from the region nominated by Govt. of Telangana State, one senior professor, one assistant professor nominated by Principal, CMRIT and Member secretary who is the Principal of CMRIT. The

Designation	Number	Category
Chairman	01	Secretary and Correspondent of MGRES (Educationist/ Academician/Industrialist)
Members	04	Nominated from MGRES
Member – Educationist	01	Nominated by MGRES
Member – Academician	01	Nominated by MGRES
Member – Industrialist	01	Nominated by MGRES
Member – Technologist	01	Nominated by MGRES
Member – UGC	01	Nominated by UGC
Member – University	01	Nominated by JNTUH
Member – State Government	01	Nominated by Govt. of Telangana State
Member – State Government – Educationist/Technologist/Industrialist	01	Nominated by Govt. of Telangana State
Member Secretary	01	Principal of the institution
Member – Professor	01	Nominated by Principal, CMREC
Member – Asst. Professor	01	Nominated by Principal, CMREC

following is the nomenclature of Governing Body:

Frequency of Meeting: The member secretary, with the approval of the chairman convenes the meeting of the governing body at least twice a year and on such other occasions as the case may be. The member secretary in consultation with the chairman prepares and circulates the agenda of the meeting well in advance. The member secretary maintains the minutes of the meeting and action taken report.

Quorum: One half of the members constitute the quorum. However, if there is no quorum formed for any meeting so convened till half an hour before the scheduled time, then the meeting automatically stands adjourned to the next convenient day and date.

Term: The term of Governing Body for internal members and nominated members by statutory bodies is three years. The term of UGC nominee is for six years.

Functions: The Governing Body is the overall custodian of the Institution. The role and responsibilities are to

1. Adapt innovative practices in all the areas of academic administration.
2. Develop strategic alliances to bridge the gap through industry-institution interface.
3. Lay down staff selection and recruitment procedures, in particular to attract, maintain and sustain highly qualified faculty above the University/UGC/AICTE requirements.
4. Approve the recommendations of the Staff Selection Committee.
5. Implement important instructions and policy decisions as received from the University, the Government, the AICTE, UGC, etc.
6. Fix the fees and other charges payable by the students as per the recommendations of the Finance Committee and as approved by the Government/University from time to time.
7. Institute scholarships, fellowships, studentships, medals, prizes and certificates on the recommendations of the Academic Council.
8. Formulate academic strategies for the institution and guide the staff towards its achievement.
9. Examine the recommendations of the Academic Council for its implementation and prepare a road map to achieve the goals of the institution.
10. Monitor the academics, research, training, development and extension activities of the institution.
11. Prepare strategic plans for financial, infrastructural and staffing areas
12. Facilitate for Accreditations, Certifications and Ranking processes
13. Facilitate and encourage the faculty to apply for various sponsored research projects/proposals
14. Facilitate starting of new programs, closure of any existing programs and increase/decrease in intake into any program.
15. Examine the budget proposals & approval, approve auditor, accounts and financial statements.

16. Ratify the academic regulations, syllabi, panel of examiners, evaluators, question paper setters, viva-voce and adjudicators for thesis/dissertation/project after thorough deliberations and on approval of AC.
17. Advise the HOI related to legal issues or court cases, if any.
18. Lay down service conditions, emoluments as per the council norms, traveling allowances for teaching and non-teaching staff of the college, consistent with the University statutes/ordinances/ regulations/rules and State Government provisions.
19. Regulate and enforce disciplinary procedures among students and staff members.
20. Approval of investments in movable/immovable property and related title transfers.
21. Appoint committees/councils/cells for smooth functioning and development of the institution.
22. Recommend on grievance redressal mechanism for students and staff.
23. Delegation of administrative and financial powers to the Principal and other functionaries.
24. Approve the annual report of the college.
25. Ensure the infrastructural resources above the AICTE/UGC/University norms and standards.
26. Formulate strategies for promotion, demotion, performance appraisal system, QIP, deputation, encouragement of staff for awards/rewards/incentives and disciplinary actions.
27. Accept and approve endowments for specific purpose(s)
28. Approve the student, faculty exchange programs
29. Approve foreign travel grants/tours/assignments for presentation of research papers.
30. Perceive any other role or responsibility at the discretion chairman and members.

ACADEMIC COUNCIL

The Academic Council is the highest academic body of the Institute and is solely responsible for the maintenance of standards of instruction, education and examination within the Institute. It has the right to advise the various Academic Schools on all academic matters. The Academic Council is responsible for all academic matters, such as, framing of academic

quality policy, strategy development, approval of courses, regulations, syllabi, etc. The Chairperson of the council is the Principal of the institution. The nominated members are from the University, academicians of repute, working professionals from industries, Chairpersons of the Board of Studies of various departments, Senior Professors, Associate Professors and Assistant Professors. The decisions of the council are placed before the Governing Body for approval.

The following is the nomenclature of Academic council:

S. No.	Category	Status
1.	The Principal	Chairman
2.	All the heads of department.	Member
3.	Head of the Institution Four teachers of the college representing different categories of teaching staff by rotation on the basis of seniority of service in the college.	Member
4.	Not less than four experts from outside the college representing areas such as Industry, Commerce, Law, Education, Medicine, Engineering etc., to be nominated by the Governing Body.	Member
5.	Three nominees from the university.	Member
6.	A faculty member nominated by the Principal	Member secretary

Frequency of Meeting: The member secretary convenes the meeting of the AC with the approval of the principal at least twice a year and such other occasions as may be necessary. The member secretary in consultation with the chairman prepares and circulates the agenda of the meeting well in advance. The member secretary maintains the minutes of the meeting and action taken report.

Quorum: One half of the members constitute the quorum including at least two university nominees. However, if there is no quorum for the meeting convened up to half an hour, then the meeting shall stand adjourned to the next convenient day.

Term: The term of nominated members shall be three years.

Functions: The Roles and Responsibilities are to

1. Scrutinize and approve the proposals with or without modification of the boards of studies with regard to courses of study, academic regulations, curricula, syllabi and modifications thereof, instructional and evaluation arrangements, methods, procedures relevant thereto etc., provided that where the Academic Council differs on any proposal, it will have the right to return the matter for reconsideration to the BOS concerned or reject it, after giving reasons to do so.
2. Frame academic rules and regulations and modular them.
3. Make regulations and implement the orders/instructions issued by the government/affiliating university regarding the admission of students into different programs of study.
4. Make regulations for extra-curricular activities, games & sports, maintenance of the playgrounds.
5. Review functioning of hostels.
6. Advise the proposals for new programs of study to the governing body.
7. Advise to frame rules to institute and award scholarships, studentships, fellowships, prizes, medals on approval of the governing body
8. Suggest the governing body in matters pertaining to academic affairs.
9. Suggest measures for inter-department co-ordination.
10. Review the activities of various departments periodically and make recommendations if any for improving the standards of the instruction.
11. Recommend the governing body for recruitment of new staff positions.
12. Frame regulations as per university norms to conduct examinations, initiate measures to improve the quality of TLP, students' evaluation and advisory system.
13. Approve the list of successful candidates for the award of degree, diploma and certificates.
14. Encourage faculty members to undertake sponsored research, industrial consultancy, continuing education and related activities.
15. Promote innovative practices in education through industry institution interaction, incubation and entrepreneurship ecosystem and encourage experimentation.
16. Provide measures to enhance the quality of educational programs.
17. Make recommendations to the BOS regarding the equivalence of various subjects.
18. Approve and forward panel of examiners, evaluators, paper-setters viva-voce and adjudicators for thesis / dissertation / project to the governing body.
19. Comment on the quality of publications, patents, awards, rewards and recognitions.
20. Perform such other functions as may be assigned by the governing body.

BOARD OF STUDIES

The Board of Studies is a major constituent of the academic system of the college and functions by its strict adherence to the guidelines prescribed by all the statutory bodies such as UGC, AICTE, JNTUH and TSCHE for developing and restructuring the curricula.

Its functions include framing the syllabi for various courses, reviewing and updating syllabi from time to time, introducing new courses of study, determining details of continuous assessment, recommending panels of examiners under the semester system etc. Board of Studies may revise the syllabi once in every three years or as and when required. The Board of Studies ensures the implementation of syllabi and add-on courses by the departments concerned to meet the needs of the industry.

The constitution of Board of studies of every department:

S. No.	Category	Status
1.	Head of the department concerned	Chairman
2.	The entire faculty of each specialization	Member
3.	Two subject experts from outside the college to be nominated by the AC.	Member
4.	One expert to be nominated by the vice-chancellor.	Member
5.	One representative from industry/corporate sector/allied area relating to placement	Member
6.	One postgraduate meritorious alumnus to be nominated by the Principal.	Member
7.	The chairman, BOS, with the approval of the principal of the college, co-opt (a) Experts from outside the college whenever special courses of studies are to be formulated (b) Other members of staff of the same faculty	Member

Frequency of Meeting: The principal schedules the meeting of the board of studies of various departments. The meeting may be scheduled as and when necessary, but at least once a year to finalize the syllabi of various programs and courses offered by the institution.

Quorum: Two-third of the members constitute the quorum including university nominees. If there is no quorum for the meeting convened up to half an hour, then the meeting shall stand adjourned to the next convenient day.

Term: The term of nominated members shall be three years.

Functions: The roles and responsibilities are to

1. Prepare/revise the syllabi for various courses keeping in view the objectives of the institute, interest of the stakeholders and global requirement, for consideration and approval of the AC.
2. Suggest methodologies for innovative teaching, learning and evaluation techniques.
3. Suggest/revise panel of examiners, evaluators, question paper setters, viva-voce and adjudicators for thesis/dissertation/project to the academic council for approval.
4. Discuss the starting of new courses, programmes etc. to meet the global challenges.
5. Coordinate research, teaching, extension and other academic activities in the department/institute.
6. Recommend on the rules, regulations and minimum qualifications required for admission into subject/course concerned to the academic council.
7. Prepare a pattern of question papers for each subject concerned as and when regulations are revised.
8. Recommend textbooks, courses of study, scheme of study, examination and evaluation of each subject to the academic council for review.
9. Submit a panel of experts for selection committees to the academic council for approval.
10. Any other function that may be assigned by the academic council.

FINANCE AND PLANNING COMMITTEE

The overall objective of the Finance and Planning Committee is to ensure that CMREC has the relevant funding to support the activities of the college in fulfilling the Strategic Plan. The Finance and Planning Committee advises the Governing Body on financial matters. It prepares and submits the income and expenditure statements in the prescribed format to TFRC for fixation of tuition and other fees of the college. It is an advisory committee to the Governing Body.

Composition of Finance and Planning Committee:

S. No.	Category	Status
1.	The Governing body Chairman or his Nominee / Principal	Chairman
2.	One more member nominated from the Governing Body	Member
3.	Head of the institution	Member
4.	All the HODs and Deans	Members

5.	Coordinators of Govt. funded / sponsored / project(s) / Schemes	Member
6.	Chief Finance Officer of the college	Member secretary

Frequency of Meeting: The finance and planning committee meets at least twice in a financial year and such other times, as may be required. Every year, the meeting in the month of March is for budget allocation and the other held in the month of September for budget review. The member secretary in consultation with the chairman prepares and circulates the agenda of the meeting well in advance. The member secretary maintains the minutes of the meeting and action taken report.

Quorum: Two-third members constitute the quorum. If there is no quorum for the meeting convened up to half an hour, then the meeting shall stand adjourned to the next convenient day.

Term: The term of the members shall be five years.

Functions: Finance and Planning committee shall meet to appraise finance related matters and submit a report to the governing body.

The Roles and Responsibilities are to,

1. Review and consolidate budget estimates related to various grants received/receivable from the UGC/AICTE/ Govt. / Private and income from fees and other sources and expenditure.
2. Invite budget proposals in prescribed format from all departments/committees/cells/projects, prepare a tentative consolidated budget after analysis and forward the same to the governing body for approval.
3. Develop a plan for optimum utilization of approved budget.
4. Prepare a budget for day-to-day operations of the Institution.
5. Review of the audited reports and upload in institute website after approval from governing body.
6. Examine the accounts and expenditure to be incurred for old and new proposals.
7. Take necessary measures to organize audit(s) by auditors appointed by the governing body.

8. Sanction expenditures to procure major equipment and/or construct new buildings after getting approval from the governing body.
9. Recommend to governing body about the limits of recurring and non-recurring expenditure for the year based on income and resources of the Institute, including the proposals of the loans.
10. Recommend to the governing body for investments and the management of assets and resources.
11. Mobilize resources through donations from society, funding agencies and various schemes.
12. Propose honorarium to the examination branch staff, travelling allowances, grants, R&D incentives etc. and get it approved by the governing body.
13. Recommend to governing body regarding appointments, increments, allowances, PF and pay fixation to all the staff members including ministerial staff.
14. Advise the governing body on matters related to estate management and funds of the Institute.
15. Advise on financial matters referred to it by the governing body, academic council or any other authority or body or committee or any officer of the institute.
16. Report to the Principal on any lapses or irregularities in the financial matters.
17. Prepare detailed plan of the activities that need funding for the academic year as advised by governing body.
18. Ensure smooth administration by coordinating the activities of the departments/cells/committees.
19. Devise policies for recruitment, promotion, demotion, transfer and recommend necessary action against poor performance.
20. Prepare feedback of ongoing activities and forward it to governing body.

PRINCIPAL

The principal is the academic and administrative head of the institute and works for the growth of the institute. He leads and inspires the faculty and the students to work effectively and to maintain cordial working conditions within the campus to excel in all spheres. He formulates and implements various policies approved by the academic council. He is the member secretary of Governing Body, Chairman of Academic Council, Chairman of Finance committee and Chief Controller of the Examinations. He monitors admissions, examinations, evaluation for smooth functioning of the system. He is authorized to nominate Deans, HODs, Coordinators, members and other administration functionaries.

Functions: The Roles and Responsibilities of the Principal are to

A. Academic Administration

Report to the Secretary & Correspondent on all matters of the institution.

1. Leading the establishment, updating and delivery of the College Strategic Plan, in line with the University Strategic Plan.
2. Update, ensure and comply with the provisions of government acts and statutes of affiliating bodies.
3. Provide guidelines for optimum utilization of resources, long-term & operational plans, and mobilization of funds for sponsored research to support financial audits.
4. Monitor the admission process with due focus on professional awareness programmes to attract the quality students and arrange an induction programme for freshmen.
5. Promoting the development of internal structures within the campus that allows the evolution and development of various academic disciplines.
6. Provide required human resources for the timely completion of tasks related to the academic assignments, exams and any other contingencies.
7. Convene various meetings with the Governing Body, Academic Council, Boards of Studies, Examination Committee, Finance Committee, College Advisory Committee, IQAC, Anti-Ragging Committee, RTI and any other committees as the case may be and record minutes of meeting and intimate action taken report to the concerned staff.
8. Working with the Heads of academic and research units to ensure that effective management structures are in place for each unit.
9. Coordinate and motivate the faculty, administrative authorities and the supporting staff, so that they play their respective roles more effectively.

10. Design the programmes to facilitate and encourage the international mobility of students both inward and outward.
11. Individually and collectively responsible to the Governing Body, Academic Council, State Government, AICTE/UGC/JNTUH, students and other stakeholders for the design and development of curriculum and academic regulations for all the programs/courses to meet the global challenges.
12. Represent/participate in public/private forums and share intelligence to guide professors, Deans, HODs to organize the various local /regional /national /international programmes, activate links with professional bodies, industry and international alliances towards development of students, faculty and other stakeholders.
13. Develop recruitment, performance evaluation & appraisal, retirement procedures and conduct training need analysis (TNA) of the staff, devise training programmes such as refresher courses, orientation courses, faculty development programmes, quality enhancement programmes, etc.
14. Conduct the meetings with all the HODs at regular intervals for the development and assessment of academic activities, the evaluation of feedback (curriculum, institutional) of all stakeholders and take corrective measures, if any.
15. Develop an almanac/consolidated time-table for the entire institution in coordination with the various heads of the departments/cells/committees.
16. Monitor the class work, examinations, co-curricular & extra-curricular activities, education, training, R&D, extension & administration activities in coordination with HODs.
17. Provide a framework for identification of weak, slow pace, bright students and provide necessary assistance through makeup classes, remedial classes, bridge courses and innovative assignments in consultation with mentors, coordinators and HODs.
18. Review of internal & external examinations of theory and practical and analyze the results.
19. Obtain student feedback periodically to establish a better learning environment for the students.
20. Identify the list of the students and analyze the reasons for condoned, detained /discontinued, readmitted, re-registered candidates, in coordination with HODs, Deans, ACEs and COE.
21. Focus on campus recruitment training for students to enhance employability skills, Professional communication skills, internships, employment, higher education and Entrepreneurship in coordination with training & placement cell and industry-institute Interaction cell.

22. Ensuring that the duty of care owed to staff and students is exercised particularly in relation to the maintenance of a learning/working environment free from bullying, harassment or discriminatory practices.
23. Seek activity reports from various departments/cells/committees/projects from time to time and send the necessary report to the governing body.
24. Promote internal revenue generation (IRG) activities with the help of staff and students.

B. General Administration

1. Correspond with external agencies such as JNTUH, TS Govt., AICTE, NBA, NAAC, UGC, government bodies and any other institutions as necessary.
2. Arrange and support with all the records to audit parties, inspection of AICTE /DTE /TSCHE /TFRC /JNTUH FFC /NBA /NAAC /UGC /any other such boards and subsequently implement any suggestions made.
3. Responsible for procurement of equipment, electrification, library & lab infrastructure, furniture & fixtures and any other consumable and non-consumable requirements for the institution.
4. Ink MOUs for industry tie-ups for placements, training, workshops, internships and projects.
5. Redressal of grievances between and among students, staff members and stakeholders.
6. Maintain healthy relationships with parents /guardians /media /resource-persons /consultants /industry/ academia.
7. Maintain service records of probation, regularization, increments, promotion, demotion, discipline and performance appraisal of all the employees of the institution.
8. Arrange for performance appraisal & development of content delivery of staff members through demos on micro teaching skills during vacation and record the video shoot of lectures of senior faculty members.
9. Authorize leaves on approval of HODs
10. Initiate disciplinary proceedings against the staff, constitution of an enquiry committee, hold enquiry, impose punishments such as warning, seizure, cease, censure, withholding increments, promotion, fine and recovery. Recommend governing body for suspension, removal, dismissal from the services as case may be.

C. Financial Administration

1. Liaising closely with the Bursar/Chief Financial Officer in developing College financial strategy in keeping with overall University financial strategy
2. Forward material contracts, MOUs, scholarships, staff attendance & salary disbursements, cheques and representations with financial commitments to the Principal for approval.
3. Propose purchase of stationery, library books, periodicals, consumables and non-consumables for laboratories, workshops etc as per guideline of Governing Body.
4. Recommend R&D incentives, travel grant, registration fees for various professional and academic training programmes, FDPs, Workshops, seminars, conferences at national and international level.
5. Working with the College Financial Analyst and the Executive Management Committee to manage the pay and non-pay College budget
6. Monitor the student's admission fee, tuition fee, examination fee and any other fee collections under the direction of GB/JNTUH/AICTE/UGC/TSGOVT/NBA/NAAC and any other bodies.
7. Mobilize revenue from various research bodies for active research and entrepreneurial start-ups.
8. Prepare and submit annual budget in coordination with HODs to the Principal for approval and ensure the auditing of the accounts.
9. Liaison with JNTUH/AICTE/UGC/TSGOVT/NBA/NAAC and all other bodies, departments and industries as necessary regarding financial matters.
10. Support staff & students financially to participate in national & international games & sports, seed capital for start-ups, seed money for R&D activities, margin money for IIEC.

THE HEAD OF THE DEPARTMENT (HOD)

The department Head should be a well disciplined and committed individual possessing leadership qualities. She/he motivates the staff and the students to discharge their respective academic / administrative duties effectively. The Heads of the department report to the Principal on various activities and take his/her guidance and advice in all academic and administrative matters. HOD is responsible to run and monitor the department, giving leadership and direction.

The roles and responsibilities are to

1. Plan, monitor and implement various academic schedules, academic time tables, laboratory log books, manuals, course files, attendance registers in coordination with the concerned staff.
2. Maintain inter & intra departmental correspondence, BOS /AC /NBA /NAAC /AICTE /JNTUH /UGC/ TS-GOVT files related to admission, academics and administration.
3. Design and develop syllabus, course structure, academic-regulations, convene the BOS meeting, get approvals from various statutory bodies, maintain relevant notices of agenda, minutes of the meetings, action taken reports, etc., and communicate the same to the concerned.
4. Design and develop modules/bridge courses/value addition courses/certification programmes to enhance employability skills among the students.
5. Prepare a list of the required laboratory equipment as per the curriculum and arrange for procurement.
6. Arrange special classes, if necessary for the benefit of below average students.
7. Coordinate with various committees for design and development of PEOs, POs, vision, mission, rubrics for achievement and assessment of department objectives and goals.
8. Maintain internship, project, training & placement, employment, innovation and entrepreneurship data in coordination with other cells and departments.
9. Maintain students-database of admissions, scholarships, attendance, marks & results, awards, achievements, condonation, detention, readmission, discontinued and re-registered students.
10. Maintain a staff database regarding qualification, experience, leaves, appreciation, promotions, performance appraisal, awards, achievements and disciplinary information.
11. Supervise the maintenance of lab(s) equipment, AMC, calibrations, master readings, stock registers submit the lab master and upload the lab equipment details in JNTUH portal for approval and support inspections of all affiliating agencies.
12. Maintain the list and documentation of MAC-ids, hardware/software configuration, UPS, networking components, LCD projectors, CCTV, TV screens, public address system, amplifiers, printers, scanners, peripherals, furniture, ACs, electric equipments

and interiors in class rooms, tutorials, labs, seminar halls, staff cabin, department office, library and corridors.

