Part B

Back To Content Page

1 Vision, Mission and Programme Educational Objectives (75) **Total Marks : 75.00**

1.1 Vision and Mission (5) Total Marks : 5.00

1.1.1 State the Vision and Mission of the institute and department (1) Institute Marks : 1.00

(List and articulate the vision and mission statements of the institute and department)

Vision of the Institute

To be among the best of the institutions for engineers and technologists with attitudes, skills and knowledge and to become an epicenter of creative solutions.

Mission of the Institute

To achieve and impart quality education with an emphasis on practical skills and social relevance.

Vision of the Department

To impart technical knowledge and skills required to succeed in life, career and to help society to achieve self sufficiency.

Mission of the Department

- To become an internationally leading department for higher learning.
- To build upon the culture and values of universal science and contemporary education.
- To be a center of research and education generating knowledge and technologies which lay groundwork in shaping the future in the fields of electrical and electronics engineering.
- To develop partnership with industrial, R&D and government agencies and actively participate in conferences, technical and community activities.

1.1.2 Indicate how and where the Vision and Mission are published and disseminated (2) Institute Marks : 2.00

(Describe in which media (e.g. websites, curricula books) the vision and mission are published and how these are disseminated among stakeholders)

Every effort is made to ensure the Vision and Mission are communicated effectively to all stakeholders namely students, faculty, parents, industry, regulating authority, alumni and management etc.

Presently Vision and Mission are published and disseminated through the following methods:

Print Media: College Diary, College Brochures, Lab manuals, Department brochure, Syllabus book, Regulation book.

Electronic Media: College/Departmental Website, Display Monitors

Display Boards: Flexi-Boards, Permanent Wooden Boards

Direct Communication: Orientation Programmes to freshers/parents/guardians, Induction Programmes to staff members, presentation to visiting Academics/Industrial persons, Announced during Seminars/Conferences/WorkShops.

1.1.3 Mention the process for defining Vision and Mission of the department (2) Institute Marks : 2.00

(Articulate the process involved in defining the vision and mission of the department from the vision and mission of the institute.)

The department established the vision and mission through a consultative process involving the stakeholders (students, alumni, faculty, industry, management) considering the scope of the department and the future societal requirements.

The process to arrive at the Mission and Vision of the department is as follows:

1. This process reviews aspirations of our Institution in the light of the vision and mission some of best educational institutions running similar programmes,
2. Feedback from all stakeholders are consider.
3. Departmental Advisory Board DAB (DDMC) makes the draft .
4. These proposals will be reviewed and ratified by Governing Body.

figure 1 : Process for defining Mission and Vision of the department

1.2 Programme Educational Objectives (10) — Total Marks : 10.00

1.2.1 Describe the Programme Educational Objectives (PEOs) (1) — Institute Marks : 1.00

(List and articulate the programme educational objectives of the programme under accreditation)

This programme is meant to prepare our students to professionally thrive and to lead. During their progression:

PEO 1: Post Graduates will have a successful technical and professional careers, including supportive and leadership roles on multidisciplinary teams.

PEO 2: Post Graduates will be able to acquire, use and develop skills as required for effective professional practices.

PEO 3: Post Graduates will be able to attain holistic education that is an essential prerequisite for being a responsible member of society.

PEO 4: Post Graduates will be engaged in life-long learning, to remain abreast in their profession.

1.2.2 State how and where the PEOs are published and disseminated (1) — Institute Marks : 1.00

(Describe in which media (e.g. websites, curricula books) the PEOs are published and how these are disseminated to stakeholders)

Institute makes every effort to ensure Department PEOs are communicated effectively to all stakeholders namely students, faculty, parents, industry, alumni and management etc.

Presently PEOs are published and disseminated through the following methods:

Print Media: Departmen Brochure/Booklets, Course Registers, Syllabus book, Regulation book.

Electronic Media: College/Departmental Website, Display Monitors

Display Boards: Notice Boards

Direct Communication: Orientation Programmes to freshers/parents, Induction Programmes to staff members

1.2.3 List the stakeholders of the programme (1) — Institute Marks : 1.00

(List stakeholders of the programme under consideration for accreditation and articulate their relevance)

The Stake holders for the programme are

1. Students 2.Faculty 3. Parents 4 Industry 5 Alumni 6. Management

Students: Students seek quality environment at the Institute which includes good infrastructure, qualified faculty, conductive learning environment. Students expect that the qualification be well recognized for an employment at a reputed industry or for an admission in the best educational institution if opted for higher education or prepare one for career of own choice.

Faculty: Faculty acts as a facilitator for the students to achieve their goals. Faculty wants to improve their credentials and grow in profession. Faculty takes pride in associating with a good learning environment and expects results from their students for self satisfaction.

Parents: Parents seek quality education for their children for a better future through the institution. Parents seek better career for their wards. Parents expect that their feedback can be considered in the development of the institution.

Industry: In most cases industry needs to hire the best students from good institutions such that these well trained students are readily employable, trainable and contribute to their growth. Industry also sees institutions as a complementary asset to their R&D. Industry, being one of the direct beneficiary, provide the necessary direction and growth plans.

Alumni: The Alumni take pride in their educational institution from where they post graduated. The Alumni prefer to maintain traditions by guiding their juniors on approaches to get better professional growth. The present social networking sites have made better interaction between Alumni and students. The Alumni contributes to the institution at times financially and other times through technical guidance and also gives feedback for the development of the Institution.

Management: Management is interested to impart quality education by providing best infrastructure, qualified faculty members and latest equipments and softwares. Management is looking to attract the best students. Management can enhanced their social standing through the institution.

1.2.4 State the process for establishing the PEOs (3) Institute Marks : 3.00

(Describe the process that periodically documents and demonstrates that the PEOs are based on the needs of the programme's various stakeholders.)

We draw upon the inputs from stake holders typically the faculty, alumni, industry, professional bodies input to formulate our PEOs.

Faculty: The faculty members of the department are one of the key stake holders empowered to evaluate the feedback received from all other stake holders, proposing improvements in the curriculum, the outcomes and objectives, and in implementing any ratified changes. All changes in the curriculum are initiated by the faculty. Additionally, all the faculty members continually interact with all of the other stakeholders, allowing for the opportunities to receive, apart from formal, the informal feedback.

Alumni: The Alumni provides vital inputs for drafting and review our PEOs. The inquiry includes opinion on the current courses, its shortfall, suggestive changes to be considered in the revising curriculum, their success in their careers and the suitability of the preparation attributed to the curriculum they were tutored in, any advice they have to give to the current students, and what they have to do for succeeding in their careers.

Regular input from alumni is obtained via the following interactions:

Surveys: Formatted Survey data is utilized to gather comprehensive information for scrutiny and analysis.

Alumni visits: Formal and informal visits by the alumni gives scope for direct personal interaction, discussions and also gives an opportunity to collect and record information required for improving the programme based on their professional experiences.

Employers: Input from employers plays a vital role in the formulation and review of the PEOs which reflects on the success and relevance of the designed courses. Employers are at the forefront of the practice of the profession; hence their feedback is important. They give us early indications of changing or new trends in the profession. The information is gathered from employers using both formal surveys and various informal interactions. In such interactions, employers are inquired about their views on the needs and direction of growth of the domain and correspondingly what the goals should be in educating the students.

Regular input from employers is obtained via the following interactions:

Surveys: Industry is directly or indirectly interacted with, during institutional visits for guest lectures, workshops, seminars, placement drives or for any other informal interaction and the opportunity is utilized to fill in the Survey Form designed for formulating PEOs.

Tours: Departments regularly arrange tours to industries as part of their courses education processes. Discussions with the industries, and the faculty visitors help gain additional information on the current needs of industry with regard to our post graduates, and thereby contribute the understanding needed to formulate or revise our PEOs.

Professional Bodies: Professional Bodies like IEEE, PES, ISTE, IETE, IE, CII, NASSCOM periodically express the status of industry which are noted and utilized during formulating or reviewing the PEOs.

The PEOs are established through the following steps:

Step 1: Vision and Mission of the Institute and Department are taken as the basis to interact with all the key stake holders.

Step 2: All documents relating to the Programme and the department are also forms the necessary inputs. These include instructional materials which are collected for all the courses. The Outcomes in terms of courses are listed for the programme and the Post Graduate attributes are taken into account apart from the information collected from Alumni in terms of career achievements, contribution to society, ethical practices and intellectual contributions.

Step 3: Program Coordinator consults the key stakeholders in the light of the current status of the institute, teaching learning environment, student and faculty quality and infrastructure. Feedback from prospective employers and current employers of the alumni are collected.

Step 4: Programme Assessment Committee, reviews and recommends within the guidelines defined for the formulation of the PEOs to DAB(DDMC).

Step 5: DAB (DDMC), finalize the PEO's and submits to academic council.

Step 6: PEOs are suggested by DAB (DDMC) ratified by the Academic Council.

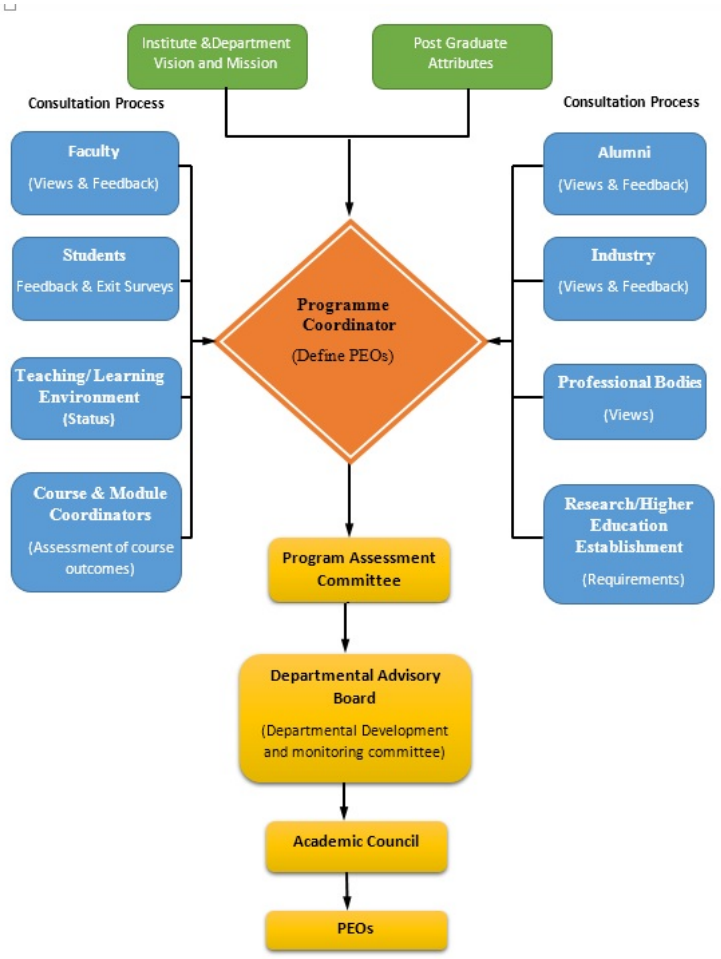


Figure 2: Process for Establishing the PEOs

1.2.5 Establish consistency of the PEOs with the Mission of the institute (4) Institute Marks : 4.00

(Describe how the Programme Educational Objectives are consistent with the Mission of the department.)

The Department mission is in Consistent with that of the institute.The PEOs are consistent with the Mission of Department as described by mapping wherein it gives evidence on the agreement between Mission and the EEE Program Educational Objectives. The EEE-PEOs reflect the expected accomplishments of the post graduates a few years after their post graduation. These objectives are consistent with the Mission statement as is evident from the statement above.

By educating students in Electrical and Electronics Engineering, they are being molded for careers in professional practice, leadership and by providing them with a broad based education including communication and life-long learning skills. This also develops and strengthens their ability to solve practical problems of social relevance, for civic contribution as well as professional practice.

PEOs	Mission of Department			
	Higher Learning	Contemporary Education	Technical knowledge	Research
Post Graduates will have a successful technical and professional careers, including supportive and leadership roles on multidisciplinary teams	X	X	X	X
Post Graduates will be able to acquire, use and develop skills as required for effective professional practices		X	X	X
Post Graduates will be able to attain holistic education that is an essential prerequisite for being a responsible member of society	X			X
Post Graduates will be engaged in life-long learning, to remain abreast in their profession.	X		X	X

1.3 Achievement of Programme Educational Objectives (20)

1.3.1 Justify the academic factors involved in achievement of the PEOs (10)

(Describe the broad curricular components that contribute towards the attainment of the Programme Educational Objectives.)

The following are the academic factors involved in the achievement of the PEOs:

1. By introducing courses in core engineering, Machines,Power Systems ,Power Electronics,Control Systems,Embeded & Computing and elective courses, semina components.

Course Component	PEOs	Curriculum Content (% of total number of credits of the program)	Credits
Machines	1 & 2	7%	3
Control Systems	1,2 & 4	7%	3
Power Systems	1,2 & 4	16%	6
Professional Core(Power Electronics)	1,2 & 4	48%	21
Embeded & Computing	1,2 & 3	22%	9

2.The academic factors are decided by Academic Council and Board of Studies. which involve university professors, Industrial experts and subject experts from the d frame the curriculum.

3.Student participation in Internship programmes and Major Projects.

4.By conducting continuing education and professional development programmes for the faculty.

5.By providing budgetary resources and modern infrastructure.

6.By developing and maintaining quality in instructions.

7.By collaborating with leading institutions and industries.

8.By effectively employing appropriate technologies to enhance instructions and student learning.

9.By effective monitoring of feedback and fine tuning the systems and processes approximately and timely.

1.3.2 Explain how administrative system helps in ensuring the Achievement of the PEOs (10)
(Describe the committees and their functions, working process and related regulations.)

To ensure achievement of PEOs and goals of Outcome Based Education a well structured administrative hierarchy exists in the institute. Administrative System to ens

1. **Course Coordinator**: Faculty who teaches common course, monitors and reviews activities related to attainment of course outcomes.
2. **Module Coordinator**: Senior Faculty Coordinates and supervises the faculty teaching similar like courses.
3. **Programme Coordinator**: Interacts and maintains liaison with key stakeholders students, faculty and administration. He conducts and interprets various survey

In order to monitor and ensure Outcome Based Education the Institution level committees and department level committees are created.

1. Class Coordinators Committee
2. Programme Assessment Committee(PAC)
3. Board of Studies (BOS)
4. Departmental Advisory Board (DDMC)
5. Academic Council

Committee	Chair Person	Members	Responsibilities
Class Coordinating Committee (CCC)	Respective Class Coordinator	1. Faculty of a particular course 2. Student representatives.	1. To tap the suggestions of the students, to enhance teaching-learning process. 2. To monitor and improve the relations and shortfalls between academics and teaching environment. 3. Review of activities related to attainment of course outcomes **Committee Scheduled Meetings:** Two times a semester or as and when needed. **(A sample of copy is Annexed)**
			1. To monitor feed backs from stake holders and taking action thereafter on academic matters 2. To monitor assessment and attainment of COs, POs and PEOs. 3. Evaluate Programme effectiveness and propose necessary changes for continuous improvement. 4. Motivate faculty and students to attend workshops,

Programme Assessment Committee(PAC)	Programme Coordinator	1. Module Coordinators 2. Faculty of a particular course 3. Class Coordinator	developing projects, working models, paper publications and research. 5. Inter act with Students, faculties, Programme coordinator, Module coordinators, and external stake holders in facilitating PEOs. **Committee Scheduled Meetings:** Two times a semester or as and when needed. **(A sample of copy is Annexed)**
Board of Studies(BOS)	Chairman Board of Studies	1. Programme Coordinators of the Department. 2. All teaching faculty of each course/ specialization offered. 3. Module coordinator 4. Two external experts in the course concerned and nominated by the Academic Council. 5. One expert to be nominated by the Vice-chancellor from a panel of six recommended by Principal of the institute. 6. Not more than two persons to be co-opted for their expert knowledge including those belonging to the concerned profession or industry. 7. One post-graduate meritorious alumni nominated by the Principal. 8. The Chairman Board of Studies may with the approval of the Principal of the Institute co-opt: 9. Experts from outside the institute whenever special courses of studies are to be formulated. Other members of the staff of the same faculty	1. To prepare, frame and modify the syllabus for the various courses keeping in view the Programme objectives of the programme. 2. Evaluates programme effectiveness and proposes continuous improvement. 3. To suggest panel of names for appointment of examiners; and coordinate research, teaching, extension and other academic activities in the programme / institute. 4. To suggest new methodologies for innovative teaching and evaluation techniques and tools. 5. To review implementation of institutional quality assurance in the department for improving programme. 6. Guiding in evolving POs and COs based on assessment. **Committee Scheduled Meetings:** As and when necessary **(A sample of copy is Annexed)**
Departmental Development and Monitoring Committee (DDMC) (DAB)	Head of the Department	1. All faculty are members- one among them will act as Secretary, 2. Members may be co-opted from other programmes, University and industry as per requirement	1. To formalize the departmental vision and mission. 2. To plan and monitor the growth of programmes of the department. 3. Develops and recommends new or revised PEOs 4. To ensure infrastructure, support facilities and activities to ensure for attainment of PEOs. **Committee Scheduled Meetings:** Two times a semester or as and when needed. **(A sample of copy is Annexed)**
Academic Council	Principal	1. Heads of Departments. 2. Four faculty members other than the Heads of Departments representing the various categories (by rotation and seniority). 3. Four persons including educationalists of repute, one person from the industry and engineering related to the activities of the institute, who are not in the service of the institute and nominated by the Governing Body. 4. Three nominees of the parent university 5. A faculty member nominated by the Principal of the institute to act as Member Secretary.	1. To exercise general supervision over the academic work of the institute, to give directions regarding method(s) of instruction, evaluation, research and improvements in academic standards. 2. To scrutinize and approve the proposals of the Board of Studies related to courses of study, academic regulations, curricula, syllabi, their objectives and outcomes and modifications, instructional and evaluation arrangements, methods, procedures etc. 3. To make regulations regarding the admission of students to different programs of study. 4. To recommend to the Governing Body the proposals of institution for new programs of study. 5. To recommend to the Governing Body, institution of scholarships, studentships, fellowships, prizes and medals, and to frame regulations for the award of the same. 6. To advise the Governing Body on suggestion(s) pertaining to academic affairs made by it. 7. To perform such other functions as may be assigned by the Governing Body. **Committee Scheduled Meetings:** Two time a year **(A sample of copy is Annexed)**

1.4 Assessment of the Achievement of Programme Educational Objectives (35) — Total Marks : 35.00

1.4.1 Indicate tools and processes used in assessment of the attainment of the PEOs (5) — Institute Marks : 5.00

Describe the assessment process that periodically documents and demonstrates the degree to which the Programme Educational Objectives are attained. Also include information on:
a) A listing and description of the assessment processes used to gather the data upon which the evaluation of each programme educational objective is based. Examples of data collection processes may include, but are not limited to, employer surveys, graduate surveys, focus groups, industrial advisory committee meetings, or other processes that are relevant and appropriate to the programme;

b) The frequency with which these assessment processes are carried out.

The following assessment processes are used for the assessment of the achievement of the PEOs

	Method	Assessment Tool	Description
1	Direct	Oral & Written Exams	Objective, subjective, theory, practical, seminar and viva evaluation
2		Projects	Mini & Major project evaluation
3	Indirect	Student Exit Survey	Passing out students
4		Alumni Survey	Old batches of the students
5		Employer Survey	Industries which recruits
6		Industry Survey	Leading industry in the domain of particular programme

PEOs (Program Educational Objectives) relate to the career and professional accomplishments of students after they graduate from the program. Consequently, assessment and evaluation of the objectives requires assessment tools that can be applied after graduation. The PEO's assessment process and methods are tabulated. However, keeping the significance of contribution of the curriculum and the assessment opportunities such as placement data and higher education entrance performance, these assessments are taken as supplementary evidence.

Program Educational Objectives	Assessment Tools & Performance Criteria	Process Used in assessment		Documentation
		Assessment Cycle	Evaluation Cycle	
PEO1: Post Graduates will have a successful technical and professional careers, including supportive and leadership roles on multidisciplinary teams.	Placement: 70% of EEE graduates & post graduates are currently employed in leading Industries.	Every year	Every year	Department & Institute
	Alumni Survey: EEE Alumni rate the overall quality of educational experience as well as gives the insight for improving the program.	Every year	Every year	Department & Institute
PEO2: Post Graduates will be able to acquire, use and develop skills as required for effective professional practices.	Mid Examinations, Quizzicals & viva: Written mid examinations are clearly linked to learning objectives.	Twice in a semester	Every semester	Department & Institute
	Semester Examination: These help in assessing the overall development of the students, which directly link to attainment of PEOs.	Every Semester	Every Semester	Department & Institute
	Assignments, written Lab & project Reports: these are direct assessment methods which help in evaluation of PEOs	Quarterly	Quarterly	Department
PEO3: Post Graduates will be able to attain holistic education that is an essential prerequisite for being a responsible member of society.	Alumni Surveys: Alumni are asked to rate the quality of preparation to demonstrate abilities which they feel needed by under graduate and PG gradutes	Every year	Every year	Institute & Department
	Employer Survey 70% of EEE employers responding to the Employer Survey will indicate they are either very satisfied or satisfied with EEE graduates'& PG graduates performance	Every year	Every year	Institute & Department
PEO 4: Post Graduates will be engaged in life-long learning, to remain abreast in their profession.	Alumni Survey: One or more abilities are listed which reflect this objective. Alumni are asked to rate the quality of preparation to demonstrate each ability they feel they received from their UG and PG education.	Every year	Every year	Department
All PEOs	Board of Studies: will meet annually and provide feedback to improve the quality of the program, also evaluate the senior project design teams.	Every year	Every year	Department

Frequency of the Assessment Processes:

Assessment Tool	Description	Assessment Cycle	Evaluation Cycle	Documentation and Maintenance
Mid Exams	Internal Evaluation	Twice in a semester	Twice in a semester	Marks are recorded in department and examination cell.
End Exams	External Evaluation	Once in a semester	Once in a semester	Result Recorded at examination cell and department
Assignments	Before Every Mid Exam	Twice in a semester	Twice in a semester	Course Register
Viva	End of the Semester	Once in a semester	Once in a semester	Lab Register
Seminars	General and Technical	Once in a semester	Once in a semester	Course Register
Lab Exams	Internal and External experimental evaluation	Once in a semester	Once in a semester	Lab record, Examination Cell
Projects	Mini and Major project evaluation	Once in four years	Once in four years	Examination Cell
Surveys	All Stake Holders	Once in a year	Once in a year	Recorded in department

1.4.2 Give evidences for the attainment of the PEOs (30) Institute Marks : 30.00

a) The expected level of attainment for each of the programme educational objectives;
b) Summaries of the results of the evaluation processes and an analysis illustrating the extent to which each of the programme educational objectives is being attained; and
c) How the results are documented and maintained.

File Name
Feedback analysis
surveys
Result Analysis
Minuties of Minutes

We have introduced the Outcome Based Education system in full spirit recently. Therefore it will take one more academic years to have students having experienced the learning environment as per new defined PEOs and three to five years from exit for them to experience the field of their careers. In the absence of such complete data, the evaluation guide lines are given, however the attainment of PEO's are commenced based on available data.

However criteria for level of attainment of PEOs have been formulated for the essential processes indicated before. The existing alumni and graduate performances and surveys are presented as a representative data for future discussions.

PEO	Assessment	Good	Average	Below Average	Attainment
PEO 1 Post Graduates will have a successful technical and professional careers, including supportive and leadership roles on multi disciplinary teams.	Placements	70 % above placement record	40 - 70 % placement record	Less than 50% of students selected off campus	40% placements are done in recent passed out batch.
	Performance	70% above distinctions	40-70% with distinctions	Below40% with distinctions	73% distinctions
	Higher Education	25% above graduates pursue higher education	15-25% of graduates pursue higher education	Below 15% of graduates pursue higher education	22 % for higher education
	Alumni	Above 80% satisfied their training.	70-75% satisfied their training.	65-70% satisfied their training.	78% satisfied.
	Industry	Returned for subsequent placement drives with more intake	Returned for subsequent placement drives	Reluctant to come for placement drives	Returned for placement drives
	Employer	Highly satisfied graduates and PG Graduates performance	Satisfied graduates and Post graduates performance	Not satisfied graduates and post graduates performance	Highly satisfied as they repeated placement drives
PEO 2 Post Graduates will be able to acquire, use and develop skills as	Alumni Survey	65% above graduates and PG graduates are in application development.	40-65% graduates and post graduates are in application development	Below 40% graduates and post graduate are in bench waiting for task	65% are in development tasks
	Employer	Above 60% of graduates and	40-60% of graduates and post	Below 40% of graduates and	60% graduates and post gradutes

required for effective professional practices.	survey	post graduates were able to analyze societal problems	graduates were able to analyze societal problems	post graduates were able to analyze real time problems	were able to analyze societal problems
PEO 3 Post Graduates will be able to attain holistic education that is an essential prerequisite for being a responsible member of society	Student Exit Survey	Above 80% graduates and post graduates are satisfied with their curriculum	60-80% graduates and post graduates are satisfied with their curriculum	60% below graduates and post graduates are satisfied with their curriculum	Above 90% graduates and post graduates are satisfied with their curriculum
	Alumni Survey	Above 80% graduates working large teams	50-80% graduates working in large tams	Below 50% graduates working in large teams	Above 80% graduates working large teams
	Employer Survey	Above 60% of graduates posses good communication abilities	50-60% of graduates posses good communication abilities	Below 50% of graduates posses good communication abilities	Above 75% of graduates posses good communication abilities
	Industry Survey	Above 70% graduates are familiar with modern tool usage	40-70% graduates are familiar with modern tool usage	40% below graduates are familiar with modern tool usage	Above 90% graduates are familiar with modern tool usage.
PEO 4 Post Graduates will be engaged in life-long learning, to remain abreast in their profession.	Alumni Survey	Above 50% have undergone for additional courses and qualifications.	40 -50% have undergone for additional courses and qualifications.	25-40% have undergone for additional courses and qualifications.	28% have undergone for additional courses and qualifications.
	Employer Survey	Above 70% of graduates and post graduates posses good management skills	50-70% of graduates and post graduates posses good management skills	Below 40% of graduates and post graduates posses good management skills	Above 60% of graduates and post graduates posses good management skills

1.5 Indicate how the PEOs have been redefining in the past (5)

Total Marks : 5.00

Institute Marks : 5.00

(Articulate with rationale how the results of the evaluation of the PEOs have been used to review/redefine the PEOs)

We have introduced the Outcome Based Education system recently. Therefore students, having experienced the learning environment as per newly defined PEOs are yet to graduate from the Institute. We have defined PEOs based on the vision and mission of institution and the department and also to suit curriculum given by the affiliating university JNTUH and used the feedback received from the stakeholders through surveys. The continuous process of assignments, direct and indirect assessments and evaluation will lead to the revision and refinement of the PEOs. We have a system to review the results of the evaluation of our outcome based education system at the end of each academic year.

For redefining PEOs, exit students survey, professional bodies view, alumni survey, employer survey and feedback are collected by programme coordinator. These are reviewed and redefined PEO's are drafted by PAC. The same is finalized by the DAB(DDMC).Then the proposed PEO's are ratified by academic council

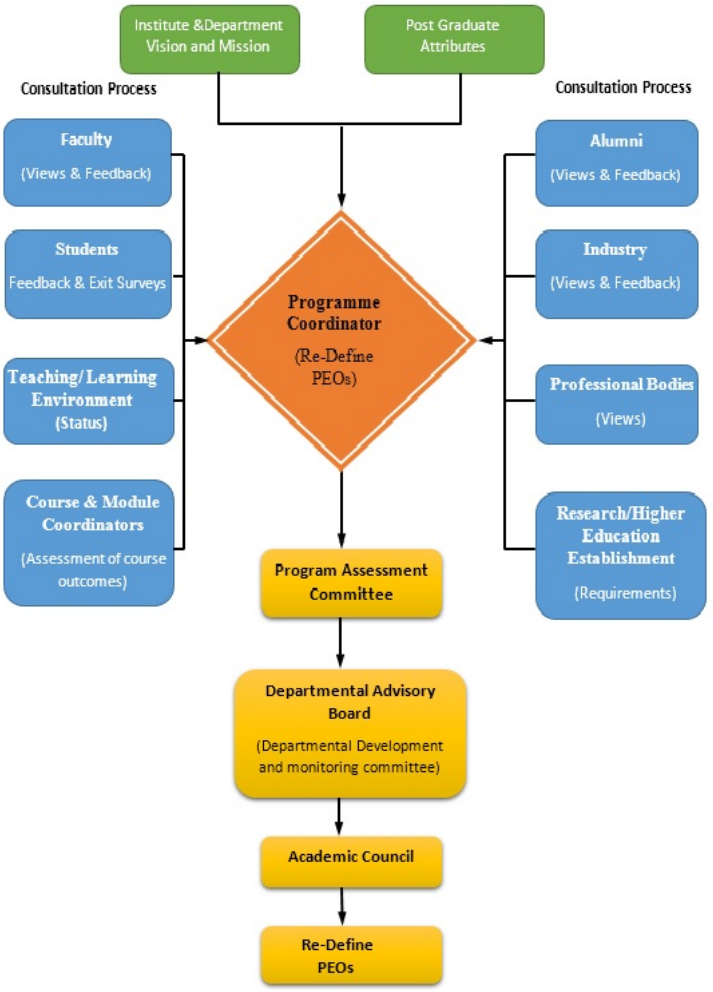


Figure-3 :The process of redefining PEOs

2 Programme Outcomes (250) **Total Marks : 250.00**

2.1 Definition and Validation of Course Outcomes and Programme Outcomes (20) **Total Marks : 20.00**

2.1.1 List the Course Outcomes(COs) and Programme Outcomes (POs) (1) Institute Marks : 1.00

(List the course outcomes of the courses in programme curriculum and programme outcomes of the programme under accreditation)

Course Outcomes of M.Tech Power Electronic

I Year I SEM

Course Code	Course Title	Course Outcomes
GR14D5036	Modern Power Electronics	1.Acquire knowledge in advanced power electronic devices.
		2.Evaluate the design and control of multi level inverters.
		3.Articulate power electronic resonant converters in power control applications.
		4.Evaluate the design and control of Inverters.
		5.Acquire knowledge in different Techniques for analyzing and design of resonant inverters.
		6.Evaluate the design and control of power supplies.
		7. Acquire knowledge in different Techniques to Design modern power conditioners.
GR14D5037	Analysis Of Power Electronic Converters	1. Ability to design power electronic converters for power control applications
		2.Ability to analyze ac voltage controllers
		3 .Ability to analyze cycloconverters.
		4 .Ability to design dc-dc converters.
		5.Acquire knowledge in different Techniques to design and control of rectifiers and inverters.
		6. Simulates different SVM method in

		inverters.
		7. Articulate the basics power electronic circuits
GR14D5038	**Modern Control Theory**	1. .Acquire knowledge in advances in control systems.
		2. Evaluate the design of state space analysis.
		3.Articulate control parameters in power control applications.
		4.Evaluate the Controllability and Observability of State Model
		5. Acquire knowledge in different Techniques for analyzing and design of state analysis
		6. Evaluate the design of optimal control.
		7. Acquire knowledge in different controllers and observers techniques.
GR14D5039	**Power Electronic Control of DC Drives**	1.Understands the Performance and analysis of different types of drives and their controllers for DC motors.
		2.Relate the performance characteristics of different types of drives.
		3.Analyze the different modes of operation of 1-ph and 3-ph controlled bridge rectifier for DC motor.
		4.Ability to Relate the performances of 1-ph & 3-ph controlled bridge rectifiers with DC motor as a load.
		5.Understands the different quadrant operations of a chopper for a DC drive.
		6.Ability to Extend the knowledge of current control, speed control and chopper control for closed loop operation of DC motor drives.
		7.Apply the knowledge of control techniques to do the simulation of DC motor drives.
GR14D5040	**Machine Modeling & Analysis**	1.Acquire knowledge in different advances of machine modelling.
		2. Evaluate the design and Working of DC machines.
		3.Articulate mathematical model of separately excited DC motor .
		4. Evaluate all Transformation Techniques.
		5.Understaning different Techniques for analyzing voltage ,current and torque equations of synchronous machines.
		6.Understaning different Techniques for analyzing voltage, current and torque equations of synchronous machines in state variable form
		7.Illustrates different Techniques to Design synchronous in two axis frame Transformers and Inductors.
GR14D5041	**HVDC Transmission**	1.Understand the importance of Transmission of power through HVDC links.
		2.Ability to calculate power conversion between Ac to DC and vice versa.
		3.Ability to relate the performance characteristics of 6 pulse, 12 pulse circuits.
		4. Ability to discuss firing angle control.
		5. Ability to analyze the control of reactive power through HVDC.
		6. Ability to discuss power flow analysis HVDC.
		7.Ability to know the importance of protection of HVDC
GR14D5042	**Energy Conservation Systems**	1.Understand different advances in spectral distribution
		2. Evaluate the design and Principles of MHD power generation.
		3.Articulate MHD technology in power control applications.
		4. Evaluate the Application of OTEC systems
		5. Demonstrate Techniques for principles of EMF generation
		6. Evaluate Global energy position and environmental effects.
		7.Ilustrate different Techniques for energy storage.
GR14D5043	**Digital Control of Power Electronic Systems**	1.Ability to understand and design digital control systems.
		2.Ability to deal with the Z-domain representation of systems.
		3.Ability to test the real time system stability.
		4.Ability of design control loops in digital domain.
		5.Ability to implement PWM techniques using digital comparators
		6.Ability to understand system dynamics with fast acting digital controllers.
		7.To impart knowledge for research studies in digital power electronic systems.
GR14D5044	**Solar and Wind Energy**	1. Acquire knowledge in different Advances in Conversion of Solar energy
		2. Evaluate the design and control of Solar Cells
		3.Articulate Design process and optimization of PV system design.
		4. Evaluate the design and control of inverters for solar energy.
		5.Techniques for analyzing and design of Extreme winds calculation of theoretical power developed by the wind turbine.
		6.Evaluate the Horizontal and vertical axis wind turbines
		7.Techniques to design wind turbines to extract power from wind energy
GR14D5045	**Special**	1. Acquire knowledge in different advances in dc machines.
		2. Evaluate the design and control of stepper motors.
		3. Articulate reluctance motors in control applications.