13. Recommend all categories of leaves/permissions/ODs of the staff members of the department after ensuring all the work adjustments.
14. Conduct departmental/cells/committees meetings regularly with the staff members to discuss academic progress as scheduled and maintain records viz. notice, agenda, MOM and ATR.
15. Monitor the discipline, attendance and academic performance of the students on a daily basis through a proper mentoring system.
16. Inform the parents about their ward's attendance, irregularities, indiscipline, and examination performance and counsel both parents and students at regular intervals.
17. Discuss the department progress with the Principal on a daily basis and seek advice.
18. Allocate the subjects and workload among the faculty members in the most unbiased manner well in advance before the commencement of the semester.
19. Monitor the syllabus completion at regular intervals and prepare reports fortnightly and submit the same to the Principal.
20. Maintain the answer booklets of internal examinations for both theory and practical through the examination branch along with consolidated award lists and be ready to produce for any inspections.
21. Submit the identified list of examiners, paper setters in prescribed format to BOS and AC for approval. Arrange the panel of examiners from the approved list for both theory and practical.
22. Arrange to conduct the practical examinations as per the academic calendar and ensure the submission of answer scripts in sealed cover after completion of evaluation process to COE.
23. Recommend to the Principal on student's permission/leave after ensuring mentor's opinion on assessing the complexity of the same.
24. Responsible for enforcement of overall discipline of the students/staff with a bird's eye view on in- discipline and to initiate appropriate corrective measures.
25. Collect academic planner /lesson plans from teaching staff before the commencement of class work and ensure that the information provided is in accordance with the format.

26. Ensure that the time tables are prepared as per the guidelines given by the Principal and disseminate the same to all the faculty members and students well in advance.
27. Interact with class representatives / students once in a fortnight to consolidate their opinions on issues if any and report the same with possible solutions to the Principal.
28. Verify the attendance registers maintained by the staff members once in a week and submit to the Principal for verification once in a fortnight.
29. Ensure that the faculty members send the three sets of mid examination question papers confidentially through email to the COE. After the evaluation, submit the mid marks along with the assignment marks in prescribed manner to the COE.
30. Ensure and implement suggested dress code culture among the students and staff.
31. Collect the subject-wise student's electronic feedback, analyze and communicate to the concerned faculty and the Principal. If any subject is handled by the other department faculty, communicate to the respective HOD. Guide and monitor the faculty performance towards improvement.
32. Allot the project guides to each batch and frame the project review committee as per guidelines.
33. Allocate Fifteen/twenty students to each mentor at the first time of admission and will continue throughout the programme and guide them towards career growth and opportunities.
34. Make arrangements for safe custody of equipment available in classrooms, tutorials, seminar halls, laboratories, staff rooms, department office and HOD office before leaving the premises.
35. Prepare annual budget proposals of the department in consultation with the faculty and submit the same to the Principal for approval and adhere to the sanctioned budget limits.
36. Ensure all the faculty members use ICT in TLP and enhance their skills.
37. Ensure the faculty members submit the course files/log books /handouts /PPTs /digital resources well in advance before commencement of the semester.
38. Motivate faculty members to apply for R&D proposals, consultancies to various funding agencies such as AICTE, DST, DRDO, etc., and ensure research guidance through continuing education activities, interaction with industry and society among students and staff.

39. Organize national and international conferences /workshops /seminars /symposia /guest-lectures /FDPs /STTP/Industrial visits /excursions through professional chapters /associations and clubs for students.
40. Maintain harmonious relations to resolve the student and/or staff grievances in the department.
41. Participate in any additional activities entrusted by the Principal.

The following rules and responsibilities prescribed for all staff members

1. In principle all the employees what so ever may be the nature is expected to be in the service round the clock.
2. No staff is allowed to engage, directly or indirectly in any trade or business or engage
3. Private tuition/coaching for any remuneration/ honorarium and undertake any employment outside the office.
4. The college functions six days in a week i.e., Monday to Saturday from 9.10 am to 4.00 pm. All the staff members are expected to be present in the campus at 9.00am and leave the campus after 4.00 pm, only; unless and otherwise specified as the case may be.
5. Staff can avail two permissions in a month either late/early for not more than 2 hours each, on approval.
6. Any staff leaves the premises during office hours on any personal-work/on-duty shall seek special permission from HOD and record in the movement of out pass register.
7. Staff should wear ID card; follow dress code, decorum and disciplinary rules during and in the course of employment.
8. Staff those who want to claim deductions/exemptions' from total income under any section should submit proofs in original for the purpose of TDS otherwise a tax will be deducted as per income tax rules in force.
9. Staff are restricted to use mobile phone everywhere/anywhere in the campus except in their cabins/staff rooms.
10. All staff should follow code of conduct time to time as mentioned and/or expected to present themselves in decent attire (men tucked in shirt, shoes, neat shaving; and women in saree/salwar-suit).
11. Staff should speak in English with students and colleagues and maintain courtesy.
12. Vehicles with CMRGI parking stickers are only allowed into the campus, park the vehicle as per Security instructions at owners risk and follow stringently RTA rules as applicable time to time.

13. No staff are allowed to gather/party/meet/mobbing unless and otherwise specified.
14. No staff is allowed to avail any kind of permission/leave/vacation/OD in person without any proper authorization. However they can make use of electronic channels in case of emergencies.
15. All the staff can avail all categories of leaves get approved through online portal in advance after adjustment of their duties and responsibilities.
16. No employee shall make any statement, publish or write through any media which has effect of an adverse criticism of any policy or action of the institute and should maintain the strict confidentiality of any information.
17. All the staffs are expected to be present ten minutes before to their respective duties and responsibilities.
18. Perform any other work assigned by the HOD from time to time.
19. All the staff is entitled for 12 days paid marriage vacation / special case
20. Staff can avail CCL and OD which is valid for only college work.
21. College staff can use library resources and E- Resources for college academics and learn new things.

Duties and Responsibilities of Professor Associate Professor

A professor exhibit academic leadership in creation of effective learner's environment for students. The total workload for a professor is 36 hours per week, out of which, 8 hours for teaching, 6 hours for preparation and 22 hours for research/administration.

Associate Professor creates effective learning environment for students with his academic capabilities. The total workload for a associate professor is 36 hours per week, out of which, 12 hours for teaching, 2 hours for preparation and 12 hours for research/administration.

1. Teach with modern pedagogy along with continuing education, training and research activities.
2. Develop curriculum content; establish professional chapters, associations, clubs and cells. Develop advanced learning resources including training & placements and interface with LMS.
3. Modernize/develop/erect of existing/new academic/research labs with state-of-technologies
4. Innovating new projects to students and guiding them for future.

5. Teach innovatively, prepare lab manuals, conduct laboratory sessions, register master readings and develop digital resources.
6. Involve in design/revision and up-gradation of courses.
7. Deliver lectures using innovative techniques, transfer of knowledge, practical skills and methods.
8. Prepare course material, lesson plans for the courses assigned.
9. Conduct internal tests and semester examinations with utmost integrity.

Duties and Responsibilities of Assistant Professor

Provide the necessary assistance to the HOD in all academic aspects. Enable effective learning environment for students with teaching and monitoring. The total workload for an assistant professor is 36 hours per week, out of which, 16 hours for teaching, 14 hours for preparation and 6 hours for research/administration. The Assistant Professor should extend assistance to co-faculty/HODs/deans in academic/administration/R&D and involve in departmental/institutional activities.

1. Up-grade qualification and experience through publication of papers/articles/chapters/books/
2. Patents of national/international repute for professional and career development
3. Guide the students in the performance of practical tasks and skill exercises and evaluate their performance, Advise and assist the students in their project works.
4. Be available for student consultation on a regular basis, informing students of their
5. availability for student consultations (both with and without appointments and makes
6. sincere attempt to solve their difficulties (academic and personal counseling)

The duties and responsibilities of program coordinator are to

1. be familiar with vision/mission/goals/PEO/POs & NBA/NAAC visits to the institution /department.
2. Acquaint staff/stakeholders about OBE-assessment/vision/ mission/PEO/PO/CO/SWOC etc.
3. Appoint course coordinators & involve them to develop/goals/strategies/ rubrics/benchmarks, etc.,
4. Build strategic plan, department calendar, NBA/NAAC compliance report and budget.
5. Record program specific achievements/accomplishments in fulfillment of graduate attributes.

6. Allot accreditation files to department staff members and support all audits, visits & inspections.
7. Upload necessary documents, digital resources repositories in website on proper approvals.
8. Provide remote access to all the stakeholders to visit, download or edit option in special cases.
9. Optimize the use of department resources to achieve the PO/CO.
10. Exchange accreditation process intelligence with other institutes/organizations to gain knowledge.
11. Identify slow-pace/weak/bright students and provide makeup/remedial/special assignments.
12. Arrange counseling/mentoring based on analysis of performance through HOD/ coordinators.
13. Analyze students spread/diversity/results/performance and advice them for MOOCs/VAC/TTP.
14. Design, collect and analyze the feedback meant for various stakeholders.
15. Maintain database of alumni, internships, projects and MOUs with industrial, R&D, employers.
16. List the names of funding-agencies/schemes and encourage staff to apply for the same.
17. Arrange for CRT, skill/personality/professional/career development programmes
18. Establish professional chapters, technical clubs, and research /incubation centers in the department.
19. Evaluate assessment effectiveness of CIE/SEE/rubrics/benchmarks/QA and report to PAC/IQAC.
20. Analyze CIE/SEE/SGPA/CGPA and suggest improvements for the staff.
21. Upload course files, lab manuals, master readings/calibrations, model examination question papers with solutions, setting up benchmarks/rubrics/CO-PO mapping/BTL on website on time.
22. Maintain staff/students database of achievements, accomplishments, awards, publications, R&D, Projects, patents, schemes and contributions to NSS /cultural/societal/sports activities.
23. Direct the staff members to attend/participate/organize various SDPs/TTPs/Workshops/EDPs/ MOOCs/ SWAYAM/ NPTEL/ Internshala.

24. Maintain notices/agenda/MOM/ATR for various committees in the department for inspections.
25. Undertake any other work as assigned by the HOD/IQAC/Principal.

Duties and Responsibilities of Course Coordinator (NBA/NAAC)

The course coordinator is responsible for course planning, design, development, delivery, resources, purpose, assessment, outcomes, evaluation, quality and integrity.

The duties and responsibilities are to

1. explain importance, unique-role, pre-requisites, specific-skills, knowledge, proficiency, lab support, possibility for projects/internships/startups, support to competitive examination for higher employment/education, graduate attributes mapped, course outcomes, benefits on completion of the course and how the knowledge received can help in career development.
2. provide the content/syllabi i.e., deliverables, course design, number of instructional/contact/practice/ practical/ projects/viva-voce/seminar, tenure of course(s), self learning expectations, lateral/ critical/innovative/creative thinking levels, class room support, digital cover, tutorials, quiz, assignments, CIE, SEE, grading procedure, weightages assigned.
3. Maintain profiles and staff database with the details of courses handled, course file, lesson plan, assignment timelines, lab manuals, digital resources, open sources, e-learning and remote access.
4. Detail the procedure adopted for assessment of students in terms of course/program outcomes, graduate attributes, grade-point-indicators, boundaries of learning and theory of constraints.
5. Indicate how particular series of courses/modules leads to department/institute vision/mission.
6. Draft CO statements and use action verbs as depicted in BTL chart to assess learner's level.
7. Collect course end survey, analyze student-performance in terms of stakeholder perception.
8. Provide awareness on syllabus review, additional topics & content beyond syllabus and resource persons & modes of addressing i.e., seminar/conference/workshop/TTP/collaborative learning etc.
9. Assist in timetables/makeup/remedial classes/professional coaching/team learning/project learning.
10. List out adequacy of academic/research infrastructure facilities/equipment.

11. Provide basis for evaluation/assessment/benchmarks/rubrics and submit to PAC & Principal.
12. Provide student access to LMS such as textbooks, library learning material, etc.
13. Promote a culture of academic quality, rigor and integrity.
14. Answer NBA/NAAC questions with valid proof.
15. Undertake any other work as assigned by the HOD/IQAC/Principal

Duties and Responsibilities of Class Coordinator

Class coordinator advise on courses, communicate/explain the students about course registration, choice of electives, regularity, attendance, condonation, detention by attendance/credits in CBSS/CBCS, re-registration, re-admission, substitute courses, drop/extra courses, importance of lab/practice sessions, handing equipment in smart classrooms/labs, assignments, assessment procedure, CIE/SEE process, internships, projects, professional memberships, and performance indicators.

The duties and responsibilities are to

1. Monitor availability of ICT tools, time-tables, list of faculty/students and classroom equipment.
2. Maintain and up-to-date attendance of the class & syllabus coverage by each faculty.
3. Update student attendance daily in web-portal and communicate to parents through SMS.
4. Advise staff/mentor to identify slow-pace/weak/advanced learners and arrange separate schedules.
5. Appoint student representative/coordinator (one boy & girl) to observe class-discipline/labs/seminars/quiz/any other activities as per time table.
6. Impose special assignments to late comers and address class room discipline/academic issues.
7. Conduct periodic meetings with students/staff, collect feedback and report on academic matters.
8. Collect feedback on OBE from student/staff/stakeholders, analyze and report the results to HOD.
9. Instruct counselors/advisors/mentors to report on critical students performance to HOD.
10. Implement collaborative inclusive academic learning environment among student groups.

11. Act as mentor, counselor, forward student late/early permissions and academic difficulties. 12. conduct frequent reviews with mentors on student progress submit the same to HOD.

13. Instruct the students to attend the classes regularly, follow the dress code and consequences of Failure to perform & succeed in CIE/SEE.

14. Motivate students to attend the seminars/workshops/conferences/fests and present/publish papers.

15. Undertake any other work as assigned by the HOD/Principal.

Duties and Responsibilities of Faculty Mentor

Each faculty member should mentor a group of 20 to 25 students. First year students will have faculty mentors from the freshmen engineering department and from second year onwards the students will have faculty mentors from the parent department and continue till their graduation.

The duties and responsibilities of mentors are to

1. Maintain/update a detailed academic/mentoring record of each student about contact, admission, co/extra-curricular activities, achievements and disciplinary actions if any.

2. be familiar with the history of assigned student including educational and family background.

3. Meet the mentees at least twice a month or as and when required.

4. Monitor, counsel, guide and motivate the students in all academic matters and provide amicable solution for their problems, if any.

5. Guide the students regarding choice of courses, electives, project, internships, credit calculation/ promotion, GP/SGPA/CGPA, VAC/NPTEL/MOOCs and explain about condonation/detention/ discontinuation/re-registration/re-admission/substitute courses etc.

6. Ensure timely online registration of mentees and add/drop of courses within stipulated period.

7. Contact parents/guardians about academic irregularities, behavioral changes, interpersonal relations, detrimental activities by way of physical/mental/emotional imbalances of the students.

8. Create awareness about ragging implications to students in general and girls in particular.

9. Advise the students in their career development/professional guidance.

10. Keep contact with the students even after their graduation.

11. Intimate parent through HOD for any administrative action in critical cases.

12. Create awareness about student performance process, graduate requirements and attributes.
13. Explain the importance of attendance, class activities, assignments, CIE/SEE examinations in theory/laboratory/seminar/projects and its bearing on graduation.
14. Create awareness on diverse fields of higher education and employment opportunities to students.
15. Maintain student-friendly environment by allowing him to make his own free choices after considering the limitations, alternatives, and consequences involved in decision-making process.
16. Explain the importance of self-respect, self-motivation, self-discipline and self-esteem to perform well in career and focus on entrepreneurial career.
17. Emphasize on positive-attitude/hard-work/career/values/culture/society in all counseling sessions.
18. Monitor mentees performance in individual subjects about the attendance/marks/other feedback in coordination with the concerned faculty.
19. Consider any other help as required academically by the student for self improvement.
20. Undertake any other work as assigned by HOD/HOI.

Duties and Responsibilities of Faculty in-charge for Laboratory

The faculty in-charge is responsible for laboratory. The duties and responsibilities are to

1. Assist HOD in preparation of guidelines for equipment procurement, operations/maintenance, upgradation /modernization, repair/impair/calibrate and removal/disposal of obsolescence/scrap.
2. Prepare budget, devise procedure to receive/inspect/stack/stores/issues & maintain stock registers.
3. Facilitate the procurement of hardware/software peripherals and other consumable items those are required for lab well in advance before the commencement of semester on approval of HOD/HOI.
4. Plan for the procurement of equipment & facilities to the lab well in advance as per norms.
5. Identify students/staff who mishandled equipment & recover/replace for any breakage/loss etc.
6. Ensure the cleanliness of the lab and switch off all equipment after use except those required.

7. Take preventive measures for theft/damage/embezzlement/spoilage/pilferage/leakage in the lab and initiate action to recover the same through proper channel when such cases are found.
8. Ensure proper record of the attendance, observation-books, lab-record-books, day-to-day work assessment, conduct of CIE/SEE and distribution of marks for each Laboratory session.
9. Create and implement new exercises beyond the syllabus to bridge the academic gap and keep records of utilization factor, loading schedule, maintenance/upkeep of equipment and prepare/ update the lab manual with master readings/calibrations/precision levels/standard errors.
10. Ensure to display the (i) list of equipment/software with cost (ii) list of experiments & lab manuals (iii) lab time table (iv) names of lab in-charge/lab assistants (v) stock position (vi) layout (vii) log book for daily usage (viii) complaint register (ix) safety measures (x) models & charts (xi) vision/mission/PEOs/POs/COs (xii) do's & don'ts etc.
11. Arrange for documentation & maintenance of network traps/server capacity/hardware & software configurations/installation & testing/proxy backups & cloud management in case of computer lab.
12. Ensure for labeling/coding/metal-tokens, testing/maintenance/AMC, internet components & hubs, physical security, update of hardware/software equipment and authorized use.
13. Perform any other duty as may be assigned by the HOD/Principal from time to time.

Duties and Responsibilities of Subject Teacher for Laboratory

In general, same subject teacher will conduct respective lab.

The duties and responsibilities are to

1. Prepare the list of experiments and maintain/update the lab manuals as per syllabus.
2. Ensure the list of compulsory/additional/supplementary experiments to be executed.
3. Execute all the experiments personally, well in advance, before commencement of the semester.
4. Create awareness about all experiments among the students and staff, well in advance, for their preparation along with master readings/calibrations/ precision levels/standard errors.
5. Ensure attendance is taken as per the procedure and seating is done as per the order.
6. Check the observation book/record book/dress code/behaviour of every student.
7. Assist the students in execution of experiments and clarify the doubts, if any.
8. Conduct daily assessment and CIE/SEE evaluation in coordination with appointed examiner.

9. Submit CIE/SEE marks to the heads of respective departments within the stipulated time period.
10. Undertake any other work as assigned by lab in-charge and HOD.

Duties and responsibilities of technical staff

The technical staff members of the institute perform various functions required for the smooth conduct of academics and administrative activities. The technical personnel such as programmers, systems administrators, lab assistants, workshop in-charges work for maintenance of equipment in order to provide required technical assistance to respective departments in an effective manner.

Duties and Responsibilities of Lab Assistants

The lab assistants assist the respective lab in-charge and subject teacher for smooth functioning of the laboratories. The duties and responsibilities are to

1. Ensure the safety and upkeep of all the materials and equipments as per stock register.
2. Maintain, update and display (i) list of equipment/software with cost (ii) list of experiments & lab manuals (iii) lab time table (iv) names of lab in-charge/lab assistants (v) stock position (vi) layout (vii) log book for daily usage (viii) complaint register (ix) safety measures (x) models & charts (xi) vision/mission/PEOs/POs/COs (xii) do's & don'ts etc.
3. Restrict plastics, edibles, loiter, late-comers, movement of furniture/fixture/test-benches/jigs/tools, follow safety/operational instructions in set-up of equipment and ensure proper discipline at labs.
4. Issue instructions and supervise whether all equipment/fans/lights/computers/LCD Projectors are switched off when not in use and cleanliness is maintained in lab and with equipment at all times.
5. Assist the students/teacher in the laboratory proceedings and be conversant with technicalities/ emergencies of all the lab experiments and equipments with the knowledge of master readings/ calibrations/precision levels/standard errors.
6. Ensure that the lab is to be opened/closed in his presence as per schedule, making sure that all the Windows and doors are closed and the lab is sealed before leaving.
7. Stick lab schedules/models/charts/boards/scientist photos/diagrams/tables at conspicuous places.
8. Record the issues/usages/receipt of materials/fuels/tools/minor-equipment and collection of damages /replacement/recoveries and any issues made to the student on approval.

9. Present at the time of receipt, repairs, delivery, erection, fabrication/peripherals/components/ assemblies /accessories/tools/spares/materials and take care of resources/services of the institute.

10. Ensure that no theft/damage/embezzlement/spoilage/pilferage/leakage in the lab and hold enquiries, confiscate, seizes, detain persons indulged with evidence and hand over them to HOI.

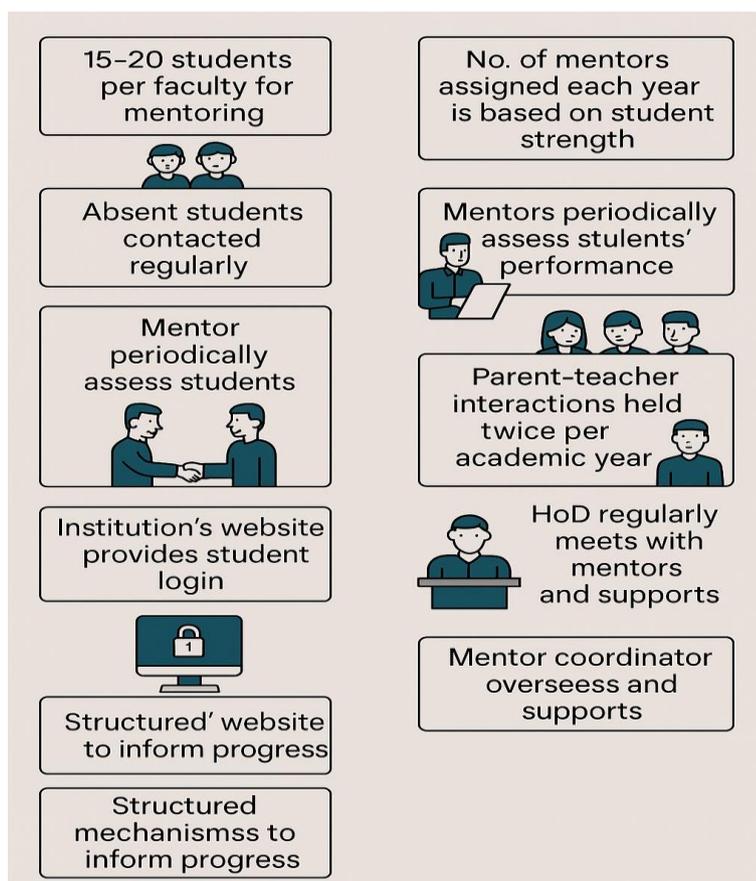
11. Undertake any other work as assigned by lab in-charge/HOD/Principal.

6. MENTORING/COUNSELLING :

Mentoring System

CMR Engineering College has established a robust student mentoring system as a best practice to support the student community. This initiative fosters academic excellence, ethical values, peer interaction, and holistic growth. Encouraging students to actively engage with their peers, uphold moral values, and receive guidance while empowering them to achieve recognition at higher levels.

The mechanism of the mentoring process is described below.

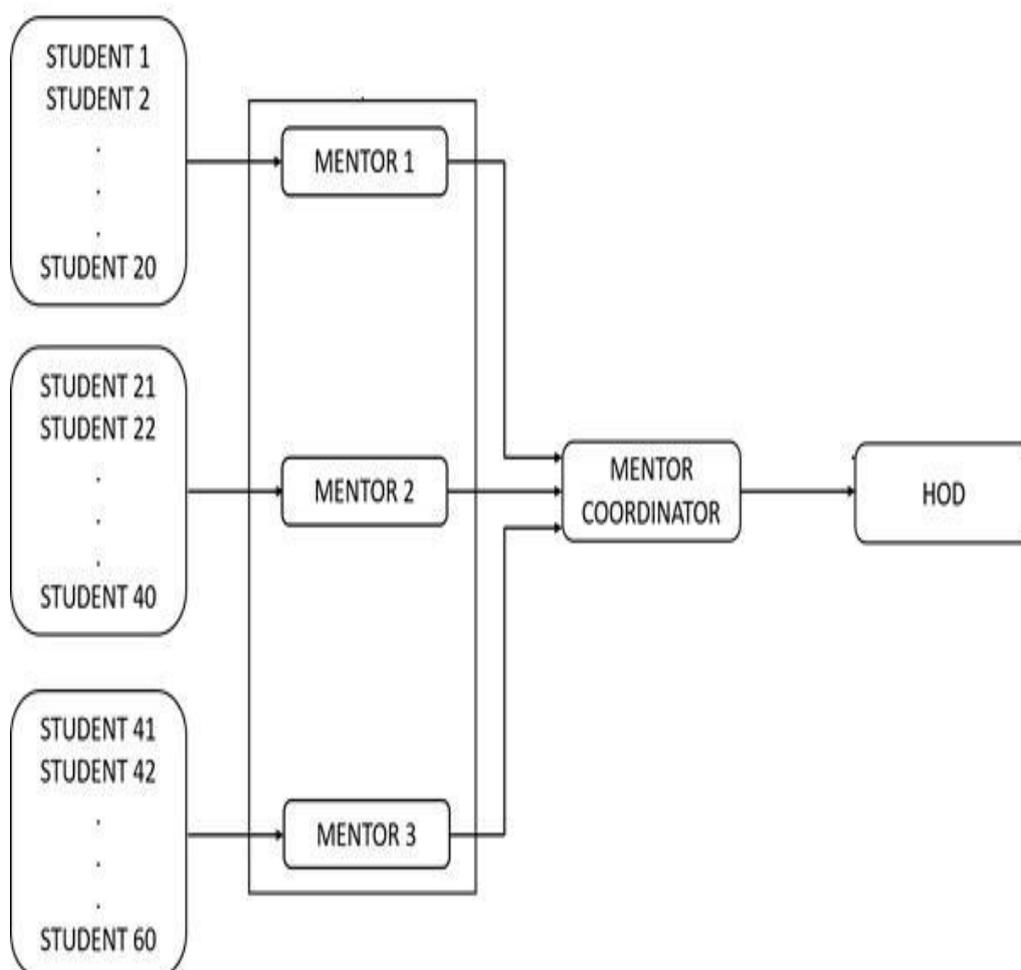


- A group of 15-20 students are allotted to each faculty member for mentoring purpose and to empower the students.
- The number of faculty mentors assigned each year is based on the student strength. Mentors interact with their mentees weekly during a designated time slot in the timetable.
- Mentor monitors the attendance of the student regularly.
- The mentor contacts absent students to discuss attendance issues and encourages them to be regular and actively participate in various activities.
- Mentors periodically assess students' performance in professional guidance, career advancement, coursework-specific areas, laboratory-specific skills, and overall development. They record the details in proctor forms and communicate the information to parents

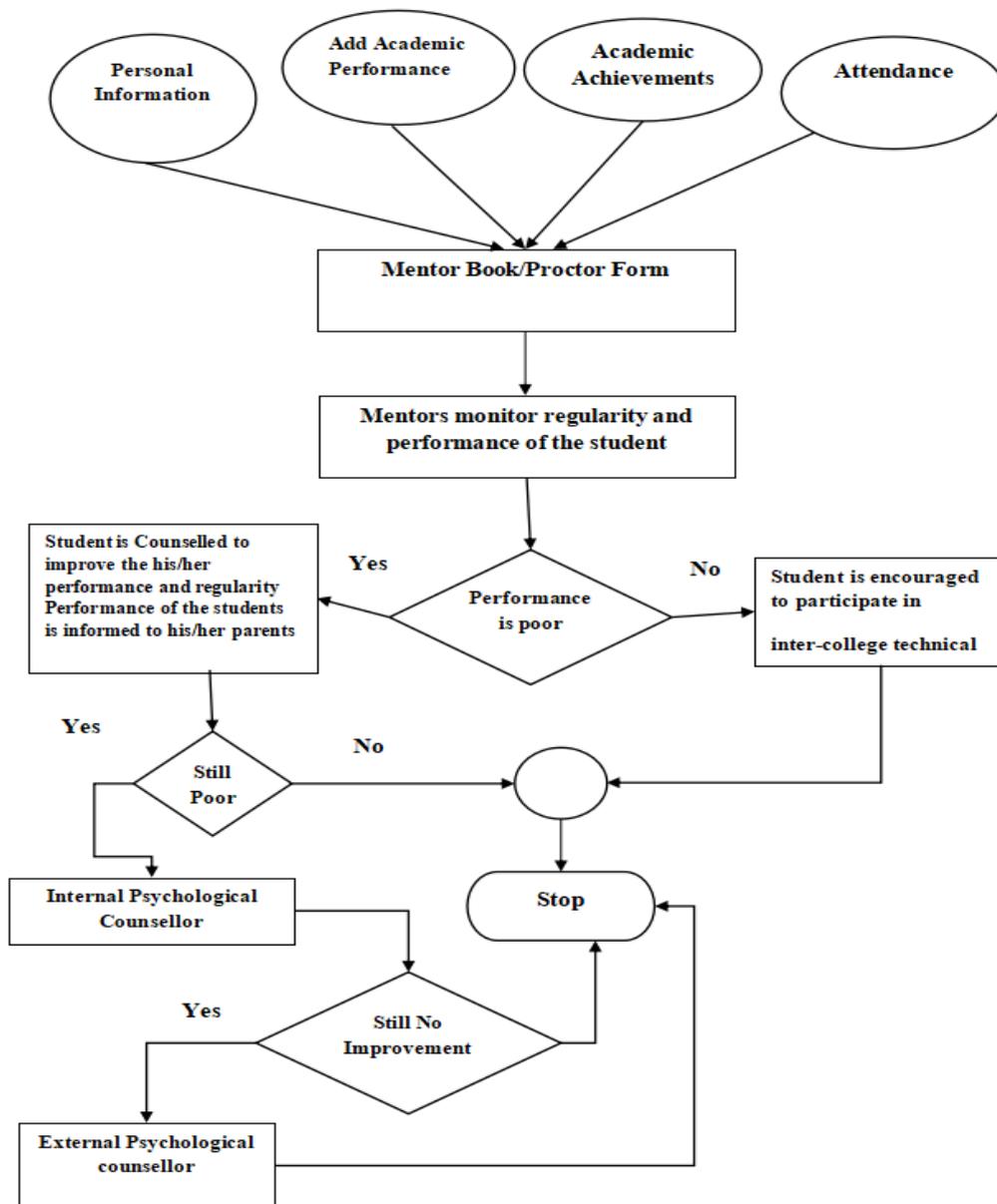
- When a student requires special attention, the mentor notifies the class coordinator and ensures appropriate support is given.
- Parent-teacher interactions are held twice per academic year to update parents on their ward's progress.
- The Institution's website provides a dedicated student login to access essential information such as attendance, exam marks, and more.
- A structured mechanism is in place to regularly inform parents about their ward's attendance and academic performance.
- A mentor coordinator is responsible for overseeing and supporting the entire mentoring process. They regularly report to the HoD on the performance of individual mentors.

The HoD regularly meets with mentors and class coordinators to review and follow up on the mentoring process.

Mechanism of Mentoring System



Mentoring System Flow Chart



Summary of mentoring system

Parameter	Description
Type of mentoring activities	Professional guidance, career advancement, coursework-specific areas, laboratory-specific skills, and overall development.
Number of Students per mentor	15-20
Frequency of meeting	Once in a week

Mentoring at CMREC

- Students' mentoring is our main priority. Each instructor takes interest in mentoring their mentees. Students are free to approach faculty for personal, professional, and other advices. Faculty members make special efforts to help the students for up liftment in their carrier growth.
- Faculty members make dedicated efforts to support students in their career growth and development.
- A Proctor form is maintained for each student where the mentor records personal details, academic performance, meeting summaries, and activity participation.
- The following table describes the various mentoring processes at CMREC. The model

The following table describes the various mentoring processes at CMREC.

Description of Mentoring System

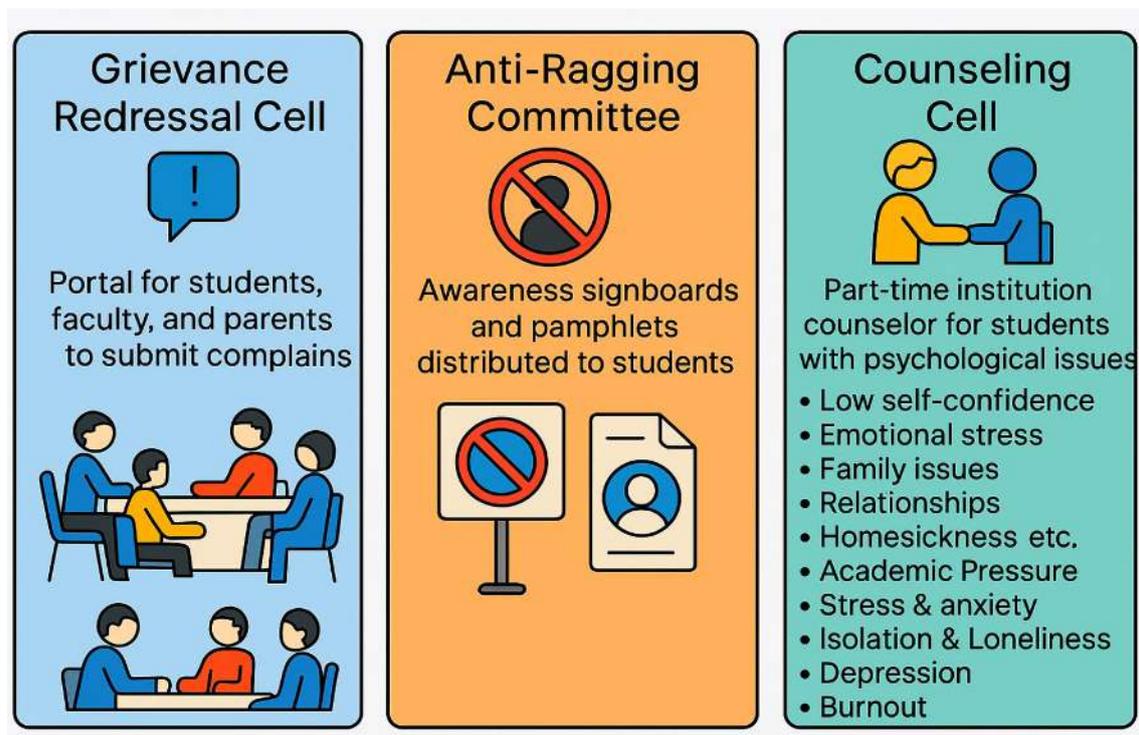
S. No	Type of Mentoring System	Functions
1.	Professional guidance	<ul style="list-style-type: none"> • The department features highly qualified and experienced faculty members who mentor aspiring professionals by integrating the latest technological advancements into dynamic classroom discussions. • Students are guided and encouraged to take professional memberships, such as ISTE, ISOT , IEEE, and CSI to enhance their knowledge, stay updated on industry trends, and engage in research opportunities. • Students are encouraged to pursue online certification courses through NPTEL, and SPOKEN TUTORIAL to strengthen their credentials for professional growth. Over 2000 students have successfully obtained certifications in various courses, averaging a significant number of certified students each year.
2.	Career Advancement	<ul style="list-style-type: none"> • The Training and Placement Cell plays a pivotal role in facilitating campus recruitment drives, conducting pre-placement talks, and offering comprehensive training programs to enhance students' overall professional development. • Students undergo industry-focused training in aptitude, reasoning, group discussions, personality development, programming, and other technical skills to boost their employability. • Final-year students need active participation by delivering lectures on professional development. • Students are encouraged to take up internships to gain hands-on experience and stay updated with the latest industry technologies.

3.	Course work Specific	<ul style="list-style-type: none"> • Academic planners, timetables, and e-learning resources are provided to students to enhance their learning experience and knowledge. • Absent students are regularly contacted to ensure they stay informed and encouraged to attend classes consistently. Additionally, students with low attendance are identified and counseled in the presence of the HoD and a mentor to help them improve their attendance. • Mentors monitor students' progress by assessing their performance in Mid-term and Semester examinations, with marks duly recorded in the proctor form. Additionally, Parent-Teacher Meetings (PTMs) are conducted twice a year to discuss academic progress and provide further guidance. • High-achieving students are encouraged to maintain strong GPAs throughout all semesters, while those with backlogs receive guidance and attend remedial classes/MUC to enhance their subject knowledge. To further motivate academic excellence, the Best Academic Performer Award is presented annually during the Annual Day function.
4.	Laboratory Specific	<ul style="list-style-type: none"> • Each lab session is conducted under the supervision of two faculty members and one non-teaching staff member, ensuring students receive focused guidance and support during experiments. • Each experiment begins with a demonstration by the instructor, ensuring students understand the procedure. Upon completion, the faculty member reviews and evaluates the students' record notebooks. • Students absent from laboratory classes receive counseling to ensure regular attendance and timely completion of missed experiments within the allotted hours. • Mentoring enhances problem-solving skills, technical expertise, and real-world application in hackathons and project-based learning through Hobby projects. It fosters innovation, teamwork, and confidence while providing industry exposure through club activities and accelerating skill development. Additionally, mentors help individuals build professional networks, improving career prospects and industry readiness.

5.	All-round development	<ul style="list-style-type: none"> • The mentors identify and inform the students about appropriate events to improve their involvement in Co-curricular and Extracurricular activities. • Students are encouraged to participate actively in various technical events, including paper presentations, poster presentations, technical quizzes, seminars, and workshops. <p>Mentors identify students' potential talents and encourage their participation in sports, cultural, and social activities with support from the Physical Education Department, NSS, NCC, and Unnat Bharat Abhiyan.</p>
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Specific support service

In addition to the above-mentioned mentoring, the following specific support services/facilities are available towards monitoring and mentoring the students.



7. TUTORIAL CLASSES :

Tutorial class:

- A **tutorial**, in education, is a method of transferring knowledge and may be used as a part of a learning process. More interactive and specific than a book or a lecture, a tutorial seeks to teach by example and supply the information to complete a certain task.
- Tutorials are often not optional because they give you an opportunity to delve deeper into concepts, and attendance may contribute to your participation mark
- The tutorial system is a **method of university education** where the main teaching method is regular, very small group sessions. These are the core teaching sessions of a degree, and are supplemented by lectures, practical and larger group classes.
- A tutorial can be taken in many forms, ranging from a set of instructions to complete a task to an interactive problem solving session (usually in academia).
- In documentation and instructional design, tutorials are teaching-level documents that help the learner progress in skill and confidence. Tutorials can take the form of a screen recording (screen cast), a written document (either online or downloadable), interactive tutorial, or an audio file, where a person will give step by step instructions on how to do something.

Benefits of Tutorial Classes

- Enables users to learn on demand and when they are motivated
- Tutorial can be done independent of time and geography
- User is able to stop for breaks and to repeat sections as needed
- Easier to briefly review or skip sessions if not a beginner
- Learning through written communication may be easier than learning through oral communication (e.g. English as a second language users)
- Less ongoing staff time is needed for instruction
- Experts can devise tutorial, even though they are located at a different institutions
- Tutorials are very labor-intensive to devise
- Hard to maintain especially if content in tutorial is changing rapidly
- Should tutorial include practice problems or a quiz?
- Using interactivity and examples to make tutorial more effective
- Choosing the right media: audio, video, web, email, combinations?

- Length of sessions—list total time needed, provide clear outline, and divide topics into modules
- What equipment and other types of infrastructure is needed to deliver tutorial?
- What level of user should you aim at?
- Lobby producers to create tutorials
- Use team to create tutorial

CMR college Tutorial classes:

In Our College we conducted Tutorial classes for following subjects(as per AUTONOMOUS syllabus):

2024-25

Year & Semester	Subject	Faculty	Signature
III-year:I - sem	Automata Compiler Design		
II-year: II-sem	Computer Oriented Statistical Methods		

Evaluation Process: We will give 5 questions from each unit of Tutorial subjects and give 1 mark for each answer.

Subject : Automata Compiler Design

B.Tech III Year I sem

TUTORIAL ASSIGNMENT

Answer all the following questions

1. Difference between NFA and DFA.
2. Explain about Regular Expression to Finite Automata.
3. Explain about Turing Machine .
4. Discuss about Phases of Compiler .
5. Explain about Storage Allocation Strategies

Subject : Computer Oriented Statistical Methods
sem

B.Tech II Year II

TUTORIAL ASSIGNMENT

Answer all the following questions

1.a State and prove Baye's theorem.

b. A random variable X has the following probability function:

x	0	1	2	3	4	5	6	7
P(X)	0	k	k	2k	3k	k ²	2k ²	7k ² +k

Find the value of k and Evaluate $P(X < 6)$, $P(X \geq 6)$, $P(0 < X < 5)$.

2. Out of 800 families with 5 children each, how many would you expect to have i) 3 boys ii) 5 girls iii) either 2 or 3 boys d) at least one boy? Assume equal probabilities for boys and girls.

3. Find the Mean , Variance ,Median of normal distribution.with Examples

4. Find 95% confidence limits for the mean of a normality distributed population from which the Following sample was taken 15,17,0,18,16,9,7,11,13,14.

5. a) Compute the unique fixed probability vector of $P = \begin{pmatrix} 0 & 0.75 & 0.25 \\ 0.5 & 0.5 & 0 \\ 0 & 1 & 0 \end{pmatrix}$

b) What matrix does P^n approach?

c) What vector does $(0.25 \ 0.25 \ 0.5)P^n$ approach?

Pattern of Tutorial classes (For Absent/Dull students/Lack of classes)

S.No.	Topic Covered	Absentees Roll Numbers	Total No. of Absentees	Total No. of Presents	Signature of Faculty

Guidelines for tutorial:

Tutorial helps to the students to rectify their doubts very clearly. In the class all students may not ask their doubts but in tutorial session this may mainly tutorial classes helps average and below average students to overcome their difficulties.