	Machines	4. Evaluate the design and control of variable stepper motors.
		5.Techniques for analyzing and design of permanent magnet materials.
		6. Evaluate the design and control of dc machines
		7. Acquire different Techniques to Design linear induction motors.
GR14D5046	**Electrical Systems Simulation Lab**	1. Acquire knowledge in different advances in power electronic devices.
		2. Applying coding in MATLAB software.
		3. Knowledge of PSPICE software.
		4. Construct various engineering projects in software environment
		5. Techniques for analyzing and design of controlled rectifiers.
		6. Design and Conduct simulations and experiments.
		7. Define the advances in stability analysis.
GR14D5175	**Seminar-I**	1. Familiarize with the fundamentals
		2. Familiarity in public speaking
		3.Ability to develop required skills for technical presentation.
		4.Ability create learning environment among students.
		5.Ability to participate on debate, question and answer session.
		6.Ability to concentrate on specific topic in scientific and engineering fields
		7.Ability to discuss new trends among group of students and facilities.

Course Outcomes of M.Tech Power Electronics

I Year II SEM

GR14D5047	**Power Electronic Control of AC Drives**	1.Analysis of different types of drives and their controllers for IM.
		2.Relate the performance characteristics of different drives.
		3. Extend the knowledge of current control for IM.
		4.Analyse the performance of vector control for IM drives.
		5.Extend the knowledge of current control for Synchronous Reluctance Machines (SyRM).
		6.Relate the performance characteristics of control techniques for IM & SyRM drives.
		7.Understand the control techniques of 3-ph BLDC motors
GR14D5048	**Microcontrollers**	1.Express architecture of microprocessors and controllers programs.
		1. Programming with microprocessors.
		2.Ability to program 8086,8255 and Micro processor
		3.Ability to interface stepper motor, A/D , D/A and Keyword.
		4.Ability to program interrupts.
		5.Ability to use 8051 timers with Microprocessor.
		6.Ability to Program AVR RISC Micro controllers
		7.Express architecture of microprocessors and controllers programs.
	Flexible AC Transmission	1. Express different types of FACTS controllers and their design.
		2.Understand the operating principles of various FACTS devices.
		3.Importance of compensation

GR14D5049	**Systems (FACTS)**	methods in power system network.
		4.Relate the performance and applications of VSI & CSI.
		5.Extend the knowledge of power factor, active & reactive power and voltage control with FACTS devices.
		6.Analyse the characteristics of shunt and series compensation methods.
		7. Acquire knowledge in different application of FACTS devices in UPQC, UPFC and DVR.
GR14D5050	**Neural and Fuzzy Systems**	1. Acquire knowledge in different advances in neural networks.
		2. Evaluate the design and control of fuzzy systems.
		3.Articulate the applications of fuzzy control block sets.
		4. Evaluate the design of various models in neural networks
		5. Acquire knowledge in different Techniques for analyzing of various types of neural networks.
		6.Evaluate the design and control of associative memories
		7.Acquire knowledge in different Techniques to Design fuzzy logic system
GR14D5051	**Power Quality**	1. Acquire knowledge about the various power quality issues and their remedial measures.
		2. Express what an interruption is, where it originates, what the causes, limits, their costs are and how to predict the number of interruptions.
		3. Gains knowledge on Voltage sag and its characterization in single-phase and three phase networks
		4. Explains behavior of various equipment to voltage sags.
		5. Apply their knowledge to design mitigation equipment
		6. To allow students discuss about the standards of Power Quality and EMC Standards
		7. Ability to measure sags in radial and non-radial networks
GR14D5052	**Digital Control Systems**	1. Acquire knowledge in different advances in digital control systems.
		2. Evaluate the design and control of z-transfroms.
		3. Articulate the need of state space analysis.
		4.Evaluate the design and control discrete time control system
		5.Techniques for analyzing and design of resonant inverters.
		6.Evaluate the design and control of stability analysis
		7. Acquire knowledge in different Techniques to Design feedback controllers.
		1.An ability to understand electromechanical energy conversion principals and magnetic circuits.

GR14D5053	**Dynamics of Electrical Machines**	2.An ability to find what type of machine should placed in particular application based on its fast dynamics.
		3.Ability to judge type of duty needed by machine based on application environment.
		4.Ability to model all electrical machines in simulation environment and know it dynamics.
		5.Ability to change the machine parameters to get fast dynamics from electrical machines.
		6.Ability to design new machines with fast dynamics
		7.Finally ability to make industrial systems to respond with fast dynamics.
GR14D5054	**Advanced Digital Signal Processing**	1.Define the structure of digital filters.
		2. Evaluate the design and control of filters
		3. Will Articulate dsp control algorithm in digital control applications.
		4. Evaluate the design and control filters in finite set
		5. Acquire knowledge in different Techniques for analyzing and design filters
		6. Evaluate the design and control power spectrum
		7. Acquire knowledge in different Techniques to Design filters in dsp algorithm.
GR14D5055	**Programmable Logic Controllers And Their Applications**	1.To Perform different types of PLC programming schemes.
		2. Ability to implement ladder diagrams for process control.
		3. Acquire knowledge in different control schemes of robots using PLC.
		4. Ability to tune the PLC for different applications.
		5.Relate PLCs with drives in achieving required control.
		6. Extend knowledge of PLC in analog operations.
		7.Perform different types of PLC programming schemes.
GR14D5056	**Reactive Power Compensation and Management**	1. Define the advances in power compensation.
		2.Evaluate the design and control of different types of compensation
		3. Articulate User side reactive power management
		4.Evaluate the design and Typical layout of traction systems.
		5. Will be able to know the Techniques for analyzing of reactive power management
		6.Evaluate reactive power control requirements
		7. Acquire knowledge in different Techniques to Design layout of traction systems
GR14D5057	**Power Converters Lab**	1. Define the basics of power electronics and drives.
		2. Evaluate the design and control of power electronics and drives.
		3. Relate the operating characteristics of Thyristor controlled & IGBT controlled drives.
		4. Analyze the operation of 3-ph Induction Motor (IM) drives.
		5. Knowledge of control techniques for the speed control of IM.
		6. Extend the knowledge of control technique for Cycloconverters.

		7.Relate the operating characteristics of half-wave and fully controlled converters.
GR14D5176	**Seminar-II**	1. Familiarize with the fundamentals
		2. Familiarity in public speaking
		3.Ability to develop required skills for technical presentation.
		4.Ability create learning environment among students.
		5.Ability to participate on debate, question and answer session.
		6.Ability to concentrate on specific topic in scientific and engineering fields
		7.Ability to discuss new trends among group of students and facilities.

II Year I SEM

GR14D5178	**Comprehensie Viva**	1. Ability to articulate knowledge on various fundamentals
		2. Ability to articulate knowledge on design concepts.
		3.Abiliy to define engineering basics, Applications, concepts.
		4.Ability to express sufficient knowledge in selected course.
		5.Ability to respond face interview ,oral presentation and oral examination.
GR14D5177	**Seminar-III**	1. Familiarize with the fundamentals
		2. Familiarity in public speaking
		3.Ability to develop required skills for technical presentation.
		4.Ability create learning environment among students.
		5.Ability to participate on debate, question and answer session.
		6.Ability to concentrate on specific topic in scientific and engineering fields
		7.Ability to discuss new trends among group of students and facilities.
GR14D5179	**Project work**	1. Ability to put their ideas and thoughts (H/W&S/W) into practice to realize a product.
		2. Ability to go for the patent rights for their projects.
		3. Ability to prepare technical presentation in the journals with research skills
		4.Ability to display the project in road shows and other forums.
		5.Ability to apply engineering knowledge in the development of innovative project.
		6.Ability to design of machine ob any electrical engineering product and improve its performance.
		7.Ability to prepare documentation work monitoring modeling simulation design and results.

II Year II SEM

GR14D5180	**Project work and Dissertation**	1. Ability to put their ideas and thoughts (H/W&S/W) into practice to realize a product.
		2. Ability to go for the patent rights for their projects.
		3. Ability to prepare technical presentation in the journals with research skills
		4.Ability to display the project in road shows and other forums.
		5.Ability to apply engineering knowledge in the development of innovative project.
		6.Ability to design of machine ob any electrical engineering product and improve its performance.
		7.Ability to prepare documentation work monitoring modeling simulation design and results.

Based on the department's educational objectives, students will achieve the following specific **Program outcomes**.

Program Outcomes
a. Ability to apply knowledge of mathematics, science, and engineering.
b. Ability to design and conduct experiments, as well as to analyze and interpret data.
c. Ability to design a system, component, or process to meet desired needs within realistic constraints.
d. Ability to function on multi-disciplinary teams.
e. Ability to identify, formulates, and solves engineering problems.
f. Understanding of professional and ethical responsibility.
g. Ability to communicate effectively.
h. Broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
i. Recognition of the need for, and an ability to engage in life-long learning.
j. Knowledge of contemporary issues.
k. Ability to utilize experimental, statistical and computational methods and tools necessary for engineering practice.
l . Post Graduates will demonstrate an ability to design electrical and electronic circuits, power electroics, power systems; electrical machines analyze and interpret data and also an ability to design digital and analog systems and programming them.

2.1.2 State how and where the POs are published and disseminated (1) Institute Marks : 1.00

(Describe in which media (e.g. websites, curricula books) the POs are published and how these are disseminated among stakeholders)

Institute makes every effort to ensure Department POs are communicated effectively to all stakeholders namely students, faculty, parents, industry, alumni and management etc.

Presently POs are published and disseminated through the following methods:

Print Media: Departmental Brochure/Booklets, Course Registers

Electronic Media: College/Departmental Website, Display Monitors

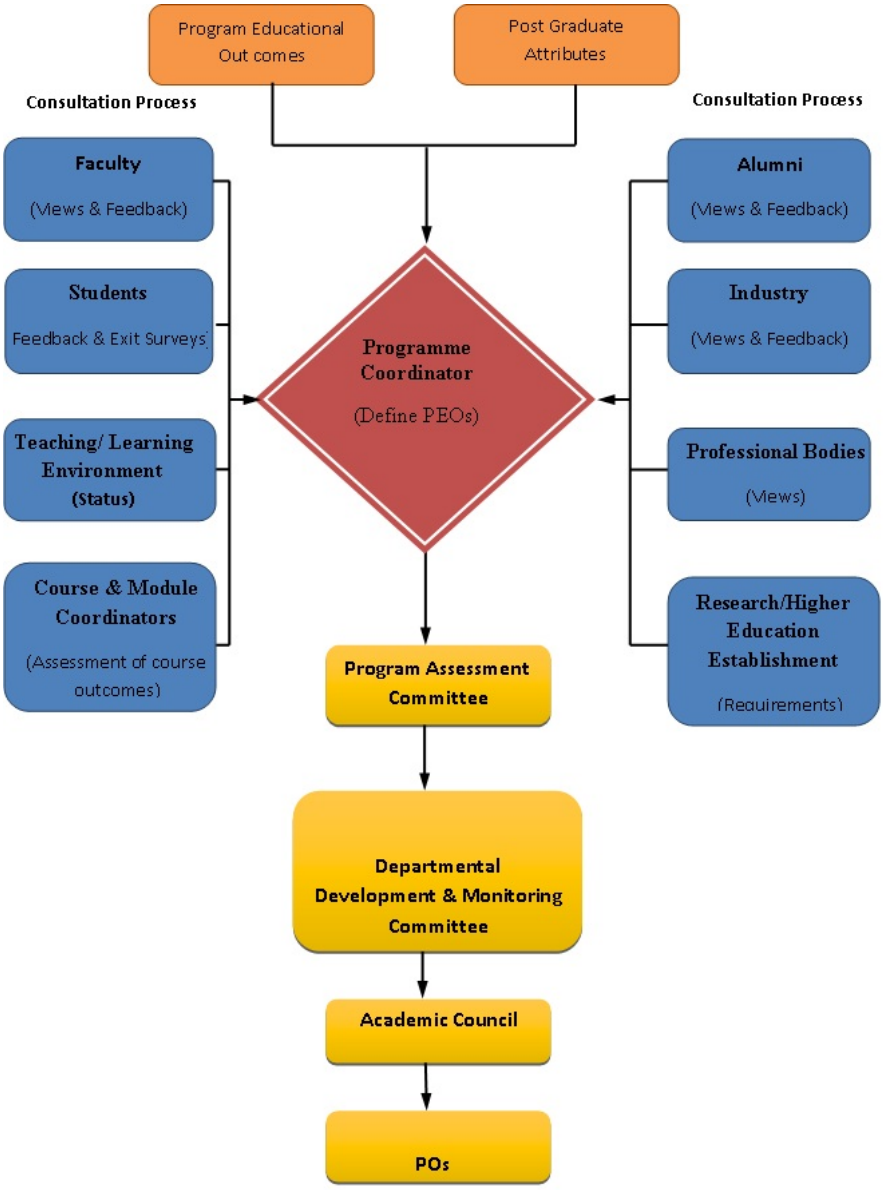
Display Boards: Notice Boards

Direct Communication: Orientation Programmes to freshers/parents, Induction Programmes to staff members

2.1.3 Indicate processes employed for defining of the POs (3) Institute Marks : 3.00

(Describe the process that periodically documents and demonstrates that the POs are defined in alignment with the graduate attributes prescribed by the NBA.)

The POs (a-l) are as defined and developed for each program with the consultation and involvement of various stakeholders from management, industry, alumni, faculty, and students. Their interests, suggestions and contributions in defining and developing



2.1.4 Indicate how the defined POs are aligned to the Graduate Attributes prescribed by the NBA (7) Institute Marks : 7.00

(Indicate how the POs defined for the programme are aligned with the Graduate Attributes of the NBA as articulated in accreditation manual.)

POs Post Graduate Attributes	a	b	c	d	e	f	g	h	i	j	k	l
Engineering Knowledge	X											
Problem Analysis		X										
Design and Development of Solutions			X									X
Investigation of Complex Problems					X							
Modern Tool Usage											X	
Engineer and Society			X									
Environment and Sustainability								X				
Ethics						X						
Individual and Team Work				X								
Communication							X					
Lifelong Learning									X			
Project Management and Finance										X		

2.1.5 Establish the correlation between the POs and the PEOs (8) Institute Marks : 8.00

(Explain how the defined POs of the programme correlate with the PEOs)

Program Educational Objectives (PEOs)	Program Outcomes(POs)	
1.Post Graduates will have a successful technical and professional careers, including supportive and leadership roles on multidisciplinary teams.	a. Ability to apply knowledge of mathematics, science, and engineering. b. Ability to design and conduct experiments, as well as to analyze and interpret data. e. Ability to identify, formulates, and solves engineering problems. h. Broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context. j. Knowledge of contemporary issues. k. Ability to utilize experimental, statistical and computational methods and tools necessary for engineering practice. l. Post Graduates will demonstrate an ability to design electrical and electronic circuits, power electronics, power systems; electrical machines analyze and interpret data and also an ability to design digital and analog systems and programming them.	
2.Post Graduates will be able to acquire, use and develop skills as required for effective professional practices.	c. Ability to design a system, component, or process to meet desired needs within realistic constraints. d. Ability to function on multi-disciplinary teams e. Ability to identify, formulates, and solves engineering problems. f. Understanding of professional and ethical responsibility. g. Ability to communicate effectively l. Post Graduates will demonstrate an ability to design electrical and electronic circuits, power electronics, power systems; electrical machines analyze and interpret data and also an ability to design digital and analog systems and programming them.	
3. Post Graduates will be able to attain holistic education that is an essential prerequisite for being a responsible member of society.	e. Ability to identify, formulates, and solves engineering problems f. Understanding of professional and ethical responsibility. g. Ability to communicate effectively. h. Broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context. i. Recognition of the need for, and an ability to engage in life-long learning. j. Knowledge of contemporary issues. k. Ability to utilize experimental, statistical and computational methods and tools necessary for engineering practice. l. Post Graduates will demonstrate an ability to design electrical and electronic circuits, power electronics, power systems; electrical machines analyze and interpret data and also an ability to design digital and analog systems and programming them.	
4. Post Graduates will be engaged in life-long learning, to remain abreast in their profession and be leaders in our technologically vibrant society.	d. Ability to function on multi-disciplinary terms e. Ability to identify, formulates, and solves engineering problems. f. Understanding of professional and ethical responsibility. g. Ability to communicate effectively. h. Broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context. i. Recognition of the need for, and an ability to engage in life-long learning. k. Ability to utilize experimental, statistical and	

	computational methods and tools necessary for engineering practice. l. Post Graduates will demonstrate an ability to design electrical and electronic circuits, power electronics, power systems; electrical machines analyze and interpret data and also an ability to design digital and analog systems and programming them.	

PEOs		Pos											
		a	b	c	d	e	f	g	h	i	j	k	l
PEO1	To have successful technical and professional careers Supportive and leadership roles in multidisciplinary teams	M	M			H			H		H		H
		M	M			H			H			H	
PEO2	To acquire, use and develop skills required for effective professional practices			M	M	H	H	H					H
PEO3	To acquire the holistic education necessary to be a responsible member of society.					H	H	M	M	M	M	H	H
PEO4	To engage in life-long learning to remain abreast in their profession.				M	M	H	M	H	H		M	H

M: Medium H: High

2.2 Attainment of Programme Outcomes (75)

Total Marks : 75.00

2.2.1 Illustrate how course outcomes contribute to the POs (5)

Institute Marks : 5.00

(Provide the correlation between the course outcomes and the programme outcomes. The strength of the correlation may also be indicated)

Course Outcomes of M. Tech Power Electronics

I Year I SEM

Course Code	Course Title	Course Outcomes	Programme Outcomes										
			a	b	c	d	e	f	g	h	i	j	k	l
GR14D5036	Modern Power Electronics	1.Acquire knowledge in advanced power electronic devices.		M			M		M				H	M
		2.Evaluate the design and control of multi level inverters.	H	M			M				H			
		3.Articulate power electronic resonant converters in power control applications.	H	M			M	H			M		M	M
		4.Evaluate the design and control of Inverters.	M	M					M		M			H
		5.Acquire knowledge in different Techniques for analyzing and design of resonant inverters.	M	M		M					M			H
		6.Evaluate the design and control of power supplies.	M	M							H		M	
		7. Acquire knowledge in different Techniques to Design modern power conditioners.	M	M					M				M	H
		1. Ability to design power electronic converters for power control applications	M	M							H		M	
		2.Ability to analyze ac voltage controllers	H	M			M		H		M			M

GR14D5037	**Analysis Of Power Electronic Converters**	3 .Ability to analyze cycloconverters.	H	M			M			M		H		
		4 .Ability to design dc-dc converters.	H	M			M		M			H	M	
		5.Acquire knowledge in different Techniques to design and control of rectifiers and inverters.	H	M			M			M		H	H	
		6. Simulates different SVM method in inverters.	M	H			H		M	M		M		
		7. Articulate the basics power electronic circuits	M	H			H			M		M	H	
GR14D5038	**Modern Control Theory**	1.Acquire knowledge in advances in control systems.	M			M			H		H	H	M	
		2. Evaluate the design of state space analysis.	M	H			H			M		M		
		3.Articulate control parameters in power control applications.	M	H			H			M		M		
		4.Evaluate the Controllability and Observability of State Model	H				M			M		H	H	
		5. Acquire knowledge in different Techniques for analyzing and design of state analysis	M	H			H			M		M	H	
		6. Evaluate the design of optimal control.	H				M			M		H	H	
		7. Acquire knowledge in different controllers and observers techniques.	H				M			M		H	M	
GR14D5039	**Power Electronic Control of DC Drives**	1.Understands the Performance and analysis of different types of drives and their controllers for DC motors.	M	H	M		H			M		M	H	
		2.Relate the performance characteristics of different types of drives.	M	H			H			M		M		
		3.Analyze the different modes of operation of 1-ph and 3-ph controlled bridge rectifier for DC motor.	M	M			H			H		H		
		4.Ability to Relate the performances of 1-ph & 3-ph controlled bridge rectifiers with DC motor as a load.	M	M			H		M	H		H	H	
		5.Understands the different quadrant operations of a chopper for a DC drive.	M	M			H			H		H		
		6.Ability to Extend the knowledge of current control, speed control and chopper control for closed loop operation of DC motor drives.	M	M			H			H		M	H	
		7.Apply the knowledge of control techniques to do the simulation of DC motor drives.	M	M			H		M			H	H	
GR14D5040	**Machine Modeling & Analysis**	1.Acquire knowledge in different advances of machine modelling.	M			M			H		H	H	M	
		2. Evaluate the design and Working of DC machines.	M	M	M		M					M	H	
		3.Articulate mathematical model of separately excited DC motor .	M	H			H			M		M	M	
		4. Evaluate all Transformation Techniques.	H				M			M		H	M	
		5.Understaning different Techniques for analyzing voltage ,current and torque equations of synchronous machines.	M	H			H			M		M		
		6.Understaning different Techniques for analyzing voltage, current and torque equations of synchronous machines in state variable form	H		H	M	M			M		H	H	
		7.Illustrates different Techniques to Design synchronous in two axis frame Transformers and Inductors.	M	H			H		M	M		M	H	
		1.Understand the importance of Transmission of power through HVDC links.		H	M		M			M			H	
		2.Ability to calculate power conversion between Ac to DC and vice versa.	H	M			H			M			M	

		3.Ability to relate the performance characteristics of 6 pulse, 12 pulse circuits.	M	H			H			M		M	H
GR14D5041	HVDC Transmission	4. Ability to discuss firing angle control.	H				M			M		H	H
		5. Ability to analyze the control of reactive power through HVDC.	H	M			H			M			M
		6. Ability to discuss power flow analysis HVDC.	H	M			H			M			M
		7.Ability to know the importance of protection of HVDC	M	H						M	M	M	M
GR14D5042	Energy Conservation Systems	1.Understand different advances in spectral distribution	M				M						H
		2. Evaluate the design and Principles of MHD power generation.	M				M						
		3.Articulate MHD technology in power control applications.	M	M			H					H	M
		4. Evaluate the Application of OTEC systems	M		M				H		M		M
		5. Demonstrate Techniques for principles of EMF generation	M				M					H	
		6. Evaluate Global energy position and environmental effects.	M		M				H		M		M
		7.Ilustrate different Techniques for energy storage.	M	H		M		H	M		M	M	
GR14D5043	Digital Control of Power Electronic Systems	1.Ability to understand and design digital control systems.	M	H					M	M		H	H
		2.Ability to deal with the Z-domain representation of systems.		H			H					M	M
		3.Ability to test the real time system stability.	M				M				M	M	
		4.Ability of design control loops in digital domain.	M				M				M	M	H
		5.Ability to implement PWM techniques using digital comparators	H			H					M	M	
		6.Ability to understand system dynamics with fast acting digital controllers.	H				M			M		M	H
		7.To impart knowledge for research studies in digital power electronic systems.	M				H					M	
GR14D5044	Solar and Wind Energy	1. Acquire knowledge in different Advances in Conversion of Solar energy	M	M	M				H			M	M
		2. Evaluate the design and control of Solar Cells	M	M								H	
		3.Articulate Design process and optimization of PV system design.	M	M			H					H	M
		4. Evaluate the design and control of inverters for solar energy.											
		5.Techniques for analyzing and design of Extreme winds calculation of theoretical power developed by the wind turbine.	M	M	M				M			M	H
		6.Evaluate the Horizontal and vertical axis wind turbines	M						M			M	M
		7.Techniques to design wind turbines to extract power from wind energy	M	M	M				M			M	H
GR14D5045	Special Machines	1. Acquire knowledge in different advances in dc machines.	M		M		H			M		H	
		2. Evaluate the design and control of stepper motors.	M	M	H		M					M	H
		3. Articulate reluctance motors in control applications.					M					M	M
		4. Evaluate the design and control of variable stepper motors.	M	M	H		M					M	
		5.Techniques for analyzing and design of permanent magnet materials.	M	M								M	H
		6. Evaluate the design and control of dc machines	M		M		H			M		H	
		7. Acquire different Techniques to Design linear induction motors.	M	H			H			M		M	H
GR14D5046	Electrical Systems Simulation Lab	1. Acquire knowledge in different advances in power electronic devices.	M	H	H		M	H				H	M
		2. Applying coding in MATLAB software.	M	H			M					H	
		3. Knowledge of PSPICE software.	M	H			M					H	M
		4. Construct various engineering projects in software environment	M	M	H		M	M				M	M
		5. Techniques for analyzing and design of controlled rectifiers.	M	H	H							H	
		6. Design and Conduct simulations and experiments.	M	H	H							H	H
		7. Define the advances in stability analysis.	M	H	H		M	H				H	M
GR14D5175	Seminar-I	1. Familiarize with the fundamentals	M	M					M				
		2. Familiarity in public speaking	H						M		H		
		3.Ability to develop required skills for technical presentation.	M										M
		4.Ability create learning environment among students.	M				M						
		5.Ability to participate on debate, question and answer session.	M	M		H			M				
		6.Ability to concentrate on specific topic in scientific and engineering fields	M										M
		7.Ability to discuss new trends among group of students and facilities.	M	H									

Course Outcomes of M. Tech Power Electronics:

I Year II SEM

Course Code	Course Title	Course Outcomes	Program Outcomes											
			a	b	c	d	e	f	g	h	i	j	k	l
GR14D5047	Power Electronic Control of AC Drives	1.Analysis of different types of drives and their controllers for IM.	H		H		M		H				M	H
		2.Relate the performance characteristics of different drives.		M		M	H			M				
		3. Extend the knowledge of current control for IM.					H	M					M	M
		4.Analyse the performance of vector control for IM drives.					H				M		M	M
		5.Extend the knowledge of current control for Synchronous Reluctance Machines (SyRM).	M	M			H					M	M	M
		6.Relate the performance characteristics of control techniques for IM & SyRM drives.	M	M			H						M	M
		7.Understand the control techniques of 3-ph BLDC motors	M	H										
GR14D5048	Microcontrollers	1.Ability to discuss role and importance of communication skills and learn to make use of various forms of communication in their respective professional fields.			M		H		M			H		H
		2. Ability to use communication tool to be an effective team leader or team member				M				M		H		M
		3. Ability to use communication tool to be an effective team leader or team member.										H		M
		4. Ability to use communication modes as a tool for success in career progression.									M	M	M	H
		5.Ability to present in various social and professional situations formally.										H		H
		6. Ability to analyze and share the ideas by various media of information transfer.										H		H
		7. Ability to design various behavioral aspects in relation to problem solving.				M						H		
		1. Express different types of FACTS controllers and their design.	M	H	M								M	M
		2.Understand the operating principles of various FACTS devices.	M				M				M		M	H
		3.Importance of compensation methods in power system network.	M						M					

GR14D5049	**Flexible AC Transmission Systems (FACTS)**	4.Relate the performance and applications of VSI & CSI.	M					M						H
		5.Extend the knowledge of power factor, active & reactive power and voltage control with FACTS devices.	M	H									M	M
		6.Analyse the characteristics of shunt and series compensation methods.		M										H
		7. Acquire knowledge in different application of FACTS devices in UPQC, UPFC and DVR.	M			M			M		H		M	
GR14D5050	**Neural and Fuzzy Systems**	1. Express different types of FACTS controllers and their design.	H	M	M		H			M			M	H
		2.Understand the operating principles of various FACTS devices.	M	H	M		H			M		H	M	M
		3.Importance of compensation methods in power system network.	H	M	M							M	H	M
		4.Relate the performance and applications of VSI & CSI.	M	H	M		H			M		H	M	H
		5.Extend the knowledge of power factor, active & reactive power and voltage control with FACTS devices.	H	M	M		H			M			M	H
		6.Analyse the characteristics of shunt and series compensation methods.	M	H	M		H			M		H	M	M
		7. Acquire knowledge in different application of FACTS devices in UPQC, UPFC and DVR.	M	H	M		H			M		H	M	H
GR14D5051	**Power Quality**	1.Acquire knowledge about the various power quality issues and their remedial measures.	H	M			M				M		M	
		2.Express what an interruption is, where it originates, what the causes, limits, their costs are and how to predict the number of interruptions.	H	M	M		H	H	M		M		H	H
		3. Gains knowledge on Voltage sag and its characterization in single-phase and three phase networks	M	M	M		H	H	M		M		H	H
		4. Explains behavior of various equipment to voltage sags.	M	M			M			H	M		M	
		5.Apply their knowledge to design mitigation equipment	H	M	H		M	M			M		M	H
		6.To allow students discuss about the standards of Power Quality and EMC Standards	M	M	H		M	M			M		M	
		7. Ability to measure sags in radial and non-radial networks	M	H	M		M	M			M		H	M
		1. Acquire knowledge in different advances												

		in digital control systems.	H	M	H		M				H		M	H
		2. Evaluate the design and control of z-transfroms.	M	H	M		H				M		M	
		3. Articulate the need of state space analysis.	M	H	M		M				M		H	H
GR14D5052	**Digital Control Systems**	4.Evaluate the design and control discrete time control system	M	M	M		M				H		H	M
		5.Techniques for analyzing and design of resonant inverters.	H	M	M		M		M		M		M	
		6.Evaluate the design and control of stability analysis	H	M	M		M				H		M	M
		7. Acquire knowledge in different Techniques to Design feedback controllers.	M	M	M		M		M		M		M	H
		1.An ability to understand electromechanical energy conversion principals and magnetic circuits.	H	M	M	M					H		H	
		2.An ability to find what type of machine should placed in particular application based on its fast dynamics.	H	H	M		M				M		M	M
		3.Ability to judge type of duty needed by machine based on application environment.	M	H				M			M		M	
GR14D5053	**Dynamics of Electrical Machines**	4.Ability to model all electrical machines in simulation environment and know it dynamics.	H	M			M				M		H	H
		5.Ability to change the machine parameters to get fast dynamics from electrical machines.	H	M			H				M		M	
		6.Ability to design new machines with fast dynamics	M	H			M				M		H	M
		7.Finally ability to make industrial systems to respond with fast dynamics.	M	H			M				M		M	
		1.Define the structure of digital filters.	M			M	M							H
		2. Evaluate the design and control of filters		H	M					H			M	H
		3. Will Articulate dsp control algorithm in digital control applications.						M					M	M
		4. Evaluate the design and control filters in finite set	M				H							
GR14D5054	**Advanced Digital Signal Processing**	5. Acquire knowledge in different Techniques for analyzing and design filters	M				H							M
		6. Evaluate the design and control power spectrum	M				M							M
		7. Acquire knowledge in different Techniques to Design filters in dsp algorithm.	M	M										M
		1.To Perform different types of PLC programming schemes.	M	M			M						M	H
		2. Ability to implement ladder												

		diagrams for process control.	M	H			H						H	H
GR14D5055	**Programmable Logic Controllers And Their Applications**	3. Acquire knowledge in different control schemes of robots using PLC.	M	H			M						H	M
		4. Ability to tune the PLC for different applications.	H	M			M		M				H	
		5.Relate PLCs with drives in achieving required control.	H	M			M						M	
		6. Extend knowledge of PLC in analog operations.	H	M			H						M	M
		7.Perform different types of PLC programming schemes.	H	H			M						M	
GR14D5056	**Reactive Power Compensation and Management**	1. Define the advances in power compensation.	H	M			H						H	M
		2.Evaluate the design and control of different types of compensation	H	M			M						H	M
		3. Articulate User side reactive power management	H	M			M						M	H
		4.Evaluate the design and Typical layout of traction systems.	H	H			M						H	M
		5. Will be able to know the Techniques for analyzing of reactive power management	M	M			M						M	
		6.Evaluate reactive power control requirements	H	H			M				H		H	M
		7. Acquire knowledge in different Techniques to Design layout of traction systems	M	H			M			M			H	
GR14D5057	**Power Converters Lab**	1. Define the basics of power electronics and drives.	M	H	H		M	H					H	M
		2. Evaluate the design and control of power electronics and drives.	M	H			M						H	
		3. Relate the operating characteristics of Thyristor controlled & IGBT controlled drives.	M	H			M		M				H	M
		4. Analyze the operation of 3-ph Induction Motor (IM) drives.	M	M	H		M	M					M	M
		5. Knowledge of control techniques for the speed control of IM.	M	H	H								H	
		6. Extend the knowledge of control technique for Cycloconverters.	M	H	H								H	H
		7.Relate the operating characteristics of half-wave and fully controlled converters.	M	H	H		M	H					H	M
GR14D5176	**Seminar-II**	1. Familiarize with the fundamentals	M	M					M					
		2. Familiarity in public speaking	H						M			H		
		3.Ability to develop required skills for technical presentation.	M											M
		4.Ability create learning environment among students.	M				M							
		5.Ability to participate												

		on debate, question and answer session.	M	M		H				M				
		6.Ability to concentrate on specific topic in scientific and engineering fields	M											M
		7.Ability to discuss new trends among group of students and facilities.	M	H					M		H			

Course Outcomes of M.Tech Power Electronics

II Year I SEM

Course Code	Course Title	Course Outcomes	Program Outcomes											
			a	b	c	d	e	f	g	h	i	j	k	l
GR14D5178	**Comprehensive Viva**	1.Ability to articulate knowledge on various fundamentals.	H				M						H	
		2.Ability to articulate knowledge on design concepts.	M	H	H		M						H	H
		3.Abiliy to define engineering basics, Applications, concepts.	M	M									M	
		4.Ability to express sufficient knowledge in selected course.	M	M										H
		5.Ability to respond face interview ,oral presentation and oral examination.	M	M		M			H					
GR14D5177	**Seminar-III**	1. Familiarize with the fundamentals	M	M					M					
		2. Familiarity in public speaking	H						M			H		
		3.Ability to develop required skills for technical presentation.	M											M
		4.Ability create learning environment among students.	M				M							
		5.Ability to participate on debate, question and answer session.	M	M		H				M				
		6.Ability to concentrate on specific topic in scientific and engineering fields	M											M
		7.Ability to discuss new trends among group of students and facilities.	M	H										
GR14D5179	**Project work**	1. An ability to solve any problem the students will be in position to put their ideas and thoughts (H/W&S/W) into practice to realize a product.	H	M		H	M		H	M		H		H
		2. An ability to design and develop products to get patent rights.	H		H	M		M		M		H	M	H
		3. An ability to prepare technical presentation in the journals.	H	M	H		M		H		M	H		M
		4.Ability to display the project in road shows and other forums.	M		H								H	H
		5.Ability to apply engineering knowledge in the development of innovative project.	M		M									
		6.Ability to design of machine by any electrical engineering product and improve its performance.	M	H	H									H
		7.Ability to prepare documentation work monitoring modeling simulation design and	M	M									M	

		results.												