1. All the faculty members should prepare tutorial schedule in their subject.
2. Tutorial classes must be conducted in their allotted classes as per the tutorial schedule.
3. Two faculty members must handle the tutorial class

Tutorial hour schedule:

CLASS	TOPIC-SUB TOPIC	SUGGESTED BOOKS	DAY/DATE/PERIOD		SUBJECT INCHARGE	ADDITIONAL FACULTY	REMARKS	SIGN
			SCHEDULED	ACTUAL TAKEN				
I								
II								

STEP/Tutorial(TUT)TIMETABLE-IIyear

Time→ Day↓	09:10 - 10:10	10:10- 11:00	11:00- 11:50	11:50- 12:40	12:40- 01:20	01:20- 02:20	02:20- 03:10	03:10- 04:00
Monday				TUT	L U N C H			
Tuesday		TUT						
Wednesday		TUT						
Thursday								
Friday								
Saturday			TUT					

STEP/Tutorial(TUT)TIMETABLE-IIIyear

	09:10 - 10:10	10:10- 11:00	11:00- 11:50	11:50- 12:40	12:40- 01:20	01:20- 02:20	02:20- 03:10	03:10- 04:00
Monday				TUT	L U N C H			
Tuesday								
Wednesday		TUT						
Thursday		TUT						
Friday								
Saturday			TUT					

STEP/Tutorial(TUT)TIMETABLE-IVyear

Time→ Day↓	09:10 - 10:10	10:10- 11:00	11:00- 11:50	11:50- 12:40	12:40- 01:20	01:20- 02:20	02:20- 03:10	03:10- 04:00
Monday					L U N C H			
Tuesday								
Wednesday								
Thursday								
Friday								
Saturday								

8.E-LEARNING PLANS :

SPOKEN TUTORIAL

Spoken Tutorial is an educational content portal being offered by IIT Bombay. Here any student can learn various Free and Open Source Software all by oneself. Anybody with a computer and a desire for learning can learn from any place, at any time and in a language of their choice. All the content published on this website is shared under the CC BY SA license. A Creative Commons (CC by SA) license is one of several public copyright licenses that enable the free distribution of an otherwise copyrighted "work".

The courses are simple and easy to follow even for a beginner, but they also meet the growing needs of the learner. The digital content ensures that learning happens at all levels - Basic, Intermediate and Advanced. The content mandates side-by-side practice thereby ensuring that learners are actively learning. Many of the software taught, are used in various disciplines of Engineering, pure Sciences and several other Under-Grad and Post-Grad studies. Alongside these, there are some courses relevant at School level, too, which help school students to visualize difficult concepts of Mathematics and Science.

The learning can happen in an organized manner as well. Faculty in institutes can look where every individual student who will learn a particular software course for an entire semester. The ST course can be mapped to the Course/Lab manuals and systematic learning can take place. In every academic year single student are learning upto 3 different ST courses in one semester during the designated academic Lab hours.

End-of-Course online tests and certificates are available for those who wish to test their expertise in particular software. These certificates give an edge to students during placement by increasing their employability potential.

The college has a local center and training the students in various open and online courses which are helping the students to get the better knowledge on latest developments.

Guidelines for Online Technical Trainings (Spoken Tutorial)

1. All the spoken tutorial coordinators have to create an account in the spoken tutorial.org as administrator and have to prepare the schedule for the Course.
2. After creating the account the administrator has to request for the Course which is scheduled.
3. As soon as the request is confirmed the coordinator has to download the material on which the Course is going to be conducted

4. On the day of the Course the coordinator has to look after the required number of PC's, Head phones for conducting the Course
5. After conducting the Course the coordinator has to request for the test within two weeks from the date of Course scheduled.
6. To request for the test the coordinator has to give the invigilator details from his/her admin account.
7. The coordinator has to choose the invigilator from his/her department.
8. On the day of exam the coordinator and invigilator has to look after the PC's required and also see they should be connected with the internet as the test is an online test.
9. Invigilator has to guide the students to create the account in spoken tutorial.org to take an online exam at the same time the invigilator has to login to the administrator's account so that as the students create an account that is visible to the invigilator to confirm his/her online test.
10. As the test is finished by the students the invigilator has to click on the test completed from the administrator's account.
11. Now the invigilator has to guide the students how to generate the online certificate who gets 40% in online exam.

Audio Visual Lecture Schedule

SNO	Year/ Section	Day/Date	Period/ Time	Subject	Topic	Location of Database (URL)	Location of Class/Lab	Remarks

SWAYAM-NPTEL

Massive Open Online Courses (MOOCs) is a platform to run free online courses for anyone. The MOOCs is being implemented through SWAYAM-NPTEL in India. To make the students to easy access, SWAYAM-NPTEL has initiated the concept of local chapter. The main intention of the local chapter is to liaison between the college and SWAYAM-NPTEL. This initiation helps the students and the faculty members to get the quick access easily.

The college has started the SWAYAM-NPTEL local chapter in the month of September 2018. Subsequently, the college has procured the NPTEL videos for all the courses run by SWAYAM-NPTEL. All the videos have been made available to the students and faculty members through a Internet. In continuation, the college has encouraging the students and faculty members to pursue the NPTEL online courses.

The main objective of SWAYAM-NPTEL is to enhance the quality education in the of engineering by developing curriculum-based video and web courses. This is being carried out by seven IITs and IISc Bangalore as a collaborative project. Five major engineering disciplines have been covered in this project so far at the undergraduate (B.Tech.) level. In addition, a number of core curriculum courses common to all engineering programmes such as mathematics, physics, chemistry, management, electronics, language etc. have also been included. Currently, around 300 courses are being offered for all most all engineering branches including science, humanity, and management subjects.

- **NPTEL (National Programme for Technology Enhanced Learning):** NPTEL lessons are procured and are available all over campus through Intranet at the link local that can be accessed from any computer and handheld device with LAN / WiFi connection. These lessons are stored at server of library with capacity of 14TB.
- A website is created as <http://nptel.cmrec.ac.in/> to access the NPTEL material and other resources quickly.

COURSERA

- Coursera is an online education provider that offers online courses, popularly known as MOOCs or Massive Open Online Courses, from top universities around the world. Currently it has over 200 partners from 48 countries. These partners include Universities such as Stanford, Duke, Penn, Princeton, Michigan, Peking, and HEC Paris. Coursera has also started partnering with companies like IBM, Google, and Pwc — these companies are also launching courses on Coursera.
- Coursera is the most popular MOOC provider in the world based on the number of students (over 76 million learners) and has an active catalog of 6,000+ online courses.
- As well as these individual courses and 25 online degrees, Coursera offers more than 500 groups of courses known as Specializations, MasterTracks, and Professional Certificates.
- A Coursera Specialization is a micro-credential offered by Coursera which is made of several courses. In some cases, the final course is a Capstone project which is assessed by student peers. Most specializations have 4 or 5 courses, although some have up to 10. Most specializations take 4-6 months to complete.
- To earn a specialization certificate, you need to pay for all the courses and complete the necessary work. Individual courses can be taken separately but capstone projects are not available unless you have completed all the other courses in the specialization.
- Many Specializations run on a subscription basis costing between US\$39-79 per month (<https://about.coursera.org/>). Most offer a 7-day free trial, after which you will be billed. If you cancel within the free trial time, you will not be billed, unless you have completed a course and received your certificate. If you decide not to complete a Specialization, make sure you cancel your subscription, or you may continue to be billed.
- Students can apply for financial aid for specializations, but need to apply for each individual course separately: <https://learner.coursera.help/hc/en-us/articles/209819033-Apply-for-Financial-Aid>
- Many Specializations are available when you pay for Coursera Plus, which gives access to around 3000 courses and Specializations with monthly or annual subscription options.

9. LIBRARY/SPORTS :

LIBRARY:

CMR Engineering College established a spacious Central Library with a multi-storied building and world-class infrastructure within an area of 1320 sqm. It started functioning with a vision to serve the information needs of its users and to promote a continuous learning atmosphere with a vast and comprehensive collection of Text Books, Reference Books, Competitive Exam Books, Special Collection Books, Rare Books, eBooks, Journals, Magazines, E-Journals, Subject PPT's, Subject Animations, Project Reports, Tutorials, Question Papers, NPTEL and MIT Video Lessons, Faculty Recorded Video Lessons for students and faculty to develop an all-round broader mindset with a user-friendly approach. It offers a fully integrated and peaceful environment for conducting academic study. The Central Library is fully automated with a barcode mechanism.

The central library is a multistoried building consisting of the following layout structure.

Ground Floor

Circulation Counter, New Arrivals, Stack Area, Reading Area, Newspaper Section, Reprography Section

First Floor

Reference Section, Digital Library, Periodicals Section, Reading Area

Facilities Available in Central Library

- Well-designed infrastructure with a reading capacity for 200 users
- Wi-Fi facilitated in the library□
- Special zone provided for using Laptops□
- Fully automated library from the beginning□
- Automated gate register (started in the year 2014)□
- SMS & email sending to library users on each library transaction□
- “Best Library User Award” introduced for its students (in the year 2014) for the first time in Telangan, andalso among private engineering colleges in Telugu States.
- Announcing the **best library user award** on 12 August every year on the occasion of Dr.S.R. Ranganathan birthday, the father Library Science in India□
- Lending more books to Top 10 Merit Students from each branch. This initiation was started for the first time in Telangana & Telugu States from the year 2011 and continuing successfully.

Digital Library

The college initiated requisite action to establish a Digital Library for the benefit of its user community. Digital library is to act as a subject gateway providing access to multiple resources enabling users to search browse and download any required data needed quickly and easily. The Library is totally automated with the following facilities.

Access Your
Digital Library

IEEE

EBSCOhost

ProQuest Ebook Central

DELNET
Developing Library Network

knimbus
Your eLibrary. Anywhere. Any Device.

NPTEL

MIT OCW

BRITISH COUNCIL

National Digital Library of India

CMREC Repository <http://103.161.31.10/>

CMR ENGINEERING COLLEGE
UGC AUTONOMOUS
Approved by AICTE-New Delhi | Affiliated to JNTUH | Accredited by NAAC & NBA

NEA **nirf**
NATIONAL BOARD OF EXAMINATIONS
NATIONAL INSTITUTE OF RESEARCH IN FINANCIAL ENGINEERING & MANAGEMENT

ARBA
THE BOARD OF ARCHITECTURE
REGULATORY AUTHORITY

<https://cmrec.ac.in/library/>

Relevance of available learning resources including e-resources

The available learning resource is that it helps the individual to acquire the necessary skills through learning and knowledge so that he can achieve his/ her set goals. An important fact about learning is that it is a means to improve knowledge and gain skills that will help in

reaching specific goals.

Library Resources

Books:

- a) Text Books
- b) Reference Books

Periodicals:

- a) Print Journals
- b) Online Journals
- c) Technical Magazines

Non-Book Materials:

- a) CD/DVD
- b) Project Reports
- c) Journal Bound Volumes

CMREC Repository:

- a) NPTEL Video Lessons
- b) MIT Video Lessons
- c) Faculty Recorded Video Lessons
- d) E-Books
- e) Tutorials
- f) Course Materials
- g) Step Materials
- h) Previous Question Papers
- i) Staff Published Articles

Font size Bigger Reset Smaller
Search... GO

Home Course Material NPTEL Videos MIT Courses E-Books Videos Projects Question Papers Others Login

You are here: Home

Home

REPOSITORY CONTAINS
11000 NPTEL Video Lessons
100 Subjects NPTEL Text
300 Subjects MIT Open-Courseware
1000 e-Books
500 Projects
1500 Software Video Tutorials
3316 Question Papers
525 Course Material
2145 Course Videos + Recorded Lectures
193 STEP Material
2000 Universities Information

Activate Windows
Go to Settings to activate Windows.

CMREC Repository

Special Collections Books:

- a) Soft Skills
- b) Communication Skills
- c) Fiction
- d) Novels

- e) Personality Development Books
- f) Moral Value, Ethics
- g) Rare Books

Competitive Exam Books:

- a) GATE
- b) GRE
- c) TOEFL
- d) IELTS
- e) BANK
- f) Defence
- g) ISRO

Library Services

Circulation

For Students 5 books for 1 Month

For Merit Students 7 books for 1 Month

For Staff 6 books for semester

Web OPAC

OPAC is an online catalog to see a complete list of books of CMREC Central Library holdings. The library catalogue is computerized and can be accessed from a terminal in the library or from anywhere. A library catalogue can also be used for checking by title, by author's name, by a subject, or by a key-word, locating the books, and also for checking their account status by users.

<http://103.161.31.11:8080/newgenlibtxt/>

Library Best User Award

This award was introduced in the 2014-15 academic year and announced on 12th August every year on the birthday of Dr.S.R. Ranganathan, the **Father of Library Science** of India to encourage and create awareness among the students about the benefits of utilizing the library services regularly.

Orientation Programme

Conducting Orientation Programme for newly joined students every year of Ist year B.Tech/M.Tech and at the time of joining.

Other Services

- **Reprography**

A Printer, Document Scanner, and Xerox Machine are provided for library users at a nominal cost.

- **Current Awareness Service (C.A.S)**

The library offers a newspaper clipping service and makes workshop brochures available.

- **E-mails Alerts**
- Regarding library transactions, users get alerts and information on issues, returns, renewals, and reminders in the form of e-mails.
- **New Arrivals**

New arrivals are displayed at the circulation counter as and when we receive new titles, and users can also view new arrivals from anywhere anytime through OPAC.

E- RESOURCES

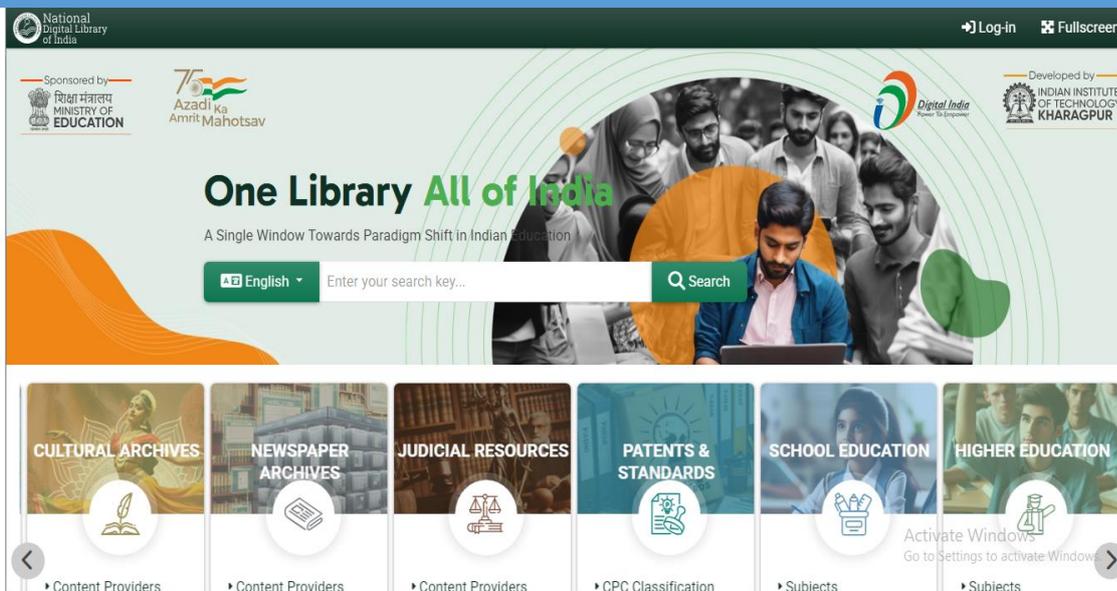
- IEEE Journals
- [EBSCOHOST](#) e-Books
- <https://www.knimbus.com>
- [CMREC Repository](#)
- [British Council Digital Library](#)
- [DELNET](#)
- [NDLI](#)

DELNET (Developing Library Network):

CMREC Central Library is subscribed DELNET membership and it provides services such as Inter Library Loan (ILL) facility is available. Through this a book or a document or a part of a document/article can be procured from any member library throughout India.

National Digital Library of India

The National Digital Library of India (NDLI) is a virtual library featuring search and browse functionality as well as a number of other services for the learning community. With its National Mission on Education through Information and Communication Technologies, the Ministry of Education of the Government of India sponsors and guides it (NMEICT). Focused searching is made easier by the use of filtered and federated searching, allowing students to access the appropriate resource quickly and easily. NDLI offers services tailored to the needs of particular user groups, such as exam preparation for high school and college students as well as job seekers. Services are also offered for general learners and researchers. The NDLI provides interface support for the top 10 spoken languages in India and is built to hold content in any language. It is designed to accommodate students of all academic levels, including researchers and lifelong learners, all academic specialties, all widely used access devices, and students with disabilities. It is intended to make it possible for people to prepare for situations by learning from best practices from around the globe and to make it easier for researchers to conduct interconnected research from many sources. It was created and maintained by Indian Institute of Technology Kharagpur. <https://ndl.iitkgp.ac.in/>



NDLI Club

An initiative to engage learners and promote effective utilization of NDLI’s vast resources through competitions, training sessions and workshops. NDLI Clubs enable learners to effectively use NDLI throughout their journey of education while motivating them to contribute actively towards a national knowledge trove. A virtual teaching-learning-evaluation-knowledge discovery and innovation platform to encourage collaborative, personalized, self-paced, new-age multi-media education at all levels.

<https://club.ndli.iitkgp.ac.in/club-home>



Images of NDLI Club Mobile App

KNIMBUS

Knimbus e-Library provides a customized e-library portal & Mobile App which provides single point anywhere access to all the digital resources of the institution including over 1486 journals, 8,132+ eBooks, 1,000+ eLearning videos and millions of articles .

<https://www.knimbus.com/#/>

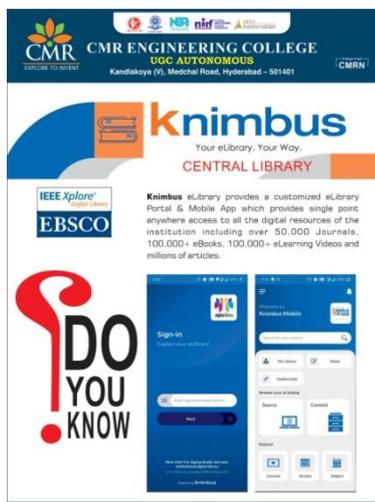


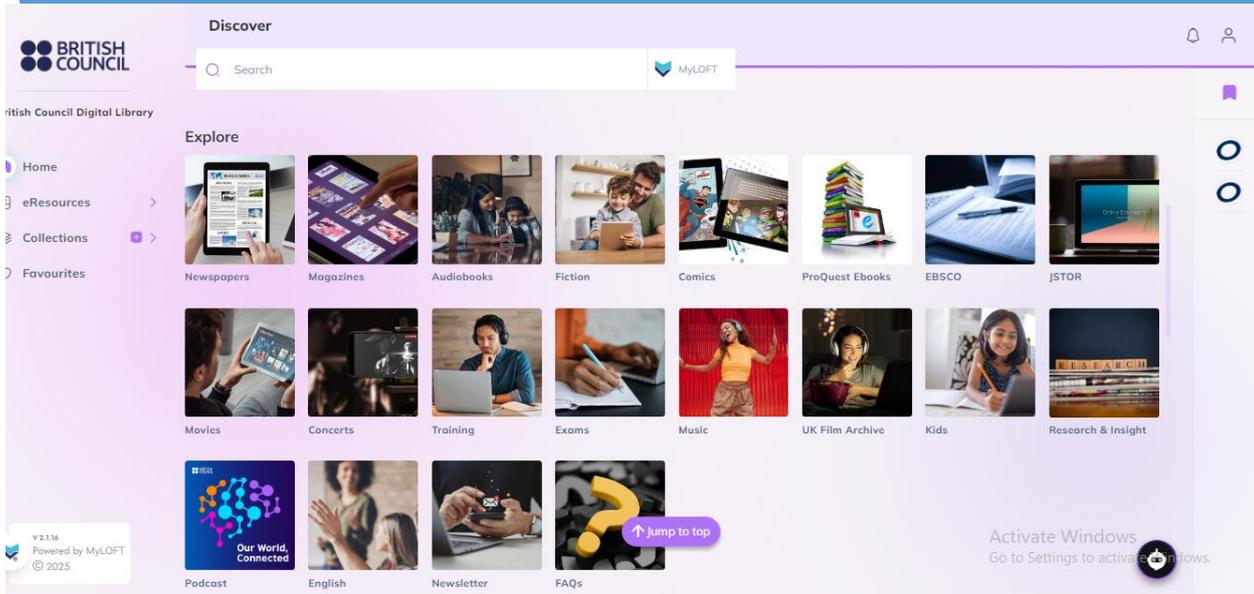
Image of Knimbus M-Library Mobile App

British Council Digital Library Collection:

- **E-Journals** - Read and download over 2,000+ journals from JSTOR and 15,000+ from ProQuest Central
- **E-Books** - Read and download 1,20,000+ full text e-books and audio books (includes academic and fiction)
- **E-Magazines** - Read and download the best of UK magazines including The Economist, Amateur Photographer, New Scientist etc.
- **E-Newspapers** - Read 1,000+ e-newspapers from across 100 countries.
- **E-Learning** - Access 40,000 online learning modules on soft skills and software applications.
- **E-Resources for Children** - Enjoy 'Learn English for Kids' resource and over 1555 digital graphic novels and e-comics.
- **Watch online** - theatre performances, music documentaries and stream live concerts.

ID: principal.cmrec@gmail.com

Password: Cmrec@6611#



British Council Digital Library APP Images

e-Books in Regional Languages

- <https://ekumbh.aicte-india.org/>

GATE Mock Test:

- GATE Preparation

Thesis / Dissertations:

- Shodhganga

Wi-Fi

- Facilitated to all the users on Laptop

CC Camera

- CC Camera Surveillances for security purposes

Welcome e-Mail

- Patron received welcome e-mail after library membership registration

New Arrivals News Letter

- Patron received New Arrivals News Letter from Central Library as and when new arrivals added to library

SPORTS:

CMR Engineering College has spacious and well equipped Indoor and Outdoor sports/games facilities. Dedicated sports facilities with guidance of a qualified full time physical director is made available to students. Outdoor and indoor sports facilities are made available to students both during and after college hours. The college has an active sports council that conducts annual sport meets/events and Inter-collegiate tournaments. Also sports competitions are conducted at the inter-departmental level during the academic year. The winners are awarded and rewarded accordingly. College teams are formed to take part in state level and University level competitions and other intercollegiate competitions.