Course Outcomes of M.Tech Power Electronics

II Year II SEM

GR14D5180	**Project work and Dissertation**	1. An ability to solve any problem the students will be in position to put their ideas and thoughts (H/W&S/W) into practice to realize a product.	H	M		H	M		H	M		H		H
		2. An ability to design and develop products to get patent rights.	H		H	M		M		M		H	M	
		3. An ability to prepare technical presentation in the journals.	H	M	H		M		H		M	H		M
		4.Ability to display the project in road shows and other forums.	M		H								H	H
		5.Ability to apply engineering knowledge in the development of innovative project.	M		M									
		6.Ability to design of machine by any electrical engineering product and improve its performance.	M	H	H									H
		7.Ability to prepare documentation work monitoring modeling simulation design and results.	M	M									M	

2.2.2 Explain how modes of delivery of courses help in attainment of the POs (5) Institute Marks : 5.00

(Describe the different course delivery methods/modes (e.g. lecture interspersed with discussion, asynchronous mode of interaction, group discussion, project etc.) used to deliver the courses and justify the effectiveness of these methods for the attainment of POs. This may be further justified using the indirect assessment methods such as course-end surveys.)

Different delivery mechanisms are employed with individuals and groups. Some implementation techniques, however, are common to most programmes. They include the following:

1. **Lectures/Presentation :** These are the effective ways of achieving educational objective and outcomes synchronously. The course objectives and outcomes could not be better achieved without these. Lectures are the best ways to get facts, make students think and get better in their attitudes. These make sure that the ground of the course is covered which improves the ability to design, formulate and solve the problems. Modes of delivery of lectures are PPT presentations and OHP presentations.
2. **Guest Lectures/Expert Lectures:** The invitation of guest speakers from various eminent institutes and industries helps the students and faculty to understand the current trends in various courses which leads to attainment of PO's. External resource persons also add value to the program, and help students to realize the link between education and the world outside along with professional responsibilities.
3. **Seminars / Workshops:** Department organizes seminars/workshops in topics of current relevance and interest to both students and faculty. These serve as a platform for sharing knowledge/expertise in advanced areas which results in collaborative attempt for further enhancement of the skills, techniques and modern engineering tools necessary for their engineering practice.
4. **Project Work:** Mini and a Main Project works in the curriculum gives the practical and analytical exposures of students. They can learn and implement for subjective knowledge while implementing project. This will empower them to work in teams, learn how to gather data and systematically arrange it in an understandable form.
5. **Road shows**: Road shows are organized for display of project works/for peers/ experts evaluation and source of inspiration and information for others.
6. **Mentoring and Counseling:** Mentoring concepts are integral part of the curriculum. All faculty members play an important role in counseling and motivating the students which helps in augmenting the program. It prepares students adequately for contemporary issues.
7. **Educational/Industrial Tours:** Another delivery strategy includes visits and educational/ Industrial tours. Resource centers, work places and others place of interest, help to explore all opportunities that have an impact on students. It allows students to think and make realistic decisions. This has proved successful in career exploration and decision making molding them as life- long learners.
8. **Certification Courses:** With technology advancing at a rapid pace, opportunities for advanced applications of software are limitless. Certification courses will update the student skills and broaden their knowledge in the course which enhances their employability.
9. **Research projects:** encourage students to carry out small research projects on their own empowering them to know how to gather data and systematically arrange it in an understandable form. Students will also be trained to be more curious and able to gather information for them rather than wait to be spoon-fed; it prepares them adequately and allows them to take pride in themselves. Students are prepared to carry out their own research which serves in multiple ways. The documentation of the research benefits the students in their overall development.
10. **E-Resources:** Faculty provides course information and peripheral knowledge on the web so that students can asynchronously accept the same.

Assignments & Assessments –Program Outcomes (POs) Mapping

Assignments & Assessments	Programme Outcomes											
	a	b	c	d	e	f	g	h	i	j	k	l
Lectures/Presentation				X		X	X					
Guest Lecturers/Expert Lecturers				X			X	X				X
Educational/Industrial Tours	X	X					X			X	X	
Projects	X		X		X		X		X		X	
Career Fairs/Seminars		X	X						X		X	
Workshops		X		X	X		X		X	X		X
Road Shows	X		X	X		X		X			X	X
Project Work	X								X			
Library and information		X					X		X		X	X
e-Resources	X					X			X		X	X

2.2.3 Indicate how assessment tools used to assess the impact of delivery of course/course content contribute towards the attainment of course outcomes/programme outcomes (15)

Institute Marks : 15.00

(Describe different types of course assessment and evaluation methods (both direct and indirect) in practice and their relevance towards the attainment of POs.)

Assignments & Assessments –Program Outcomes (POs) Mapping

Assignments & Assessments	Programme Outcomes											
	a	b	c	d	e	f	g	h	i	j	k	l
Lectures/Presentation				X		X	X					
Guest Lecturers/Expert Lecturers				X			X	X	X			
Educational/Industrial Tours	X	X					X			X	X	
Projects	X		X		X		X		X		X	
Career Fairs/Seminars		X	X						X	X		
Workshops		X		X	X		X		X	X		X
Road Shows	X		X	X		X		X			X	X
Project Work	X								X			

Library and information		X					X		X		X	
e-Resources	X					X			X		X	X
Class test				X			X			X		
Viva	X			X				X	X			X
Mid Marks	X											
Progress in Laboratories		X	X							X	X	

2.2.4 Indicate the extent to which the laboratory and project course work are contributing towards attainment of the POs (50) Institute Marks : 50.00

(Justify how the project works/thesis works carried out as part of the programme curriculum contribute towards the attainment of the POs.)

All Project work/thesis of the curriculum in the Programme are performed by the students as per the curriculum requirements as well as to attain Programme Educational Objectives (PEOs) with the help of Program Outcomes (POs).

Mapping of Process carried out to project work with Program Outcomes

	POs											
Process	a	b	C	d	e	f	g	h	i	j	k	l
Problem Analysis and Design	X	X	X		X		X	X			X	X
Results and Record		X	X			X			X	X	X	
Usage of Tools						X	X	X	X	X		
Viva	X	X	X	X	X						X	
Presentation	X	X	X		X				X	X	X	X

2.3 Assessment of the attainment of the Programme Outcomes (125) Total Marks : 125.00

2.3.1 Describe assessment tools and processes used for assessing the attainment of each PO (25) Institute Marks : 25.00

Describe the assessment process that periodically documents and demonstrates the degree to which the Programme Outcomes are attained. Also include information on:
a) A listing and description of the assessment processes used to gather the data upon which the evaluation of each the programme educational objective is based. Examples of data collection processes may include, but are not limited to, specific exam questions, student portfolios, internally developed assessment exams, senior project presentations, nationally-normed exams, oral exams, focus groups, industrial advisory committee;
b) The frequency with which these assessment processes are carried out.

The following assessment processes are used for the assessment of the achievement of the POs

S.No/	Method	Assessment Tool	Description
1	Direct	Mid Exams	Objective, Subjective exams
2		End Exams	Subjective written exams
3		Assignments/Tutorials	Course wise assignments/Tutoials
4		Viva	Course / Lab wise viva, Comprehensive viva
5		Seminars	Individual Seminars, Group seminars
6		Lab Exams	Internal and External Lab exams
7		Projects	Mini & Major projects evaluation
8	Indirect	Yearly Student Survey	Students pursing in respective Academic year
9		Student Exit Survey	Passing out students
10		Alumni Survey	Old batches of the students
11		Employer Survey	Industries which recruits

Assessment of POs by Both Direct and Indirect Methods

Direct Assessment			
PO	**Contributing Courses**	**Attainment % %**	**Average Attainment**
	GR14D5036: Modern Power Electronics	100	

a	GR14D5038: Modern Control Theory	100	99%
	GR14D5039: Power Electronic Control of DC Drives	100	
	GR14D5040: Machine Modeling & Analysis	100	
	GR14D5046: Electrical Systems Simulation Lab Simulation Lab, Data Structures	100	
	GR14D5047: Power Electronic control of AC Drives	100	
	GR14D5037: Analysis of Power Electronic Converters	100	
	GR14D5057: Power Converters Lab	100	
	GR14D5041: HVDC Transmission	-	
	GR14D5041: Energy Conservation Systems	-	
	GR14D5045: Special Machines	-	
	GR14D5049: Flexible AC Transmission Systems (FACTS)	100	
	GR14D5052: Digital Control Systems	-	
	GR14D5051: Power Quality	94	
	GR14D5053: Dynamics of Electrical Machines	-	
	GR14D5054: Advanced Digital Signal Processing	-	
	GR14D5044: Solar and Wind Energy	-	

Direct Assessment			
PO	**Contributing Courses**	**Attainment %** **%**	**Average Attainment**
b	GR14D5036: Modern Power Electronics	100	100%
	GR14D5037: Analysis of Power Electronic Converters	100	
	GR14D5057: Power Converters Lab	100	
	GR14D5046: Electrical Systems Simulation Lab	100	
	GR14D5049: Flexible AC Transmission Systems	100	
	GR14D5055:Programmable logic controllers and their applications	100	
	GR14D5048: Microcontroller	100	
	GR14D5039: Power Electronic Control of DC drives	100	
	GR14D5047: Power Electronic control of AC drives	100	

Direct Assessment			
PO	**Contributing Courses**	**Attainment %** **%**	**Average Attainment**
c	GR14D5044: Solar and Wind Energy	-	100%
	GR14D5041: HVDC Transmission	-	
	GR14D5053: Dynamics of Electrical Machines	-	
	GR14D5042:Energy Conservation Systems	-	
	GR14D5056:Reactive power Management	-	
	GR14D5055:Programmable logic controllers and their applications	100	

Direct Assessment			
PO	**Contributing Courses**	**Attainment % %**	**Average Attainment**
d	GR14D5177:Project work and Seminar	100	100%
	GR14D5178:Comprehensive Viva	100	

Direct Assessment			
PO	**Contributing Courses**	**Attainment % %**	**Average Attainment**
e	GR14D5036: Modern Power Electronics	100	99%
	GR14D5038: Modern Control Theory	100	
	GR14D5039: Power Electronic Control of DC Drives	100	
	GR14D5056:Reactive power Management	-	
	GR14D5041: HVDC Transmission	-	
	GR14D5040: Machine Modeling & Analysis	100	
	GR14D5055: Programmable logic controllers and their applications controllers	100	
	GR14D5045: Special Machines,	-	
	GR14D5042:Energy Conservation Systems	-	
	GR14D5047:Power Electronic control of AC drives	100	
	GR14D5048: Microcontroller	100	
	GR14D5054: Advanced Digital Signal	-	
	GR14D5050:Neural And Fuzzy Systems	100	
	GR14D5052: Digital Control Systems	-	
	GR14D5051: Power Quality	94	
	GR14D5053: Dynamics of Electrical Machines	-	
	GR14D5049: Flexible AC Transmission	100	

Direct Assessment			
PO	**Contributing Courses**	**Attainment % %**	**Average Attainment**
f	GR14D5175:Seminar	100	100%

Direct Assessment			
PO	**Contributing Courses**	**Attainment % %**	**Average Attainment**
g	GR14D5177:Seminar	100	100%
	GR14D5178:Comprehensive Viva	100	

Direct Assessment			
PO	**Contributing Courses**	**Attainment % %**	**Average Attainment**
h	GR14D5044: Solar and Wind Energy	-	98%
	GR14D5056:Reactive power Management	-	
	GR14D5048: Microcontrollers	100	
	GR14D5050:Neural And Fuzzy Systems	100	
	GR14D5051: Power Quality	94	
	GR14D5038: Modern Control Theory	100	

Direct Assessment			
PO	**Contributing Courses**	**Attainment % %**	**Average Attainment**
i	GR14D5036: Modern Power Electronics	100	99%
	GR14D5038: Modern Control Theory	100	
	GR14D5040: Machine Modeling & Analysis	100	
	GR14D5055: Programmable logic controllers and their applications controllers	100	
	GR14D5039: Power Electronic Control of DC Drives	100	
	GR14D5048: Microcontrollers Simulation Lab Simulation Lab, Data Structures	100	
	GR14D5047: Power Electronic control of AC Drives	100	
	GR14D5037: Analysis of Power Electronic Converters	100	
	GR14D5041: HVDC Transmission	-	
	GR14D5042: Energy Conservation Systems	-	
	GR14D5045: Special Machines	-	
	GR14D5049: Flexible AC Transmission Systems (FACTS),	100	
	GR14D5043: Digital Control Systems	-	
	GR14D5051: Power Quality	94	
	GR14D5053: Dynamics of Electrical Machines	-	
	GR14D5054: Advanced Digital Signal Processing	-	
	GR14D5050:Neural And Fuzzy Systems	100	

Direct Assessment			
PO	**Contributing Courses**	**Attainment % %**	**Average Attainment**
j	GR14D5038: Modern Control Theory	100	92%
	GR14D5050:Neural And Fuzzy Systems,	100	
	GR14D5056:Reactive power Management	-	
	GR14D5044: Solar and Wind Energy	-	
	GR14D5055: Programmable logic controllers and their applications	100	
	GR14D5048: Microcontroller	100	
	GR14D5069:Embedded Systems	61	

Direct Assessment			
PO	**Contributing Courses**	**Attainment %**	**Average Attainment**
k	GR14D5038: Modern Control Theory	100	100%
	GR14D5040: Machine Modeling & Analysis	100	
	GR14D5042: Energy Conservation Systems	-	
	GR14D5057: Power Converters Lab	100	
	GR14D5046: Electrical Systems Simulation Lab	100	
	GR14D5048: Microcontroller	100	

	GR14D5050:Neural And Fuzzy Systems	100	

Direct Assessment			
PO	**Contributing Courses**	**Attainment %**	**Average Attainment**
l	GR14D5036: Modern Power Electronics	100	99%
	GR14D5038: Modern Control Theory	100	
	GR14D5039:Power Electronic Control of DC Drives	100	
	GR14D5040: Machine Modeling & Analysis,	100	
	GR14D5055: Programmable logic controllers and their applications	100	
	GR14D5048: Microcontrollers Data Structures	100	
	GR14D5047: Power Electronic control of AC Drives	100	
	GR14D5037: Analysis of Power Electronic Converters ConvertConverters	100	
	GR14D5041: HVDC Transmission	-	
	GR14D5042: Energy Conservation Systems	-	
	GR14D5045: Special Machines	-	
	GR14D5049: Flexible AC Transmission Systems (FACTS)	100	
	GR14D5052: Digital Control Systems	-	
	GR14D5051: Power Quality	94	
	GR14D5053: Dynamics of Electrical Machines	-	
	GR14D5054: Advanced Digital Signal Processing	-	
	GR14D5050:Neural And Fuzzy Systems	100	
	GR14D5044: Solar and Wind Energy	-	

Indirect Assessment

Assessment Tool	**Attainment Level**	**Average Attainment level in Indirect measure**
Alumni Survey	Satisfactory	Satisfactory
Employer Survey	Satisfactory	Satisfactory
Student Exit Survey	Satisfactory	Satisfactory
Course completion Survey	Satisfactory	Satisfactory

Student work will be assessed, depending on the learning outcome being assessed and the tool for assessment. Choosing criteria is where rubrics come in. A Rubric is a set of criteria for assessing student work or performance. Rubrics are particularly suited to learning outcomes that are complex or not easily quantifiable, for which there are no clear "right" or "wrong" answers, or which are not evaluated with standardized tests or surveys. Assessment of writing, oral communication, critical thinking, or information literacy often requires rubrics.

Rubrics have two dimensions: they identify the various characteristics of the outcome, and they specify various levels of achievement in each characteristic. Thus, a well-designed rubric consists of:

1. clear definitions of each characteristic to be assessed for a given learning outcome, and
2. clear descriptions of the different levels of achievement for each characteristic.

Because rubrics establish criteria, they can help make assessment more transparent, consistent, and objective. Faculty members and evaluators can use rubrics to communicate to students and each other what they see as excellent work, while student's gain an understanding of what is expected and how their performance will be assessed. Rubrics are also useful when there is more than one evaluator; rubrics can serve as standardized scoring guides that assist different evaluators to determine the quality of student work in a consistent manner.

Program Outcome	Assessment Evidence Source or Tool
a). Ability to apply knowledge of mathematics, science, and engineering.	Quality assessment review alumni and other surveys faculty reviews course outcome data
b). Ability to design and conduct experiments, as well as to analyze and interpret data.	audit of graduating senior transcripts for compliance with distribution requirements alumni, exit other surveys data faculty reviews and results
c). Ability to design a system, component, or process to meet desired needs within realistic constraints	audit of post graduating senior transcripts for compliance with distribution requirements requirement for taking Power Electonics courses course outcome data
d). Ability to function on multi-disciplinary teams.	Mini project, Project Work, Lab work and its outcomes with Several Stake holders reviews
e). Ability to identify, formulates, and solves engineering problems.	Courses like Machine Modeling & Analysis, Modern Control Theory, andModern Power Electronics, and its outcomes with several surveys and outcomes of the courses
f). Understanding of professional and ethical responsibility.	audit of graduating senior transcripts reviews of data
g). Ability to communicate effectively..	Results of the courses like Seminar, and Project seminars Reviews of several stake holders
h). Broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.	Results of usage of modern tools and subject outcomes, surveys data analysis
i) Recognition of the need for, and an ability to engage in life-long learning.	alumni and senior faculty survey data
j). Knowledge of contemporary issues.	JNTUH, GRIET , EEE program ,power electronics & requirements alumni survey data
k).Ability to utilize experimental, statistical and computational methods and tools necessary for engineering practice.	Alumni survey data, Results and Outcomes with several surveys data
l). Graduates will demonstrate an ability to design electrical and electronic circuits, power electronics, power systems; electrical machines analyze and interpret data and also an ability to design digital and analog systems and programming them.	Results of usage of modern tools and subject outcomes, surveys data analysis

b) Frequency of the Assessment Processes;

Assessment Tool	Description	Assessment Cycle	Evaluation Cycle	Documentation and Maintenance
Mid Exams	Internal Evaluation	Twice in a semester	Twice in a semester	Marks are recorded in department and examination cell.
End Exams	External Evaluation	Once in a semester	Once in a semester	Result Recorded at examination cell and department
Assignments	Before Every Mid Exam	Twice in a semester	Twice in a semester	Course Register
Viva	End of the Semester	Once in a semester	Once in a semester	Lab Register
Seminars	General and Technical	Once in a semester	Once in a semester	Course Register
Lab Exams	Internal and External experimental evaluation	Once in a semester	Once in a semester	Lab record, Examination Cell
Projects	Mini and Major project evaluation	Once in four years	Once in four years	Examination Cell
Surveys	All Stake Holders	Once in a year	Once in a year	Recorded in department

2.3.2 Indicate results of Evaluation of each PO (100) Institute Marks : 100.00

c) The expected level of attainment for each of the programme outcomes;
d) Summaries of the results of the evaluation processes and an analysis illustrating the extent to which each of the programme outcomes are attained; and
e) How the results are documented and maintained.

File Name
Course file 1
course file 2
Mid Question Papers
External Question Papers
Answer Script
Lab Expt
Assignment
Result Analysis

Step-by-step process for assessing Program Outcomes

Step 1: The Program coordinator along with the BOS and course coordinators analyses each outcome into elements (different abilities specified in the outcome) along with the set of Post Graduate attributes for each element and the designed surveys to assess the outcome.

Step 2: For each outcome define performance indicators (Assessment criteria) and their targets.

Step 3: Identify/select courses that address the outcome (each course contributes to at least one of the outcomes). Hence, each outcome is assessed in several courses to ensure that students acquire an appropriate level in terms of knowledge/skills/attitude.

Step 4: The course coordinators use the qualitative and quantitative data while assessing the outcomes on a continuous basis.

Step 5: The Head of the Department analyze the collected data. If the assessed data meets the performance targets which are specified in step 2, the outcome is attained. Otherwise, consider step6.

Step 6: The Head of the Department reviews along with the Programme Coordinator and the BOS to recommend content delivery methods/course outcomes/ curriculum improvements as needed.

Programme outcome 1: Ability to apply knowledge of mathematics, science, and engineering.

Courses	Performance Criteria	Method of Assessment	Sources for data collection	Target for the performance	Length of Assessment Cycle/when the data is collected
GR14D5038: Modern Control Theory GR14D5036: Modern Power Electronics GR14D5040: Machine Modeling & Analysis GR14D5093: Power Electronic Control of DC Drives GR14D5046: Electrical Systems Simulation Lab GR14D5047: Power Electronic control of AC GR14D5037: Analysis of Power Electronic Converters GR14D5057: Power Converters Lab GR14D5041: HVDC Transmission GR14D5042: Energy Conservation Systems GR14D5045: Special Machines GR14D5049: Flexible AC Transmission Systems (FACTS),	Applies knowledge of mathematics/ Science principals to provide numerical solution to model the problem	Internal/external Evaluation/ Assignments/ Group tasks(mini projects, main projects, lab activities, team activities)	Course outcomes Rubrics	80%	2 years End of the semester
		Courses end survey/ Post Graduate Survey/ Alumni survey	Survey reports	80%	2 years End of the semester End of the programme
		Internal/external Evaluation/ Assignments/ Group tasks	Course outcomes Rubrics	80%	2 years End of the semester

GR14D5052: Digital Control Systems GR14D5051: Power Quality GR14D5053: Dynamics of Electrical Machines GR14D5054: Advanced Digital Signal Processing GR14D5044: Solar and Wind Energy	Solve the problems by computing principles effectively	Courses end survey/ Post Graduate Survey/ Alumni Survey	Survey reports	75%	2 years End of the semester End of the programme

Programme outcome 2: Ability to design and conduct experiments, as well as to analyze and interpret data.

Courses	Performance Criteria	Method of Assessment	Sources for data collection	Target for the performance	Length of Assessment Cycle/when the data is collected
GR14D5036: Modern Power Electronics GR14D5037: Analysis of Power Electronic Converters GR14D5057: Power Converters Lab GR14D5046: Electrical Systems Simulation Lab GR14D5049: Flexible AC Transmission Systems	design and conduct experiments	Internal/external Evaluation/ Assignments/ Group tasks	Lab activity data Rubrics Course outcome	80%	2 years End of the semester
		Courses end survey/ Graduate Survey/ Alumni Survey	Survey data	80%	2 years End of the semester End of the programme
GR14D5057:Programmable logic controllers and their applications GR14D5049: Microcontroller GR14D5039: Power Electronic Control of DC drives GR14D5047: Power Electronic control of AC drives	analyze and interpret data.	Internal/external Evaluation/ Assignments/ Group tasks	Lab activity data Rubrics Course outcome	80%	2 years End of the semester
		Courses end survey/ Graduate Survey/ Alumni survey	Survey reports	75%	2 years End of the semester End of the programme

Programme outcome 3: Ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.

Courses	Performance Criteria	Method of Assessment	Sources for data collection	Target for the performance	Length of Assessment Cycle/when the data is collected
GR14D5044: Solar and Wind Energy GR14D5041: HVDC Transmission GR14D5053: Dynamics of Electrical Machines GR14D5042:Energy Conservation Systems GR14D5056:Reactive power Management	Design a system, component, within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.	Internal/external Evaluation/ Assignments/ Group tasks	Lab activity data Rubrics Course outcome	80%	2 years End of the semester
		Courses end survey/ Graduate Survey/ Alumni survey	Survey reports	80%	2 years End of the semester End of the programme
	Design a process to meet desired needs within	Internal/external Evaluation/ Assignments/	Lab activity data Rubrics	80%	2 years End of the

GR14D5055:Programmable logic controllers and their applications	realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.	Group tasks	Course outcome		semester
		Courses end survey/ Graduate Survey/ Alumni survey		75%	2 years End of the semester End of the programme

Programme outcome 4: Ability to function on multi-disciplinary teams.

Courses	Performance Criteria	Method of Assessment	Sources for data collection	Target for the performance	Length of Assessment Cycle/when the data is collected
GR14D5178:Comprehensive Viva GR14D177:Project work and Seminar	function on multi-disciplinary	Internal/external Evaluation/ Assignments/ Group tasks	Lab activity data Rubrics Course outcome	80%	2 years End of the semester
		Courses end survey/ Graduate Survey/ Alumni survey	Survey reports	80%	2 years End of the semester End of the programme
	Team work.	Internal/external Evaluation/ Assignments/ Group tasks	Lab activity data Rubrics Course outcome Project data	80%	2 years End of the semester
		Courses end survey/ Graduate Survey/ Alumni survey	Survey reports	75%	2 years End of the semester End of the programme

Programme outcome 5: Ability to identify, formulates, and solves engineering problems.

Courses	Performance Criteria	Method of Assessment	Sources for data collection	Target for the performance	Length of Assessment Cycle/when the data is collected
GR14D5036: Modern Power Electronics GR14D5038: Modern Control Theory GR14D5039: Power Electronic Control of DC Drives GR14D5056:Reactive power Management GR14D5041:HVDC Transmission GR14D5040:Machine Modeling & GR14D5055: Programmable logic controllers and their applications controllers	identify, formulates, and engineering problems	Internal/external Evaluation/ Assignments/ Group tasks	Lab activity data Rubrics Course outcome	80%	2 years End of the semester
		Courses end survey/ Graduate Survey/ Alumni survey	Survey reports	80%	2 years End of the semester End of the programme

GR14D5045: Special Machines, GR14D5042:Energy Conservation Systems GR14D5047: Power Electronic control of AC GR14D5048: Microcontroller GR14D5054: Advanced Digital Signal GR14D5050:Neural And Fuzzy Systems GR14D5052: Digital Control Systems GR14D5051: Power Quality GR14D5053: Dynamics of Electrical Machines GR14D5049: Flexible AC Transmission	solve engineering problems	Internal/external Evaluation/ Assignments/ Group tasks	Lab activity data Rubrics Course outcome	80%	2 years End of the semester
		Courses end survey/ Graduate Survey/ Alumni Survey	Survey reports	75%	2 years End of the semester End of the programme

Programme outcome 6: Understanding of professional and ethical responsibility.

Courses	**Performance Criteria**	**Method of Assessment**	**Sources for data collection**	**Target for the performance**	**Length of Assessment Cycle/when the data is collected**
GR14D5176:Seminar	professional skills	Internal/external Evaluation/ Assignments/ Group tasks	Lab activity data Rubrics Course outcome	80%	2 years End of the semester
		Courses end survey/ Graduate Survey/ Alumni survey	Survey reports	80%	2 years End of the semester End of the programme
	Ethical skills	Internal/external Evaluation/ Assignments/ Group tasks	Lab activity data Rubrics Course outcome	80%	2 years End of the semester
		Courses end survey/ Graduate Survey/ Alumni survey	Survey reports	75%	2 years End of the semester End of the programme

Programme outcome 7: Ability to communicate effectively.

Courses	**Performance Criteria**	**Method of Assessment**	**Sources for data collection**	**Target for the performance**	**Length of Assessment Cycle/when the data is collected**
	Communication skills	Internal/external Evaluation/ Assignments/ Group tasks	Lab activity data Rubrics Course outcome	80%	2 years End of the semester
					2 years

GR14D5175:Seminar		Courses end survey/ Graduate Survey/ Alumni Survey	Survey reports	80%	End of the semester End of the programme
GR14D5178:Comprehensive Viva	Interpersonal skills	Internal/external Evaluation/ Assignments/ Group tasks	Lab activity data Rubrics Course outcome	80%	2 years End of the semester
		Courses end survey/ Graduate Survey/ Alumni Survey		75%	2 years End of the semester End of the programme

Programme outcome 8: Broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context

Courses	**Performance Criteria**	**Method of Assessment**	**Sources for data collection**	**Target for the performance**	**Length of Assessment Cycle/when the data is collected**
GR14D5044: Solar and Wind Energy GR14D5056:Reactive power Management GR14D5048: Microcontrollers GR14D5050:Neural And Fuzzy Systems GR14D5051: Power Quality GR14D5038: Modern Control Theory	Broad education of engineering solutions in a global, economic context	Internal/external Evaluation/ Assignments/ Group tasks	Lab activity data Rubrics Course outcome Project data	80%	2 years End of the semester
		Courses end survey/ Graduate Survey/ Alumni Survey	Survey reports	80%	2 years End of the semester End of the programme
	engineering solutions in a environmental, and societal context	Internal/external Evaluation/ Assignments/ Group tasks	Lab activity data Rubrics Course outcome	80%	2 years End of the semester
		Courses end survey/ Graduate Survey/ Alumni Survey	Survey reports	75%	2 years End of the semester End of the programme

Programme outcomes 9: Recognition of the need for, and an ability to engage in life-long learning.

Courses	**Performance Criteria**	**Method of Assessment**	**Sources for data collection**	**Target for the performance**	**Length of Assessment Cycle/when the data is collected**
GR14D5036: Modern Power Electronics GR14D5038: Modern Control Theory , GR14D5040: Machine Modeling & Analysis, GR14D5055:		Internal/external Evaluation/ Assignments/	Lab activity data Rubrics Course	80%	2 years End of the semester

Programmable logic controllers and their applications controllers GR14D5039: Power Electronic Control of DC Drives GR14D5048: Microcontrollers GR14D5047: Power Electronic control of AC Drives GR14D5037: Analysis of Power Electronic Converters	Engage in life long learning	Group tasks	outcome		
		Courses end survey/ Graduate Survey/ Alumni Survey	Survey data	80%	2 years End of the semester End of the programme
GR14D5041: HVDC Transmission GR14D5042: Energy Conservation Systems GR14D5045: Special Machines GR14D5049: Flexible AC Transmission Systems (FACTS), GR14D5052: Digital Control Systems GR14D5051: Power Quality GR14D5053: Dynamics of Electrical Machines GR14D5054: Advanced Digital Signal Processing GR14D5050:Neural And Fuzzy Systems	Update future developments In electrical and electronics field	Internal/external Evaluation/ Assignments/ Group tasks	Lab activity data Rubrics Course outcome	80%	2 years End of the semester
		Courses end survey/ Graduate Survey/ Alumni Survey	Survey data	75%	2 years End of the semester End of the programme

Programme outcome 10: Knowledge of contemporary issues, project management and finance.

Courses	**Performance Criteria**	**Method of Assessment**	**Sources for data collection**	**Target for the performance**	**Length of Assessment Cycle/when the data is collected**
GR14D5038: Modern Control Theory GR14D5050:Neural And Fuzzy Systems, GR14D5056:Reactive power Management GR14D5044: Solar and Wind Energy	Knowledge of project management and finance.	Internal/external Evaluation/ Assignments/ Group tasks	Rubrics Course outcome	80%	2 years End of the semester
		Courses end survey/ Graduate Survey/ Alumni survey	Survey data	80%	2 years End of the semester End of the programme
GR14D5055: Programmable logic controllers and their applications GR14D5048: Microcontroller GR14D5069:Embedded Systems	Knowledge of contemporary issues.	Internal/external Evaluation/ Assignments/ Group tasks	Rubrics Course outcome	80%	2 years End of the semester
		Courses end survey/ Graduate Survey/ Alumni survey	Survey data	75%	2 years End of the semester End of the programme

Programme outcome 11: Ability to utilize experimental, statistical and computational methods and tools necessary for engineering practice.

Courses	Performance Criteria	Method of Assessment	Sources for data collection	Target for the performance	Length of Assessment Cycle/when the data is collected
GR14D5038: Modern Control Theory GR14D5040: Machine Modeling & Analysis, GR14D5042: Energy Conservation Systems GR14D5057: Power Converters Lab GR14D5046: Electrical Systems Simulation Lab GR14D5048: Microcontroller GR14D5050:Neural And Fuzzy Systems	Study experimental, statistical and computational methods	Internal/external Evaluation/ Assignments/ Group tasks	Lab activity data Rubrics Course outcome	80%	2 years End of the semester
		Courses end survey/ Graduate Survey/ Alumni survey	Survey data	80%	2 years End of the semester End of the programme
	Hands on experience in computational methods and tools necessary for engineering practice	Internal/external Evaluation/ Assignments/ Group tasks	Lab activity data Rubrics Course outcome	80%	2 years End of the semester
		Courses end survey/ Graduate Survey/ Alumni survey	Survey data	75%	2 years End of the semester End of the programme

Programme outcome 12: Graduates will demonstrate an ability to design electrical and electronic circuits, power electronics, power systems; electrical machines analyze and interpret data and also an ability to design digital and analog systems and programming them.

Courses	Performance Criteria	Method of Assessment	Sources for data collection	Target for the performance	Length of Assessment Cycle/when the data is collected
GR14D5038: Modern Control Theory GR14D5036: Modern Power Electronics GR14D5040: Machine Modeling & Analysis GR14D5039: Power Electronic Control of DC Drives GR14D5046: Electrical Systems Simulation Lab GR14D50: Power Electronic control of AC GR14D5051: Analysis of Power Electronic Converters GR14D5060: Power Converters Lab GR14D5054: HVDC Transmission GR14D5058: Energy Conservation Systems GR14D5058: Special Machines GR14D5063: Flexible AC Transmission Systems (FACTS),	Study experimental, statistical and computational methods	Internal/external Evaluation/ Assignments/ Group tasks	Lab activity data Rubrics Course outcome	80%	2 years End of the semester
		Courses end survey/ Graduate Survey/ Alumni Survey	Survey data	80%	2 years End of the semester End of the programme
	Hands on experience in computational	Internal/external Evaluation/ Assignments/ Group tasks	Lab activity data Rubrics Course outcome	80%	2 years End of the semester

GR14D5065: Digital Control Systems GR14D5066: Power Quality GR14D5059: Dynamics of Electrical Machines GR14D5059: Advanced Digital Signal Processing GR14D5069: Solar and Wind Energy	methods and tools necessary for engineering practice	Courses end survey/ Graduate Survey/ Alumni survey	Survey data	75%	2 years End of the semester End of the programme

d) Summaries of the results of the evaluation processes and an analysis illustrating the extent to which each of the programme outcomes are attained; and

Maintenance and documentation of results: Evaluation of examinations is done through the Examination Branch. Analysis of exam results is done after the results. All the details of results are stored as digital soft copy and printed hard copy format at the examination branch. Model data is enclosed in the annexure. Other internal, mid exam, lab internal data, and surveys data is maintained by the department.

For the batch passing out in 2012-13, the performance indicators are as follows:

Program Outcome	Indicator
a. Ability to apply knowledge of mathematics, science, and engineering.	70 % of students who got 75% or greater pass percentages by year end.
b. Ability to design and conduct experiments, as well as to analyze and interpret data.	85% of students who got 80% or greater lab pass with tool usage rate by year end
c. Ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.	70% of students who acquired 75% or greater knowledge on social and other issues by year end
d. Ability to function on multi-disciplinary teams.	82 % of students who have 75% or greater ability to function in multi/several disciplinary teams rate by year end
e. Ability to identify, formulates, and solves engineering problems.	80% of students who have 80% or greater ability to formulate and solving engineering issues by year end
f. Understanding of professional and ethical responsibility.	75% of students who have 80% or greater understand of ethical and professional responsibility by year end 80% of students are aware on environmental issues
g. Ability to communicate effectively.	80% of students who have 85% or greater ability to communicate effectively
h. Broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.	65% of students who have 80% or greater understand the quality, environmental and social context
i. Recognition of the need for, and an ability to engage in life-long learning.	80% of students who have 85% or greater engage in life-long learning
j. Knowledge of contemporary issues.	75% of students who have an 80% or greater knowledge of other valuable issues
k. Ability to utilize experimental, statistical and computational methods and tools necessary for engineering practice.	80% of students who have an 80% or greater knowledge on experimental and statistical practices
l. Post Graduates will demonstrate an ability to design electrical and electronic circuits, power electronics, power systems; electrical machines analyze and interpret data and also an ability to design digital and analog systems and programming them.	80% of students who have an 85% or greater knowledge on management and project management

EEE Program Outcome	Assessment Evidence Source or Tool
a). Ability to apply knowledge of mathematics, science, and engineering.	Machines,Power Electronics,Power Systems Embeded and control quality assessment review alumni and other surveys Faculty reviews course outcome data
b). Ability to design and conduct experiments, as well as to analyze and interpret data.	Audit of Post Graduate raduating senior transcripts for compliance with distribution requirements alumni, exit other surveys data faculty reviews and results
c). Ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.	Audit of Post Graduate senior transcripts for compliance with distribution requirements requirement for taking EEE courses course/Power Electronics(P.G) outcome data.
d). Ability to function on multi-disciplinary teams.	Mini project, Project Work, Lab work and its outcomes

	with Several Stake holders reviews
e). Ability to identify, formulates, and solves engineering problems.	Courses like MMA,MCT,DCD,ACD and NFS and its outcomes with several surveys and outcomes of the courses.
f). Understanding of professional and ethical responsibility.	audit of Post Graduating senior transcripts reviews of data
g). Ability to communicate effectively..	Results of the courses like Seminars and Comprehensive Reviews of several stake holders
h). Broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.	Results of usage of modern tools and subject outcomes, surveys data analysis
i). Recognition of the need for, and an ability to engage in life-long learning.	alumni and senior faculty survey data
j). Knowledge of contemporary issues.	JNTUH, GRIET , EEE program and PG & requirements alumni survey data
k). Ability to utilize experimental, statistical and computational methods and tools necessary **for e**ngineering practice.	Alumni survey data, Results and Outcomes with several surveys data
l). Post Graduates will demonstrate an ability to design electrical and electronic circuits, power electronics, power systems; electrical machines analyze and interpret data and also an ability to design digital and analog systems and programming them.	Results of usage of modern tools and subject outcomes, surveys data analysis

e) How the results are documented and maintained.

The results of Assessment and evaluation process for attaining PO's are:

- displayed in the website.
- filed in the department and also available with the examination branch.
- maintained by each Course Faculty as a course file with all the results and evaluation details. These results and evaluation are informed and discussed with students.

2.4 Use of Evaluation results towards improvement of the programme (30) — Total Marks : 30.00

2.4.1 Indicate how results of assessment used for curricular improvements (5) — Institute Marks : 5.00

(Articulate with rationale the curricular improvement brought in after the review of the attainment of the POs)

We have introduced the outcome based education system recently. Therefore students, having experienced the learning environment as per new defined PEOs and POs are yet to graduate from the Institute. We have defined POs based on the NBA graduate attributes mapping to curriculum given by affiliating university JNTUH and used the feedback received from the stakeholders through surveys. The continuous process of assignments, direct and indirect assessments and evaluation will lead to the revision and refinement of the POs. We have a system to review the results of the evaluation of our outcome based education system at the end of each academic year.

After receiving results of each semester faculty analyses percentage of pass in his subjects and finds out the average of marks obtained in his course, in order to recommend necessary actions to improve the courses. This process considers exit students survey, professional society survey, alumni survey, employer survey, feedback and rubrics. The improvement of PO attainment can be expected by bringing appropriate changes in course outcomes, curriculum, delivery methods, and assessment and evaluation methods. After receiving inputs from the internal committees Board of Studies, Academic Council will give the final approval for the necessary improvements.

Once the action plan is defined, data for the performance indication is to be collected and analyzed and evaluated by the course coordinator to see the performance. This process continues till the performance improves to the target value.

2.4.2 Indicate how results of assessment used for improvement of course delivery and assessment (10) — Institute Marks : 10.00

(Articulate with rationale the curricular delivery and assessment improvement brought in after the review of the attainment of the POs)

The improvement of PO attainment can be expected by bringing appropriate changes in course outcomes, curriculum, delivery methods, and assessment and evaluation methods. After receiving inputs from the internal committees Board of Studies, Academic Council will give the final approval for the necessary improvements.

1. Meeting between course coordinator and program coordinators.

2. Feedback from students.

3. Analysis of results and finding scope where to improve.

4. Discussion have to improve course development.

2.4.3 State the process used for revising/redefining the POs (15) Institute Marks : 15.00

(Articulate with rationale how the results of the evaluation of POs have been used to review/redefine the POs in line with the Graduate Attributes of the NBA.)

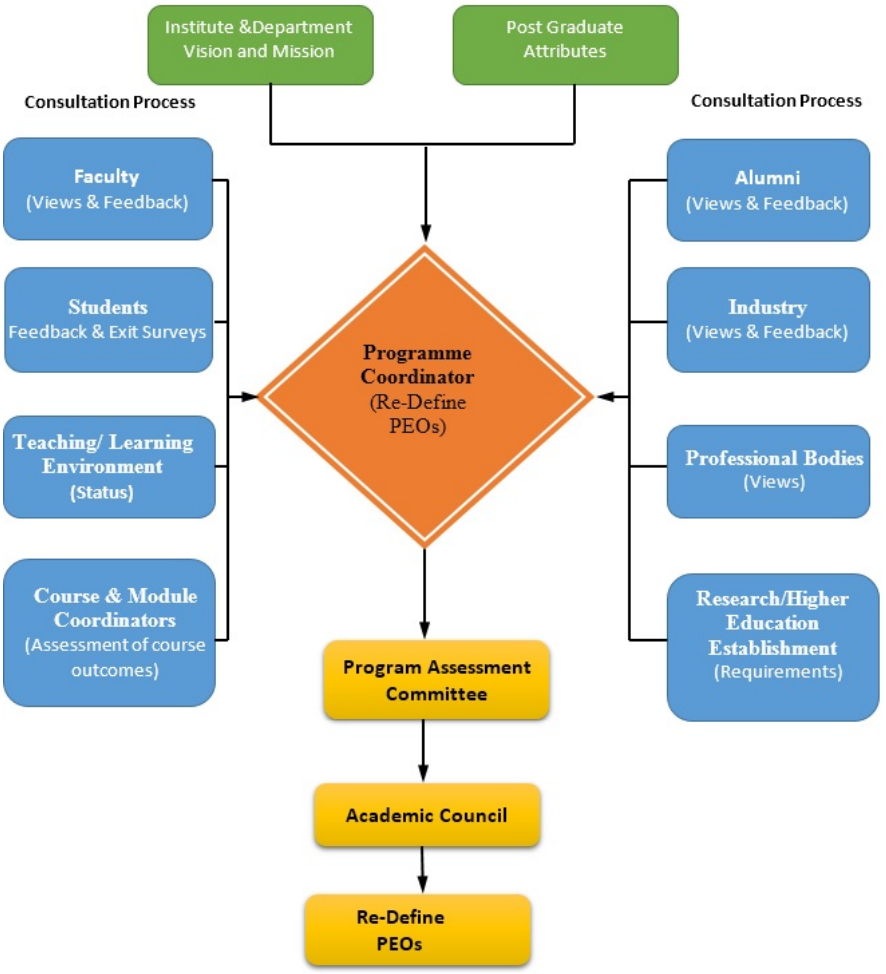


Figure 4

Figure4:- The Process for Redefining PEOs

3 Programme Curriculum (75) **Total Marks : 75.00**

3.1 Curriculum (15) Total Marks : 15.00

3.1.1 Describe the Structure of the Curriculum (5) Institute Marks : 5.00

Curricular Composition	Credits
Theory courses	36
Laboratory courses	4
Seminars	6
Project works	40
Comprehensive Viva	2

3.1.2 Justify how the curricular structure helps for the attainment of the POs and the (10) Institute Marks : 10.00

(Articulate how the curricular structure helps in the attainment of each PO and PEO)

Course Component	Curriculum Content (% of total number of credits of the programme)	Total number of contact hours	Total Number of credits	POs	PEOs
Machines	7	4	3	a,b,c,e,f,h,i,j,k,l	1,2

Control Systems	7	4	3	a,b,c,e,f,h,i,j,k,l	1,2,4
Power Systems	16	8	6	a,b,c,d,e,f,g,h,i,j,k,l	1,2,4
Professional Core(Power Electronics)	48	52	21	a,b,c,d,e,f,g,h,i,j,k,l	1,2,4
Embeded & Computing	22	12	9	a,b,c,d,e,f,g,h,i,j,k,l	1,2,3

3.2 Indicate interaction with R&D organisations / Industry (40)

Total Marks : 40.00

Institute Marks : 40.00

(Give the details of R&D organisations and industry involvement in the programme such as industry-attached laboratories and partial delivery of courses and internship opportunities for students)

Student are encouraged to take internship in the leading industries to get overall expertise on the engineering education in academically relevant work during semester break or vacation time.

Industrial visits are organized to the students along with the faculty members to bridge the gap between theoretical and practical aspects of the curriculum. Experts from industry are invited to interact with the students in every semester so that the students get the latest technical developments in the industry. Department having collaborations with reputed industries and professional bodies so as to move towards practicing Technologies.

- An expert from Industry is included as an active member of Academic Council and also Departments Board of Studies with a very important role in design of the curriculum.
- The institution has MOU's with reputed organizations like Future Tech pvt ltd to strengthen the relationships with industry.
- Department is active associated with TCS in academics.
- Students are encouraged to take realistic problems/ live problems from industry while carrying out the main project which is part of the curriculum carrying credits
- The department also conducts several workshops for students and invites experts from Industry to share knowledge and experience.
- Entering into agreement with consultancies for providing resources and inputs to students for industry orientation programs, for faculty and joint development of innovative products.
- Department organizes several workshops with industry experts for the benefit of the students.

Event name	Any other contributory Inst./ Industry	Developed/ organized by	Resource Persons	Target Audience	Benefits
Industrial Training	BHEL	E.Venkateshwarlu	G.M -BHEL	Second year M.Tech Students	Case study on industrial machines such as AC and DC machines.
Industrial Training	NTPC	S S Nawaz	GM-NTPC	Second year M.Tech Students	Case study on power plant –power generation-transmission lines-working of boiler-turbine
Internship	Airport Authority of Airport	S S Nawaz	GM-AAI	First year M.Tech Students	Operation of gyro, Measuring instruments, ATC.
Internship	HWPM	V.Vijayaramaraju	GM	Second year M.Tech Students	Electrical machines,measuring instruments,PLC
Industrial Training	BHEL	E.Venkateshwarlu	G.M -BHEL	Second year M.Tech Students	Case study on industrial machines such as AC and DC machines.
Internship	SIEMENS	V.Vijayaramaraju	SIEMENS-HRD	Second year M.Tech Students	Automatic relays, sensors, inverters, rectifiers and choppers
LABVIEW	Institution	V.HimaBindu	V.Vijayaramaraju (Assoc. Prof)	Second Year M.Tech Students	Helpful for projects
EAGLE	Institution	G.Swapna	V HimaBindu	SecondYear M.Tech Students	Helpful for projects
PROTEUS	Institution	G Swapna	R Anil Kumar	Second Year M.Tech Students	Helpful for projects
NADCON Workshop	Institution	S S Nawaz	R Anil Kumar	Faculty	Helpful in improvement of education
Staff Development Programme Workshop	Institution	Dr J Praveen	P.S.Raju	Faculty& Staff	Helpful in improvement of education
Mission 10X	Wipro Technologies	Organized by GRIET	Mr. Srinivas	Faculty	Teaching Methodologies
IRM	IIT Bombay	V Vijayaramaraju	Vijayaramaraju (Assoc. Prof)	Faculty & Staff	Helpful in improvement of education
AAKASH FOR EDUCATION	IIT Bombay	V Vijayaramaraju	P. S. Raju	Faculty & Staff	Helpful in improvement of education

(Director)

3.3 Curriculum Development (15)

Total Marks : 15.00

3.3.1 State the process for designing the programme curriculum (5)

Institute Marks : 5.00

(Describe the process that periodically documents and demonstrates how the programme curriculum is evolved considering the PEOs and the POs)

Board of Studies takes responsibility of preparing curriculum of the programme. The curriculum for the programme is developed by considering PEOs and POs, taking the feedback from industry people regarding their expectations and latest developments in technology. The process of defining the curriculum is given below.

Step 1: PEOs and POs are taken as guide lines.

Step 2: A bench mark curriculum of JNTUH (affiliating University), premier institutes like IIT and also from abroad is considered.

Step 3: Relevant credit distribution is done between Mathematics, Science, Humanities, Core and Projects.

Step 4: courses are chosen as per contemporary technology and also industry and higher education requirements.

Step 5: The extent of coverage of depth and breadth are decided to suit the POs through COs

The curriculum gaps are continuously monitored but revision is limited to three years.

3.3.2 Illustrate the measures and processes used to improve courses and curriculum (10)

Institute Marks : 10.00

(Articulate the process involved in identifying the requirements for improvement in courses and curriculum and provide the evidence of continuous improvement of courses and curriculum)

To identify the curricular gaps for attainment of COs/POs we have followed these methods:-

1. *Course feedback collected from the students is analyzed to measure the gap for attainment of COs and POs.*
2. Faculty surveys are considered to identify curriculum gaps for attainment of CO's and PO's. Faculty inputs are valuable because they understand student comprehension and learning abilities better.
3. Based on the COs and POs and using result analysis and surveys, the curricular gaps are ascertained.
4. *'Student Exit surveys' are collected to identify curriculum gaps and the requisite skills for their future endeavors in their career paths.*
5. *Surveys are conducted with industry and the employers of our students, regarding their expectations from our graduates, which are then matched with our COs and POs.*
6. Panel discussions are organized with focus groups such as IE(Institute of Engineering), ISTE(International Society for Technology in Education), IEEE(Institute of Electrical and Electronics Engineers),PES(Power and Energy Society)
7. Institution of Valuers, and other professional bodies to identify the curricular gaps.
8. Feedback is collected from the alumni who has joined in the professional careers or pursuing higher studies or has become entrepreneurs.
9. *The required achievement level of Graduates Attributes are observed to identify gaps in attainment of COs and POs.*

The feedback and surveys being utilized in the process are aimed at analyzing and discerning the extent to which the outcomes are addressed. This includes analysis for missing out on outcomes, by students in case of change in electives; the extent of support by pedagogy and assessments in the development of the students; the attainment of required skills and qualities by students for professional growth. Inputs and suggestions on improvements in courses after result analysis from course coordinators, Guest lecture, web content, video lectures and additional power point presentations of the course shared with the students for further strengthening the course outcomes.

3.4 Course Syllabi (5)

Total Marks : 5.00

Institute Marks : 5.00

(Include, in appendix, a syllabus for each course used. Syllabi format should be consistent and shouldn't exceed two pages.)
The syllabi format may include:
- Department, course number, and title of course
- Designation as a required or elective course
- Pre-requisites
- Contact hours and type of course (lecture, tutorial, seminar, project etc.,.)
- Course Assessment methods (both continuous and semester-end assessment)
- Course outcomes
- Topics covered
- Text books, and/or reference material

File Name
M.Tech(Power Electronics Syllabus)

The Course Syllabi of Electrical Engineering programme consists of general guidelines, academic requirements, attendance requirements, credit requirements and details about curriculum. Each semester modules are given in which courses and laboratory required content is provided. Details about elective subjects and requirement about seminar, comprehensive viva, mini and major project is provided. Finally a requirement for the award of the degree is given.

The syllabi format includes:

- Department, course number, and title of course
- Designation as a required or elective course
- Contact hours and type of course (lecture, tutorial, seminar, project etc.)
- Course Assessment methods (both continuous and semester-end assessment)
- Course Outcomes
- Topics covered
- Text books, and/or reference material

I Year - I SEMESTER

Code	Group	Subject	L	P	Credits
GR14D5036		Modern Power Electronics	3	0	3
GR14D5037		Analysis Of Power Electronic Converters	3	0	3
GR14D5038		Modern Control Theory	3	0	3
GR14D5039		Power Electronic Control Of DC Drives	3	0	3
GR14D5040	Elective -I	Machine Modeling & Analysis	3	0	3
GR14D5041		HVDC Transmission			
GR14D5042		Energy Conservation Systems			
GR14D5043	Elective –II	Digital Control of Power Electronic Systems	3	0	3
GR14D5044		Solar and Wind Energy			
GR14D5045		Special Machines			
GR14D5046	Lab	Electrical Systems Simulation Lab	0	3	2
GR14D5175		Seminar	-	-	2
		Total Credits (6 Theory + 1 Lab.)			22

I Year - II SEMESTER

Code	Group	Subject	L	P	Credits
GR14D5047		Power Electronic Control of AC Drives	3	0	3
GR14D5048		Microcontrollers	3	0	3
GR14D5049		Flexible AC Transmission Systems (FACTS)	3	0	3
GR14D5050		Neural and Fuzzy Systems	3	0	3
GR14D5051	Elective –III	Power Quality			
GR14D5052		Digital Control Systems	3	0	3
GR14D5053		Dynamics of Electrical Machines			
GR14D5054	Elective –IV	Advanced Digital Signal Processing	3	0	3
GR14D5055		Programmable Logic Controllers And Their Applications			
GR14D5056		Reactive Power Compensation and Management			
GR14D5057	Lab	Power Converters Lab	0	3	2
GR14D5176		Seminar	-	-	2
		Total Credits (6 Theory + 1 Lab.)			22

II Year - I SEMESTER

Code	Group	Subject	L	P	Credits
GR14D5178		Comprehensive Viva	-	-	2
GR14D5177		Seminar-III	0	3	2
GR14D5179		Project work	-	-	18
		Total Credits			22

II Year - II SEMESTER

Code	Group	Subject	L	P	Credits

GR14D5180	Project work and Dissertation	-	-	22

COURSE ASSESSMENT METHODS

1. Seminars

2. Mid Exams

3. End Exams

4.Class tests

4 Students' Performance (100) **Total Marks : 85.14**

4.1 Admission intake in the programme (15) **Total Marks : 10.47**

Year	Sanctioned Strength of the Programme	Number of Students Admitted	Percentage of seats filled	Number of Students Admitted with Valid GATE Score/PG entrance of State	Percentage of Students with Valid GATE Score/PG entrance of State
2014-2015	18	12	66.00	11	91.00
2013-2014	18	18	100.00	13	72.00
2012-2013	18	14	77.00	9	64.00
2011-2012	18	13	72.00	11	84.00
2010-2011	18	17	94.00	11	64.00

Average percentage of seats filled through approved procedure 75.00

Average percentage of students admitted with valid GATE Score/PG entrance of state 75.00

Year	Number of Students Admitted	API = Academic Performance Index = Average CGPA or Average Marks on a Scale of 10 (Compiled from the Graduation Records)
2014-2015	12	0.00
2013-2014	18	7.32
2012-2013	14	7.65
2011-2012	13	7.33
2010-2011	17	7.42

Average API 5.94

4.1.1 Number of seats filled through the admission procedure approved (5) Institute Marks : 3.75

Assessment will be based on average percentage of seats filled through approved procedure and points awarded to be proportionate accordingly.

Assessment = 10*75=750

4.1.2 Quality of students as judged from their complete graduation records (5) Institute Marks : 2.97

Assessment = 1.5 □ Average API =8.91

4.1.3 Number of students admitted having a valid GATE score/PG entrance of state (5) Institute Marks : 3.75

Assessment = 10 □ (Average percentage of students admitted with valid GATE score/PG entrance of state)

=10*66=660

4.2 Success Rate (20) **Total Marks : 20.00**

Institute Marks : 20.00

Provide data for the past three batches of students

Assessment = 20 x Average GI
GI = Graduation Index
= (Number of students graduated from the programme) /
(Number of students joined the programme)

Year	Number of Students Graduated from the Programme	Number of Students Joined the Programme	GI
2012-2013 (LYG)	14	14	1.00
2011-2012 (LYGm1)	13	13	1.00
2010-2011 (LYGm2)	17	17	1.00

Average GI 1.00
Assessment 20.00

4.3 Academic Performance (20)

Total Marks : 15.33

Institute Marks : 15.33

Assessment = 2 x Average API
API = Academic Performance Index
= Average CGPA or Average Marks
on a Scale of 10

Item Approximating the API by the following mid-point analysis	2012-2013	2011-2012	2010-2011
9 < Number of students with CGPA < 10	0.00	1.00	0.00
8 < Number of students with CGPA < 9	7.00	3.00	5.00
7 <= 8	6.00	4.00	8.00
6 <= 7	1.00	5.00	4.00
5 <= 6	0.00	0.00	0.00
Total	14.00	13.00	17.00
Approximating API By Mid-CGPA	0.00	0.00	0.00
Mean of CGPA/Percentage of all the students API	7.93	7.50	7.56
Assessment	15.86	15.00	15.12

Average assessment points 15.33

4.4 Placement and Higher Studies (20)

Total Marks : 14.34

Institute Marks : 14.34

Assessment Points = 20 × (x + 3y)/N
where, x = Number of students placed
y = Number of students admitted for higher studies with valid qualifying scores/ranks, and
N = Total number of students who were admitted in the batch to maximum assessment points = 20

Item	LYG	LYGm1	LYGm2
Number of admitted students corresponding to LYG (N)	14.00	13.00	17.00
Number of students who obtained jobs as per the record in the industry/academia	4.00	7.00	12.00
Number of students who opted for higher studies with valid qualifying scores/ranks (y)	1.00	1.00	1.00
Assessment points	10.00	15.38	17.65

Average assessment points 14.34

4.5 Professional Activities (25)

Total Marks : 25.00

4.5.1 Membership in Professional Societies / Chapters and organising engineering events (5)

Institute Marks : 5.00

(Instruction: The institution may provide data for past three years).

GRIET lays stress not only on the academic excellence but also on the beyond academic excellence to make the programme a holistic experience. This is managed by providing time and resources to allow the students to take part in Co and Extracurricular activities which are integrated and spread over the entire academic year. This we believe has a profound impact in shaping the overall personality of a student.

- The activities are pre-planned and included in the College diary.
- The activities are planned and executed by the student bodies of the college with supervision from faculty.
- Pragnya (a tech-fest) and Pulse (a cultural fest) are major annual attractions and widely participated.

To give fillip to beyond-curricular activity, the institution has encouraged registration of its student groups as members in professional societies, chapters such as: Institution of Engineers (IE), Computer Society of India (CSI), Institute of Electrical and Electronic Engineers (IEEE), Institute of Electronic and Telecommunication Engineers (IETE), Society of Automobile Engineers (SAE), Indian Society for Technical Education (ISTE), Indian Concrete Institute (ICI), Free Software Foundation (FSF), Robotics Club, Gaming Club.

The student chapters of professional societies such as IEEE, CSI, Robotic Club, and FSF have been intensely involved in Co-curricular activities giving full benefit and encouragement to the students.