Library/Sports hour:

Time→ Day↓	09:10 - 10:10	10:10 - 11:00	11:00 - 11:50	11:50 - 12:40	12:40- 01:20	01:20- 02:20	02:20 - 03:10	03:10- 04:00
Monday					L U N C H			
Tuesday								Lib/Sports / Seminars
Wednesday								
Thursday								
Friday								
Saturday								

10. LAB PLANNING

LABORATORY INSTRUCTIONS:

1. Students should report to the concerned labs as per the time table.
2. Students should attend the Laboratory classes in time. Late comers shall not be permitted to enter the Laboratory and they are likely to lose attendance.
3. The students should come to the Laboratories with the prescribed uniform.
4. White apron with shoes.
5. Student without Identity Cards are not allowed to the Laboratory classes.
6. Students should be present in the labs for the total scheduled duration.
7. Students should bring an observation book of about 100 pages and should enter the Algorithm, Flowchart and Program into that book.
8. If any student is absent in the Lab, The concerned faculty has to inform the mentor, in turn has to inform the parents
9. The assigned second faculty must ask the viva questions for day-to-day evaluation.
10. Students are required to write the Flowchart, Algorithm & Program before coming to the Lab.
11. Students are instructed to shutdown the system after execution of their program.
12. The record book of the program performed in the immediate last session should be submitted and certified by the concerned subject faculty.
13. In the name of LEARN EMERGING ADVANCES IN THE DOMAIN (LEAD) Experiments one or two tasks / experiments, beyond the University syllabus, are additionally conducted in every laboratory.

LEAD EXPT: 1 will be conducted by faculty.

LEAD EXPT: 2 must be done by students on their interest (1 Experiment /1 Batch)

Department of Computer Science and Engineering

LAB NAME

A.Y:2024-2025

CLASS:

VIVA Rubrics for Laboratory

	RUBRICS	Unsatisfactory (1)	Acceptable(2)	Exceptional(3)
P1	FUNDAMENTAL KNOWLEDGE	Lack of Fundamental Knowledge	Fundamental Knowledge is Medium	Very good Fundamental Knowledge
P2	KNOWLEDGE IN COURSE	No sufficient Knowledge in course content	Have Reasonable Knowledge in course Content	Have very good knowledge in course content
P3	ANALYSIS OF THE CONTENT IN THE COURSE	Not able to perform effective analysis	Written the program and result performed on that day	More effectively perform the analysis
P4	COMMUNICATION SKILLS	Lack of communication Skills	Able to Perform effective analysis	Effective communication skills
P5	CONFIDENCE	No confident	Just Confident (Little bit Confusion)	Very good confident

Lab coordinator Subject faculty

HOD

**Department of Computer Science and Engineering
Rubrics Assessment Viva Voice Sheet**

		LAB:					AY:2024-25		
		YEAR:		SECTION:		BATCH:		DATE:	
S.NO	RollNo	Exp. No	Parameter Proficiency Level on scale of 1to5					Total	
			I	II	III	IV	V		
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
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28									
29									
30									

Lab Faculty

Lab coordinator

Department of Computer Science and Engineering Log sheets

Name of the lab:

Class:

Branch:

Date:

Staff:

Academic Year:

S.NO	ROLLNO Complete Roll Number	RECORD		OBSERVATION		REMARKS
		Submitted Date	Issued Date	Submitted Date	Issued Date	
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
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29						
30						

Lab-Faculty

Lab-coordinator

CMR ENGINEERING COLLEGE

KANDLAKOYA (V), MEDCHAL ROAD, HYDERABAD-501401

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING TECHNOLOGY

Lab Time Table Format

Time→ Day↓	09:10 - 10:10	10:10 - 11:00	11:00- 11:50	11:50- 12:40	12:40 - 01:20	01:20- 02:20	02:20- 03:001	03:10-04:00
Monday		-----Year-Section -----			L U N C H	-----Year-Section -----		
Tuesday		-----Year-Section -----				-----Year-Section -----		
Wednesday		-----Year-Section -----				-----Year-Section -----		
Thursday		-----Year-Section -----				-----Year-Section -----		
Friday		-----Year-Section -----				-----Year-Section -----		
Saturday		-----Year-Section -----				-----Year-Section -----		

LIFT (Laboratory Improvement Future Trends):

Laboratory instruction is considered essential because it provides training in observation, supplied detailed information, and aroused pupils' interest. Keeping this in the view, LIFT has been introduced to provide practical hands on experience for each student by making them with good exposure to different experiments and uplift the knowledge levels of student in various fields with different applications.

Aim:

The main aim of the LIFT programme is to innovate, modify the existing facilities in labs, to create awareness among the students and develop Industry –Institution interactions and reach the standards in laboratories.

Functions:

- I.To create better understanding concepts of LIFT and other lab related activities among the staff and lab techniciansfor better improvement.
- II.To Arrange LIFT Presentations from each department about the lab activities by the staff handling the labs. (LabPlanners)
- III. To Prepare GAP ANALYSIS: This involves collection of requirements from each lab of every department, information about expansion of labs, repairs and maintenance of

labs etc.

IV. To arrange Industrial Visits/ Industrial training programs in coordination with concerned lab staff and Heads of the departments.

V. A Report on Shadow Engineering: This involves arrangement of Industrial and Practical learning, Submission of Industrial Visit report, Technical Survey reports and Market Survey of a product for development in laboratories.

VI. Verification of all the laboratories in every department by the LIFT Team along with the Principal and the concerned HODs, to check whether the activities are going according to LIFT guidelines, to check the Record Keeping, Lab Manuals and Viva sessions etc.

VII. Check for LEAD Experiments and its follow up.

VIII. Submission of proposals related to R&D, Project and Consultancy from lab staff to the Principal for further approvals.

Goals:

The main aim of the LIFT program in laboratory is to innovate, modify the existing facilities in labs, to create awareness among the students and develop Industry –Institution interactions and reach the standards in laboratories.

Contents in LIFT

- 1. Objectives and Relevances**
- 2. Scope**
- 3. Prerequisites**
- 4. Syllabus As Per CMREC**
- 5. Lab Schedule**
- 6. Suggested Books**
- 7. Websites (Useful Links)**
- 8. Expert Details**
- 9. Mapping Of Lab With Project/Consultancy/R & D**
- 10. Proposals**
- 11. Guidelines For Shadow Engineering (Vip) And Industrial Visits (Iip – Innovative Industrial Learning Program)**
- 12. Calibration, Testing And Inspection**
- 13. Preventive Maintenance Schedules**
- 14. Trouble Shooting**

1. Objectives And Relevance:

The main objective of the LIFT concept in lab course is to provide practical hands on experience for each student by providing them with good exposure to different experiments and to uplift the knowledge levels of The Student, With Different Applications In Various Fields.

2. Scope: The main scope of the LIFT lab course is to cover all the experiments as per the schedule given in the prescribed week wise periods. With this, a student can better understand the concepts and operating systems so that he could get better knowledge about each lab.

3. Prerequisites:

The basic level idea related to each experiment should be provided to the students before conducting main lab course. Following details are to be explained related to experiment:

1. Introduction to experiment – 30 min
2. The Operating of the equipment/instrument/software
3. Record of Experimental Results.
4. Sample Calculations / Executable Programs

4. Syllabus As Per Jntuh:

The lab course should be planned as per the JNTUH syllabus. In this, LEAD experiments should also be included in the cycle of experiments.

5. (A) Lab Schedule:

The lab schedule should be planned once in a week. The week wise scheduled experiment should be completed.

CYCLE 1

Batches	week-1	week-2	week-3	week-4	week-5	week-6	week-7
B1	Demo	Exp.1	Exp.2	Exp.10	Exp.9	Exp.8	Test
B2	Demo	Exp.2	Exp.10	Exp.9	Exp.8	Exp.1	test
B3	Demo	Exp.10	Exp.9	Exp.8	Exp.1	Exp.2	test
B4	Demo	Exp.9	Exp.8	Exp.1	Exp.2	Exp.10	test
B5	Demo	Exp.8	Exp.1	Exp.2	Exp.10	Exp.9	test

CYCLE 2

Batches	week-1	week-2	week-3	week-4	week-5	week-6	week-7
B1	Exp.3	Exp.4	Exp.6	Exp.11	Exp.12	Exp.5	test
B2	Exp.7	Exp.6	Exp.11	Exp.12	Exp.5	Exp.4	test
B3	Exp.3	Exp.11	Exp.12	Exp.5	Exp.4	Exp.6	test
B4	Exp.10	Exp.12	Exp.5	Exp.4	Exp.6	Exp.11	test
B5	Exp.9	Exp.5	Exp.4	Exp.6	Exp.11	Exp.12	test

(B) Viva Schedule:

The viva schedule should be planned prior to the lab experiment.

ROUND-1

Batches	week-1	week-2	week-3	week-4	week-5
B1,B2,B3	Viva				
B1,B2,B3		viva			
B1,B2,B3			viva		
B1,B2,B3				viva	
B1,B2,B3					Viva

ROUND-2

Batches	week-1	week-2	week-3	week-4	week-5
SG1	Viva				
SG2		viva			
SG3			viva		
SG4				viva	
SG5					viva

*SG: Selected Group with a maximum of 6 or 12 students

(C) Scheme of Evaluation:

The scheme of evaluation for internal and external exams as follows:

Lab Internal-30

Lab External-60

Project Based Learning(PBL)-10

LAB INTERNAL:					
Day to Day Evaluation-10		Viva-10		Internal Exam-10	
Aim/Apparatus/ Theory/Procedure	Observations/ Calculations/ Execution	Diagrams/ Figures/Graphs	Result	Viva	Day to Day Evaluation
Marks-3	Marks-3	Marks-2	Marks-2	Marks-10	Marks-10
Total Marks-30					

LAB EXTERNAL:				
Write up	Experiment /Program	Results	Presentation of another Experiment/program	Viva
Marks-10	Marks-15	Marks-15	Marks-10	Marks-10
Total Marks-60				

6. Suggested Books:

The suggested books should be recommended to the students as per the JNTUH syllabus prescribed.

7. Websites (Useful Links):

The useful links should be provided to the students, where they can get an easy access to the knowledge of the experiment.

8. Expert Details:

The expert details should be provided based on the experimental importance.

9. Mapping Of Lab With Project/Consultancy/R & D:

The lab course should be designed in such a way that it should meet the requirements of research and development as well as consultancy projects. Also the Proposals of Project/R&D/Consultancy are as follows:

Proposal 1: Project Design & Execution

Proposal 2: R & D Level Project Design & Execution

Proposal 3: Consultancy Task / Project Design & Development

Proposal 1: Project Design & Execution:

A Proposal of a hobby/mini/proto/general/model/proto type project including the abstract, Block Diagram/Circuit/Flow diagram and clear references may be presented and executed.

Proposal 2: R& D Level Project Design & Execution:

1. An exact paper from a National/International journal in this entitled area/subject/area (IEEE Format)

AND/OR

2. An article/white paper from a magazine /journal/weekly/any periodical in the entitled Subject

AND/OR

3. An Advanced technology development/ proposal/article publication from any source of information.

Proposal 3: Consultancy Task / Project Design & Development:

A program/machine/product of utility may be proposed to develop for in-house usage/ Industrial requirements which may be useful for any outside agency, that can be marketable in order to generate revenue through consultancy

FUNDED/UNFUNDED PROPOSALS (if any):

The proposals for AICTE grants like (SDPs, RPS and MODROBES etc) UGC grants, DST CPRI

and other funding agencies may be submitted by giving Title and Abstract/Objective OR Self Funded program proposals may be submitted for Management approvals.

9. Proposals:

Week Wise Industrial Visits In-House Or Outside Visit Or Training Programs

Table 1 : Industrial Visits

S.No.	Type of industry	Nature of industry	Date of visit	No. of students participated	Year/branch	Remarks

Table 2: Industrial Training (Shadow Engineering)

(Career Visit Approval)

S.No.	Name of the Course	Nature of Industry	Duration of Training	Authority	Date of Training/Certificate No.	Remarks

Guidelines For Shadow Engineering (Vip) And Industrial Visits:

(Iip – Innovative Industrial Learning Program):

Objectives Of Shadow Engineering:

1. The program uplifts the knowledge of the students related to laboratories.
2. To improve the industry-college interactions.
3. To create industry like environment for all the students in order to make future assignment.
4. This program leads to matrixing with the students.

10. Activities In Lift Program:

i. CALIBRATION/INSTALLATION AND TESTING:

Calibration: Aim of this concept is to check:

- i. whether all the equipment is functioning correctly as per the standards
- ii. To bring correctness in the errors of instrument or equipment.
- iii. To rectify the errors if any

Installation: Aim of this concept is to make and maintain installation procedure for a new equipment or already existing equipment

Testing: Aim of this concept is to test the equipment after installation whether it meets the existing standards

The list of equipments (hardware/software):

- i. Necessity of tools for development and testing.
- ii. Equipment to be calibrated.
- iii. Installation of supporting equipment if any.

After calibration the details of equipment should be submitted in following format.

S.No.	Type of equipment	Certificate no.	Certificate issued by	Date of calibration	Date of calibration due	Remarks

Calibration, Testing and Installation details equipment wise are mentioned as follows:

Case 1: Calibration of Equipment -----if any

Case 2: Installation of Equipment ----- if any

Case 3: Testing of Equipment-----if any

11. Preventive Maintenance Schedules

Maintenance:

Maintenance and trouble shooting of each equipment in a laboratory must follow the following guidelines:

Maintenance Schedules:

(1) Preventive Maintenance Schedules of lab will be decided by lab in charge along with concerned HOD. The details of schedule should be recorded in the following format.

S.No.	Name of the Equipment	Date of Maintenance	Type of Activity	Remarks

(2) Maintenance Reports should be duly signed by in charges as well as HODs and duly approved by Principal periodically.

trouble Shooting Schedules:

A proposal is to be made from each lab branch wise. The proposal should carry following details related to specific equipment in lab.

S.No., Equipment Name , Type of Problem (Too much Noise, Abnormal Sound, Corrupt Software, Anti Virus Problem, Missing of Display, CRT not working, Motor is not giving signal, Digital display is

not working, Break of tools, Misalignment of machine elements, PLC is not properly working), Expected Reasons (Bearing failure, Improper alignment of machine centres, Missing of vibration pads etc) Trouble shooting exercises should be properly recorded in a separate format as mentioned below:

S.No.	Date of recording activity	Equipment Name	Type of Trouble	Remedial Activity	Remarks

LEAD (Learn Emerging Advancements in Domain):

The LEAD Experiments are designed based upon the theory syllabus and student skills. At least One Experiment is introduced in each lab to train all the students in latest trends for laboratory improvement program which will be useful for the students to get awareness about the skills in conducting experiments.

Objectives

Innovations can be carried out in laboratories by doing the experiments beyond the curriculum. By conducting LEAD Experiments students can get benefit in technical skills. Introduction of new experiments beyond course curriculum in day to day regular lab sessions. This experiment is exclusively new idea with the background from the rest of the experiments that continuously running in each laboratory.

Lead Experiments in Laboratories

Guidelines for Lead experiment:

- a. A Lead Experiment is selected apart from all the other experiments that covered in JNTUH/R20 CMREC Syllabus/Curriculum.
- b. This experiment is exclusively new idea/concept with the background from the rest of the experiments that continuously running in each laboratory.
- c. Lead experiment should utilize the existing resources within the laboratory itself.
- d. Every student should aware of Lead Experiment and himself involved in doing and knowing about the experimental technique.
- e. A separate page is provided to record lead experiment in record book stating all details like Aim, Procedure and Record of Results.
- f. A Lead experiment should be a unique one from all the other experiments.
- g. Each Lab Staff/Technicians must clearly explain all the students about the concept of Lead Experiment and make them understand before going to that Experiment.

11. MAKE UP, TUTORIAL AND REMEDIAL CLASSES :

MAKE UP CLASSES

- MUC classes are conducted to improve the academic performance of slow learners. Slow learners will give extra guidance by the faculty members along with regular classes. During MUC classes the faculty members teaches and clears the doubts of slow learners and also conduct assessment activities to check the improvement of slow learners.
- Slow learners are identified by using previous semester and overall results as well as mid exam results in each semester from each class as well by understanding levels of students.
- From each section a group of selected students who are slow learners are selected and a new batch of slow learners is formed for each year. Extra guidance will be given to these students.
- In each semester for each subject an expert faculty will be assigned who is currently handling the subjects. The faculty will take classes, and clarify the doubts of students and conducts assessment exams in allocated time slot. Generally MUC classes will be conducted after the college hours from 4.00 to 5.00 PM.

MUC TIME TABLE

ACADEMIC YEAR :

SEM:

S.No	Day	Subject	Name of Expert faculty
1	MON DAY		
2	TUES DAY		
3	WEDNES DAY		
4	THURS DAY		
5	FRI DAY		

Pattern of MUC: (For Absent/Dull students/Lack of classes)

S.No.	Topic Covered	Absentees Roll Numbers	Total No. of Absentees	Total No. of Presents	Signature of Faculty

12. CLASS WISE DAIRY/ATTENDANCE

Attendance Guidelines

As the Academic Performance of a student is based on his/her attending the classes, it is the foremost responsibility and duty of every teacher to counsel the student and make lively the lecture so that he/she attends the classes regularly and in turn we can increase the **PASS PERCENTAGE**.

1. As per the JNTUH Regulations each and every student has to maintain 75% attendance in the class work. If the attendance is less than 65% the student will be detained. In this regard an undertaking by the student and the parent to be taken in the start of the semester.

2. Based on the previous attendance performance and his academic performance the class is divided into 3 groups **RED, GREEN, YELLOW**. Red group students with least and irregular attendance. Yellow group students with a substantial attendance and academic performance. Green group students with more than 75% attendance and good academic performance. Much of the attention has to make on the Red & Yellow category students to see that they move into Green group.

➤ Regularly through Bees software SMS has to be sent to their parent about any absence. If the student is absent for a day or two, he/she should intimate to the respective mentor about the valid reason for his absence, if the reason is not valid the mentor has to call his/her parent.

➤ If a student is absent for 5 days continuously, mentor has to ask the student to come along with their parents and meet mentor/CC/HOD.

➤ If the student puts up more than 90% attendance he may be given an appreciation certificate and a Subject Book useful to the student.

➤ In the beginning of the semester each student is intimated that day wise lab performance will be maintained and if the student is absent the concerned faculty need to intimate it to the mentor and in turn mentor should counsel the student and intimate it to the parent.

➤ Each and Every faculty should identify the students who are irregular to their classes and counsel them regularly and when they miss that class topic they must be asked to write the assignment and bring it in the next class.

➤ Each and Every student who wants to leave the college during the day they should apply in the leave letter form available with the class coordinator and take HOD permission.

- Fortnightly attendance Review to be made by the mentor with the HOD and Appraisal to be done and necessary action to be made.
- The same report to be submitted to the PRINCIPAL on regular basis and take further instructions from the PRINCIPAL to improve the attendance Performance.

Class Wise Dairy/Attendance Report Format :

DEPARTMENT OF COMPUTER SCIENCE &ENGINEERING

CLASS WISE DAILY ATTENDANCE

Year/Section

Date

Day

Period	Scheduled Subject	Actually Held	Topic Covered	Student Absent Roll Numbers	No.of Presentees	No.of Absentees	Sign of Staff
I							
II							
III							
IV							
V							
VI							
VII							

Class Coordinator Name

Time :

Signature:

13. PERIODICAL SYLLABUS COVERAGE REPORT

**Syllabus Coverage Report Format
Year/Semester-Section:**

S. NO	SUBJECT	NAME OF THE FACULTY	UNIT	NO OF PERIODS PLANNED	NO OF PERIODS TAKEN	% SYLLABUS COVERED	NO OF PERIODS REQUIRED TO COMPLETE SYLLABUS	NO OF PERIODS AVAILABLE AS PER TIME TABLE	EXTRA PERIODS REQUIRED TO COMPLETE SYLLABUS	FACULTY SIGN
1			1							
			2							
			3							
			4							
			5							

HOD

PRINCIPAL

Student Syllabus coverage report from

Year/Semester-Section:

NAME OF THE CLASS REPRESENTATIVE 1. -----

CONTACT NUMBER:-----

NAME OF THE CLASS REPRESENTATIVE 2.-----

CONTACT NUMBER:-----

S.No	SUBJECT	FACULTY NAME	UNIT	SYLLABUS COVERAGE	NOTES STATUS	FACULTY SIGN
1			1			
			2			
			3			
			4			
			5			

HOD

PRINCIPAL

14. ASSIGNMENT AND INNOVATIVE ASSIGNMENTS

Assignment Guidelines:

The main objective of assignment is to provide new and creative ideas and their implementation into your organization should be planned with clear goals and direction.

Assignment Guidelines:

1. The Assignment Coordinator should collect the signed sample assignment question paper from the concerned faculty for every 2.5 units for both mid-term examinations in every semester.
2. The number of questions given by the faculty should be minimum 5 for each mid-term examination in every semester intimating the last date of submission..
3. The assignment question paper should be in prescribed format which include 5 questions which carries 5 marks for each question covering the important topics and previously asked JNTU questions.
4. The assignment should be written by the students in assignment booklets.
5. The Assignment Coordinator should verify student's assignment scripts.
6. The Assignment Coordinator should ensure whether the faculty members are evaluating the assignments properly.
7. Subject teachers should ensure the submission of the intended assignments by every individual student.
8. The Assignment Coordinators should maintain samples of assignment booklet of all subjects (at least 2 booklets / subject /class)..
9. The foremost duty of the Assignment Coordinators is to maintain the record of the assignments given to the students by the faculty of different subjects.

Assignment Coverage Report Format

S.NO	Year/ Section	Subject	Name of Faculty	Issue Date	Submission Date	Remark	Signature

Innovative Assignments :

An assignment is one of the most important components in teaching and learning process. It serves as a common tool to judge the student's individual level of understanding towards the subject. In innovative assignments, the student's intellectual ability and critical thinking is assessed. Innovative assignments explore the students Problem analytical skills & report preparation ability from a topic of discussions

Objectives:

- Express ideas or concepts in their own ways. [IA1]
- Improves the written communication skills. [IA2]
- Create new ideas or given perspectives in a topic or issue. [IA3]

Innovative Assignment Guidelines:

1. The Innovative Assignment Coordinator should collect the question paper and answer scripts from the concerned faculty for few subjects for every semester.
2. The number of questions given by the faculty should be a minimum /maximum of 2/6 for every semester intimating the last date of submission.
3. Innovative assignment should be written by the students in A4 size papers/booklets.
4. The Innovative Assignment Coordinator should verify student's Innovative Assignment scripts.

subject teachers should ensure the submission of the Innovative Assignments from few students

6. The Innovative Assignment Coordinator should maintain samples of Innovative assignment booklet of few subjects (at least 2 booklets / subject /class).
7. The foremost duty of the Assignment Coordinators is to maintain the record of the innovative assignments given to the students by the faculty of different subjects.

Innovative Assignment Coverage Report Format:

S.NO	Year/ Section	Subject	Innovative Topic/Questions	Name of Faculty	Issue Date	Submission Date	Signature

15. STUDENTS SEMINAR FORMATS :

TECHNICAL SEMINAR GUIDELINES:

Following are the Guidelines for students for Technical seminars:

1. Every student must choose recent, computer Science related Technical topic for technical seminar presentation.
2. Every student must submit one copy of abstract to respective internal guide and take confirmation for the selected topic for technical seminar.
3. The font size is 12 in Times New Roman for abstract for technical seminar.
4. Every student must submit one copy of documentation in 30-40 pages with internal guide and Head of the Department signs.

Font sizes are mandatory as 16(for Main Headings),14(sub headings),12(Normal Text)in Times new Roman only.

5. Every student must present technical presentation minimum of 15-20 slides.
6. Submit abstract and documentation softcopy to Technical Seminar Coordinator in pdf format.

Documents and PPT should be in zip file With file name in Roll number

Ex: 208R1A0501.zip

GUIDELINES FOR SELECTION OF TOPIC FOR TECHNICAL SEMINAR

1. Students have to meet their respective allotted **Faculty members (Guides)** before selecting domains on their interested research areas or vice versa. (Domains like AI/ML/DL/NLP etc...)
2. The students have to choose the **Research Papers** which is published in **IEEE, Springer, and Scopus indexed Journals only (Published Year-2021 onwards till 2023)** under guidance of your allotted Guides.
3. The Selected Paper which can be converted into **PPT Presentation slides** and should be presented in front of Panel members at the Final Viva which carries **100 Marks**.
4. The **PPT Presentation Slides** must contain below **Contents** as
 - a) Abstract
 - b) Introduction
 - c) CaseStudy(Literature Survey)
 - d) Problem analysis
 - e) Proposed System
 - f) Methodology Used (System Architecture)
 - g) Result Analysis
 - h) Conclusion
 - i) References

5. The Research Paper for Technical Seminar Topic must be finalized on given time. Late Submissions won't be considered and entrained in any circumstances.
6. The Students are informed to check the all the contents in PPT Slides (Minimum 10 slides, Maximum depends on your Guide Suggestions) before submitting to Guide signature and final Presentation. (Sample Soft Copy of PPT will be shared later in groups)
7. The Presentation Slides, Hardcopy of Final Document (Report) need to be in the given mentioned formats before submission.
8. All the Hardcopy of Final Report will be get verified by your Concerned Class Seminar Faculty before submitting.

TECHNICAL SEMINAR GUIDE ALLOTMENT FORMAT

IVB.TECHA.Y.2024-25			
<u>TECHNICAL SEMINAR GUIDELIST</u>			
Branch:CSE			
SI No	RollNo	Name	GUIDENAME
1			
2			
3			
4			
5			

TECHNICALSEMINAR COORDINATOR

HOD

EVALUATION SHEET FORMAT FOR TECHNICAL SEMINAR

S I · N o	R o l l N o	Stu dent Na me	Inte rnal Gui de	TIT LE	a. Sele ction of Topi c(10)	b. Litera ture Surve y(10)	c. Techni cal Depth & Comple xity(10)	d. Organi zation & Structu re(10)	e. Clarity & Effective ness of Presenta tion(20)	f. Use of Visua l Aids (Slide s, Diagr ams, Chart s, etc.)(10)	g. Abili ty to Handle Questio ns(10)	h. Practica l & Industri al Relevan ce(10)	i. Ethical, Environm ental & Societal Considera tions(10)	To tal (1 00)

Instructions to class wise Seminar in charge :

Preparation of Seminar PowerPoint Presentation and Report:

- Title Slide with Name, Roll No., Batch No., etc.
- Introduction
- Contents should be neat and clear with proper diagrams & pictures wherever necessary.
- Video clips / Flash animations may be used.
- Applications, Advantages, Disadvantages, Comparisons, etc.
- Conclusion & References

The PowerPoint Presentation should contain at least the following slides :

- In your slide presentation use good amounts of block diagrams, drawings, and photographs if appropriate.
- Use large font sizes and keep your text brief.
- Use graphs and plots in place of equations wherever possible. People get more out of looking at a plot of an equation rather than the symbols during a fast-paced oral presentation.

Presentation of The Seminar:

- a. Group students are normally allowed to present particular seminar class. The allotted time for a student would be span of 25 minutes, which can be utilized as follows:
 - i. 15 minutes for actual presentation
 - ii. 10 minutes for discussion
- b. The first 10 minutes of every Seminar Class will be used for setting up the Slides and Audio System and arranging the Seminar Hall.
- c. It will be the responsibility of the Seminar batch for that day to make sure all arrangements are made at the Seminar Hall in time.
- d. During presentation student is not expected to read and refer any written content continuously but use only for reference.

Discussion and Participation:

1. At the end of the presentation of each paper discussion will be held between the audience and the speaker for a period of 10 minutes.

Music is a great communication and language can never be a barrier.-A P J Abdul Kalam
2. Only Healthy and useful discussions are expected and will alone be entertained. Students may ask questions and speaker can respond to these questions.
3. Also, staff member will pick up names of 5 or 6 students at random who will have to ask questions on the topic.
4. Sometimes they will also be asked to either comment on the topic or give an abstract of the same.
5. Credit for the participation will be awarded to the students accordingly.

Schedule Report of Student Seminars

Year : Semester : Section:

Batch No.	S.No	Name of the student	Roll No.	Seminar Topic	Scheduled Date	Performance Date	Organizer	Remarks
B1								
B2								
B3								

Student Seminar Evaluation Format

Year/Sem: Section: Date:

Roll. No	Presentation Time	Organization of talk (max: 5M)	Preparation of PPT/Making of PPT (max:4M)	Knowledge on selected topic (max:5M)	Response to Questions (max:5M)	Dress code (max:1M)	Overall grading (max:20M)	Remarks

Grades: Excellent: 18-20 marks, Good 15-17, Average: 12-14 marks, Poor below 12 marks

Note: The student with poor grade has to give seminar once again.

Seminars Time Table w.e.f :

Time→ Day↓	09:10 - 10:10	10:10 - 11:00	11:00 - 11:50	11:50 - 12:40	12:40- 01:20	01:20- 02:20	02:20 - 03:10	03:10- 04:00
Monday					L U N C H			
Tuesday							Library/Sports/Seminars	
Wednesday								
Thursday								
Friday								
Saturday								

Name of the Topic	No. Of Classes	Faculty Name

16.GUEST LECTURES

Guide Lines to Guest/Expert Lectures:

1. Collect the subject expert details with address & contact numbers from faculty of each subject/other sources, sem/year wise.
2. Based on the students difficulty towards the subject and priority of the subject importance, finalize the subjects sem/year wise for the guest lecturers with the acceptance of HOD.
3. Plan of GLs for sem/year wise along with budget (tentative).
4. Should maintain the list of formats like GL invitation (soft copy & Hard copy), Consent / Acceptance letter, GL profile (in presented format), Thanking Letter etc.
5. Prepare the Status Report on GLs
6. Status report on GLs held and planned in future (last A.Y & Present A.Y)
7. Maintain all details of the GLs along with Status Reports

Guest Lectures Coverage Report :

S. No.	Topic	Date Conducted	Duration	Class	Speaker	Remarks	Signature

17. FACULTY LEVEL APPRAISALS AND FACULTY IMPROVEMENT PROGRAMS /FLIP

OBJECTIVE:

To improve the level of faculty, he/she has to fulfill the targets given prior to the start of the academic year.

TARGETS:

1. HIGHER QUALIFICATION:

- (i) Professor(s) & Assistant Professor(s) must have Ph.D Degree in their relevant Branch.

2. WORKSHOPS:

- (a) Attended: Each faculty has to attend at least one workshop per semester.
- (b) Organized: Each faculty (Associate Professor/Professor) has to organize one workshop per academic year.

3. GUIDING UG/PG/Ph.D:

- (a) Each faculty should guide at least three UG students per year.
- (b) Each faculty (Associate Professor/Professor) should guide at least one PG students per year.
- (c) Associate Professor(s) and Professor (s) should guide at least one Ph.D Scholar

4. PUBLISHING PAPERS:

- (i) Each faculty should publish at least one paper per year in reputed National/International journals with good impact factor.
- (ii) Each faculty (Associate Professor/Professor) should compulsory publish at least two paper per year in reputed National/International journals with good impact factor.

5. CONFERENCES:

(i) All Assistant Professor(s) should attend at least one National/International conference per year and present their paper per year.

(ii) All faculty (Associate Professor/Professor) should compulsory attend at least two National/International conference per year and present their paper in that conference.

6. REVIEWERS OR EDITORS:

Each faculty (Associate Professor/Professor) should act as a reviewer/editor for a National/International journal/Conference.

7. CERTIFICATION COURSES:

Each faculty should undergo the valid certification course in their core branch during their summer vacation.

8. BOOKS:

To improve the teaching learning process, a good course file has to be maintained by each faculty. A good course file can be transformed to a good text book if it satisfies *plagiarism* level standard.

9. INTERACTION WITH OTHER INSTITUTIONS (IOI):

Faculties can interact with other institution as an expert for (Guest lectures, webinars, external examiners, paper presentation judges to other colleges. It is desirable to each faculty to target the IOI.

10. AWARDS/PATENTS:

Identifies talented teachers for promoting their professional growth by evaluating them to devote maximum time in research and study with their teaching responsibility, to produce patents and awards

11. CONSULTANCY:

(i) The state of scientific and technological developments and advancements in any Nation can be judged by quality and extent of research activity in R & D centers and academic Institutions in the Nation.

(ii) The consultancy cell of the college will procure number of equipments/instruments software's required for consultancy work in various field of Engineering. Its aim is to bridge the gap between industry and institute and provide the necessary technical support to industries to solve their problems.

(iii) So, it is necessary for the faculty to involve in the research activities of consultancy work. So that consultancy cell will continue to grow and become a major consultancy centres

12.AICTE FUNDED PROGRAMS:

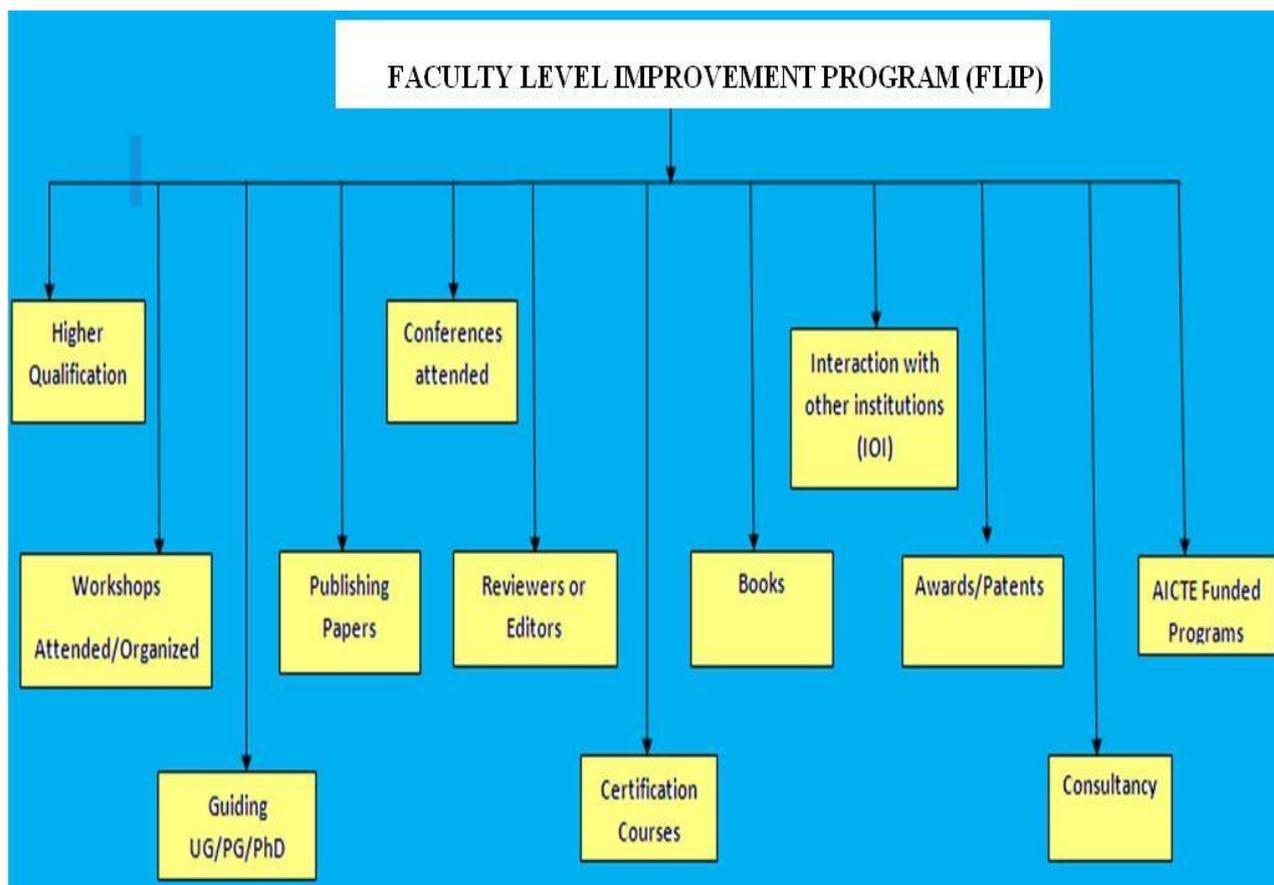
FACULTY DEVELOPMENT PROGRAM (FDP):

The FDPs provide inputs on process and practice of Personal development and entrepreneurship development, communication and inter-personal skills, creativity, problem solving, achievement motivation training, inputs on resource and knowledge industries. The training methodology includes case studies, group discussion, games and simulation exercise, field visits and classroom lectures.

RESEARCH PROMOTION SCHEME (RPS):

The objective of this scheme is to create and update the general research capabilities of the faculty members of the various technical institutes.

RPS is aimed to create research ambience in the institutes by promoting research in Engineering sciences and innovations in established and newer technologies and to generate Masters & Doctrinal degree candidates to augment the supply of research experience faculty and research personnel in the country



ANNUAL FLIP TARGET CHART A.Y 2024-25:

S.No	Name of the staff	TARGETS												
		1	2	3	4	5	6	7	8	9	10	11	12	13
1.														
2.														
3.														

Target 1	Higher Qualification
Target 2	Workshops Attended/Organized
Target 3	Guiding UG/PG/Ph.D
Target 4	Publishing Papers
Target 5	Conferences attended
Target 6	Reviewers Or Editors
Target 7	Certification course
Target 8	Books
Target 9	Interaction with other institutions (IOI)
Target 10	Awards/Patents
Target 11	Consultancy
Target 12	AICTE Funded Programs
Target 13	Others

TEACHER ASSESSMENT PROGRAM (TAP)

TAP aims at suggestions by senior and expert faculty of the department to the junior faculty when they discuss in the form of a presentation/ seminar about the 8th unit of the subject being handled.

This TAP will be conducted by the coordinator in the department in the presence of the HOD and the status will be collected in the following format,

S.No	Name of the staff	Name of the Subject	Presentation Date	Signature of staff	Signature of coordinator

18. WORKSHOPS/SHORT TERM/ADJUNT COURSES/WEBINARS :

WORKSHOPS

- The basic objective of Organizing Workshops/Events is to bring together academicians and experts from different Places to exchange knowledge and ideas. This will provide an in-depth analysis of subjects and update the knowledge of the participants from academic/research institutions.
- The department is regularly organizing Workshops, Eminent persons from Industry, Academic fields are the resource persons in different events, besides giving an opportunity to the students to excel in the field of Computer Science Engineering.
- Activities organized in collaboration with recognized academic associations/academic bodies, academic/professional institutions, associations of business/industry, voluntary organizations will be encouraged.
- For State/National level activities, the participants may be provided free board and lodging by the host institutions, wherever it is possible. Participants may be charged registration fees. Traveling allowances for outstation participants may be limited as per College rules where the activity is being organized

WORKSHOPS CONDUCTED IN ACADEMIC YEAR :

s.no	Name of the Event	Guest Name with Phone Number	Designation & address	Targated/STUDENTS	HighLights of Event	Date	Event Coordinators
1.							

ADJUNCT COURSES :

The department invites eminent experts from industries or organizations for teaching in our premises on regular basis as Visiting/Adjunct/Emeritus Faculty. This institute is having in well planned way to call experts from reputed organizations/industries. We take advantage of college –related initiatives and professional development opportunities to give their services to the academia. We consistently enhance the student’s skills and incorporate the effective teaching methodologies which are currently need for the industry. In the same, they also involved in peer collaboration, differentiated instruction, and traditional lecture to effectively meet course objectives.

We create a positive learning environment among the students by inviting them to participate and engage in classroom activities, which can consistently enhance the learning process of our students too. We bring out special expertise to the students and encourages staff to plan for more activities and innovative methods in order to create awareness and increase skills among the students

We are be calling the Adjunct Faculty from the various Industry/Organizations to share their knowledge and express their views in detail for a particular subject in which they are expert. They will be called in each Semester to teach for approximately 25hrs.

Following is the list of conducted of the above said events in the Department of Computer Science & Engineering (CSE).

Adjunct Courses Report:

SNO	CONDUCTED DATE	DURATION	TOPIC COVERED	TARGETED STUDENTS

19. CERTIFICATE COURSE/ORIENTATION

SNO	Nature of activity	Name of the Organization/Institution	Name(s) of participating Faculty	Details of Activity	Estimated cost in INR (Enclose Budget Details)	Remarks

20.RESEARCH AND DEVELOPMENT (R & D)

An Exclusive R & D cell in the name of MEDHA has been established & the following guidelines and activities are defined.

R&D Guidelines:

1. Every faculty has to work on publishing research papers at least one at National/International conferences or journals.
2. The faculty members would be appropriated points for his research work.
3. The ODs will be sanctioned for attending or presenting paper in conferences or workshops.
4. Lead projects are to be carried out to the completion.
5. Encouraging the students for doing innovative projects. Based on the project the management has to provide funding to it. Some of the activities under R&D Cell (MEDHA) are as follows:

1. Departmental Associations
2. Professional Body memberships and affiliations
3. Internal faculty expert lectures
4. Guest lectures by Industry experts or Academic Pears
5. Industry Institution Interaction (Exchange of Knowledge, Technology, and other MOU's)
6. R&D Funded/unfunded Programs
7. Consultancy

R & D: Activities : Some of the R & D activities are mentioned below for reference

1. Departmental associations
2. Professional body memberships and affiliations
3. Internal faculty expert lectures
4. Expert lectures at other institutes/organizations by faculty
5. Guest lectures by Industry experts or Academic Pears
6. Staff development programs
7. Skill development programs

8. Industry Institution Interaction (Exchange of Knowledge, Technology, and other MoUs)
9. Hobby projects
10. Mini projects
11. Main projects
12. R&D Funded/unfunded Programmes
13. Consultancy
14. R&D incubation center's development
15. LEAD

21. PROJECTS

Guide Lines For Major Projects:

1. Preamble

These guidelines are intended to give both students and supervisor at CMREC a set of procedures and expectations that will make the project work evaluation process easier, more predictable, and more successful. These guidelines should be interpreted as the minimum requirements of the degree awarded by JNTUH, Hyderabad. The project work committee assigned for various programs offered by CMREC may add requirements or guidelines as deemed fit.

2. Objective:

The main objective of the Project Work is for the students to learn and experience all the major phases and processes involved in solving “real life engineering problems”.

3. Expected Outcome:

The major outcome of the B. Tech project must be well-trained students. Morespecifically students must have acquired:

- System integration skills
- Documentation skills
- Project management skills
- Problem solving skills
- Modern Tools Usage Skills

4. Project Work

The undergraduate students of the department have to do their major project during IV B.Tech I-Semester (Major Project stage I) and II Semester (Major Project stage II). The major project work can be executed either in the college or in the industry with an internship; however, students are encouraged to execute their major project work in the department project laboratory. In CMREC, utmost care is taken in the allocation, implementation, and documentation of major project work.