Events organized by the professional societies/chapters during the last three years:

Title	Professional Societies	Date	Achievement / Benefit
GRIET Students' Chapter			Guest Lecture on "Planning, Design and Construction of Metro Rail Project"

	IEI	9/02/2015	
Ruedo	IEEE	19/02/2015	The much awaited environment fest of GRIET was successfully held on the 19th of February, 2015. Over two month's hard work was put in by the NSS wing and Street Cause to organize this one-of-a-kind fest.
Visit to R & D Showcase, IIIT-H	IEEE	24/01/2015	R & D Showcase - 2015 is the fourteenth research and project exhibition of IIITHyderabad, showcasing the prominent research and projects being carried out at the institute.
Technical Talk on Internet of Things	IEEE	31/01/ 2015	The Internet of Things (IOT) is the network of physical objects or "things" embedded with electronics, software, sensors and connectivity to enable it to achieve greater value and service by exchanging data with the manufacturer, operator and/or other connected devices
Android Workshop	IEEE	5 /02/2015 & 6/02/2015	IEEE GRIET SB in collaboration with Jawahar Knowledge Center and Google conducted a two-day Workshop o Android App Development
Student Body Meeting I	IEEE	11/02/2015	Though the session constituted of a competition among the member teams, the chief focus was to develop team skills and creative thinking among the members.
Web Technologies Clusters	IEEE	18/02/2015, 4/03/2015 & 16/03/2015	The series of the Web Technologies Clusters helped the participants to understand and apply the concepts of Web Technologies.
Robotics Clusters	IEEE	21/02/2015 ,12/03/2015 & 04/04/2015	Emphasizing the increasing interest in Robotics in the students, the robotics cluster series helped to ensure that the participants were involved in robot making hands on sessions.
Introduction to Power and Energy Society	IEEE	9/03/2015	The Power an Energy Society was introduced to the students of the concerned branch by Dr. R Balasubramanian, Chairman, Power an Energy Society, IEEE Hyderabad Section.
Selections for PE and Computer Society ExeCom	IEEE	9/03/ 2015	To ensure that the newly formed Societies of the IEEE GRIET Student Chapter are governed by Professionals, IEEE GRIET SB conducted PE and Computer Society ExeCom selections for the second and third year student members of the respective Societies.
Talk on Entrepreneurship	IEEE	13/03/ 2015	Emphasizing the need for the students and young professionals looking upon entrepreneurship as a career option to fetch a substantial understanding of the concepts of the same, the IEEE Hyderabad Section in collaboration with IEEE Young Professionals and IEEE GRIET SB conducted a talk on "Entrepreneurship"
Cognitio '15	IEEE	17/03/2015 & 31/03 2015.	The event is chiefly a contest comprising of three rounds that tests the aptitude, dexterity and reflexes as they tread along a matrix of challenges with technical questions effectively fabricated within them.
IDEAZ 15	ISTE	10/04/2015	In this competition, students from various branches put their presentation skills to test.
Guest lecture	ISTE	23/02/2015	The Students were encouraged to make the right choices in life and to overcome their weakness.
Go green – ruedo'15	ISTE	30/01/2015	" Go Green they say ! A little sapling turns into a tree, beauty in its deed ! We, at ISTE doing our part ! Go Green world.
Intro Session	ISTE	14/08/2014	The event focussed on bringing out the social able person in each student. Attended by over 250 students, it tugged at the social skills of the attendees. Groups of students interacted with each other and advocated their views and shared knowledge on various topics.
Junior ExeCom Recruitment Drive	IEEE	17/7/ 2014	To pass on the legacy of IEEE GRIET SB into professional hands and to provide an insight to the upcoming batches on the function of student branch, IEEE GRIET SB conducted Junior ExeCom selections for the second year students of GRIET.
Student Body Meeting III	IEEE	05/08/ 2014	The main focus of this event was to understand the working of a Government and the way its policies are framed.
Robotics Cluster II	IEEE	12/08/2014	This cluster was aimed to transform the cluster attendees into a team and decide the course of action of the cluster, as the motto of clusters is to provide a working environment for enthusiastic students.
Technical Talk on Ham Radio	IEEE	15/09/2014	On the occasion of Engineer's Day the IEEE Hyderabad Section conducted a technical talk on HAM RADIO by Prof. Miroslav Skoric organized by the IEEE GRIET SB in collaboration with IETE Student Chapter of GRIET at the GRIET Campus, Hyderabad.
Colloquium 14	IEEE	11/10/ 2014	Colloquiums, since their inception have proven to be a quality source of knowledge to the students and faculty alike, about various topics of same origin.
Pragnya 14	IEEE	17/10/2015& 18/10 / 2014	Pragnya, a national level technical symposium conducted by GRIET, has over the years proved itself to be an ace platform for students to test their calibre.
ExeCom '15 Recruitment Dive	IEEE	8 /11/2014	In order to elect the Office Bearers for the upcoming term.
Membership Drive	IEEE	21/12/2015 & 22/ 12/2014	The newly constituted Executive Committee of the SB started off the proceedings for the term of 2014-2015 with the Membership Drive.
Launch of Skill Connect Program	IEEE	27/12/2014	Emphasizing the need for the students to elevate their levels in accordance with the current industry standards Education Society Chapter.
Debate Competition	ISTE	1/11/2014	What is more interesting than two parties advocating their varied views and begin to challenge each other. While the two parties began to debate on nuclear power and its usage, the audience watched in amazement and awe.
National symposium on software 2.0 emerging competencies	CSI	30/04/2013	Workshop conducted for academic improvement
Seminar on "Transformation of Data: from Relation data to Big data"	IEEE	01/03/2013	The seminar aimed at introducing the students to the increasing importance of "Data" in today's technological world and how this continuously multiplying data can be dealt with.
Workshop on "Android Application Development"	IEEE	27/02/2013 to 28/02/2013	The workshop focused on the basic theoretical concepts of android application development tools and practical implementation of these concepts to design a simple application
Seminar on "Research and Education Opportunities in	IEEE	28/01/2013	Emphasized the importance of Data Sciences to the students

Data Sciences"			
Industrial Visit To Center for Electronic Test Engineering (CETE), ECIL, Hyderabad	IEEE	02/01/2013	Exposed to the importance of testing all the electric machinery used in both research and industry in order to prevent any hazardous accidents.
PRAGNYA'12	IEEE	09/10/2012 to 10/10/2012	Prangnya'12 a national level technical symposium offers challenges for people coming from various walks of engineering. The breadth of events extends from the classical paper presentations, to new and demanding events such as carbon trading.
WIE Star Program	IEEE	03/08/2012, 06/08/2012, 16/08/2012	To educate the government school students about the basics of computers, electronics, communication etc., and update them with various developments in technology such as robotics.
IEEE Star Program	IEEE	03/08/2012	This educational outreach program promotes involvement of IEEE members with local junior high and high schools in order to create a positive image of engineering careers.
Open Source Seminar	IEEE & FSF	21/07/2012	The second and third year students attended this seminar where introduction to the concept of open source was given and its uses and advantages were discussed.
Android Seminar	IEEE & FSF	21/07/2012	To let the students know the working of android and its applications
"GRIET Productions" Club	IEEE	31/07/2012	It provides a platform for the students who are interested in photography, cinematography, direction and script writing.
Student Outreach Session	IEEE	25/06/2012	The basic idea of this session is to impart knowledge about safety from peril of addictions by the youngsters.
Robo Project Expo At D.A.V School	Robotic Club	21/04/2012	Display and demo of the projects developed at GRIET
Photoshop Workshop	IEEE & GAP	03/04/2012	This workshop was designed to help youngsters to design posters and edit pictures to a professional level. They were taught different aspects of the Photoshop which can be used in a variety of ways.
Cloud Computing Seminar	IEEE	31/03/2012	The Seminar was a half day session which dealt with the basics of Cloud Computing.
Mobi Tronix Robo Workshop	Robotic Club	09/03/2012 to 10/03/2012	Enhancement of Micro controller concepts, and Embedded system concepts in practical manner
Women's Day Celebration	IEEE	08/03/2012	Emphasizing on how the present day women have managed to overcome so many barriers by making a constant effort to follow their heart and manage their restrictions.

4.5.2 Participation and their outcomes in international/national events (5) Institute Marks : 5.00

(Instruction: The institution may provide data for past three years).

Publications:

Publications / Conferences attended by the Students:

Sl. No.	Name of the Student	Guide Name	National / International	Title of the Paper
1	D Rohan	S S Nawaz(Asst Prof)	National conference on Electrical Sciences (NCES-2014)	Design of shunt active filter for harmonic compensation in power systems
2	D Rohan	S S Nawaz(Asst Prof)	International conference on Innovations in Electrical & Electronics Engineering (ICIEEE-2014)	Design of shunt active filter for harmonic compensation in power systems
3	R Pavan Kumar	M Srikanth(Asst Prof)	National conference on Electrical Sciences (NCES-2014)	cascaded H-Bridge multi level inverter using selective harmonic Elimination technique
4	K Swetha	A Vinay Kumar	International conference on Innovations in Electrical & Electronics Engineering (ICIEEE-2014)	Implementation of Digital Filter to Improve Dynamic Response of a Single Phase PWM Rectifier

Publications / Conferences attended by the Faculty:

Sl. No.	Name of Faculty	Name of Refereed Journal	National / International	Title of the Paper	Year of Publication
1	Dr.J.Praveen	ELSEVIER International journal of Procedia Computer Science	International	Simulation of Artificial Intelligent Controller based DVR for Power Quality Improvement	Procedia Computer Science 47 (2015) 153 – 167, Available online at www.sciencedirect.com
2	Dr.J.Praveen	IOSR-JEEE IOSR Journal Of Electrical and Electronics Engineering	International	Modelling and design of cascaded 9 level voltage source converter based DVR for mitigating the voltage sag,swell, harmonics,transient and flickers in distributed power system	e-ISSN:2278-1676,p-ISSN:2320-3331,vol 10
3	Dr.J.Praveen	International Journal of Scientific & Engineering Research	International	Modeling and Simulation of DVR with Multilevel Inverters to Mitigating the Sag,swell and harmonics	Volume 6,Issue 5,May 2015,ISSN 2229-5518
4	Dr.J.Praveen	International Conference on Proceedings of 15th IRF	International	Design and Simulation of custom power device for power quality improvement in power systems	ISBN:978-93-85465-45-1
5	Dr.J.Praveen	International conference on Innovations in Electrical & Electronics Engineering (ICIEEE-2014)	Intentional	Power Quality Improvement using Z-Source Dynamic Voltage Restorer	pp 435-439.(ISBN-978-93-82163-55-8)September-(5th & 6th)-2014
6	Dr.J.Praveen	National Journal of Technology	National	Various power Quality Issues: Measurement of Flicker and Mitigation of Voltage sag	Sep-14
7	Dr.J.Praveen	International journal on Advances in Electrical and Electronic Engineering	International	Kalman Filter Based Unified Power Quality Conditioner For Output Regulation	Vol 4, No.3, 2014, Research India Publications PP 247-252. ISSN 2231-1297
8	Dr.J.Praveen	International Journal of Electrical, Electronics and Telecommunications Engineering	International	A New Multi-functional DVR for Compensation of Voltage Sag	ISSN: 2051-3240, Vol.45,2014 Special Issue.1 – pp 526-531
9	D.V.Pushpalatha	InderScience Publishers	International	Design of Fractional Model Reference Adaptive PID Controller to Magnetic Levitation System with Permagnet	communicated in Dec. 2014
10	D.V.Pushpalatha	IJEPES, Elsvier Publishers	International	Dynamic Response of Fuzzy and PID controller based DC motor system using LabView	communicated in Dec. 2014
11	D.V.Pushpalatha	Processing and Fabrication of Advanced Materials XXIII	International	Study the Effect of Temperature on the Properties of ASS-304 Using ANN	Vol.2,pp 1186-1192, Dec 5 -7 2014.
12	D.V.Pushpalatha	Journal of Intelligent and Fuzzy Systems	Online	Design of Prisoner's Dilemma Based Fuzzy C-Means Computed Torque Controller with Lyapunov Synthesis Linguistic Model for PUMA-560 Robot Manipulator	ISSN: print: 1064-1246; online: 1875-8967,June, 2014.
13	D.V.Pushpalatha	InderScience Publishers	Internationa	Design of Fractional Model Reference Adaptive PID Controller to Magnetic Levitation System with Permagnet	Dec. 2014
14	D.V.Pushpalatha	National conference on Contemporary Control(CONCON-2014)	National	Ultrasonic RADAR system Using Arduino	November-(20-21),2014

15	D.V.Pushpalatha	National conference on Contemporary Control(CONCON-2014)	National	Speed Control of DC Motor using Arduino	November-(20-21),2014
16	D.V.Pushpalatha	National conference on Contemporary Control(CONCON-2014)	National	Design of Line following Robot Using Arduino	November-(20-21),2014
17	Dr.J.Sridevi	Int. Journal of Engineering Research and Applications	International	Implementation Of Thyristor Controlled Series Capacitor (TCSC) In Transmission Line Model Using Arduino	ISSN : 2248-9622, Vol. 4, Issue 9(Version 5), pp.114-117, September 2014
18	P.Srividya Devi	National conference on Contemporary Control(CONCON-2014)	National	Ultrasonic RADAR system Using Arduino	November-(20-21),2014
19	P.Srividya Devi	National conference on Contemporary Control(CONCON-2014)	National	Speed Control of DC Motor using Arduino	November-(20-21),2014
20	P.Srividya Devi	National conference on Contemporary Control(CONCON-2014)	National	Design of Line following Robot Using Arduino	November-(20-21),2014
21	P.Sirisha	National conference on Contemporary Control(CONCON-2014)	National	Ultrasonic RADAR system Using Arduino	November-(20-21),2014
22	P.Sirisha	National conference on Contemporary Control(CONCON-2014)	National	Design of Line following Robot Using Arduino	November-(20-21),2014
23	A.Vinay Kumar	National Journal OF Technology	National	Various power Quality Issues: Measurement of Flicker and Mitigation of Voltage sag	Sep-14
24	D.Rohan	International conference on Innovations in Electrical & Electronics Engineering (ICIEEE-2014)	International	Design of shunt active filter for harmonic compensation in power systems	September-(5th & 6th)-2014
25	Syed Sarfarz Nawaz	International conference on Innovations in Electrical & Electronics Engineering (ICIEEE-2014)	International	Design of shunt active filter for harmonic compensation in power systems	September-(5th & 6th)-2014
26	M.Srikanth	National conference on Electrical Sciences (NCES-2014)	National	cascaded H-Bridge multi level inverter using selective harmonic Elimination technique	July-26-2014
27	Syed Sarfarz Nawaz	National conference on Electrical Sciences (NCES-2014)	National	Design of shunt active filter for harmonic compensation in power systems	July-26-2014
28	D.Rohan	National conference on Electrical Sciences (NCES-2014)	National	Design of shunt active filter for harmonic compensation in power systems	July-26-2014
29	P.Mallikarjuna Sarma	International Journal of Latest Trends in Engineering and Technology (IJLTET)	International	Automatic Street Lighting using PLC	July 2013
30	P.Mallikarjuna Sarma	International Journal of Latest Trends in Engineering and Technology (IJLTET)	International	Appliance Remote Control Using Arduino	July 2013
31	P.Mallikarjuna Sarma	International journal of engineering trends and technology	International	Hardware implementation of single phase Inverter	August 2013
32	P.Mallikarjuna Sarma	Research Journal of Engineering	National	“Measurement of power and energy using	October **(2013).**

		Sciences		Arduino"	
33	Dr.D.V.Pushpa Latha	National Conference on Contemporary control and Soft computing in Electrical Engineering	National	System identification of dc motor-generator set using matlab/labview	May 2013.
34	Dr.D.V.Pushpa Latha	Research Journal of Engineering Sciences	National	Millenium3 PLC based Temperature Control using LM35	June 2013.
35	Dr.D.V.Pushpa Latha	IEEE Workshop on Computational Intelligence: Theories, Applications and Future Directions	National	Fuzzy C-Means Controller for a PUMA-560-Robot manipulator	July 2013
36	Dr.D.V.Pushpa Latha	(IJETED), RS Publication	International	Soil Moisture and Temperature sensor based intelligent irrigation water pump controlling system using PIC 16F72 Microcontroller	July, 2013
37	Dr.D.V.Pushpa Latha	IJLTET	International	Simulation of PLC based Smart Street Lighting Control using LDR	July , 2013
38	Dr.D.V.Pushpa Latha	Research Journal of Engineering Sciences	National	Measurement of power and energy using Arduino	October (2013)
39	Dr.D.V.Pushpa Latha	International Journal of Electronics and Electrical Engineering (IJEEE)	International	On line speed control of PMDC motor using Auto tuning PID through LabVIEW	December, 2013
40	Dr.D.V.Pushpa Latha	IJISA	International	PLC based Smart Street Lighting Control",	2013
41	Dr.D.V.Pushpa Latha	International Journal of Fuzzy Logic Systems (IJFLS)	International	Design of Lyapunov based Fuzzy Logic Controller for PUMA-560 robot manipulator	December 2013
42	Dr J Praveen	International conference on Emerging Trends in Engineering	International	Adoption of Synchrophasor Technology in Indian Grid Failures & Blackouts	22nd&23rd Feb,2013
43	Dr J Praveen	International Journal of International Organization of Scientific Research	International	Adoption of Synchrophasor Technology in Indian Grid Failures & Blackouts	2013
44	Dr J Praveen	International Journal of Electrical , Electronics and Telecommunication Engineering	International	A Seven Level Cascaded Multilevel Inverter Based Dynamic Voltage Restorer	March 2013
45	Dr J Praveen	International Journal of Electrical and Electronics Engineering Research	International	Power Quality Improvement, Thd Analysis Using Dstatcom For Low Voltage System	March31, 2013
46	Dr J Praveen	International Journal of Electrical and Electronics Engineering Research (IJEEER)	International	Design and Simulation of New Z Source Inverter for Improving Voltage Quality	Aug 2013
47	Dr J Praveen	National Conference on Advanced research methodologies in Electrical Engineering	National	Modernization of Indian Grid System by Developing Ultrafast Measurement System Known as Synchro Phasors Technology Using GPS in PMU's to Avoid System Failure	June 27th & 28th ,2013
48	Dr J Praveen	International Conference on Intelligent and Efficient Electrical Systems	International	Various power Quality issues :Measurement of Flicker and Mitigation of Voltage sag	12-14 Dec 2013
49	Dr J Praveen	National Conference on "Power Quality and Industrial Drives	National	Measurement of Voltage Filcker and Mitigation of Voltage Sag to improvise the power Quality	July12-13th 2013
		International journal of engineering		Automatic Solar	

50	M.Chakravahy	trends and technology	International	tracking using Crouzet Millenium PLC	August 2013
51	M.Chakravahy	International journal of engineering trends and technology	International	Hardware implementation of single phase Inverter	August 2013
52	Swati Devabhaktuni	National Conference on Contemporary control and Soft computing in Electrical Engineering	National	Speed control of separately excited d.c motor using chopper	May, 2013
53	Swati Devabhaktuni	National Conference on Contemporary control and Soft computing in Electrical Engineering	National	Labview Based Temperature Control Using LM 35	May 2013.
54	Swati Devabhaktuni	Research Journal of Engineering Sciences	National	Millenium3 PLC based Temperature Control using LM35	June 2013
55	Swati Devabhaktuni	IJISA	International	PLC based Smart Street Lighting Control",	2013
56	Swati Devabhaktuni	International journal of emerging trends in engineering and development	International	'Soil moisture and temperature sensor based intelligent irrigation water pump controlling system using PIC16F72 microcontroller	
57	Swati Devabhaktuni	*International Journal of Electronics and Electrical Engineering*	*International*	On Line Speed Control of PMDC Motor Using Auto Tuning PID through LabVIEW	*December, 2013*
58	Swati Devabhaktuni	Carib.j.SciTech	*International*	Power quality improvement of self-excited induction enerator using Multipulse AC-DC converters - A comparison	2013
59	J.Sridevi	International science congress association research journal of engineering	International	A new active power factor correction using boost converter	Aug,2013.
60	A.Vinaykumar	International Conference on Intelligent and Efficient Electrical Systems	International	Various power Quality issues :Measurement of Flicker and Mitigation of Voltage sag	12-14 Dec 2013
61	A.Vinay kumar	National Conference on "Power Quality and Industrial Drives"	National	Measurement of Voltage Filcker and Mitigation of Voltage Sag to improvise the power Quality	July12-13 2013
62	G.Swapna,	International journal of engineering trends and technology	International	Hardware implementation of single phase Inverter	August 2013
63	V.Himabindu	International journal of engineering trends and technology	International	Hardware implementation of single phase Inverter	August 2013
64	V.V.S.Madhuri	International Journal of Latest Trends in Engineering and Technology (IJLTET)	International	Automatic Street Lighting using PLC	July 2013
65	V.V.S.Madhuri	International journal of latest trends in engineering and technology(IJLTET)	International	Automatic Solar tracking using Crouzet Millenium PLC	July 2013
66	M.N.SandhyaRani	International Journal of Latest Trends in Engineering and Technology (IJLTET)	International	Automatic Street Lighting using PLC	July 2013
67	M.N. SandhyaRani	International Journal of Latest Trends in Engineering and Technology (IJLTET)	International	Appliance Remote Control Using Arduino	July 2013
		Research Journal of		Measurement of power	

68	P.SrividyaDevi	Engineering Sciences	National	and energy using Arduino	October **(2013)**
69	M.Rekha	National Conference on Contemporary control and Soft computing in Electrical Engineering	National	System identification of dc motor-generator set using matlab/labview	May, 2013
70	P.Prasanth Kumar	International Journal of Engineering Research and Technology(IJERT)	International	Development and testing of Non-Isolated Boost Converter",International Journal of Engineering Research and Technology(IJERT)	August 2013
71	P.SrividyaDevi	Research Journal of Engineering Sciences	National	Measurement of power and energy using Arduino	October **(2013)**
72	M.Rekha	National Conference on Contemporary control and Soft computing inElectrical Engineering	National	System identification of dc motor-generator set using matlab/labview	May, 2013
73	P.Prasanth Kumar	International Journal of Engineering Research and Technology(IJERT)	International	Development and testing of Non-Isolated Boost Converter",International Journal of Engineering Research and Technology(IJERT)	August 2013

4.5.3 Publication and awards in international/national events (10) Institute Marks : 10.00

(Instruction: The institution may list the publications mentioned earlier along with the names of the editors, publishers, etc.).

Awards:

Design of shunt active filter for harmonic compensation in power systems awarded as Best Paper In National conference on Electrical Sciences (NCES-2014) presented by D Rohan

Publications / Conferences attended by the Students:

Sl. No.	Name of the Student	Guide Name	National / International	Title of the Paper
1	D Rohan	S S Nawaz(Asst Prof)	National conference on Electrical Sciences (NCES-2014)	Design of shunt active filter for harmonic compensation in power systems
2	D Rohan	S S Nawaz(Asst Prof)	International conference on Innovations in Electrical & Electronics Engineering (ICIEEE-2014)	Design of shunt active filter for harmonic compensation in power systems
3	R Pavan Kumar	M Srikanth(Asst Prof)	National conference on Electrical Sciences (NCES-2014)	cascaded H-Bridge multi level inverter using selective harmonic Elimination technique
4	K Swetha	A Vinay Kumar	International conference on Innovations in Electrical & Electronics Engineering (ICIEEE-2014)	Implementation of Digital Filter to Improve Dynamic Response of a Single Phase PWM Rectifier

Publications / Conferences attended by the Faculty:

Sl. No.	Name of Faculty	Name of Refereed Journal	National / International	Title of the Paper	Year of Publication
				Simulation of Artificial	Procedia Computer Science 47 (2015) 153

1	Dr.J.Praveen	ELSEVIER International journal of Procedia Computer Science	International	Intelligent Controller based DVR for Power Quality Improvement	– 167, Available online at www.sciencedirect.com
2	Dr.J.Praveen	IOSR-JEEE IOSR Journal Of Electrical and Electronics Engineering	International	Modelling and design of cascaded 9 level voltage source converter based DVR for mitigating the voltage sag,swell, harmonics,transient and flickers in distributed power system	e-ISSN:2278-1676,p-ISSN:2320-3331,vol 10
3	Dr.J.Praveen	International Journal of Scientific & Engineering Research	International	Modeling and Simulation of DVR with Multilevel Inverters to Mitigating the Sag,swell and harmonics	Volume 6,Issue 5,May 2015,ISSN 2229-5518
4	Dr.J.Praveen	International Conference on Proceedings of 15th IRF	International	Design and Simulation of custom power device for power quality improvement in power systems	ISBN:978-93-85465-45-1
5	Dr.J.Praveen	International conference on Innovations in Electrical & Electronics Engineering (ICIEEE-2014)	Intentional	Power Quality Improvement using Z-Source Dynamic Voltage Restorer	pp 435-439.(ISBN-978-93-82163-55-8)September-(5th & 6th)-2014
6	Dr.J.Praveen	National Journal of Technology	National	Various power Quality Issues: Measurement of Flicker and Mitigation of Voltage sag	Sep-14
7	Dr.J.Praveen	International journal on Advances in Electrical and Electronic Engineering	International	Kalman Filter Based Unified Power Quality Conditioner For Output Regulation	Vol 4, No.3, 2014, Research India Publications PP 247-252. ISSN 2231-1297
8	Dr.J.Praveen	International Journal of Electrical, Electronics and Telecommunications Engineering	International	A New Multi-functional DVR for Compensation of Voltage Sag	ISSN: 2051-3240, Vol.45,2014 Special Issue.1 – pp 526-531
9	D.V.Pushpalatha	InderScience Publishers	International	Design of Fractional Model Reference Adaptive PID Controller to Magnetic Levitation System with Permagnet	communicated in Dec. 2014
10	D.V.Pushpalatha	IJEPES, Elsvier Publishers	International	Dynamic Response of Fuzzy and PID controller based DC motor system using LabView	communicated in Dec. 2014
11	D.V.Pushpalatha	Processing and Fabrication of Advanced Materials XXIII	International	Study the Effect of Temperature on the Properties of ASS-304 Using ANN	Vol.2,pp 1186-1192, Dec 5 -7 2014.
12	D.V.Pushpalatha	Journal of Intelligent and Fuzzy Systems	Online	Design of Prisoner's Dilemma Based Fuzzy C-Means Computed Torque Controller with Lyapunov Synthesis Linguistic Model for PUMA-560 Robot Manipulator	ISSN: print: 1064-1246; online: 1875-8967,June, 2014.
13	D.V.Pushpalatha	InderScience Publishers	Internationa	Design of Fractional Model Reference Adaptive PID Controller to Magnetic Levitation System with Permagnet	Dec. 2014
14	D.V.Pushpalatha	National conference on Contemporary Control(CONCON-2014)	National	Ultrasonic RADAR system Using Arduino	November-(20-21),2014
15	D.V.Pushpalatha	National conference on Contemporary Control(CONCON-2014)	National	Speed Control of DC Motor using Arduino	November-(20-21),2014

16	D.V.Pushpalatha	National conference on Contemporary Control(CONCON-2014)	National	Design of Line following Robot Using Arduino	November-(20-21),2014
17	Dr.J.Sridevi	Int. Journal of Engineering Research and Applications	International	Implementation Of Thyristor Controlled Series Capacitor (TCSC) In Transmission Line Model Using Arduino	ISSN : 2248-9622, Vol. 4, Issue 9(Version 5), pp.114-117, September 2014
18	P.Srividya Devi	National conference on Contemporary Control(CONCON-2014)	National	Ultrasonic RADAR system Using Arduino	November-(20-21),2014
19	P.Srividya Devi	National conference on Contemporary Control(CONCON-2014)	National	Speed Control of DC Motor using Arduino	November-(20-21),2014
20	P.Srividya Devi	National conference on Contemporary Control(CONCON-2014)	National	Design of Line following Robot Using Arduino	November-(20-21),2014
21	P.Sirisha	National conference on Contemporary Control(CONCON-2014)	National	Ultrasonic RADAR system Using Arduino	November-(20-21),2014
22	P.Sirisha	National conference on Contemporary Control(CONCON-2014)	National	Design of Line following Robot Using Arduino	November-(20-21),2014
23	A.Vinay Kumar	National Journal OF Technology	National	Various power Quality Issues: Measurement of Flicker and Mitigation of Voltage sag	Sep-14
24	D.Rohan	International conference on Innovations in Electrical & Electronics Engineering (ICIEEE-2014)	International	Design of shunt active filter for harmonic compensation in power systems	September-(5th & 6th)-2014
25	Syed Sarfarz Nawaz	International conference on Innovations in Electrical & Electronics Engineering (ICIEEE-2014)	International	Design of shunt active filter for harmonic compensation in power systems	September-(5th & 6th)-2014
26	M.Srikanth	National conference on Electrical Sciences (NCES-2014)	National	cascaded H-Bridge multi level inverter using selective harmonic Elimination technique	July-26-2014
27	Syed Sarfarz Nawaz	National conference on Electrical Sciences (NCES-2014)	National	Design of shunt active filter for harmonic compensation in power systems	July-26-2014
28	D.Rohan	National conference on Electrical Sciences (NCES-2014)	National	Design of shunt active filter for harmonic compensation in power systems	July-26-2014
29	P.Mallikarjuna Sarma	International Journal of Latest Trends in Engineering and Technology (IJLTET)	International	Automatic Street Lighting using PLC	July 2013
30	P.Mallikarjuna Sarma	International Journal of Latest Trends in Engineering and Technology (IJLTET)	International	Appliance Remote Control Using Arduino	July 2013
31	P.Mallikarjuna Sarma	International journal of engineering trends and technology	International	Hardware implementation of single phase Inverter	August 2013
32	P.Mallikarjuna Sarma	Research Journal of Engineering Sciences	National	“Measurement of power and energy using Arduino”	October (2013).
33	Dr.D.V.Pushpa	National Conference on Contemporary control and Soft	National	System identification of dc motor-generator set	May 2013.

	Latha	computing in Electrical Engineering		using matlab/labview	
34	Dr.D.V.Pushpa Latha	Research Journal of Engineering Sciences	National	Millenium3 PLC based Temperature Control using LM35	June 2013.
35	Dr.D.V.Pushpa Latha	IEEE Workshop on Computational Intelligence: Theories, Applications and Future Directions	National	Fuzzy C-Means Controller for a PUMA-560-Robot manipulator	July 2013
36	Dr.D.V.Pushpa Latha	(IJETED), RS Publication	International	Soil Moisture and Temperature sensor based intelligent irrigation water pump controlling system using PIC 16F72 Microcontroller	July, 2013
37	Dr.D.V.Pushpa Latha	IJLTET	International	Simulation of PLC based Smart Street Lighting Control using LDR	July , 2013
38	Dr.D.V.Pushpa Latha	Research Journal of Engineering Sciences	National	Measurement of power and energy using Arduino	October **(2013)**
39	Dr.D.V.Pushpa Latha	International Journal of Electronics and Electrical Engineering (IJEEE)	International	On line speed control of PMDC motor using Auto tuning PID through LabVIEW	December, 2013
40	Dr.D.V.Pushpa Latha	IJISA	International	PLC based Smart Street Lighting Control",	2013
41	Dr.D.V.Pushpa Latha	International Journal of Fuzzy Logic Systems (IJFLS)	International	Design of Lyapunov based Fuzzy Logic Controller for PUMA-560 robot manipulator	December 2013
42	Dr J Praveen	International conference on Emerging Trends in Engineering	International	Adoption of Synchrophasor Technology in Indian Grid Failures & Blackouts	22nd&23rd Feb,2013
43	Dr J Praveen	International Journal of International Organization of Scientific Research	International	Adoption of Synchrophasor Technology in Indian Grid Failures & Blackouts	2013
44	Dr J Praveen	International Journal of Electrical , Electronics and Telecommunication Engineering	International	A Seven Level Cascaded Multilevel Inverter Based Dynamic Voltage Restorer	March 2013
45	Dr J Praveen	International Journal of Electrical and Electronics Engineering Research	International	Power Quality Improvement, Thd Analysis Using Dstatcom For Low Voltage System	March31, 2013
46	Dr J Praveen	International Journal of Electrical and Electronics Engineering Research (IJEEER)	International	Design and Simulation of New Z Source Inverter for Improving Voltage Quality	Aug 2013
47	Dr J Praveen	National Conference on Advanced research methodologies in Electrical Engineering	National	Modernization of Indian Grid System by Developing Ultrafast Measurement System Known as Synchro Phasors Technology Using GPS in PMU's to Avoid System Failure	June 27th & 28th ,2013
48	Dr J Praveen	International Conference on Intelligent and Efficient Electrical Systems	International	Various power Quality issues :Measurement of Flicker and Mitigation of Voltage sag	12-14 Dec 2013
49	Dr J Praveen	National Conference on "Power Quality and Industrial Drives	National	Measurement of Voltage Filcker and Mitigation of Voltage Sag to improvise the power Quality	July12-13th 2013
50	M.Chakravahy	International journal of engineering trends and technology	International	Automatic Solar tracking using Crouzet Millenium PLC	August 2013
		International journal of engineering		Hardware	

51	M.Chakravahy	trends and technology	International	implementation of single phase Inverter	August 2013
52	Swati Devabhaktuni	National Conference on Contemporary control and Soft computing in Electrical Engineering	National	Speed control of separately excited d.c motor using chopper	May, 2013
53	Swati Devabhaktuni	National Conference on Contemporary control and Soft computing in Electrical Engineering	National	Labview Based Temperature Control Using LM 35	May 2013.
54	Swati Devabhaktuni	Research Journal of Engineering Sciences	National	Millenium3 PLC based Temperature Control using LM35	June 2013
55	Swati Devabhaktuni	IJISA	International	PLC based Smart Street Lighting Control",	2013
56	Swati Devabhaktuni	International journal of emerging trends in engineering and development	International	'Soil moisture and temperature sensor based intelligent irrigation water pump controlling system using PIC16F72 microcontroller	
57	Swati Devabhaktuni	*International Journal of Electronics and Electrical Engineering*	*International*	On Line Speed Control of PMDC Motor Using Auto Tuning PID through LabVIEW	*December, 2013*
58	Swati Devabhaktuni	Carib.j.SciTech	*International*	Power quality improvement of self-excited induction enerator using Multipulse AC-DC converters - A comparison	2013
59	J.Sridevi	International science congress association research journal of engineering	International	A new active power factor correction using boost converter	Aug,2013.
60	A.Vinaykumar	International Conference on Intelligent and Efficient Electrical Systems	International	Various power Quality issues :Measurement of Flicker and Mitigation of Voltage sag	12-14 Dec 2013
61	A.Vinay kumar	National Conference on "Power Quality and Industrial Drives"	National	Measurement of Voltage Filcker and Mitigation of Voltage Sag to improvise the power Quality	July12-13 2013
62	G.Swapna,	International journal of engineering trends and technology	International	Hardware implementation of single phase Inverter	August 2013
63	V.Himabindu	International journal of engineering trends and technology	International	Hardware implementation of single phase Inverter	August 2013
64	V.V.S.Madhuri	International Journal of Latest Trends in Engineering and Technology (IJLTET)	International	Automatic Street Lighting using PLC	July 2013
65	V.V.S.Madhuri	International journal of latest trends in engineering and technology(IJLTET)	International	Automatic Solar tracking using Crouzet Millenium PLC	July 2013
66	M.N.SandhyaRani	International Journal of Latest Trends in Engineering and Technology (IJLTET)	International	Automatic Street Lighting using PLC	July 2013
67	M.N. SandhyaRani	International Journal of Latest Trends in Engineering and Technology (IJLTET)	International	Appliance Remote Control Using Arduino	July 2013
68	P.SrividyaDevi	Research Journal of Engineering Sciences	National	Measurement of power and energy using Arduino	October **(2013)**
		National Conference on Contemporary			

69	M.Rekha	control and Soft computing in Electrical Engineering	National	System identification of dc motor-generator set using matlab/labview	May, 2013
70	P.Prasanth Kumar	International Journal of Engineering Research and Technology(IJERT)	International	Development and testing of Non-Isolated Boost Converter",International Journal of Engineering Research and Technology(IJERT)	August 2013
71	P.SrividyaDevi	Research Journal of Engineering Sciences	National	Measurement of power and energy using Arduino	October **(2013)**
72	M.Rekha	National Conference on Contemporary control and Soft computing inElectrical Engineering	National	System identification of dc motor-generator set using matlab/labview	May, 2013
73	P.Prasanth Kumar	International Journal of Engineering Research and Technology(IJERT)	International	Development and testing of Non-Isolated Boost Converter",International Journal of Engineering Research and Technology(IJERT)	August 2013

4.5.4 Entrepreneurship initiatives and innovations (5) Institute Marks : 5.00

(Instruction: The institution may specify the efforts and achievements.)