5. General Suggestions And Expectations

The Project Work is by far the most important single piece of work in the undergraduate program. It provides the opportunity for a student to demonstrate independence and originality, to plan and organize a large Project over a long period and to put into practice some of the techniques that have been taught throughout the Program. The students are advised to *choose a Project that involves a combination of sound background research, a solid implementation, or piece of theoretical work, and a thorough evaluation of the Project's output in both absolute and relative terms*. Interdisciplinary Project proposals and innovative Projects are encouraged and more appreciable.

It is good to try to think of the Project as a deliverable at reviews rather than an effort to deliver a fully-functioning 'product'. The *very best Projects invariably covers some new ground, e.g. by developing complex application which does not already exist, or by enhancing some existing application or method to improve its functionality, performance etc.*

A straightforward implementation Project is acceptable, but a student must appreciate that it is unlikely to gain high marks, regardless of how well it is done and its usage. Likewise, Projects which are predominantly survey reports, unless they are backed up with experimentation, implementation, or theoretical analysis, e.g. for performing an objective comparison of surveyed methods, techniques etc. pure survey reports with no supporting implementation or theory, are not acceptable.

- Undergraduate students are to decide on the Project Work with their proposal and Project Supervisor during the month of *July/August* with a Synopsis consisting of about **three chapters**

Introduction, Literature Review and *Methodology* should be presented.

- In Case of re-reviews, any number of re-reviews can happen depending on the discretion of the committee and it should happen within the prescribed time.
- If the student fails to attend, the Supervisor refuses to endorse the student's work. The committee can invite Project Review Committee, Chairman who is empowered to resolve among further matters.
- If the work of the candidate is found to *be insufficient and plagiarized* the committee and PRC, Chairman will decide the further process.
- Head of the Department can initiate further steps to ensure the smooth implementation as deems appropriate guidelines.

6. Choosing The Right Project:

The idea for student's Project may be a proposal from a faculty member or student's own, or perhaps a combination of the two.

The student is advised to Present the proposal to the PRC & get Approval.

The PRC may suggest the student to choose the supervisor based on the specialization

The Projects offered by faculty member may vary substantially in breadth, depth and degree of difficulty. The most important thing is to shortlist a set of Projects that are right for student. Some students are better suited to well-defined and relatively safe Projects that provide scope for demonstrating proficiency with a low risk of failure. Other students are better advised to tackle harder, riskier Projects that require a high degree of original input and/or technical problem solving.

The potential Supervisors will be happy to offer advice on the suitability of a Project, given student's individual background, strengths and ambitions. It is important to balance ambition and realism when making a choice. For Choosing their topics the students are advised to search from websites like (IEEE, ACM, Elsevier, Springer, etc...)

All B. Tech major projects are to be done in the Institute. For industry specified projects, students will be permitted to spend 1-2 weeks in the industry on recommendation by the supervisor. The number of students per batch should be limited to a maximum of 4.

7. Identification of Capstone/Major Project and Allocation of Guides(05):

- The Major Project Coordinator collects area of specialization from the Faculty members in the department.
- The Major Project coordinator will provide the list of faculty members and their area of specialization to the students at least one month before the commencement of Major Project.
- The Head of the Department/project coordinator allocates laboratory resources for in-house projects and allocates the number of days per week for working on the projects in the industry (if the project is being carried out in industry).
- Students are divided into groups comprising of 3-4 students, Students are directed to submit the abstract of the project proposal to the project coordinator.
- Those students who have submitted industry oriented project proposals have to present a introductory seminar to the project review committee. Based on the quality of the project (quality can be identifies through project identification process), project review committee may recommend the group to do the project in industry.
- The project coordinator evaluates it and if the topic is relevant, forwards it to the Project Review Committee(PRC). Otherwise, the group has to come up with a new project proposal.
- The student also has to submit a time schedule according to which he is planning to complete the work.
- If the abstract is approved, Project area is identified and faculty having specialization in that particular area is assigned to the group of students.
- If the proposal is rejected the group should come up with a new proposal.
- The PRC & project coordinator lists the types of projects on the basis of Environment, Safety, Ethics, Cost and category of project i.e. whether it is application based, Product Development based or Research based projects.

8. Continuous Monitoring Process (04)

The department of CSE prepared a system to continuously monitor the student's projects. After receiving titles from the students along with reference papers, the committee will accept the abstract after peer review. After acceptance of abstract, students are allowed to do projects either internal or external. The project coordinator and internal guide (supervisor) will monitor the progress of the project continuously by letting students to give project reviews.

1. Project Review Committe
2. Assessment of the Project Work weekly

3. Major Project evaluation Procedure
4. Evaluation of reviews by departmental committee.

i. Project Review Committee (PRC)

The PRC is advised to conduct the project reviews for the students of various programs within the stipulated period and review the marks to be sent to the HOD at the month end. The PRC is also advised to make necessary arrangements required (Seminar hall availability and Dissertation or, etc...) for the smooth conduct of reviews.

The PRC consists of HOD, DEAN and two senior faculty members from the department. The committee monitors the progress of Project Work. Revising student project by PRC committee regularly and giving suggestions and modifications for the students.

ii. Assessment of the Project Work : The progress of a project is monitored by the guide on weekly basis and they have to report the updates to the respective guide every Saturday.

The major Project work is assessed weekly by the internal guide, Project Coordinator and Head of the Department.

Every week the students need to submit Major Project weekly status Report which is assessed by internal guide, Major Project coordinator and HoD.

Weekly Status of the Project

Batch No.:

Title of the Project:

Name of the Guide:

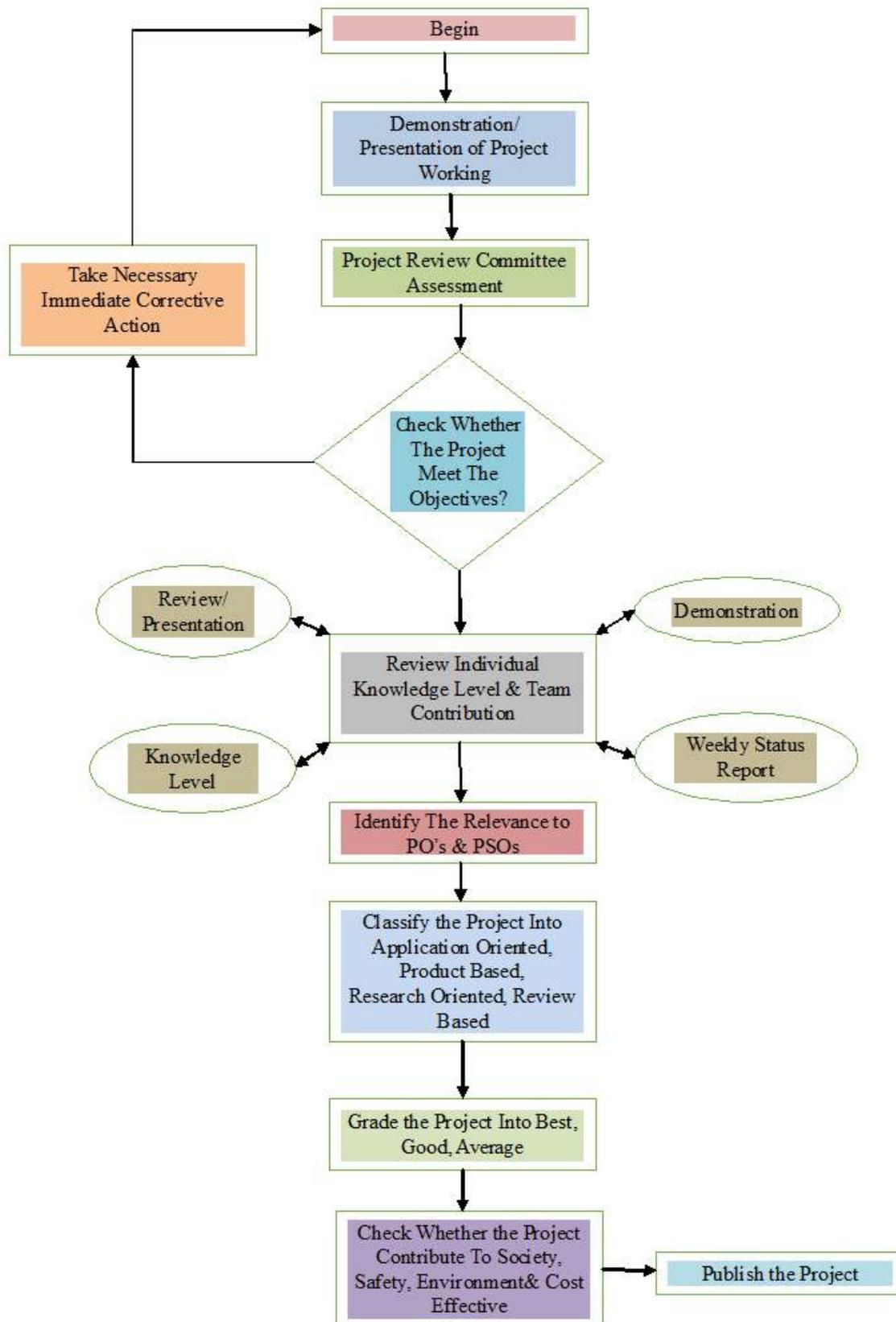
Sl. No.	Date of Interaction (s)	Name of the Student	Section	Signature of the Student	Signature of the Guide

Points Discussed:

MAJOR PROJECT COORDINATOR

HOD

iii. Major Project Evaluation Procedure:



Major Project Stage 1 evaluation:

The continuous progress is assessed through periodic review by panel (first review and second review) based on Rubrics.

Projects will be evaluated on the basis of: Working principle, implementation methodology, design process of components, performance of the system, application of projects and future scopes
Demonstration of the project work.

Viva-Voce by panel of Experts.

The Major project work stage 1 shall be evaluated for 100 marks out of which 50 marks for first internal evaluation and 50 marks for Design review evaluation. The project work shall be somewhat

innovative in nature, exploring the research bent of mind of the student. A project batch shall comprise of not more than four students

The evaluation will be done in two reviews First Review and Design review .The following is the table shown for evaluation.

S.No	Evaluation	Marks
1	First Review	50
2	Design Review	50
	Total	100

MAJOR PROJECT STAGE 1 EVALUATION FORMATS

PROJECT EVALUATION FORM: IV B.Tech II Semester

Project Title:

First Review

S. No	Roll No	Candidate Name	Supervisor
1			
2			
3			
4			

Subject Matter	Marks (50M)				
	Batch Members				
	1	2	3	4	
Abstract (5M)					
Specifies Project goals (5M)					
Literature Survey (5M)					
SRS submission (5M)					
Specifies the testing platforms and					
Project Planning (5M)					
Technical Design (5M)					
Summarises the ultimate findings of the Project(5M)					
Question and Answer (5M)					
Presentation skills (5M)					
Total (50M)					
Comments					

Internal Guide

Project Coordinator

HoD

PROJECT EVALUATION FORM

IV B.Tech II Semester

DESIGN REVIEW I

Project Title:

Candidate Details				
S. No	Roll No	Candidate Name	Supervisor	
1				
2				
3				
4				
Candidate Contribution and Performance				
Subject Matter	Marks (50M)			
	Batch Members			
	1	2	3	4
Abstract (5M)				
Literature Survey (5M)				
SRS submission (2M)				
Specifies the testing platforms and benchmark systems (5M)				
Project Planning (5M)				
Technical Design (5M)				
Summarises the ultimate findings of the				
Implementation (40 Percentage) (5M)				
Question and Answer (5M)				
Presentation skills (5M)				
Total (50M)				
Comments				

Internal Guide

Project Coordinator

HoD

Major Project Stage 2 evaluation:

The Major project work stage 2 will be conducted in IV B.Tech II Sem shall be evaluated for 100 marks out of which 30 marks for internal evaluation and 70 marks for end-semester evaluation . The project work shall be some what innovative in nature, exploring the research bent of mind of the student.

Major Project Stage 2 Internal Evaluation Marks:

Internal evaluation is done by conducting two review and average marks will be considered for Evaluation.

S.No	Evaluation	Marks
1	Design Review-II	30
2	Final Review	30
	Average	30

MAJOR PROJECT STAGE 2 EVALUATION FORMATS

PROJECT EVALUATION FORM

IV B.Tech II Semester

Project Title:

DESIGN REVIEW II

Candidate Details

S. No	Roll No	Candidate Name	Supervisor
1			
2			
3			
4			

Subject Matter	Marks (30M)				
	Batch Members				
	1	2	3	4	5
Abstract (1M)					
Architecture / System Design - (2M)					
Summaries the techniques implemented / to be implemented (2M)					
Contribution of the Candidate (5M)					
Results obtained and Summaries the ultimate findings of the Project (5M)					
Implementation (70%) (5M)					
Question and Answer (5M)					
Presentation skills (5M)					
Total (30M)					
Comments					

Internal Guide

Project Coordinator

HoD

PROJECT EVALUATION FORM

FINAL REVIEW

Project Title:

Candidate Details			
S. No	Roll No	Candidate Name	Supervisor
1			
2			
3			
4			

IV B.Tech II Semester

Candidate Contribution and Performance

Subject Matter	Marks (30M)			
	Batch Members			
	1.	2.	3.	4.
Abstract (1M)				
Architecture /System Design (1M)				
Summarises the techniques implemented (1M)				
Contribution of the Candidate (1M)				
Results obtained and Performance Evaluation (1M)				
Summarises the ultimate findings of the Project (1M)				
Implementation (100%) (5M)				
Prefinal draft of entire Project (5M)				
Draft of the paper to be published (5M)				
Question and Answer (5M)				
Presentation skills (4M)				
Total (30M)				
Comments				

Internal Guide

Project Coordinator

HoD

9. Rubrics For Grading The Project

RUBRICS	1	2	3
a.Selection of Task	Not recent and the problem definition is not so clear	Recent and the problem definition is somewhat clear	Recent and the problem definition is very much clear
b.Literature Survey	Collects minimal Information from IEEE or related journals	Collects adequate information but not much about related ones from IEEE or related journals	Collects exhaustive information from IEEE or related journals with needed background
c.Features of the Project	Minimum features with little significance and applicability	Adequate features with moderate significance and applicability	Maximum features with more significance and applicability
d.Design/Methodology	Methods, Algorithms and concepts used is not so advanced	Methods, Algorithms and concepts used is little advanced	Methods, Algorithms and concepts used is almost advanced
e.Implementation of the Project	Not very clear with look and feel of design and architecture	somewhat clear with look and feel of design and architecture	very clear with look and feel of design and architecture
f.Usage of Advanced/Business Tools	Minimal usage of tools with not sufficient knowledge about tools	Adequate usage of tools with moderate knowledge about tools	Maximum usage of tools with extensive knowledge about tools
g.Application of Projects to Industrial needs & Standards	Project with Minimal Industrial needs & standards, and not an application oriented	Project with Moderate Industrial needs & standards, with less application oriented	Project almost with Industrial needs & standards, with wide application oriented
h.Whether the Projects can be converted into Products/Services in Future	Likely but not guaranteed with the existing features	Hopefully with little updates and modifications	Definitely by little polishing of features ,technology and tools used
i.Whether the project satisfies Cost, Ethical and societal factors	Likely	Hopefully	Definitely

1. Display of project rubrics
2. Wide publicity of rubrics
3. Evaluation of performance based on project rubrics

Grading the Projects based on Rubrics:

Best Projects : 23-27Marks

Good Projects :19-22 Marks

Average Projects: Below 18 marks

10. Project Presentation / Demonstration

First Review Within 4 Weeks	Second Review Within 8 Weeks
Title Abstract Introduction Literature Survey References	<ul style="list-style-type: none"> • Title • Abstract • Introduction • Literature Survey • Methodology • Modules Split-up and Gantt Chart • Proposed System • Equations /Design and software to be used • Algorithms / Techniques used • Expected outcomes • References
Final Review Within 16 Weeks	
Title Abstract Detailed Design (if any deviation)	<ul style="list-style-type: none"> • Draft copy of a Project for publishing • Experimental Results • Performance Evaluation
Contribution of the candidate 100% of code Implementation - Demo	<ul style="list-style-type: none"> • Comparison with Existing system • Result Analysis and Conclusion • References

11. GUIDELINES FOR THE PREPARATION OF B. TECH PROJECT REPORTS

All fonts name must be Times New Roman.

1. Page size - A4; Margins - left-3.0cm, Right-2.0 cm, Top-2.5 cm, Bottom-2.5 cm,

Gutter-0

2. Project Work format must at least contain the following:

- Cover page (Front and Inside)
- Certificate Declaration
Acknowledgements
- Abstract
- Table of Content
- List of Figures
- List of Tables
- List of Abbreviation
- List of Symbols

3. Chapter 1 - Introduction

4. Chapter 2 - Literature Review & Problem Identification

5. Chapter 3 - Methodology

6. Chapter 4 – Implementation

7. Chapter 5 – Result Analysis Conclusion & Future Work

8. References

[1]. First Author, Second Author, Third Author – ‘Paper Title Name’,-
Journal/Conference Name, Publisher:

xxxx, Place:xxxx, Country: xxxx, Year:19xx, Vol. No.:xxxx, Iss. No., pp.xx to xx

9. Appendices

10. Chapter Title (e.g. **CHAPTER 1 - INTRODUCTION**) bold upper case font size 16

INTRODUCTION Chapter heading in upper case bold 12 font size:

Every chapter should have an ‘Introduction’ in the beginning and at the end a
‘Conclusion’ - Font size 12 for main text/paragraphs as given here

First Sub-Sub Heading: upper and
lower case of 12 font size
Line spacing must be
1.5

(Template for one chapter is given below)

CHAPTER 1 – INTRODUCTION

1.1 INTRODUCTION [12 bold and caps]

Every chapter should have chapter No. and Chapter headings, sections and subsections of the different chapters along with page numbers of each. It should be possible to get a complete picture of the Dissertation by looking at the contents. While, the contents cannot be as brief as listing only the chapter headings, it need not be as elaborate as to list all paragraph titles within subsections. It is preferable to include the chapter, section and subsection headings only in the contents with appropriate page numbers.

Numbering Sections, Subsections, Equations [bold and upper lower]

A word on numbering scheme used in the Dissertation is in order. It is common practice to use decimal numbering in the Dissertation. If the chapter number is 2, the section numbers will be 2.1, 2.2, 2.3 etc. The subsections in section 2.2 will be numbered as 2.2.1, 2.2.2 etc. Unless essential, it is not necessary to use numbers to lower levels than three stages. Headings of paragraphs below the subsections may be bold faced and in sentence case. Similarly, it is useful and convenient to number the figures also chapter-wise.

The figures in (say) chapter 4 will be numbered Fig.4.1, Fig 4.2 etc. This helps you in assembling the figures and putting it in proper order. Similarly, the tables are also numbered as Table 4.1 Table 4.2 etc. All figures and tables should have proper captions. Usually the figure captions are written below the figure and table captions on top of the table. All figures should have proper description by legends, title of the axes and any other information to make the figures self-explanatory.

Figures in color are not essential, but if it is essential, can be given. If used, all copies submitted should have figures in color. The same numbering scheme can be used for equations also. Only thing to be remembered is that references to the figures are made like Fig 4.2 and equations as Eqn (4.5) and tables as Table 4.2. If there are some appendices, these can be numbered as A1, A2 and A3 etc. The equations in these appendices can be numbered as (A1.1), (A2.3) etc.

a) References

It can be numbered as 1, 2, 3 etc. year wise with the latest as 1, referred to in the body of the Dissertation, say (Henk, 2013). An alternate way as mentioned in some journals is to arrange the references in the alphabetical order of the names of authors in which case the reference in

the body of the Dissertation looks like ‘as mentioned in (Adam and Eve 1946)’. However, for uniformity and brevity, the first method (like the one followed in IEEE journals) is to be used.

References to journal papers should contain the name of the author(s), title of the paper, name of the journal, volume number, issue number, particular pages (pp) and year of publication. If there are more than three authors, it is enough to mention the name of the first author followed by .et.al (meaning and others)

i) Bibliography

This contains materials that were useful for the preparation of the Dissertation in a general way and is not directly referred to in the Dissertation. IT is not essential, but will be of immense help for a student who tries to read and understand the contents of the Dissertation.

ii) Appendices

If there is material that if included in the body of the Dissertation would break up the flow of reading or bore the reader unbearably, it is better to include it as an appendix. Some items which are typically included in appendices are: major derivations or theoretical developments, important and original computer programs, data files that are too large to be represented simply in the results chapters, pictures or diagrams of results which are not important enough to keep in the main text etc

13. FORMAT FOR PRELIMINARY PAGES OF B.TECH PROJECT REPORTS

PROJECT TITLE

A

*Project Submitted to CMREC, Hyderabad In Partial Fulfillment of the requirements
for the Award of Degree of*

**BACHELOR OF TECHNOLOGY IN
COMPUTER SCIENCE AND ENGINEERING**

Submitted

By

Student name (HT.NO)

Student name (HT.NO)



Department of Computer Science & Engineering

CMRENGINEERINGCOLLEGE

UGCAUTONOMOUS

(Approved by AICTE, NEW DELHI, Affiliated to JNTU, Hyderabad Kandlakoya, Medchal
Road,R.R.Dist.Hyderabad-501401)

2024-25

A Project Report

On

PROJECT TITLE

Submitted *CMREC, Hyderabad*

In Partial Fulfillment of the requirements for the Award of Degree of

**BACHELOR OF TECHNOLOGY IN
COMPUTER SCIENCE AND ENGINEERING**

Submitted

By

Student name (HT.NO)

Student name (HT.NO)

Under the Esteemed guidance of

Internal guide name

Associate Professor ,Department of
CSE,CMREC,Hyderabad



Department of Computer Science & Engineering

CMRENGINEERINGCOLLEGE

UGCAUTONOMOUS

(Approved by AICTE, NEW DELHI, Affiliated to JNTU, Hyderabad Kandlakoya, Medchal
Road,R.R.Dist.Hyderabad-501401

CMRENGINEERINGCOLLEGE UGCAUTONOMOUS

(Accredited by NBA, Approved by AICTE NEW DELHI, Affiliated to JNTU,

Hyderabad)Kandlakoya,Medchal Road, Hyderabad-501 401



Department of Computer Science & Engineering

CERTIFICATE

This is to certify that the project entitled “**PROJECTTITLE**” is a bonafide work carried out by

STUDENTNAME (HT.NO)

STUDENTNAME (HT.NO)

In partial fulfillment of the requirement for the award of the degree of **BACHELOR OF TECHNOLOGY**

In **COMPUTER SCIENCE AND ENGINEERING** from CMR Engineering College ,affiliated to JNTU, Hyderabad, under our guidance and supervision.