Entrepreneurship Development Cell takes initiatives for motivating students in product designs and innovations concerned with the individual specialty.

Departmental Level Entrepreneurial Activities:

Event	Event Name / Effort	Achievements
2014-2015		
Entrepreneurship Initiatives	Arduino Interfacing with LabVIEW Software. PCB design work shop (EAGLE software)	All student projects are brought to the level of manufacturing
Product Designs	Power supply Board, Micro Controller Kit, IGBT Driver Card, Relay Board, Stepper Motor Driver, Remote Control Home Appliances, SMPS, Power Quality Analyzer	All student projects are brought to the level of manufacturing
Innovations	Tabletop machine controls	Made as a product
2013-2014		
Entrepreneurship Initiatives	PCB design work shop (EAGLE software)	All student projects are brought to the level of manufacturing
Product Designs	Table Top Machines – Automation & Manual, Voltage Sensor Card, Current Sensor Card, Water Level Controller, Cage Brightening Station, Power Factor Improvement Induction Motor	All student projects are brought to the level of manufacturing
Innovations	Tabletop machine controls	Made as a product
2012-2013		
Entrepreneurship Initiatives	PCB design work shop (EAGLE software)	All student projects are brought to the level of manufacturing
Product Designs	Automated Starter of Induction motor using PLC, DC Drive, PIC Micro Controller, Speed Control of DC Machine using Millennium PLC and LABVIEW	All student projects are brought to the level of manufacturing
Innovations	Tabletop machine controls	Made as a product

Institute Level Entrepreneurial Activities:

Year	Event	Achievement/ Impact
2014-15	1.Faculty Development programme in Entrepreneurship sponsored by NSTEDB ,organized by center for Entrepreneurship Development (CED). 2. Conducted Guest lecture on "Industrial opportunities,Entrepreneurship and soft skills" 3. Constituting managing committee for implementation of the scheme support for Entrepreneurial and managerial Development of SMEs through Incubators.	1. Establishment of Incubation center 2. Students actively joining family business. 3. process and practice of entrepreneurship development, communication and inter-personal skills, creativity, problem solving, achievement motivation training.
2013-14	1. conducted a competition on exhibiting and product development. 2. Organized a guest lecture on Creativity and innovation. 3. Conducted Round table discussion on Employability initiatives in life sciences segment.	
2012-13	1. conducted a CEO speak Session on "The Entrepreneurial Journey". 2. Conducted a guest lecture on "Entrepreneur opportunities and challenges " 4. Submitted propoasl for implementation of the scheme "support support for Entrepreneurial and managerial Development of SMEs through Incubators".	

5 Faculty Contributions (200) **Total Marks : 171.33**

List of Faculty Members:

Exclusively for the Programme / Shared with other Programmes

(Instruction: The institution may complete this table for the calculation of the student-teacher ratio (STR). Teaching loads of the faculty member contributing to only undergraduate programme (2nd, 3rd, and 4th year) are considered to calculate the STR.)

Faculty Profile

For CAYm2 2012-2013

Name of the faculty member	Highest Qualification	University	Year of graduation	Designation	date of joining the institution	Distribution of teaching load (%)			Number of research publications in journals and conferences	IPRs	R&D and consultancy work with amount		Holding an incubation unit	Inte v ou w
						1st Year	UG	PG			Funding Agency	Amount		
														Insti

Dr.S.N.Saxena	PhD	University of Tokyo	1974	Professor	26/11/2004	0.00 0.00 100.00	38	Design	None	0.00	yes	of emin in In
P.S.Raju	ME/ M Tech	Andhra University	1968	Professor	05/11/1997	0.00 50.00 50.00	18	Design	national agency	300000.00	yes	Insti of emin in In
P.M Sarma	ME/ M Tech	Andhra University	1974	Professor	16/08/2000	0.00 50.00 50.00	9	Design	national agency	300000.00	yes	Insti of emin in In
Dr.J.Praveen	PhD	Osmania University	2007	Professor	20/02/2013	0.00 0.00 100.00	62	Design	None	0.00	yes	Insti of emin in In
Dr. D V Pushpa Latha	PhD	Andhra University	2012	Professor	08/06/2012	0.00 0.00 100.00	10	Design	None	0.00	yes	Insti of emin in In
V.Vijayaramaraju	ME/ M Tech	NIT Warangal	2001	Associate Professor	05/05/2005	0.00 50.00 50.00	7	Design	national agency	200000.00	yes	Insti of emin in In
M.Chakravarthy	ME/ M Tech	JNTUK	2005	Associate Professor	31/08/1999	0.00 50.00 50.00	9	Design	national agency	200000.00	yes	Insti of emin in In
J.Sridevi	ME/ M Tech	Andhra University	2006	Associate Professor	18/06/2007	0.00 100.00 0.00	3	Design	None	0.00	yes	Insti of emin in In
D.Swathi	ME/ M Tech	JNTUA	2006	Associate Professor	17/09/2007	0.00 100.00 0.00	3	Design	None	0.00	yes	Insti of emin in In
E. Venkateshwarlu	ME/ M Tech	JNTUH	2010	Associate Professor	01/08/2007	0.00 100.00 0.00	3	Design	None	0.00	yes	Insti of emin in In
M.Srikanth	ME/ M Tech	JNTUH	2008	Assistant Professor	08/10/2007	0.00 100.00 0.00	3	Design	None	0.00	yes	Insti of emin in In
P.Praveen Kumar	ME/ M Tech	JNTUH	2008	Assistant Professor	08/10/2007	0.00 100.00 0.00	3	Design	None	0.00	yes	Insti of emin in In
Syed. Sarfaraz Nawaz	ME/ M Tech	JNTUH	2010	Assistant Professor	23/06/2008	0.00 100.00 0.00	3	Design	None	0.00	yes	Insti of emin in In
R.Anil Kumar	ME/ M Tech	JNTUH	2010	Assistant Professor	23/06/2008	0.00 100.00 0.00	3	Design	None	0.00	yes	Insti of emin in In
U.Viyaya Laxmi	ME/ M Tech	JNTUH	2010	Assistant Professor	23/06/2008	0.00 100.00 0.00	3	Design	None	0.00	yes	Insti of emin in In
K.Sireesha	ME/ M Tech	JNTUH	2013	Assistant Professor	05/10/2009	0.00 100.00 0.00	2	Design	None	0.00	yes	Insti of emin in In
V.HimaBindu	ME/ M Tech	JNTUH	2013	Assistant Professor	03/03/2010	50.00 50.00 0.00	2	Design	None	0.00	yes	Insti of emin in In
Y.Satyavani	B.E/B.Tech/MSc.	JNTUH	2009	Assistant Professor	03/03/2010	50.00 50.00 0.00	2	None	None	0.00	yes	Insti of emin in In
D.Ramya	B.E/B.Tech/MSc.	JNTUH	2009	Assistant Professor	26/07/2010	50.00 50.00 0.00	2	None	None	0.00	yes	Insti of emin in In
S.Radhika	ME/ M Tech	JNTUH	2011	Assistant Professor	14/06/2011	50.00 50.00 0.00	1	Design	None	0.00	yes	Insti of emin in In
A.Vinay Kumar	ME/ M Tech	JNTUK	2007	Assistant Professor	29/06/2011	50.00 50.00 0.00	1	Design	None	0.00	yes	Insti of emin in In

V.V.S Madhuri	ME/ M Tech	JNTUK	2007	Assistant Professor	30/06/2011	50.00 50.00 0.00	1	Design	None	0.00	yes	Insti of emin in In
M.Naga sandhya Rani	B.E/B.Tech/MSc.	JNTUH	2011	Assistant Professor	04/06/2011	50.00 50.00 0.00	0	None	None	0.00	yes	Insti of emin in In
G. Sandhya Rani	ME/ M Tech	JNTUH	2011	Assistant Professor	11/06/2011	50.00 50.00 0.00	1	Design	None	0.00	yes	Insti of emin in In
M Rekha	ME/ M Tech	JNTUK	2012	Assistant Professor	26/05/2012	0.00 50.00 0.00	1	Design	None	0.00	yes	Insti of emin in In
P Sirisha	ME/ M Tech	JNTUH	2012	Assistant Professor	31/05/2012	0.00 50.00 0.00	0	None	None	0.00	yes	Insti of emin in In
P Sri Vidya Devi	ME/ M Tech	JNTUH	2012	Assistant Professor	08/06/2012	0.00 50.00 0.00	1	Design	None	0.00	yes	Insti of emin in In
B. Vasanth Reddy	ME/ M Tech	NIT Rourkela	2008	Assistant Professor	05/06/2012	0.00 50.00 0.00	10	Design	None	0.00	yes	Insti of emin in In
D Anusha	ME/ M Tech	VIT	2011	Assistant Professor	07/07/2012	0.00 50.00 0.00	1	Design	None	0.00	yes	Insti of emin in In
M Ramesh	ME/ M Tech	JNTUH	2013	Assistant Professor	29/06/2012	0.00 100.00 0.00	0	Design	None	0.00	yes	Insti of emin in In
V Usha Rani	ME/ M Tech	KLU	2009	Assistant Professor	10/12/2012	0.00 50.00 0.00	1	Design	None	0.00	yes	Insti of emin in In
P Prasanth Kumar	ME/ M Tech	JNTUH	2011	Assistant Professor	14/12/2012	0.00 50.00 0.00	0	Design	None	0.00	yes	Insti of emin in In
P Shravan Kumar	ME/ M Tech	JNTUH	2008	Assistant Professor	14/12/2012	0.00 50.00 0.00	0	Design	None	0.00	yes	Insti of emin in In
K Santhosh Kumar	ME/ M Tech	JNTUH	2012	Assistant Professor	03/12/2012	0.00 50.00 0.00	0	Design	None	0.00	yes	Insti of emin in In
P Jeevan Reddy	ME/ M Tech	JNTUH	2011	Assistant Professor	02/01/2013	0.00 50.00 0.00	0	Design	None	0.00	yes	Insti of emin in In
B Aruna	ME/ M Tech	NIT Warangal	2005	Assistant Professor	26/11/2012	0.00 50.00 0.00	0	Design	None	0.00	yes	Insti of emin in In

For CAYm1 2013-2014

Name of the faculty member	Highest Qualification	University	Year of graduation	Designation	date of joining the institution	Distribution of teaching load (%)			Number of research publications in journals and conferences	IPRs	R&D and consultancy work with amount		Holding an incubation unit	Inte v ou w
						1st Year	UG	PG			Funding Agency	Amount		
Dr.S.N.Saxena	PhD	University of Tokyo	1974	Professor	26/11/2004	0.00	0.00	100.00	38	Design	None	0.00	yes	Insti of emin in In
P.S.Raju	ME/ M Tech	Andhra University	1968	Professor	05/11/1997	0.00	0.00	50.00	18	Design	national agency	300000.00	yes	Insti of emin in In
P.M Sarma	ME/ M Tech	Andhra University	1974	Professor	16/08/2000	0.00	50.00	50.00	9	Design	national agency	300000.00	yes	Insti of emin in In
Dr.J.Praveen	PhD	Osmania University	2007	Professor	20/02/2013	0.00	0.00	100.00	62	Design	None	0.00	yes	Insti of emin in In

Dr. D V Pushpa Latha	PhD	Andhra University	2012	Professor	08/06/2012	0.00 0.00 100.00	10	Design	None	0.00	yes	Insti of emir in In
V.Vijayaramaraju	ME/ M Tech	NIT Warangal	2001	Associate Professor	05/05/2005	0.00 50.00 50.00	7	Design	national agency	200000.00	yes	Insti of emir in In
M. Chakravarty	ME/ M Tech	JNTUH	2005	Associate Professor	31/08/1999	0.00 50.00 50.00	9	Design	national agency	200000.00	yes	Insti of emir in In
J.Sridevi	ME/ M Tech	Andhra University	2006	Associate Professor	18/06/2007	0.00 100.00 0.00	3	Design	None	0.00	yes	Insti of emir in In
D.Swathi	ME/ M Tech	JNTUA	2006	Associate Professor	17/09/2007	0.00 100.00 0.00	3	Design	None	0.00	yes	Insti of emir in In
E. Venkateshwarlu	ME/ M Tech	JNTUH	2010	Associate Professor	01/08/2007	0.00 100.00 0.00	3	Design	None	0.00	yes	Insti of emir in In
P.Ravikanth	ME/ M Tech	BIITS	1989	Associate Professor	23/05/2014	50.00 50.00 0.00	1	Design	None	0.00	yes	Insti of emir in In
M.Srikanth	ME/ M Tech	JNTUH	2008	Assistant Professor	08/10/2007	0.00 100.00 0.00	3	Design	None	0.00	yes	Insti of emir in In
P.Praveen Kumar	ME/ M Tech	JNTUH	2008	Assistant Professor	08/10/2007	0.00 100.00 0.00	3	Design	None	0.00	yes	Insti of emir in In
Syed. Sarfaraz Nawaz	ME/ M Tech	JNTUH	2010	Assistant Professor	23/06/2008	0.00 100.00 0.00	3	Design	None	0.00	yes	Insti of emir in In
R.Anil Kumar	ME/ M Tech	JNTUH	2010	Assistant Professor	23/06/2008	0.00 100.00 0.00	3	Design	None	0.00	yes	Insti of emir in In
U.Viyaya Laxmi	ME/ M Tech	JNTUH	2010	Assistant Professor	23/06/2008	0.00 100.00 0.00	3	Design	None	0.00	yes	Insti of emir in In
K.Sireesha	ME/ M Tech	JNTUH	2010	Assistant Professor	23/06/2008	0.00 100.00 0.00	3	Design	None	0.00	yes	Insti of emir in In
G.Swapna	ME/ M Tech	JNTUH	2013	Assistant Professor	05/10/2009	0.00 100.00 0.00	2	Design	None	0.00	yes	Insti of emir in In
V.HimaBindu	ME/ M Tech	JNTUH	2013	Assistant Professor	03/03/2010	50.00 50.00 0.00	2	Design	None	0.00	yes	Insti of emir in In
Y.Satyavani	B.E/B.Tech/MSc.	JNYUH	2009	Assistant Professor	03/03/2010	50.00 50.00 0.00	2	None	None	0.00	yes	Insti of emir in In
D.Ramya	B.E/B.Tech/MSc.	JNTUH	2009	Assistant Professor	26/07/2010	50.00 50.00 0.00	2	None	None	0.00	yes	Insti of emir in In
S.Radhika	ME/ M Tech	JNTUH	2011	Assistant Professor	14/06/2011	50.00 50.00 0.00	1	Design	None	0.00	yes	Insti of emir in In
A.Vinay Kumar	ME/ M Tech	JNTUk	2007	Assistant Professor	29/06/2011	50.00 50.00 0.00	1	Design	None	0.00	yes	Insti of emir in In
V.V.S Madhuri	ME/ M Tech	JNTUk	2007	Assistant Professor	30/06/2011	50.00 50.00 0.00	1	Design	None	0.00	yes	Insti of emir in In
M.Naga sandhya Rani	ME/ M Tech	JNTUH	2011	Assistant Professor	04/06/2011	50.00 50.00 0.00	0	None	None	0.00	yes	Insti of emir

G. Sandhya Rani	ME/ M Tech	JNTUH	2011	Assistant Professor	11/06/2011	50.00	50.00	0.00	1	Design	None 0.00	yes	Insti of emir in In
M Rekha	ME/ M Tech	JNTUK	2012	Assistant Professor	26/05/2012	0.00	100.00	0.00	1	Design	None 0.00	yes	Insti of emir in In
P Sirisha	ME/ M Tech	JNTUH	2012	Assistant Professor	31/05/2012	0.00	50.00	0.00	0	Design	None 0.00	yes	Insti of emir in In
P Sri Vidya Devi	ME/ M Tech	JNTUH	2008	Assistant Professor	08/06/2012	0.00	50.00	0.00	1	Design	None 0.00	yes	Insti of emir in In
B. Vasanth Reddy	ME/ M Tech	NIT ROURKELA	2010	Assistant Professor	05/06/2012	0.00	50.00	0.00	10	Design	None 0.00	yes	Insti of emir in In
D Anusha	ME/ M Tech	VIT	2011	Assistant Professor	02/07/2012	0.00	50.00	0.00	1	Design	None 0.00	yes	Insti of emir in In
M Ramesh	ME/ M Tech	JNTUH	2013	Assistant Professor	29/06/2012	0.00	50.00	0.00	0	Design	None 0.00	yes	Insti of emir in In
V Usha Rani	ME/ M Tech	KLU	2009	Assistant Professor	10/12/2012	0.00	50.00	0.00	1	Design	None 0.00	yes	Insti of emir in In
P.Saraswathi	ME/ M Tech	JNTUH	2012	Assistant Professor	19/06/2013	0.00	50.00	0.00	0	Design	None 0.00	yes	Insti of emir in In
K.Sreshtha	ME/ M Tech	JNTUH	2013	Assistant Professor	19/06/2013	50.00	0.00	0.00	0	Design	None 0.00	yes	Insti of emir in In
P Prasanth Kumar	ME/ M Tech	JNTUH	2011	Assistant Professor	14/01/2012	0.00	100.00	0.00	0	Design	None 0.00	yes	Insti of emir in In

For CAY 2014-2015

Name of the faculty member	Highest Qualification	University	Year of graduation	Designation	date of joining the institution	Distribution of teaching load (%)			Number of research publications in journals and conferences	IPRs	R&D and consultancy work with amount		Holding an incubation unit	Inte v ou w
						1st Year	UG	PG			Funding Agency	Amount		
P.S.Raju	ME/ M Tech	Andhra University	1968	Professor	05/11/1997	0.00	50.00	50.00	18	Design	national agency	300000.00	yes	Insti of emir in In
Dr.J.Praveen	PhD	Osmania University	2007	Professor	20/02/2013	0.00	0.00	100.00	62	Design	national agency	0.00	yes	Insti of emir in In
Dr. D V Pushpa Latha	PhD	Andhra University	2012	Professor	08/06/2012	0.00	0.00	100.00	10	Design	national agency	0.00	yes	Insti of emir in In
V.Vijayaramaraju	ME/ M Tech	NIT Warangal	2001	Associate Professor	05/05/2005	0.00	50.00	50.00	7	Design	national agency	200000.00	yes	Insti of emir in In
Dr.J Sridevi	PhD	JNTUH	2014	Professor	18/06/2007	0.00	0.00	100.00	12	Design	None	0.00	yes	Insti of emir in In
Dr SV Jayaram Kumar	PhD	IIT Kanpur	1979	Professor	26/01/2014	0.00	0.00	100.00	25	Design	None	0.00	yes	Insti of emir in In
E Venkateswarlu	ME/ M Tech	JNTUH	2010	Associate Professor	01/08/2007	0.00	100.00	0.00	3	Design	None	0.00	yes	Insti of emir in In
P Ravikanth	ME/ M Tech	BITS plani	1989	Associate Professor	23/05/2014	50.00	50.00	0.00	1	Design	None	0.00	yes	Insti of emir

												in In
M Srikanth	ME/ M Tech	JNTUH	2008	Assistant Professor	08/10/2007	0.00	100.00	0.00	3	Design	None 0.00	yes	Insti of emin in In
P Praveen Kumar	ME/ M Tech	JNTUH	2008	Assistant Professor	08/10/2007	0.00	50.00	50.00	3	Design	None 0.00	yes	Insti of emin in In
Syed Sarfaraz Nawaz	ME/ M Tech	JNTUH	2010	Assistant Professor	23/06/2008	0.00	50.00	50.00	3	Design	None 0.00	yes	Insti of emin in In
R Anil Kumar	ME/ M Tech	JNTUH	2010	Assistant Professor	23/06/2008	0.00	100.00	0.00	3	Design	None 0.00	yes	Insti of emin in In
U Vijaya Lakshmi	ME/ M Tech	JNTUH	2010	Assistant Professor	23/06/2008	0.00	100.00	0.00	3	Design	None 0.00	yes	Insti of emin in In
G Swapna	ME/ M Tech	JNTUH	2013	Assistant Professor	05/10/2009	0.00	100.00	0.00	2	Design	None 0.00	yes	Insti of emin in In
V Hima Bindu	ME/ M Tech	JNTUH	2013	Assistant Professor	03/03/2010	50.00	50.00	0.00	2	Design	None 0.00	yes	Insti of emin in In
Y Sata vani	ME/ M Tech	JNTUH	2009	Assistant Professor	03/03/2010	50.00	50.00	0.00	2	Design	None 0.00	yes	Insti of emin in In
S Radhika	ME/ M Tech	JNTUH	2011	Assistant Professor	14/06/2011	0.00	50.00	50.00	1	Design	None 0.00	yes	Insti of emin in In
A Vinay Kumar	ME/ M Tech	JNTUK	2007	Assistant Professor	29/06/2011	0.00	100.00	0.00	4	Design	None 0.00	yes	Insti of emin in In
VVS Madhuri	ME/ M Tech	JNTUK	2007	Assistant Professor	30/06/2011	25.00	25.00	50.00	1	Design	national agency 800000.00	yes	Insti of emin in In
M N Sandhya Rani	B.E/B.Tech/MSc.	JNTUH	2011	Assistant Professor	04/06/2011	0.00	100.00	0.00	1	Design	None 0.00	yes	Insti of emin in In
G Sandhya Rani	ME/ M Tech	JNTUH	2011	Assistant Professor	11/06/2011	50.00	50.00	0.00	1	Design	None 0.00	yes	Insti of emin in In
M Rekha	ME/ M Tech	JNTUK	2012	Assistant Professor	26/05/2012	50.00	50.00	0.00	1	Design	None 0.00	yes	Insti of emin in In
P Sirisha	ME/ M Tech	JNTUH	2012	Assistant Professor	31/05/2012	0.00	100.00	0.00	1	Design	None 0.00	yes	Insti of emin in In
p sri vidya devi	ME/ M Tech	JNTUH	2008	Assistant Professor	08/06/2012	0.00	100.00	0.00	4	Design	None 0.00	yes	Insti of emin in In
B Vasanth Reddy	ME/ M Tech	NIT Rourkela	2010	Assistant Professor	05/06/2012	0.00	100.00	0.00	10	Design	None 0.00	yes	Insti of emin in In
V Usha Rani	ME/ M Tech	KLU	2009	Assistant Professor	10/01/2012	0.00	100.00	0.00	1	Design	None 0.00	yes	Insti of emin in In
P Saraswathi	ME/ M Tech	JNTUA	2011	Assistant Professor	19/06/2013	0.00	100.00	0.00	1	Design	None 0.00	yes	Insti of emin in In
D Karuna Kumar	ME/ M Tech	JNTUA	2012	Assistant Professor	01/01/2009	0.00	100.00	0.00	1	Design	None 0.00	yes	Insti of emin in In
M Shekar	ME/ M Tech	JNTUH	2011	Assistant	17/06/2013	100.00	0.00	0.00	1	Design	None 0.00	yes	Insti of

				Professor							emin in In
K Sudha	ME/ M Tech	Anna University	2008	Assistant Professor	14/08/2012	0.00 100.00 0.00	1	Design	None 0.00	yes	Insti of emin in In
D Rohan	ME/ M Tech	JNTUH	2014	Assistant Professor	10/06/2014	0.00 100.00 0.00	2	Design	None 0.00	yes	Insti of emin in In
M Karthika	ME/ M Tech	JNTUK	2011	Assistant Professor	09/09/2014	0.00 100.00 0.00	0	Design	None 0.00	yes	Insti of emin in In
M Prasanth	ME/ M Tech	JNTUH	2014	Assistant Professor	15/01/2014	50.00 50.00 0.00	0	Design	None 0.00	yes	Insti of emin in In
M Lohitha	ME/ M Tech	JNTUH	2009	Assistant Professor	23/04/2015	0.00 100.00 0.00	0	Design	None 0.00	yes	Insti of emin in In
P Prasanth Kumar	ME/ M Tech	JNTUH	2011	Assistant Professor	14/01/2012	0.00 100.00 0.00	1	Design	None 0.00	yes	Insti of emin in In
Dr D.G.Padhan	PhD	MANIT	2002	Professor	17/01/2014	0.00 50.00 50.00	20	Design	None 0.00	yes	Insti of emin in In
M Sasidhar	ME/ M Tech	NITT	2014	Assistant Professor	04/10/2014	50.00 50.00 0.00	1	Design	None 0.00	yes	Insti of emin in In
D Chandra Shekar	ME/ M Tech	IISC	2014	Assistant Professor	07/11/2014	50.00 50.00 0.00	1	Design	None 0.00	yes	Insti of emin in In

5.1 Student-Teacher Ratio (STR) (20)

Total Marks : 19.08

Institute Marks : 19.08

U1 = Number of Students in UG 2nd Year
U2 = Number of Students in UG 3rd Year
U3 = Number of Students in UG 4th Year
P1 = Number of Students in PG 1st Year
P2 = Number of Students in PG 2nd Year
N1 = Total Number of Faculty Members in the Parent Department
S=Number of Students in the Parent Department
= U1 + U2 + U3 + P1 + P2
Student Teacher Ratio (STR) = S / N1
Assessment = [20 x 13 /STR], subject to maximum of 20

Year	U1	U2	U3	P1	P2	S	N1	STR	Assessment
2014-2015	111	141	139	12	18	421	31	13.58	19.15
2013-2014	141	143	144	18	14	460	32	14.38	18.08
2012-2013	143	143	126	14	13	439	38	11.55	20.00

Average assessment 19.08

5.2 Faculty strength in PG programme (20)

Total Marks : 12.17

Institute Marks : 12.17

Assessment = 20 x [X/Y]
X = Number of faculty members with Ph.D available for PG Programme
Y = Number of faculty members with Ph.D. / M.Tech. / M.E available for PG Programme
Assessment will be done on the basis of the number of faculty members with Ph.D./M.Tech./M.E., available for the PG programme. [Minimum number suggested: 4]

Year	X	Y	Assessment
2014-2015	5	8	12.50
2013-2014	3	5	12.00
2012-2013	3	5	12.00

Average assessment 12.17

5.3 Faculty Qualifications (30)

Total Marks : 30.00

Institute Marks : 30.00

Assessment = 3 × FQI
where, FQI = Faculty qualification index
= (10x + 6y + 4 z0)/N2
such that, x + y +z0 <= N2; and z0 <= z
where, x = Number of faculty members with PhD
y = Number of faculty members with ME/ M Tech
z = Number of faculty members with BE / BTech / MSc.

	X	Y	Z	N	FQI	Assessment
2012-2013	3	30	-30	5	10.00	30.00
2013-2014	3	31	-31	5	10.00	30.00
2014-2015	5	32	-34	8	10.00	30.00

Average assessment 30.00

5.4 Faculty Competencies correlation to Programme Curriculum (15)

(Indicate the faculty competencies (specialisation, research publication, course developments etc.) to correlate the programme curriculum)

In GRIET, the quality and performance of the students are very important considerations. The institution evaluates student performance, advises students regarding cu criteria specified by the IEEE and IUCEE.

GRIET has the required number of faculty with competencies to optimally cover all of the curricular areas of the program. The institution accommodates adequate lev attention and time to each component, consistent with the outcomes and objectives of the program and institution.

Our faculty has appropriate qualifications and demonstrate sufficient authority to ensure the proper guidance of the program and to develop and implement processes programs, level of scholarship, participation in professional societies.

The details of the faculty competencies that correlate to the Programme Specific Criteria are given in the tables below:

In order to satisfy Program Specific Criteria, the courses are grouped under the following Specializations.

1. Power Electronics
2. Control Systems
3. Machines
4. Network Theory
5. Power Systems

1. Program Specific Criteria of Power Electronics Courses and Faculty Competency

The courses in this group deal with the principles of Power Electronics, Power Semiconductor Drives, Microprocessors, Micro controllers, Analog and Digital Electro

Students are provided with all the digital devices, measuring equipments, simulation software's to model, analyze, simulate and design the power electronic compone

Power Electronics Specific Courses		Names of Faculty
Power Electronics		Dr .J Praveen
Power Semiconductor Drives		P Praveen Kumar
Power Electronics and Simulation lab		G.Swapna
Microprocessors and Microcontrollers		S Radhika
Microprocessors and Microcontrollers lab		M Rekha
LabVIEW-Matlab		Y Satya vani
Digital Electronics		P Prashanth Kumar
Analog and Digital Electronics lab		M.N.Sandhya Rani
IC Applications		R.Anil Kumar

M.Tech

Power Electronics Specific Courses		Names of Faculty
Modern Power Electronics		Dr .J Praveen
Analysis of Power Electronic Converters		G Sandhya rani
Power Electronics control of DC drives		Dr D G Padhan
Microcontrollers		S Radhika
Power Converters Lab		P.Praveen Kumar
Power Electronics control of AC drives		A Vinay Kumar
Electrical Systems simulation lab		S S Nawaz

Dr J Praveen has done his Ph.D from Osmania University in power electronics, Hyderabad. His research work carried out at BHEL Research and Development Center with support of University Grants Commission (UGC) fellowship. He is contributing to a major research area in Power Electronics and has published more than 50 research papers in reputed International and National Journals and Conferences. His core competency and contemporary knowledge relevant to power electronics is contributing to become proficient and helping them in their carrier building in power electronics sector. He has utilized his experience in academics in compiling Laboratory Manuals and designing course modules.

Dr. Dola Gobinda Padhan joined in this institution on 17/12/2014. He received his Ph.D. degree from Indian Institute of Technology, Guwahati and M.Tech. degree from Maulana Azad National Institute of Technology, Bhopal. He has received GATE Scholarship and MHRD scholarship during his master and doctoral studies. His research interests are focused on dead time compensation, auto-tuning, relay based identification, stabilization of processes, modeling, analysis & control of complex industrial processes, optimisation techniques, Control theory applications and smart grids. He has published more than 20 papers in well reputed International and national Journal and conferences. He is the reviewer of many reputed International Journals and conferences. He is a member of ISTE and IE, India. He was the convener for many national and international conferences, seminars and workshops. He has chaired several technical sessions in national/International conferences. He worked as a faculty member in many engineering institutions. He is having more than 14 years of teaching and research experiences.

P.Praveen Kumar developed Basic Electrical and Electronics course modules and Multisim/Network Theory Lab Laboratory manuals. His contribution to students makes them to learn and apply basic theorems and basic concepts in Electrical and Electronics.

G.Swapna has developed Power Electronics course modules and Micro processor and Micro Controllers and Power Electronics Lab manuals. She is familiar with softwares like MatLab, Arduino, Proteus, TASM, LabVIEW and Eagle etc. Her contribution to the students makes them to understand the Eagle software which provides foundation for the design of PCB's.

Y.Satyavani joined in this institution on 03/03/2010. she had completed Masters from GRIET in Power Electronics She is familiar with softwares like MatLab, Arduino, Proteus, TASM, LabVIEW and Eagle etc. Her contribution to the students makes them to understand the Mat Lab software which provides foundation for the design of Power Electronics circuits.

S. Radhika joined in this institution on 15/06/2011. She had done her M.Tech in 2011 from GRIET Hyderabad and her B.Tech from VITS affiliated to JNTUH. She had overall experience of 3 years in teaching. She is familiar with softwares like MATLAB, PSIM, PSPICE, PLC, ARDUINO, EAGLE, Multisim etc. He had done projects like UC 3875 Based full bridge converter DC/AC Converter, Water level controller using Arduino, Current Mode control of boost converter, GSM Modem Based Smart Energy Meter. Her areas of interests are Power Electronics. She had participated in various workshops through NMEICT, IITB and IITKGP, GRIET as Remote center.

M. N Sandhya Rani joined in this institution on 15/06/2011. She had done her B.Tech from ECET affiliated to JNTUH. She had overall experience of 4 years in teaching. She is familiar with softwares like MATLAB, PLC, ARDUINO, EAGLE,LabVIEW Multisim etc. Her areas of interests are Power Electronics,Electrical Machines. She had participated in various workshops through NMEICT, IITB and IITKGP, GRIET as Remote center. She has developed Analog and Digital lab manuals. Her contribution to the students makes them to understand the basic Analog and digital circuit concepts which provides foundation for the design of Op Amps.

P. Prasanth Kumar joined in this institution o in 2011 from GRIET Hyderabad and his B.T JNTUH. He had published a paper on "Deve Boost Converter" in 2013 International Journ MATLAB, ARDUINO, EAGLE, Proteus, Mu solar tracking using Arduino and Non Isolated Boost conve Electronics.

M.Rekha is well versed with the latest te developed various course modules and lab ma like MATLAB, ARDUINO, PSPICE, Proteu like Arduino based Oscilloscope, System Iden & Basic Conceptual Circuits which are useful had published a paper on An Electromagnetic Vibrationa Converters in 2012 at IJERT Journal. Her contribution to st knowledge on Control systems.

Core competence of above faculty is vital for attainment of I through Program Outcomes via Course Outcomes

2. Program Specific Criteria of Power Systems Courses and Faculty Competency

The courses in this group deals with principles of power systems, various renewable and conventional energy sources for power generation, transmission, distribution

Students are provided with all the digital devices, measuring equipments, simulation software's to model, analyze, simulate and design the power systems components

Power Systems Specific Courses	Name of the Faculty
Power Systems-I	S V Jayaram Kumar

Power Systems-II	A.Vinay Kumar
Computer Methods in Power Systems	V.Vijaya Rama Raju
Electrical Distribution Systems	P Sri Vidya devi
Renewable Energy Sources	S.S.Nawaz
Utilization of Electrical Energy	V.Hima Bindu
Switch Gear and Protection	V.V.S.Madhuri
Power Systems Operation and Control	G Sandhya Rani
High Voltage Engineering	J Sri Devi
HVDC Transmission	A Vinay Kumar

M.Tech

Power Systems Specific Courses		Names of Faculty
Energy Conservation systems		K.Sudha
FACTS		Dr.S.V.Jayaram Kumar
Power Quality		Vijarama Rama Raju

Dr S V Jayaram kumar joined this institution on 26/12/2014.He has 35 Years of Teaching Experience. He obtained Ph.d in the year 2000 from IIT Kanpur and ME in 1979 from Andhra University and B.E in 1976. He is a retired Professor from JNTUniversity Hyderabad. He had guided 10 PhD Scholars . He had 25 National and international publications. His areas of interests are FACTS & Power Systems.

J.Sridevi has submitted her thesis in JNTUH, Hyderabad in power systems. She has 11 years in teaching including four years in research. She has published three research papers in International and national conferences and presented two technical papers in International and National Conferences. Her contribution to students makes them learn how to apply distribution system methods in real time environment.

Mr.V.Vijaya Rama Raju has vast experience in designing power systems equipment and presently perusing Ph.D from power systems with JNTUH, Hyderabad and has published 7 research papers in conferences. He has developed number of computer controlled Machines with Lab view and generating funds to the department in the form of Consultancy. He has contributed in NBA and TEQIP-II In the department. The faculty member developed power systems operation and control and power systems course modules. His contribution to students makes them to learn how to apply power quality issues in real time power systems.

V. Hima Bindu joined in this institution on 03/03/10. She had done her M.Tech in 2013 from GRIET ,Hyderabad and her B.Tech from GVPCE ,Vizag, affiliated to JNTUH. She had experience of more than 5 years in teaching. She had published a paper on Hardware Implementation of Inverter in 2013 International Journal. She is familiar with softwares like MATLAB, ARDUINO,Code Composer Studio, EAGLE, Proteus, Multisim, PSIM etc. She has conducted 3 workshops in Eagle software. She has guided student projects like PLC based Speed control of Induction Motor, step down chopper using Arduino and Speed control of induction motor using PS21765. Her areas of interests are Power Electronics ,Control Systems & Power Systems.

V.V.S.Madhuri developed switch gear an contribution to students makes them to l systems. She is familiar with softwares like and PLC (Siemen's , Crouzet , ABB).

A.Vinay Kumar is a pursuing PhD from JNT engineering. He has industry working exp teaching including two years in research. He International and national conferences an International and National Conferences. Hi to learn how to apply power quality issues in real time pow

G..Sandhya Rani developed Electrical Multsim/Network Theory Lab Laboratory m lab manuals.Her areas of interest power el Faculty club Co-ordinator for dept and co conducted many activities for the faculty. He to learn and apply basic theorems and basic concepts in El

P.Srividyadevi had published a paper on Journal. She is familiar with softwares like PSCAD etc. She had done projects like control of DC shunt motor using PID & Bas for Basic Electrical Engineering. She devel and control system and Electrical measurements Lab manu them to learn and apply knowledge on control systems.

Core competence of above faculty is vital for attainment of Program Educational Objectives, through Program Outcomes via Course Outcomes.

3. Program Specific Criteria of Control Systems Courses and Faculty Competency

The courses in this group deals with principles of control systems and advanced control systems courses and laboratories. Students explore feedback control system cl

Students are provided with all the digital devices, measuring equipments, simulation software's to model, analyze, simulate and design the control systems componen

Control Systems Specific Courses		Name of the Faculty
Control Systems		D Karuna Kumar
Control Systems lab		P Sirisha
Neural Networks and Fuzzy Logic		Dr.D.V.PushpaLata Latha
Advanced Control Systems		P Ravi Kanth

M.Tech

Control Systems Specific Courses	Name of the Faculty
Modern control theory	U Vijaya Lashmi
Neural Networks and Fuzzy Logic	Dr.D.V.PushpaLata Latha
Advanced Control Systems	P Ravi Kanth

Dr DV Pushpalatha is a PhD from Andhra University, Vishakhapatnam, and she has performed research in the Design of Controllers for Robotic Applications using Fuzzy Logic and Support Vector Machines. She has published 14 papers in International Journals and National Conferences. She has also served as a chair person for technical sessions in National Conferences. She has keen interest in the field of research spanning embedded systems, Fuzzy Logic and Support Vector Machines. She developed Control systems course modules and Control systems lab manuals, and her participation in faculty development programs, workshops, seminars and conferences has benefitted to the students who attended the continuous education program/in imbibing the latest trends in Advanced control Systems and latest updates in Neural Networks.

M.P.Ravi Kanth joined as an associate professor in this institution on 22/05/2014. He had done his M.E in 1991 from Birla Institute Of Technology & Science, Pilani, Rajasthan and his B.Tech from JNTU Hyderabad. He has overall experience of 23 years in different domains. 2 Years in R & D , 3 years in industry and 18 years in teaching. He is familiar with software's like MATLAB, Xillinx ,PSPICE, LABVIEW etc. He has published 2 International and 5 National papers.He has guided various student projects at UG and PG level. His areas of interests are VLSI Design and Low Power VLSI System Design.

D.Karunakumar joined in this institution on
M.Tech in 2012 from SMCET affiliated to
2009 from AITAM affiliated to JNTUK. He
is familiar with software's like MATLAB, LA
Proteus, Multisim and CCStduio etc. His ar
power system. He is presently handling
conducted 2 workshops in Embedded Syst
projects based on Embedded system. He had participated
System" Workshop in GRIET(Remote center) through
Assistant in "Control System" Workshop in GRIET(Remo

P. Sirisha developed control systems course modules and control systems Lab Laboratory manuals. She is familiar with softwares like MATLAB, ARDUINO, Proteus, TASM, etc. She had done projects like Speed control of DC shunt motor using PID, Water Flow Gauge using Arduino for cumulative and instantaneous flows &Basic Conceptual circuits which are useful for Basic Electrical Engineering. Her contribution to students makes them to learn and apply knowledge on Advanced Control systems.

M. Karthika joined in this institution on 15
in 2011 from Shri Vishnu College of Engin
to JNTUK and her B. Tech in 2008 from V.
Technology, affiliated to JNTUH. She ha
teaching. She has published 3 research papers
2 technical papers in International & Nationa
MIAENG. She is familiar with software's like MATLAB,
interests are Power Quality and Power Electronics.

Core competence of above faculty is vital for attainment of Program Educational Objectives, through Program Outcomes via Course Outcomes.

4. Program Specific Criteria of Networks Courses and Faculty Competency

The courses in this group deals with principles of basic electrical engineering, electrical networks, measurements, Instrumentation, electromagnetic fields and labora
Student learns all the basic electrical engineering from these courses.

Students are provided with all the digital devices, measuring equipments, simulation software's to model, analyse simulate and design the electrical and electronic c

Networks Specific Courses	Name of The Faculty
Basic Electrical Engineering	Prof PS Raju
Instrumentation	U.Vijaya Laxmi
Network Theory	M.Srikanth
Electrical Measurement	U.Vijaya Laxmi
Multisim-Networks lab	P Saraswathi
Electromagnetic Fields	P.Praveen Kumar
Electrical Measurements lab	P.Sirisha

Prof P.S.Raju has done his masters in Power systems from Andhra University. He has published 14 papers in International Journals and National Conferences. He has developed Electrical machines and Machines Laboratories in the department with the help of other faculty members and research publications in the Electrical engineering field. His core competency and contemporary knowledge relevant to power electronics is contributing to become proficient and helping them in their carrier building in Electrical Machines. His vast experience in teaching is helping the students in learning the concepts with practical relevance. His participation in workshops and organizing them at the institute has benefited those faculty and students who attended the continuous education program/in imbibing the latest trends in Electrical Engineering field and latest softwares in Electrical Machines. He has utilized his vast experience in academics in compiling a Electrical Machines Lab Laboratory Manuals and designing Electrical Machines course modules.

M. Srikanth joined this institution on 08/10/2007. He had done his M.Tech in 2008 from GRIET Hyderabad and his B.Tech in 2005 from ASCET affiliated to JNTUH. He has overall experience of 7 years. He is familiar with software's like MATLAB, LABVIEW, ARDUINO, EAGLE, KEIL, Proteus, Multisim etc. He had done projects like PWM inverter using Arduino, SolarPanel Control using Stepper Motor with Arduino etc.Latest he has published a Conference paper on "Multilevel inverter with Selective Harmonic Elimination Method" in June 2014.At present he is Additional Controller of Examinations (ACE-Examinations) of GRIET.At present He is Department Examinations in charge and time table in charge. He had participated in "Control Systems" Workshop through NMEICT and IITKGP, GRIET as Remote center and Mission 10X workshop conducted by Wipro. His subjects of interest are Network Theory, Control Systems and Power Electronics

U.Vijaya Laxmi developed Electrical Measurements course modules and Electrical Measurement Lab Laboratory manuals. Her contribution to students makes them to calculate the unknown values of different bridges like Way's Bridges and Anderson Bridge.

P. Saraswathi joined in this institution on 19/06/13. She had done M.Tech from VNR VJIET Hyderabad and her B.Tech in 2010 from NEC affiliated to JNTUH. She had overall experience of 3 years in teaching. She is familiar with softwares like MATLAB, PSPICE, ARDUINO and PSIM etc. Her areas of interests are Power Electronics and power systems.

K.Sudha joined in this institution on 12/08/2014. She had done her M. E in 2008 from Sona College of Technolgy, Salem affiliated to Anna University and her B.E in 2006 from Veltech Engineering college Chennai affiliated to Anna University. She had overall experience of 6. 8Years in teaching. She is the Co- ordinator of Women's Development Cell from the dept. She has published 1 papers in International conference and presented 1 papers in National conferences. She is familiar with software's like MATLAB, PSPICE, LABVIEW etc. Her areas of interests are Power Systems & Power Electronics.

Chandrashekar D has joined in this institution on 07/11/2014. He had done his M.E in 2014 from IISc Bangalore with specialization Systems Science and automation and his B.Tech from GRIET affiliated to JNTUH. He is familiar with software's like MATLAB, PSIM, PSPICE, PLC, ARDUINO, LabView, Multisim etc. His Working Experience is 8 months.

M.Lohita joined in this institution on 23 G.Narayanamma Institute of Technology her B.Tech in 2007 from Lords Insti Hyderabad. affiliated to JNTUH. She l teaching. She is familiar with softwares and ETAP etc. Her areas of interests Machines.

Core competence of above faculty is vital for attainment of Program Educational Objectives, through Program Outcomes via Course Outcomes.

5. Program Specific Criteria of Electrical Machine Courses and Faculty Competency

The courses in this group deals with principles of AC and DC machines along with the electrical machine laboratories. In this group students learn about various types

Students are provided with all the digital devices, electrical machines, measuring equipments, simulation software's to model, analyze simulate and design the electri

Electrical Machines Specific Courses		Name of the Faculty
Electrical Machines-I		Syed Sarfaraz. Nawaz
Electrical Machines-II		B.Vasanth Reddy
Electrical Machines-III		E.Venkateshwarlu
Electrical Machines Lab-I		M. SHEKER
Electrical Machines Lab-II		M.Prashanth

Electrical Machines Specific Courses		Name of the Faculty
Machine Modeling Analysis		B Vasanth Reddy

E.Venkateshwarlu has three decades of experience in industry in Electrical machines specialization. The other faculty members teaching this course are also pursuing PhD from reputed universities and He has published several research papers in journal and conferences. His core competency and contemporary knowledge relevant to power electronics is contributing to become proficient and helping them in their carrier building in Electrical Machines. His vast experience in industry and teaching is helping the students in learning the concepts with practical relevance. His participation in workshops and organizing them at the institute has benefited those faculty and students who attended the continuous education program/in imbibing the latest trends in Electrical Engineering field and latest softwares in Electrical Machines. He has utilized his vast experience in academics in compiling a Electrical Machines Lab Laboratory Manuals and designing Electrical Machines course modules.

M. SHEKER has been completed his M.TEC and completed B.TECH from SKTRMCE , JN 10 years approximately as Asst.prof. and ta EEE and worked as Head of the department fo He was invloved in the design & implementa peak also the incharge for the solar power pla

Syed Sarfaraz Nawaz is a pursuing PhD from JNTUH in power semiconductor drives and specialized in micro grid system. He has 5 years in teaching including two years in research. He has published three research papers in International and national conferences and presented two technical papers in International and National Conferences. His contribution to the students makes them to understand design power systems.

M.sasidhar joined in this institution on 04/ from NIT ,Triuchirappalli and his B.T experience 1 year in teaching. He is far Multisim, PSIM etc. He had guided stud control of Induction Motor. His areas of in Systems & Power Systems.

B.Vasanth Reddy developed Power Electronics course modules and LabVIEW and Mat Lab Laboratory manuals. His contribution to the students makes them to understand the LabVIEW and MatLab software's and use them in designing of power electronics projects

M.Prashanth joined in this institution on in 2014 from GRIET ,Hyderabad and affiliated to JNTUH. He had overall exp familiar with software's like MATLAB, P student projects like Wide-Area Control Power Supply. His areas of interests are Power Electronics

Core competence of above faculty is vital for attainment of Program Educational Objectives, through Program Outcomes via Course Outcomes.

Awards And Achivements:

- Dr J N Murty Awarded as a Best Principal in 2013-2014.
- Dr J Praveen Awarded as Best Teacher in 2013-2014.

Publication Of Books:

Author	Name of Book
B. Vasanth Reddy	Electrical Generation and Distribution Systems and Power Quality Disturbances chapter entitled Power Quality *Improvement by Using Synchronou*

List of Lab Manuals publications:

Author	Name of Book	Publisher Name
P.M.Sarma	Lab view Programming and applications	GRIET
Dr D V Pushpa Latha,P Sri Vidya Devi	Control Systems Lab manual	GRIET
V.Vijayaramaraju Raju, E Venkateswarlu,P Praveen Kumar	Electrical Machines –II Lab Manual	GRIET
E.Venkateshwarlu, S.S.Nawaz	Electrical Machines –I Lab Manual	GRIET
VVS Madhuri,P Saswathi	Multisim/Networks Lab Manual	GRIET
M Srikanth,A Vinay Kumar	Electrical & Electronics Engg lab Manual	GRIET
U.Viyaya Lakshmi, P Sireesha	Electrical Measurements Lab Manual	GRIET
Dr J Sri Devi,S S Nawaz ,G Sandhya Rani	Power System Simulation Lab	GRIET
Dr J Praveen,S Radhika,G Swapna	Power Electronics Lab Manual	GRIET
V Usha rani,M Rekha	LabVIEW/ Matlab Lab Manual	GRIET
R.Anil Kumar, M N Sandhya Rani	Microcontrollers Lab Manual	GRIET
R.Anil Kumar, P Prashanth Kumar	Analog and Digital Electronics Lab Manual	GRIET
Dr J Sri devi ,K Sudha	Power system Lab	GRIET
Dr.D V Pushpa latha,V Hima Bindhu	DSP lab manual	GRIET
B Vasanth Reddy,P Ravi Kanth	Drives Lab	

List of Publications & Conferences:

Sl. No.	Name of Faculty	Name of Refereed Journal	National / International	Title of the Paper	Year of Publication
1	Dr.J.Praveen	ELSEVIER International journal of Procedia Computer Science	International	Simulation of Artificial Intelligent Controller based DVR for Power Quality Improvement	Procedia Computer Science 47 (2015) 153 – 167, Available online at www.sciencedirect.com
2	Dr.J.Praveen	IOSR-JEEE IOSR Journal Of Electrical and Electronics Engineering	International	Modelling and design of cascaded 9 level voltage source converter based DVR for mitigating the voltage sag,swell, harmonics,transient and flickers in distributed power system	e-ISSN:2278-1676,p-ISSN:2320-3331,vol 10
3	Dr.J.Praveen	International Journal of Scientific & Engineering Research	International	Modeling and Simulation of DVR with Multilevel Inverters to Mitigating the Sag,swell and harmonics	Volume 6,Issue 5,May 2015,ISSN 2229-5518
4	Dr.J.Praveen	International Conference on Proceedings of 15th IRF	International	Design and Simulation of custom power device for power quality improvement in power systems	ISBN:978-93-85465-45-1
5	Dr.J.Praveen	International conference on Innovations in Electrical & Electronics Engineering (ICIEEE-2014)	Intentional	Power Quality Improvement using Z-Source Dynamic Voltage Restorer	pp 435-439.(ISBN-978-93-82163-55-8)September-(5th & 6th)-2014
6	Dr.J.Praveen	National Journal of Technology	National	Various power Quality Issues: Measurement of Flicker and Mitigation of Voltage sag	Sep-14
7	Dr.J.Praveen	International journal on Advances in Electrical and Electronic Engineering	International	Kalman Filter Based Unified Power Quality Conditioner For Output Regulation	Vol 4, No.3, 2014, Research India Publications PP 247-252. ISSN 2231-1297
8	Dr.J.Praveen	International Journal of Electrical, Electronics and Telecommunications Engineering	International	A New Multi-functional DVR for Compensation of Voltage Sag	ISSN: 2051-3240, Vol.45,2014 Special Issue.1 – pp 526-531
				Design of Fractional	

9	D.V.Pushpalatha	InderScience Publishers	International	Model Reference Adaptive PID Controller to Magnetic Levitation System with Permagnet	communicated in Dec. 2014
10	D.V.Pushpalatha	IJEPES, Elsvier Publishers	International	Dynamic Response of Fuzzy and PID controller based DC motor system using LabView	communicated in Dec. 2014
11	D.V.Pushpalatha	Processing and Fabrication of Advanced Materials XXIII	International	Study the Effect of Temperature on the Properties of ASS-304 Using ANN	Vol.2,pp 1186-1192, Dec 5 -7 2014.
12	D.V.Pushpalatha	Journal of Intelligent and Fuzzy Systems	Online	Design of Prisoner's Dilemma Based Fuzzy C-Means Computed Torque Controller with Lyapunov Synthesis Linguistic Model for PUMA-560 Robot Manipulator	ISSN: print: 1064-1246; online: 1875-8967,June, 2014.
13	D.V.Pushpalatha	InderScience Publishers	Internationa	Design of Fractional Model Reference Adaptive PID Controller to Magnetic Levitation System with Permagnet	Dec. 2014
14	D.V.Pushpalatha	National conference on Contemporary Control(CONCON-2014)	National	Ultrasonic RADAR system Using Arduino	November-(20-21),2014
15	D.V.Pushpalatha	National conference on Contemporary Control(CONCON-2014)	National	Speed Control of DC Motor using Arduino	November-(20-21),2014
16	D.V.Pushpalatha	National conference on Contemporary Control(CONCON-2014)	National	Design of Line following Robot Using Arduino	November-(20-21),2014
17	Dr.J.Sridevi	Int. Journal of Engineering Research and Applications	International	Implementation Of Thyristor Controlled Series Capacitor (TCSC) In Transmission Line Model Using Arduino	ISSN : 2248-9622, Vol. 4, Issue 9(Version 5), pp.114-117, September 2014
18	P.Srividya Devi	National conference on Contemporary Control(CONCON-2014)	National	Ultrasonic RADAR system Using Arduino	November-(20-21),2014
19	P.Srividya Devi	National conference on Contemporary Control(CONCON-2014)	National	Speed Control of DC Motor using Arduino	November-(20-21),2014
20	P.Srividya Devi	National conference on Contemporary Control(CONCON-2014)	National	Design of Line following Robot Using Arduino	November-(20-21),2014
21	P.Sirisha	National conference on Contemporary Control(CONCON-2014)	National	Ultrasonic RADAR system Using Arduino	November-(20-21),2014
22	P.Sirisha	National conference on Contemporary Control(CONCON-2014)	National	Design of Line following Robot Using Arduino	November-(20-21),2014
23	A.Vinay Kumar	National Journal OF Technology	National	Various power Quality Issues: Measurement of Flicker and Mitigation of Voltage sag	Sep-14
24	D.Rohan	International conference on Innovations in Electrical & Electronics Engineering (ICIEEE-2014)	International	Design of shunt active filter for harmonic compensation in power systems	September-(5th & 6th)-2014
	Syed Sarfarz	International conference on Innovations in		Design of shunt active filter for harmonic	September-(5th &

25	Nawaz	Electrical & Electronics Engineering (ICIEEE-2014)	International	compensation in power systems	6th)-2014
26	M.Srikanth	National conference on Electrical Sciences (NCES-2014)	National	cascaded H-Bridge multi level inverter using selective harmonic Elimination technique	July-26-2014
27	Syed Sarfarz Nawaz	National conference on Electrical Sciences (NCES-2014)	National	Design of shunt active filter for harmonic compensation in power systems	July-26-2014
28	D.Rohan	National conference on Electrical Sciences (NCES-2014)	National	Design of shunt active filter for harmonic compensation in power systems	July-26-2014
29	P.Mallikarjuna Sarma	International Journal of Latest Trends in Engineering and Technology (IJLTET)	International	Automatic Street Lighting using PLC	July 2013
30	P.Mallikarjuna Sarma	International Journal of Latest Trends in Engineering and Technology (IJLTET)	International	Appliance Remote Control Using Arduino	July 2013
31	P.Mallikarjuna Sarma	International journal of engineering trends and technology	International	Hardware implementation of single phase Inverter	August 2013
32	P.Mallikarjuna Sarma	Research Journal of Engineering Sciences	National	"Measurement of power and energy using Arduino"	October **(2013).**
33	Dr.D.V.Pushpa Latha	National Conference on Contemporary control and Soft computing in Electrical Engineering	National	System identification of dc motor-generator set using matlab/labview	May 2013.
34	Dr.D.V.Pushpa Latha	Research Journal of Engineering Sciences	National	Millenium3 PLC based Temperature Control using LM35	June 2013.
35	Dr.D.V.Pushpa Latha	IEEE Workshop on Computational Intelligence: Theories, Applications and Future Directions	National	Fuzzy C-Means Controller for a PUMA-560-Robot manipulator	July 2013
36	Dr.D.V.Pushpa Latha	(IJETED), RS Publication	International	Soil Moisture and Temperature sensor based intelligent irrigation water pump controlling system using PIC 16F72 Microcontroller	July, 2013
37	Dr.D.V.Pushpa Latha	IJLTET	International	Simulation of PLC based Smart Street Lighting Control using LDR	July , 2013
38	Dr.D.V.Pushpa Latha	Research Journal of Engineering Sciences	National	Measurement of power and energy using Arduino	October **(2013)**
39	Dr.D.V.Pushpa Latha	International Journal of Electronics and Electrical Engineering (IJEEE)	International	On line speed control of PMDC motor using Auto tuning PID through LabVIEW	December, 2013
40	Dr.D.V.Pushpa Latha	IJISA	International	PLC based Smart Street Lighting Control",	2013
41	Dr.D.V.Pushpa Latha	International Journal of Fuzzy Logic Systems (IJFLS)	International	Design of Lyapunov based Fuzzy Logic Controller for PUMA-560 robot manipulator	December 2013
42	Dr J Praveen	International conference on Emerging Trends in Engineering	International	Adoption of Synchrophasor Technology in Indian Grid Failures & Blackouts	22nd&23rd Feb,2013
43	Dr J Praveen	International Journal of International Organization of Scientific Research	International	Adoption of Synchrophasor Technology in Indian Grid Failures & Blackouts	2013
		International Journal		A Seven Level	

44	Dr J Praveen	of Electrical , Electronics and Telecommunication Engineering	International	Cascaded Multilevel Inverter Based Dynamic Voltage Restorer	March 2013
45	Dr J Praveen	International Journal of Electrical and Electronics Engineering Research	International	Power Quality Improvement, Thd Analysis Using Dstatcom For Low Voltage System	March31, 2013
46	Dr J Praveen	International Journal of Electrical and Electronics Engineering Research (IJEEER)	International	Design and Simulation of New Z Source Inverter for Improving Voltage Quality	Aug 2013
47	Dr J Praveen	National Conference on Advanced research methodologies in Electrical Engineering	National	Modernization of Indian Grid System by Developing Ultrafast Measurement System Known as Synchro Phasors Technology Using GPS in PMU's to Avoid System Failure	June 27th & 28th ,2013
48	Dr J Praveen	International Conference on Intelligent and Efficient Electrical Systems	International	Various power Quality issues :Measurement of Flicker and Mitigation of Voltage sag	12-14 Dec 2013
49	Dr J Praveen	National Conference on "Power Quality and Industrial Drives	National	Measurement of Voltage Filcker and Mitigation of Voltage Sag to improvise the power Quality	July12-13th 2013
50	M.Chakravahy	International journal of engineering trends and technology	International	Automatic Solar tracking using Crouzet Millenium PLC	August 2013
51	M.Chakravahy	International journal of engineering trends and technology	International	Hardware implementation of single phase Inverter	August 2013
52	Swati Devabhaktuni	National Conference on Contemporary control and Soft computing in Electrical Engineering	National	Speed control of separately excited d.c motor using chopper	May, 2013
53	Swati Devabhaktuni	National Conference on Contemporary control and Soft computing in Electrical Engineering	National	Labview Based Temperature Control Using LM 35	May 2013.
54	Swati Devabhaktuni	Research Journal of Engineering Sciences	National	Millenium3 PLC based Temperature Control using LM35	June 2013
55	Swati Devabhaktuni	IJISA	International	PLC based Smart Street Lighting Control",	2013
56	Swati Devabhaktuni	International journal of emerging trends in engineering and development	International	'Soil moisture and temperature sensor based intelligent irrigation water pump controlling system using PIC16F72 microcontroller	
57	Swati Devabhaktuni	*International Journal of Electronics and Electrical Engineering*	*International*	On Line Speed Control of PMDC Motor Using Auto Tuning PID through LabVIEW	*December, 2013*
58	Swati Devabhaktuni	Carib.j.SciTech	*International*	Power quality improvement of self-excited induction enerator using Multipulse AC-DC converters - A comparison	2013
59	J.Sridevi	International science congress association research journal of engineering	International	A new active power factor correction using boost converter	Aug,2013.
60	A.Vinaykumar	International Conference on Intelligent and Efficient Electrical Systems	International	Various power Quality issues :Measurement of Flicker and Mitigation of Voltage sag	12-14 Dec 2013

61	A.Vinay kumar	National Conference on "Power Quality and Industrial Drives"	National	Measurement of Voltage Filcker and Mitigation of Voltage Sag to improvise the power Quality	July12-13 2013
62	G.Swapna,	International journal of engineering trends and technology	International	Hardware implementation of single phase Inverter	August 2013
63	V.Himabindu	International journal of engineering trends and technology	International	Hardware implementation of single phase Inverter	August 2013
64	V.V.S.Madhuri	International Journal of Latest Trends in Engineering and Technology (IJLTET)	International	Automatic Street Lighting using PLC	July 2013
65	V.V.S.Madhuri	International journal of latest trends in engineering and technology(IJLTET)	International	Automatic Solar tracking using Crouzet Millenium PLC	July 2013
66	M.N.SandhyaRani	International Journal of Latest Trends in Engineering and Technology (IJLTET)	International	Automatic Street Lighting using PLC	July 2013
67	M.N. SandhyaRani	International Journal of Latest Trends in Engineering and Technology (IJLTET)	International	Appliance Remote Control Using Arduino	July 2013
68	P.SrividyaDevi	Research Journal of Engineering Sciences	National	Measurement of power and energy using Arduino	October **(2013)**
69	M.Rekha	National Conference on Contemporary control and Soft computing in Electrical Engineering	National	System identification of dc motor-generator set using matlab/labview	May, 2013
70	P.Prasanth Kumar	International Journal of Engineering Research and Technology(IJERT)	International	Development and testing of Non-Isolated Boost Converter",International Journal of Engineering Research and Technology(IJERT)	August 2013
71	P.SrividyaDevi	Research Journal of Engineering Sciences	National	Measurement of power and energy using Arduino	October **(2013)**
72	M.Rekha	National Conference on Contemporary control and Soft computing inElectrical Engineering	National	System identification of dc motor-generator set using matlab/labview	May, 2013
73	P.Prasanth Kumar	International Journal of Engineering Research and Technology(IJERT)	International	Development and testing of Non-Isolated Boost Converter",International Journal of Engineering Research and Technology(IJERT)	August 2013

5.5 Faculty as participants/resource persons in faculty development / training activities (15)

Total Marks : 15.00

Institute Marks : 15.00

(Instruction: A faculty member scores maximum five points for a participation/resource person.)