The results presented in this Major project Stage2 have been verified and are found to best satisfactory.

The results embodied in this Major project Stage2 have not been submitted to any other university for the award of any other degree or diploma.

Internal Guide

Guide Name
Designation
CSE Department
CMREC

Major Project Coordinator

Coordinator Name
Designation
CSE Department
CMREC

Head of the Department

HOD Name
Designation
CSE Department
CMREC

DECLARATION

This is to certify that the work reported in the present Major project stage2entitled
“**PROJECT TITLE**” is a record of bona fide work done by us in the Department of Computer Science and Engineering, CMR Engineering College, JNTU Hyderabad. The reports are based on the project work done entirely by us and not copied from any other source. We submit our project for further development by any interested students who share similar interests to improve the project in the future.

The results embodied in this Major project stage 2 report have not been submitted to any other University or Institute for theaward of any degree or diploma to the best of our knowledge and belief.

STUDENT NAME (HT.NO)

STUDENT NAME (HT.NO)

ACKNOWLEDGMENT

We are extremely grateful to Dr. A. Srinivasula Reddy, Principal and Dr. Sheo Kumar, HOD, Department of CSE,

CMR Engineering College for their constant support.

We are extremely thankful to Guide Name, Internal Guide, Department of CSE, for his constant guidance, encouragement and moral support throughout the project.

We will be failing in duty if we do not acknowledge with grateful thanks to the authors of the references and other literatures referred in this Project.

We thank Coordinator Name, CSE Department, Major Project Coordinator for her constant support in carrying out the project activities and reviews.

We express my thanks to all staff members and friends for all the help and co-ordination extended in bringing out this project successfully in time.

Finally, we are very much thankful to our parents who guided me for every step.

STUDENT NAME (HT.NO)

STUDENT NAME (HT.NO)

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22. TRAINING & PLACEMENT CELL

The Training & Placement Cell aims to guide the students to choose the right career, provide knowledge, aptitude and skills that suit the global manpower requirements. The cell prepares the students for the process of recruitment and creates awareness among companies about the potential recruitment opportunities. The prospective recruiters are provided with infrastructure support for scheduling interviews, hosting seminars, group discussions and written tests. The cell strongly believes that the first step of an entrepreneurship is employability which includes skill, attitude and practice. Hence, the cell imparts continuous training in learning-skills, behavioral-skills, life-skills in addition to aptitude and communication skills. The cell functions in this direction by providing training in four phases i.e., primary, secondary, tertiary, advanced involving all the levels of engineering students step by step.

Constitution

S. No.	Category	Status
1	Head of the Institution	Chairman
2	Dean Academics	Member
3	All HODs	Member
4	Two faculty members from each department nominated by respective HOD	Member
5	Training and Placement officer	Member Secretary

Frequency of Meeting: The committee shall meet at least twice a month and as the case may be. The member secretary in consultation with the chairman prepares and circulates the agenda of the meeting well in advance. The member secretary maintains the minutes of the meeting and action taken report.

Quorum: Two-third members constitute the quorum. If there is no quorum for the meeting convened up to half an hour, then the meeting shall stand adjourned to the next convenient day.

Term: The tenure of the members shall be three years

Objectives: The objectives of the Cell are to

1. Facilitate the campus recruitment with necessary industry interaction, MOUs, training and placement to the satisfaction of the stakeholders.
2. Arrange for prior interaction with placement organizations for acquaintance regarding recruitment and selection procedure.
3. Counsel/mentor/address the students needs for career development/clarify their academic and career interests, and their short/long term goals through individual counseling and group sessions.
4. Arrange for the maintenance of databases with details of students, companies, placement offers, compensation packages, etc.
5. Organize periodic meetings with the Human Resources Department of companies and TPOs to promote recruitments.

Functions: The Roles and Responsibilities are to

A. Career Guidance:

1. Establish a Center for Career Guidance & Counseling to organize professional counseling.
2. Create awareness on career advancement/professional/technical/business communication skills
3. Display articles regarding competitive & industrial career opportunities on all notice boards.
4. Involve alumni and stakeholders to provide job opportunities in Govt /public /private sectors.
5. Arrange for motivational talks/workshops with industry experts and their expectations.
6. Create awareness about online assessments by providing central computer facilities.
7. Conduct tests like psychometric, aptitude, reasoning, coding challenges, mock-interviews, etc.

8. Formulate placement teams with faculty coordinators for guiding respective students.
9. Provide state-of-art facilities in auditorium/seminar-halls/interview rooms for career guidance.
10. Conduct competency mapping programs on higher education/employment & entrepreneurship.

B. Training & Development

1. Design the curriculum with industry expectations and train the students accordingly.
2. Provide communication skills - RAWLS /personality-development/GD/JAM at entry level.
3. Train the students on aptitude, reasoning, verbal skills, resume preparation, email writing, interview skills and conduct practice/mock sessions for the same at secondary level.
4. Provide corporate training programs on group discussions, general knowledge, current affairs, technical and core aspects, etc at tertiary level and gear-up for recruitment process.
5. Provide need based training according to industry requirement through online tests, technical and HR interviews at advanced level.
6. Acquaint real-world work culture exposure by organizing industrial visits every year.
7. Focus on the importance of foreign languages.
8. Conduct training sessions in value added courses to bridge industry-institute gaps.
9. Involve alumni to conduct competency mapping and career advancement programmes.

C. Placement

1. Maintain databases in prescribed format of recruiting/ranking/affiliating/ accrediting agencies and liaison with them.
2. Collect a list of eligible students for jobs/projects/higher-studies/entrepreneurs

from HODs/COE and guide them in their respective areas.

3. Liaison with industries for internships, projects, seminars, visits and recruitment.
4. Maintain active MOUs with industries universities /professional-associations /R&D agencies.
5. Prepare monthly, quarterly, half yearly and annual report on number of training programs/ workshops/seminars/guest-lectures conducted, companies visited, list of selected students, alumni contacted, number of leads generated and submit to the Principal and upload in website and maintain a record of the same for AICTE/NBA/NAAC/JNTUH, etc.
6. Publish the achievements of training /placement / alumni /entrepreneurship in institute newsletter, print and electronic media.

D. Higher Education

1. Provide information at all conspicuous places on higher studies in India/abroad universities.
2. Facilitate on campus special training for exams like GRE, TOEFL, IELTS, GATE, CAT, etc.
3. Provide platform to interact foreign university officials in their pre-promotion programmes, spot-admission cum scholarships
4. Create awareness programmes with various funding agencies regarding opportunities abroad.
5. Provide awareness programmes on premier national institutions/universities offered courses and funding opportunities.

E. Alumni

1. Establish, involve, maintain and interact with the alumni association for overall development.
2. Create awareness among the students about the importance of alumni association.
3. Coordinate the filling up of the alumni performed by the outgoing students.
4. Maintain regular alumni interaction and database to connect & reconnect.
5. Strengthen alumni relations through social media and seek their advice by active

participation.

6. Conduct guest lectures on employment opportunities through alumni interaction.
7. Extend support for the needy/deserving students of the institute in association with alumni.
8. Share intelligence and information on various aspects between alumni and institute.
9. Seek alumni assistance in student's project/internship/placement opportunities.
10. Involve alumni in curriculum-design /education /training /R&D /consultancy /extension services/ financial support.

F. Interaction between industry and institute.

1. Arrange guest-lecturers /workshops /training /R&D /consultancy /projects /internships /visits by signing relevant LOUs/MOUs with various industries.
2. Involve industry experts in curriculum-design and development.
3. Organize programs on innovation, incubation, IPR and entrepreneurship development.
4. Counsel and mentor by industry experts.
5. Conduct mock-interviews and GDs with the help of professional/industry associations.

G. Facilities for Recruiters

1. Provide seminar halls to conduct pre-placement talks and computer labs for online tests.
2. Facilitate GD rooms and personal interview chambers.
3. Arrange student volunteers and logistics for the campus/pool drives.
4. Support with stationery and photocopying facilities.
5. Ensure proper hospitality for recruitment teams.

TRAINING MONITORING SHEET:

IT- Training Monitoring Sheet

S.no.	Date	Day	Name of the Trainer	Start Time	End Time	Total Time Per Class	Topic Covered	Attendance of the Students	Signature of The Trainer	Signature Of The Coordinator
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
			Total No. Of Hours Conducted In This Month							

23. SOFT SKILL AND PERSONALITY DEVELOPMENT(BEC/SPOKENTUTORIAL /ROLE /ROPE/SCOPE/PBL/HOBBY PROJECT/ATL)

The combination of technical expertise and soft skills is important for career success. We have a well planned communication and personality development program to update our students for the highly competitive future .The college is offering various trainings to the students on personality development and career development skills, etc., The College provides the infrastructural facilities to conduct group discussions, tests and interviews besides catering to other logistics. The college arranges career guidance programs (CGP), soft skills programs, and personality development programs through faculty and external experts. Such programs are arranged for the students to develop their communication skills and to build their self-confidence. Before the campus interviews, mock interviews are conducted to enhance the skills of the students and to motivate them in order to enable them to face the interviews successfully. Critical soft skills, such as interpersonal behavior, communication, report writing and presentation skills, that augment technical skills are important in developing a successful career.

The following are common programmes that students would benefit from.

- Oral and Written Communication Skills
- Time Management
- Team Building
- Motivation
- Presentation Techniques
- Preparation for Group Discussions
- Preparation for Interviews

1 .Event Planner

S.NO	DATE	EVENTS OF TYPE	NAME OF THE EVENT	RESOU RCE PERSON	DESIGNA TION & ADDRESS	TARGETED STAFF/STUD ENTS	No.OF PARTICIP ANTS	HIGHLIG HTS OF EVENT/M OTO

BUSINESS ENGLISH CERTIFICATE COURSE(BEC)

The Department of English has inaugurated BEC, the Business English Certificate Course in our institution from the academic year 2013-2014. The Business English Certificate (BEC) course which is an internationally recognized qualification builds confidence in students to use English in a work environment combined with the ability to work successfully in a cross- cultural environment. It opens doors to higher education, improves employment opportunities and because they are globally recognized, can increase learner's choices for study or work. Students will be trained by our faculty members from the department of English who have got specially trained by the British Council at Chennai.

Since inception of the college, in the year 2010, the Department of English has been effectively functional. The Department stands focused to its Ideals in imparting knowledge and preparing the students towards achieving academic excellence through the acquisition of core competence in language skills in relation to its application & relevance for engineering professionals, and also in giving students practice for developing the four basic skills: Listening, Speaking, Reading and Writing.

OUT-STANDING ACHIVEMENTS OF BEC

The CMR Engineering College prepares the students to meet the challenges of a knowledge- based society, and carve out opportunities for students to compete globally. The institution is known all over the nation to provide of dynamic and trained engineer's to the

industry.Business

English certificate (BEC) training program opens doors to students for higher education.

HOBBY PROJETS

It is necessary that computer science students will be well prepared for entering the workforce. Future employers ask for real-world experience of their potential employees. In addition to factual knowledge and skills in the traditional curriculum, soft skills such as project management, communication and social competencies become more and more important. In computer science education, acquiring necessary social skills to elicit and define requirements is underdeveloped. We introduce a student- centered , Hobby project-based learning approach with a student team project, which tries to support learning processes. This approach allows students to explore methods for project management as well as requirements analysis and participatory design with real end-users. The results of the hobby project according to student evaluation are presented and conclusions about the value added of student team projects for computer science education are drawn

PROJECT BASED LEARNING

Project-based learning (PBL) or project-based instruction is a student-centred teaching method that encourages learning through engaging, real-world, curriculum-related questions or challenges.

The goal of Project-based learning (PBL) is to get students to engage with a question or challenge that requires concentration and nuanced problem-solving skills.

This question or challenge must:

- Be open-ended
- Encourage students to apply skills and knowledge they've developed in your classes
- Allow students to take their own approaches to develop an answer and deliver a product

As you can see, project-based learning doesn't conform to rote approaches or teacher-led instruction. Driven by critical thinking, it's often interdisciplinary and encourages students to take a rewarding-yet-challenging road to skill-building and knowledge acquisition through a nuanced learning process.

Why is project-based learning important?

Project-based learning boosts classroom engagement *and* has a direct impact on how well students are prepared to enter the workforce once they graduate.

A growing focus on 21st century skills and critical thinking means project-based learning is gaining steam in education. In addition, PBL can help educators:

- Teach students personal responsibility and critical time management skills
- Design assignments that hit higher-order stages in Bloom's taxonomy like analysis, synthesis and evaluation
- Provide multiple ways of assessing students at different stages of the project, whether through a portfolio, annotated bibliography, outline, draft product or finished project

Project-based learning helps teach students:

- Creative problem-solving skills
- The importance of collaboration
- How to find the right tools for the job
- How to build independent learning and project management skills
- How to use relevant technology to find resources, communicate and produce a final product

Project-based learning is important because it helps students approach meaningful learning opportunities with curiosity, while also giving them real-world skills they'll use for the rest of their lives.

Key characteristics of Project-Based Learning

project-based learning isn't just group work or a randomly assigned project. Let's take a look at some of the key characteristics to help you build your own project-based learning assignment:

1. Project-based learning presents an open-ended, appropriately complex question.

Students should have to do deep research, draw on existing knowledge and come up with a solution in the form of a final project -whether that's a presentation, proposal, essay or other product. Students should have a choice in what they explore, and the questions they answer should be genuinely challenging with real-world applications.

2. Project-based learning relates to knowledge acquired through classroom lessons.

Not only should project-based learning build on your classroom lessons, but it should give students the opportunity to put them to use in a real-world setting. Project-based learning encourages students to dive deeper into the subject matter and builds on content knowledge.

Ultimately, this content knowledge should have real-world applications that students can focus on during the project.

3. Project-based learning requires students to find their own solutions to a given problem or question.

Just because the inspiration for project-based learning assignments comes from your lectures, doesn't mean it should stay there. Effective PBL comes from requiring students to find their own solutions to a given problem - not just plugging in a formula to find the answer.

In practice, this looks like a real-world project with extended inquiry. It should be a multi-stage process with, if necessary, multiple deliverables at different stages to keep students on track.

4. Project-based learning gives students a choice in how they learn.

Students learn best when they're studying something that captures their imagination and interest. Regardless of the end product, students should have as much autonomy as possible in what they make and how. They should learn how to communicate ideas in a group and on their own, and really bring their passion for the project to the forefront.

5. Project-based learning follows a clear, well-defined set of assessment criteria.

The best way to keep project-based learning on track and effective is to let students know what's expected of them. At the beginning of the project, give students a rubric and handouts outlining:

- How the project will be graded
- All the products they'll be required to hand in
- How they should work independently or in a group

When students know what's expected of them, they're more likely to succeed.

ADVANCED TECHNOLOGY LABORATORY(ATL)

Modern Teaching Learning Process

Introduction:

Engineering students of different branches learn many theory subjects and perform labs as per CMREC curriculum. CMREC is introducing ATL & ASL a modern teaching learning process for the second year and first year B.Tech students.

Purpose:

In this innovative platform, faculty will deal mainly with the applications of Mathematics which is learnt theoretically till now. Through this ASL the student will get an idea of applications and implementation of principles of Mathematics/ Physics/ Chemistry in their core subjects.

Under ATL second year students will learn an advanced technology which is being used by them but not taught as part of the syllabus like Scilab, PSpice, etc.

Outcome:

Through this program students can enhance their knowledge and their skills which may create interest in Research and Development.

ATL TIME TABLE:

DAY/ TIME	9.10- 10.10	10.10- 11.00	11.00-11.50	11.50-12.40	12.40- 01.20	01.20- 02.10	2.10-3.00	3.00-3.50
MON					LUNCH BREAK			
TUE								
WED								
THU								
FRI								
SAT								

24.NSS/SPORTS EVENTS

NSS Guidelines:

National Service Scheme (NSS) The scheme was launched in Gandhiji's Centenary year, 1969. Aimed at developing student's personality through community service, NSS is a voluntary association of young people in Colleges, Universities. The cardinal principle of the NSS programme is that it is organized by the students themselves, and both students and teachers through their combined participation in community service, get a sense of involvement in the tasks of nation building.

Incentives to Students: Special Camp certificate will be give by college NSS Unit when camp is conducted by NSS Unit.

- Regular NSS Certificate
It will be issued by University authority NSS Cell who have participated in Regular NSS Activities for 240 hours in their academic year and participated in 2 Special Camps.
- Best Volunteer Award at college level
It can be given by college at academic year ending for 3 or 5 members.
- State Awards
- National Awards
- Reservation in P.G. Courses
- Preference in recruitment of certain jobs

Schedule Report Of Sports

S.No	Class	No. Of sports hours scheduled	No. Of sports hours conducted	No. Of sports hours converted	Events attended (if any)	Remarks

Sports Coordinator

Principal

25. DISCIPLINARY & ANTI-RAGGING :

The Anti-Ragging and Discipline committee initiates and implements various anti-ragging and disciplinary measures that are in-line with provisions of the Anti-ragging Act issued by the government. The committee examines the complaints received on any disciplinary issues including ragging on any student /staff member and recommends suitable punishment as per act. Ragging in and around the college in any form is banned in order to maintain the healthy atmosphere. The committee constitutes various sub-committees /squads to vigil rowing/floor inspection, buses, boarding/ alighting points, surrounding bus-stops, auditorium, grounds, courtyards, parking places, entrance, terrace, corridors, canteen, library and hostels to maintain campus discipline.

Objectives:

1. To prohibit, prevent and eliminate ragging/indiscipline in all forms among students /staff by means of misconduct, misbehavior, un-parliamentary words/acts and indulging in any form of teasing /ill-treating /man-handling /rudeness /rowdyism.
2. To monitor, direct and oversee the functions and performance of the anti-ragging squads in prevention and curbing of ragging/indiscipline in the institution.
3. To recommend/suggest suitable punishments against individuals indulged in ragging/indiscipline.

Constitution

S. No.	Category	Status
1	Head of the Institution	Chairman
2	Dean Students Affairs	Member
3	All HODs	Member
4	Two Senior Faculty	Member
5	Hostel Warden(s) (Girls/Boys)	Member
6	One Psychologist	Member
7	Coordinator, Anti ragging and discipline	Member Secretary

Frequency of Meeting: The committee shall meet at least four times a year and as the case may be. The member secretary in consultation with the chairman prepares and circulates the agenda of the meeting well in advance. The member secretary maintains the minutes of the meeting and action taken report.

Quorum: Two-third members constitute the quorum. If there is no quorum for the meeting convened up to half an hour, then the meeting shall stand adjourned to the next convenient day.

Term: The tenure of the members shall be Three years

Function: The Roles and Responsibilities are to

1. Display the posters, charts, banners and other material stating evil nature, punishment of ragging and also on student's discipline at all conspicuous places.
2. Display round the clock helpline numbers to contact in case of ragging/in-disciplinary issues at all conspicuous places.
3. Provide mobile android application/SOS to all students/parents/staff in case of emergencies.
4. Create awareness about grievance redressal portal link provided in institute's website.
5. Conduct anti-ragging awareness programmes/camps in association with statutory bodies.
6. Involve students from seniors/freshers jointly in value based cultural and other activities.
7. Ensure possible solutions through interaction, warning, counseling, mentoring, conciliation, etc., related to ragging/indiscipline and intimate the same to the respective mentor/HOD/HOI/ Principal/parent/guardian.
8. Report on the violation of disciplinary rules to the nearest police station on approval from HOI/ Principal.
9. Empower campus vigilance teams to conduct surprise visits/inspections/snapshots at all vulnerable places to avoid ragging and indiscipline.
10. Keep a close watch on the movement of trespassers/outside/strangers in the college campus.
11. Advise students, particularly girls, to regulate their movements and interactions,

especially with strangers or undesirable characters.

12. Conduct meetings on ragging/indiscipline issues and recommend appropriate action as per the “Prohibition of Ragging in Educational Institutions Act”.
13. Conduct regular meetings with Anti-ragging squad members, floor in-charges and student members to review the status in the campus, document it and submit the report to the Principal.

Duties and Responsibilities of the Anti Ragging Squad

1. Conduct rowing inspections in and around the campus.
2. Create awareness among the students about the repercussions and punishment for involvement in any act of ragging/indiscipline.
3. Bring to the notice of the anti ragging committee any cases reported.
4. Duties and Responsibilities of the Anti Ragging Floor In-charges
5. Conduct rowing inspections in the respective floors at regular intervals.
6. Monitor and warn the loitering of senior students near the first year class rooms.
7. Inform the anti ragging committee about any untoward incident witnessed.



CMR ENGINEERING COLLEGE

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