Participant/resource person in two week faculty development programme : 5 points
Participant/resource person in one week faculty development programme : 3 Points

File Name
FDP
Interaction With Outside world
Workshops

Name of the faculty	max. 5 per faculty		
	2012-2013	2013-2014	2014-2015

A Vinay Kumar	5.00	5.00	0.00
A.Vinay Kumar	0.00	0.00	0.00
B Aruna	3.00	0.00	0.00
B Vasanth Reddy	5.00	0.00	0.00
B. Vasanth Reddy	0.00	0.00	0.00
D Anusha	5.00	3.00	0.00
D Karuna Kumar	0.00	3.00	3.00
D Rohan	0.00	0.00	3.00
D.Ramya	5.00	3.00	0.00
D.Swathi	5.00	5.00	0.00
Dr SV Jayaram Kumar	0.00	0.00	5.00
Dr. D V Pushpa Latha	5.00	5.00	5.00
Dr.J.Praveen	5.00	5.00	5.00
Dr.S.N.Saxena	5.00	5.00	0.00
E Venkateswarlu	5.00	5.00	5.00
E. Venkateshwarlu	0.00	0.00	0.00
G Sandhya Rani	5.00	3.00	3.00
G Swapna	5.00	3.00	0.00
G. Sandhya Rani	0.00	0.00	0.00
G.Swapna	0.00	0.00	0.00
J Sridevi	5.00	5.00	5.00
J.Sridevi	0.00	0.00	0.00
K Santhosh Kumar	5.00	0.00	0.00
K Sudha	0.00	0.00	5.00
K.Sireesha	5.00	0.00	0.00
K.Sreshtha	0.00	0.00	0.00
M N Sandhya Rani	5.00	5.00	5.00
M Karthika	0.00	0.00	3.00
M Lohitha	0.00	0.00	3.00
M Prasanth	0.00	0.00	3.00
M Ramesh	5.00	3.00	0.00
M Rekha	3.00	5.00	3.00
M Shekar	0.00	0.00	3.00
M Srikanth	5.00	5.00	5.00
M. Chakravarty	5.00	5.00	0.00
M.Chakravarthy	0.00	0.00	0.00
M.Naga sandhya Rani	0.00	0.00	0.00
M.Srikanth	0.00	0.00	0.00
P Jeevan Reddy	3.00	0.00	0.00
P Prasanth Kumar	3.00	5.00	5.00
P Praveen Kumar	5.00	5.00	5.00
P Ravikanth	0.00	5.00	5.00
P Saraswathi	0.00	5.00	3.00
P Shravan Kumar	5.00	0.00	0.00
P Sirisha	3.00	5.00	5.00
p sri vidya devi	5.00	5.00	5.00
P.M Sarma	5.00	5.00	0.00
P.Praveen Kumar	0.00	0.00	0.00
P.Ravikanth	0.00	0.00	0.00
P.S.Raju	5.00	5.00	5.00
P.Saraswathi	0.00	0.00	0.00
R Anil Kumar	5.00	5.00	5.00
R.Anil Kumar	0.00	0.00	0.00
S Radhika	5.00	5.00	5.00
S.Radhika	0.00	0.00	0.00
Syed Sarfaraz Nawaz	5.00	5.00	5.00
Syed. Sarfaraz Nawaz	0.00	0.00	0.00
U Vijaya Lakshmi	5.00	5.00	5.00

U.Vijaya Laxmi	0.00	0.00	0.00
V Hima Bindu	5.00	5.00	5.00
V Usha Rani	0.00	5.00	3.00
V.HimaBindu	0.00	0.00	0.00
V.V.S Madhuri	5.00	5.00	5.00
V.Vijayaramaraju	5.00	5.00	5.00
VVS Madhuri	0.00	0.00	0.00
Y Sata vani	0.00	5.00	3.00
Y.Satyavani	0.00	0.00	0.00
Sum	165.00	156.00	138.00
N	5.00	6.00	8.00
Assessment = 3 × Sum/N	15.00	15.00	15.00

Average assessment 15.00

5.6 Faculty Retention (15)

Total Marks : 15.00

Institute Marks : 15.00

Assessment = 3 × RPI/N
where RPI = Retention point index
= Points assigned to all faculty members
where points assigned to a faculty member = 1 point for each year of experience at the institute but not exceeding 5

Item	2012-2013	2013-2014	2014-2015
Number of faculty members with experience of less than l year (x0)	0.00	0.00	2.00
Number of faculty members with 1 to 2 years experience (x1)	0.00	1.00	4.00
Number of faculty members with 2 to 3 years experience (x2)	7.00	4.00	4.00
Number of faculty members with 3 to 4 years experience (x3)	7.00	7.00	7.00
Number of faculty members with 4 to 5 years experience (x4)	5.00	5.00	5.00
Number of faculty members with more than 5 years experience (x5)	17.00	18.00	13.00
N	5.00	6.00	8.00
RPI = x1 + 2x2 + 3x3 + 4x4 + 5x5	140.00	140.00	118.00
Assessment	15.00	15.00	15.00

Average assessment 15.00

5.7 Faculty Research Publications (FRP) (30)

Total Marks : 30.00

Institute Marks : 30.00

(Instruction: A faculty member scores maximum five research publication points depending upon the quality of the research papers and books published in the past three years.)

Assessment of FRP = 6 × (Sum of the research publication points scored by each faculty member)/N
The research papers considered are those (i) which can be located on Internet and/or are included in hard-copy volumes/proceedings, published by reputed publishers, and (ii) the faculty member's affiliation, in the published papers/books, is of the current institution
Include a list of all such publications and IPRs along with details of DOI, publisher, month/year, etc.

File Name
Research Publication

Name of the Faculty (contributing to FRP)	FRP points (max. 5 per faculty)		
	2012-2013	2013-2014	2014-2015
A Vinay Kumar	5.00	5.00	5.00
A.Vinay Kumar	0.00	0.00	0.00
B Aruna	3.00	0.00	0.00
B Vasanth Reddy	5.00	0.00	0.00
B. Vasanth Reddy	0.00	0.00	0.00
D Anusha	3.00	0.00	0.00
D Karuna Kumar	0.00	0.00	3.00
D Rohan	0.00	0.00	5.00
D.Ramya	5.00	5.00	0.00
D.Swathi	5.00	5.00	0.00
Dr SV Jayaram Kumar	5.00	5.00	5.00
Dr. D V Pushpa Latha	5.00	5.00	5.00
Dr.J.Praveen	5.00	5.00	5.00

Dr.S.N.Saxena	5.00	5.00	0.00
E Venkateswarlu	5.00	5.00	0.00
E. Venkateshwarlu	0.00	0.00	0.00
G Sandhya Rani	3.00	0.00	0.00
G Swapna	0.00	3.00	0.00
G. Sandhya Rani	0.00	0.00	0.00
G.Swapna	0.00	0.00	0.00
J Sridevi	5.00	5.00	5.00
J.Sridevi	0.00	0.00	0.00
K Santhosh Kumar	3.00	0.00	0.00
K Sudha	0.00	0.00	3.00
K.Sireesha	3.00	5.00	0.00
K.Sreshtha	0.00	3.00	0.00
M N Sandhya Rani	3.00	3.00	0.00
M Karthika	0.00	0.00	3.00
M Lohitha	0.00	0.00	3.00
M Prasanth	0.00	0.00	3.00
M Ramesh	3.00	0.00	0.00
M Rekha	5.00	5.00	5.00
M Shekar	0.00	0.00	5.00
M Srikanth	0.00	5.00	3.00
M. Chakravarty	5.00	5.00	0.00
M.Chakravarthy	0.00	0.00	0.00
M.Naga sandhya Rani	0.00	0.00	0.00
M.Srikanth	0.00	0.00	0.00
P Jeevan Reddy	3.00	0.00	0.00
P Prasanth Kumar	0.00	3.00	0.00
P Praveen Kumar	0.00	0.00	3.00
P Ravikanth	0.00	0.00	2.00
P Saraswathi	0.00	0.00	3.00
P Shravan Kumar	5.00	0.00	0.00
P Sirisha	0.00	3.00	0.00
p sri vidya devi	5.00	5.00	5.00
P.M Sarma	5.00	5.00	0.00
P.Praveen Kumar	0.00	0.00	0.00
P.Ravikanth	0.00	0.00	2.00
P.S.Raju	5.00	5.00	5.00
P.Saraswathi	0.00	0.00	0.00
R Anil Kumar	3.00	0.00	0.00
R.Anil Kumar	0.00	0.00	0.00
S Radhika	5.00	5.00	0.00
S.Radhika	0.00	0.00	0.00
Syed Sarfaraz Nawaz	0.00	5.00	5.00
Syed. Sarfaraz Nawaz	0.00	0.00	0.00
U Vijaya Lakshmi	5.00	0.00	0.00
U.Viyaya Laxmi	0.00	0.00	0.00
V Hima Bindu	3.00	3.00	3.00
V Usha Rani	0.00	5.00	0.00
V.HimaBindu	0.00	0.00	0.00
V.V.S Madhuri	0.00	5.00	3.00
V.Vijayaramaraju	5.00	5.00	5.00
VVS Madhuri	0.00	0.00	0.00
Y Sata vani	0.00	0.00	0.00
Y.Satyavani	0.00	0.00	0.00
Sum	125.00	123.00	94.00
N	5.00	6.00	8.00
Assessment of FRP = 6 × Sum/N	30.00	30.00	30.00
		Average assessment	30.00

5.8 Faculty Intellectual Property Rights (FIPR) (10)

Total Marks : 5.75

Institute Marks : 5.75

Assessment of FIPR = 2 × (Sum of the FIPR points scored by each faculty member)/N

Name of faculty member (contributing to FIPR)	FIPR points (max. 5 per faculty member)		
	2012-2013	2013-2014	2014-2015
A Vinay Kumar	0.00	0.00	5.00
A.Vinay Kumar	0.00	0.00	0.00
B Aruna	0.00	0.00	0.00
B Vasanth Reddy	0.00	0.00	5.00
B. Vasanth Reddy	0.00	0.00	0.00
D Anusha	0.00	0.00	0.00
D Karuna Kumar	0.00	0.00	0.00
D Rohan	0.00	0.00	0.00
D.Ramya	0.00	0.00	0.00
D.Swathi	0.00	0.00	0.00
Dr SV Jayaram Kumar	0.00	0.00	0.00
Dr. D V Pushpa Latha	0.00	5.00	5.00
Dr.J.Praveen	0.00	0.00	5.00
Dr.S.N.Saxena	5.00	0.00	0.00
E Venkateswarlu	0.00	0.00	0.00
E. Venkateshwarlu	0.00	0.00	0.00
G Sandhya Rani	0.00	0.00	0.00
G Swapna	0.00	0.00	0.00
G. Sandhya Rani	0.00	0.00	0.00
G.Swapna	0.00	0.00	0.00
J Sridevi	0.00	0.00	0.00
J.Sridevi	0.00	0.00	0.00
K Santhosh Kumar	0.00	0.00	0.00
K Sudha	0.00	0.00	0.00
K.Sireesha	0.00	0.00	0.00
K.Sreshtha	0.00	0.00	0.00
M N Sandhya Rani	0.00	0.00	0.00
M Karthika	0.00	0.00	0.00
M Lohitha	0.00	0.00	0.00
M Prasanth	0.00	0.00	0.00
M Ramesh	0.00	0.00	0.00
M Rekha	0.00	0.00	0.00
M Shekar	0.00	0.00	0.00
M Srikanth	0.00	0.00	0.00
M. Chakravarty	5.00	0.00	0.00
M.Chakravarthy	0.00	0.00	0.00
M.Naga sandhya Rani	0.00	0.00	0.00
M.Srikanth	0.00	0.00	0.00
P Jeevan Reddy	0.00	0.00	0.00
P Prasanth Kumar	0.00	0.00	0.00
P Praveen Kumar	0.00	0.00	0.00
P Ravikanth	0.00	0.00	0.00
P Saraswathi	0.00	0.00	0.00
P Shravan Kumar	0.00	0.00	0.00
P Sirisha	0.00	0.00	0.00
p sri vidya devi	0.00	0.00	0.00
P.M Sarma	5.00	0.00	0.00
P.Praveen Kumar	0.00	0.00	0.00
P.Ravikanth	0.00	0.00	0.00

P.S.Raju	0.00	0.00	0.00
P.Saraswathi	0.00	0.00	0.00
R Anil Kumar	0.00	0.00	0.00
R.Anil Kumar	0.00	0.00	0.00
S Radhika	0.00	0.00	0.00
S.Radhika	0.00	0.00	0.00
Syed Sarfaraz Nawaz	0.00	0.00	5.00
Syed. Sarfaraz Nawaz	0.00	0.00	0.00
U Vijaya Lakshmi	0.00	0.00	0.00
U.Viyaya Laxmi	0.00	0.00	0.00
V Hima Bindu	0.00	0.00	0.00
V Usha Rani	0.00	0.00	0.00
V.HimaBindu	0.00	0.00	0.00
V.V.S Madhuri	0.00	0.00	0.00
V.Vijayaramaraju	0.00	5.00	0.00
VVS Madhuri	0.00	5.00	0.00
Y Sata vani	0.00	0.00	0.00
Y.Satyavani	0.00	0.00	0.00
Sum	15.00	15.00	25.00
N	5.00	6.00	8.00
Assessment of FIPR = 2 × Sum/N	6.00	5.00	6.25

Average assessment 5.75

5.9 Funded R&D Projects and Consultancy (FRDC) Work (30)

Total Marks : 14.33

Institute Marks : 14.33

(Instruction: A faculty member scores maximum 5 points, depending upon the amount.) A suggested scheme is given below for a minimum amount of Rs. 1 lakh:)

Assessment of R&D and consultancy projects = 6 × (Sum of FRDC by each faculty member)//N
Five points for funding by national agency,
Four points for funding by state agency,
Four points for funding by private sector, and
Two points for funding by the sponsoring trust/society

Name of faculty member (contributing to FRDC)	FRDC points (max. 5 per faculty member)		
	2012-2013	2013-2014	2014-2015
A Vinay Kumar	0.00	0.00	0.00
A.Vinay Kumar	0.00	0.00	0.00
B Aruna	0.00	0.00	0.00
B Vasanth Reddy	0.00	0.00	0.00
B. Vasanth Reddy	0.00	0.00	0.00
D Anusha	0.00	0.00	0.00
D Karuna Kumar	0.00	0.00	0.00
D Rohan	0.00	0.00	0.00
D.Ramya	0.00	0.00	0.00
D.Swathi	0.00	0.00	0.00
Dr SV Jayaram Kumar	0.00	0.00	0.00
Dr. D V Pushpa Latha	0.00	0.00	5.00
Dr.J.Praveen	0.00	0.00	5.00
Dr.S.N.Saxena	5.00	0.00	0.00
E Venkateswarlu	0.00	0.00	0.00
E. Venkateshwarlu	0.00	0.00	0.00
G Sandhya Rani	0.00	0.00	0.00
G Swapna	0.00	0.00	0.00
G. Sandhya Rani	0.00	0.00	0.00
G.Swapna	0.00	0.00	0.00
J Sridevi	0.00	0.00	0.00
J.Sridevi	0.00	0.00	0.00
K Santhosh Kumar	0.00	0.00	0.00
K Sudha	0.00	0.00	0.00

K.Sireesha	0.00	0.00	0.00
K.Sreshtha	0.00	0.00	0.00
M N Sandhya Rani	0.00	0.00	0.00
M Karthika	0.00	0.00	0.00
M Lohitha	0.00	0.00	0.00
M Prasanth	0.00	0.00	0.00
M Ramesh	0.00	0.00	0.00
M Rekha	0.00	0.00	0.00
M Shekar	0.00	0.00	0.00
M Srikanth	0.00	0.00	0.00
M. Chakravarty	0.00	5.00	0.00
M.Chakravarthy	0.00	0.00	0.00
M.Naga sandhya Rani	0.00	0.00	0.00
M.Srikanth	0.00	0.00	0.00
P Jeevan Reddy	0.00	0.00	0.00
P Prasanth Kumar	0.00	0.00	0.00
P Praveen Kumar	0.00	0.00	0.00
P Ravikanth	0.00	0.00	0.00
P Saraswathi	0.00	0.00	0.00
P Shravan Kumar	0.00	0.00	0.00
P Sirisha	0.00	0.00	0.00
p sri vidya devi	0.00	0.00	0.00
P.M Sarma	5.00	0.00	0.00
P.Praveen Kumar	0.00	0.00	0.00
P.Ravikanth	0.00	0.00	0.00
P.S.Raju	0.00	0.00	0.00
P.Saraswathi	0.00	0.00	0.00
R Anil Kumar	0.00	0.00	0.00
R.Anil Kumar	0.00	0.00	0.00
S Radhika	0.00	0.00	0.00
S.Radhika	0.00	0.00	0.00
Syed Sarfaraz Nawaz	0.00	0.00	0.00
Syed. Sarfaraz Nawaz	0.00	0.00	0.00
U Vijaya Lakshmi	0.00	0.00	0.00
U.Viyaya Laxmi	0.00	0.00	0.00
V Hima Bindu	0.00	0.00	0.00
V Usha Rani	0.00	0.00	0.00
V.HimaBindu	0.00	0.00	0.00
V.V.S Madhuri	0.00	0.00	5.00
V.Vijayaramaraju	5.00	5.00	5.00
VVS Madhuri	0.00	0.00	0.00
Y Sata vani	0.00	0.00	0.00
Y.Satyavani	0.00	0.00	0.00
Sum	15.00	10.00	20.00
N	5.00	6.00	8.00
Assessment of FRDC = 6 × Sum/N	18.00	10.00	15.00
		Average assessment	14.33

5.10 Faculty Interaction with Outside World (15)

Total Marks : 15.00

Institute Marks : 15.00

(Instruction: A faculty member gets a maximum of five interaction points, depending upon the type of institution or R&D laboratory or industry, as follows)

FIP = Faculty interaction points
Assessment = 3 × (Sum of FIP by each faculty member)/N
Five points for interaction with a reputed institution abroad, institution of eminence in India, or national research laboratories,
Three points for interaction with institution/industry (not covered earlier)
Points to be awarded, for those activities, which result in joint efforts in publication of
books/research paper, pursuing externally funded R&D / consultancy projects and/or
development of semester-long course / teaching modules.

Name of faculty member (contributing to FIP)	FIP		
	2012-2013	2013-2014	2014-2015
A Vinay Kumar	5.00	5.00	5.00
A.Vinay Kumar	0.00	0.00	0.00
B Aruna	4.00	0.00	0.00
B Vasanth Reddy	5.00	0.00	5.00
B. Vasanth Reddy	0.00	0.00	0.00
D Anusha	3.00	3.00	0.00
D Karuna Kumar	0.00	3.00	5.00
D Rohan	0.00	0.00	4.00
D.Ramya	5.00	5.00	0.00
D.Swathi	5.00	5.00	0.00
Dr SV Jayaram Kumar	0.00	0.00	5.00
Dr. D V Pushpa Latha	5.00	5.00	5.00
Dr.J.Praveen	5.00	5.00	5.00
Dr.S.N.Saxena	5.00	5.00	0.00
E Venkateswarlu	5.00	5.00	5.00
E. Venkateshwarlu	0.00	0.00	0.00
G Sandhya Rani	2.00	2.00	2.00
G Swapna	3.00	2.00	0.00
G. Sandhya Rani	0.00	0.00	0.00
G.Swapna	0.00	0.00	0.00
J Sridevi	5.00	5.00	5.00
J.Sridevi	0.00	0.00	0.00
K Santhosh Kumar	0.00	0.00	0.00
K Sudha	0.00	0.00	3.00
K.Sireesha	2.00	2.00	0.00
K.Sreshtha	0.00	0.00	0.00
M N Sandhya Rani	3.00	3.00	5.00
M Karthika	0.00	0.00	2.00
M Lohitha	0.00	0.00	2.00
M Prasanth	0.00	0.00	3.00
M Ramesh	0.00	0.00	0.00
M Rekha	3.00	3.00	5.00
M Shekar	0.00	0.00	0.00
M Srikanth	3.00	5.00	3.00
M. Chakravarty	5.00	5.00	0.00
M.Chakravarthy	0.00	0.00	0.00
M.Naga sandhya Rani	0.00	0.00	0.00
M.Srikanth	0.00	0.00	0.00
P Jeevan Reddy	3.00	0.00	0.00
P Prasanth Kumar	3.00	3.00	3.00
P Praveen Kumar	3.00	3.00	3.00
P Ravikanth	0.00	2.00	2.00
P Saraswathi	0.00	0.00	3.00
P Shravan Kumar	2.00	0.00	0.00
P Sirisha	2.00	2.00	2.00
p sri vidya devi	0.00	5.00	3.00
P.M Sarma	3.00	3.00	0.00
P.Praveen Kumar	0.00	0.00	0.00
P.Ravikanth	0.00	0.00	0.00
P.S.Raju	5.00	5.00	5.00
P.Saraswathi	0.00	0.00	0.00
R Anil Kumar	2.00	2.00	2.00
R.Anil Kumar	0.00	0.00	0.00
S Radhika	2.00	3.00	5.00
S.Radhika	0.00	0.00	0.00

Syed Sarfaraz Nawaz	0.00	4.00	3.00
Syed. Sarfaraz Nawaz	0.00	0.00	0.00
U Vijaya Lakshmi	0.00	0.00	3.00
U.Viyaya Laxmi	0.00	0.00	0.00
V Hima Bindu	2.00	2.00	2.00
V Usha Rani	0.00	3.00	0.00
V.HimaBindu	0.00	0.00	0.00
V.V.S Madhuri	0.00	5.00	3.00
V.Vijayaramaraju	5.00	5.00	3.00
VVS Madhuri	0.00	0.00	0.00
Y Sata vani	0.00	0.00	0.00
Y.Satyavani	0.00	0.00	0.00
Sum	105.00	115.00	113.00
N	5.00	6.00	8.00
Assessment of FIP = 3 × Sum/N	15.00	15.00	15.00

Average assessment 15.00

6 Facilities and Technical Support (75) **Total Marks : 75.00**

Description of classrooms, faculty rooms, seminar, and conference halls:

Room description	No. of Rooms	Usage	Shared/ Exclusive	Capacity	Rooms Equipped with PC, Internet, etc.
Class Rooms	8	For conducting class work for UG and PG Programms	Exclusive	72 each room	Class rooms are equipped with state-of-art infrastructure,Wi-Fi Facility and are well designed to give ideal teaching and learning environment
Facuity Rooms	2	For Department Faculty	Exclusive	16 each	Equipped with necessary infrastructure ,Wi-Fi Facility
Seminar Halls	1	For conducting workshops,Guest lectures and departmental meetings	Exclusive	60	Equipped with corporate infrastucture and facilities
Meeting room	1	For Conducting departmental Meetings	Shared	60	Equipped with corporate infrastructre and facilities
Tutorial Rooms	2	For conducting tutorial and remedial Classes	Exclusive	36 each room	Tutorial rooms are equipped with state-of-art infrastructure, Wi-Fi Facility and are well designed to give ideal teaching and learning environment.

6.1 Classrooms in the Department (15) **Total Marks : 15.00**

6.1.1 Adequate number of rooms for lectures (core/electives), seminars, tutorials, etc., for the program (5) Institute Marks : 5.00

(Instruction: Assessment based on the information provided in the preceding table.)

No. of Class rooms : 8

No. of Seminar Halls : 1

No. of Tutorial rooms : 2

Detailed information about the rooms in the department is given below.

Room No	Usage	Exclusive/ Shared	Room Equipped with
2103(UG)	Class Room	Exclusive	Class rooms are equipped with good infrastructure and are well designed to give ideal teaching and learning environment.
2108(UG)			
2309(UG)			
2113(PG)			
2304(UG)			
2305(UG)			
2308(UG)			
2114(PG)			
2112	Tutorial rooms	Exclusive	Separate Tutorial rooms with a seating capacity 36 of students are available for special and remedial classes
2111			
2102	Seminar Halls	Exclusive	Equipped with corporate style infrastructure and facilities for conducting workshops, Guest lectures and departmental meetings

6.1.2 Teaching aids---multimedia projectors, etc (5) Institute Marks : 5.00

Teaching Aids:

From the inception, the teaching staff at GRIET uses the modern Teaching aids for effective way of teaching. The process of teaching-learning depends on different types of teaching aids and tools available in the classroom. Teaching aids used at GRIET facilitate the student learning without having to rely only on textbooks and form an integral component of a classroom and are very important in the TLP (Teaching Learning Process). These teaching aids play an important role in assisting students to improve reading comprehension skills, illustrating or reinforcing a skill or concept, differentiating instruction and relieving anxiety or boredom by presenting information in a new and interesting way.

The teaching – learning resources address multiple learning styles, themes, grades and academic skill levels. Teachers at GRIET find these aids, as supplements to curriculum materials. Such resources can make teaching and learning, a rewarding experience. We use the latest teaching aids available in the form of audio, video and audio-visual aids. They are very important in implementation of learning objectives which affects the outcomes.

We at GRIET enjoy the following advantages by implementing Teaching Aids:

1. Students tend to forget if they only listen in their classroom. Appropriate teaching aid if properly used helps them to retain the concepts better and for a longer period.
2. Providing conceptual thinking and imagining capabilities.
3. Helping the student to get clarity on the subject more clearly.
4. Enhancing the learning experience for the students by motivating those using different teaching aids.
5. Making the classrooms more interesting, live and interactive.
6. Helping the students to increase and improve their vocabulary and communication skills.
7. Creating a proper image of the subject when the students hear, visualize and imagine.
8. Creating an interesting environment for the students.
9. Provide hands-on experience to the students with the help of teaching aids such as models.

Different Teaching aids used in GRIET:

1. **Visual Aids:**

i. **White board.**

- The written matter on the board is meant to attract the attention and it stays visually for a long time to the student
- It acts as a prompt and a reminder of the on-going lecture. Thus acts as a reinforcing tool in TLC.
- It is used simultaneously along with other aids which may last a short period visually.
- It helps in step-wise/sequentially depict a process or derive formulae.
- It makes the student put his or her understanding on the board, upon an invitation of the teacher in front of the audience.
- The summary of the lecture is captured on the board, reinforcing the teaching objective.

ii. **The Bulletin-Board.**

- It has a wider reach, serving as a mass communication tool.
- The display summarizes the class room activity.
- The activity of a group or the present status is made available.
- It acts as a display for result of an individual or group activity.
- It acts as a motivator when displaying awards and prizes or appreciations.
- Visual information other than written/ typed matter, photos and posters are also displayed.

iii. **Overhead Projector/ LCD Projector.**

- They evoke more involvement by the audience as the visuals are strong in composition and content.
- The teacher has the flexibility of using still photos, typed matter and video.
- Numerical data is projected as tables, graphs, charts, flow-charts, info graphics, which provoke self analysis of the projection as against the information being talked.
- Projected data or figures are put for discussion and for analysis by the group.
- Still projections are used for quiz, tests and guide students effectively.

iv. **Representations -charts, sketches, flash cards, posters, pictures, pamphlets, hand-outs etc.**

- A good way to present and practice and also recycle vocabulary for all the activities in a class room.
- We use bright and colorful Flash cards to make visual impact on the viewer that leaves a longer imprint of the content on the minds.
- Increases the creative time of students and also adds context to subject learning.
- They are visually stimulating and very versatile in fitting most of the activities at all levels.

Audio-Visual aids:

i. **Motion pictures / Video Lectures**

- Video lectures are virtual classes by subject experts which not only provide content; they also stimulate the interest that makes the curriculum relevant, meeting the course objectives.
- Students can watch these video lectures or they can revisit the stream at any point replaying the part that they did not understand.
- Students can view and study these instructors's lecture as often as they wish until they understand the material.
- These video lectures helps in improving student's grades and increases their overall level of satisfaction and confidence.
- Even the most complex and challenging subjects can be delivered to the students in a more interesting way.

2. **Activity aids:**

i. **Industrial Tours, Excursion, field trips.**

- Industrial visits are considered as one of the most strategic methods of teaching and learning process.
- These tours provide students with an opportunity to learn in real time, practically through interaction, working methods and employment practices.
- They represent an important activity that contributes to the achievement of various essential learning outcomes and program objectives for the pre-final year and final year students.

ii. **Preparation of models, charts, Role play, Demonstration, Interactive games, Quizzical, Questionnaires**

- This is an instant way of assessment of the students and reflects the teaching and learning process.
- The teacher prepares the questionnaire based on the subject, divides the class into groups and conducts the questionnaire or interactive games.
- They evoke memory recall of the subject or the topic(s) that are covered in the classroom by the students very effectively.
- It is used as a tool to elicit competitive spirit to gain good grades and winning attitude.
- Overall, this helps the students to prepare for online tests and quizzes which are assessments.

4. Internet:

- Internet provides access to an amazing number of constantly updated and expanding resources and an incredible wealth of information.
- The Teaching-Learning Process at the institute includes self-research by students on topics given as assignments and seminars. Students use it as discussion boards, to discuss what they find with classmates or, if they're using e-mail, with students in another class or an expert in the field they are studying, and finally they can publish their work on the Web.
- Students are empowered as learners, they are motivated to use e-tools to enhance and develop team building skills, and learning through sharing.
- The framework for learning is more adaptable to a fast-changing world, resources for learning are replaced by online link to the real world, resources can be adapted to immediate learning needs and skills are developed for the information age.
- The institute records all activity under Mini- and Major Projects as video presentations for motivating and educating the fresh batch students providing a platform for novelty, innovative thinking and interaction with alumni.
- Students are encouraged to upload their project videos in YOUTUBE.
- Internet skills are important for employment, improve quality of life, etc.; our students need to master them no matter whatever their field or profession.

6.1.3 Acoustics, classroom size, conditions of chairs/benches, air circulation, lighting, exits, ambience, and such other amenities/facilities (5) Institute Marks : 5.00

(Instruction: Assessment based on the information provided in the preceding table and the inspection thereof.)

- All the classrooms are well furnished, ventilated, and spacious and equipped with modern teaching aids.
- Separate rooms are available for tutorial classes with necessary infrastructure.
- Large size classrooms, seminar halls and laboratories have two exits for emergencies.
- All classrooms are acoustically designed to minimize echo and sound distortion.
- On the whole at GRIET, the class / tutorial rooms, seminar halls are designed in a way that they provide a conductive environment which is needed for technology enhance learning with all the modern teaching aids and amenities.

Room No	Room Size in sq.mt / strength	Acoustics	Conditions of chairs/benches	Air circulation / lighting / Exit / Ambience	Amenities / Facilities
2103	95sq.mt / 72	Good	Excellent	Excellent	State-of-art infrastructure, necessary gadgets
2108	95sq.mt / 72				
2113	67sq.mt / 72				
2114	67sq.mt / 72				
2304	84sq.mt / 72				
2305	84sq.mt / 72				
2308	95sq.mt / 72				
2309	84sq.mt / 72				

6.2 Faculty Rooms in the Department (15) Total Marks : 15.00

6.2.1 Availability of individual faculty rooms (5) Institute Marks : 5.00

(Instruction: Assessment based on the information provided in the preceding table.)

- Two halls of size 84 sq.mt each are utilized to have room for the teaching faculty.
- Each hall is portioned into 8 cubicles for accommodating 1 – 3 faculty members comfortably.
- Each cubicle is well equipped with necessary infrastructure, good ventilation and Wi-Fi facility round the clock.
- The cabins are spacious enough to have interactions with students personally.

Room No	No. of Cabins / Room	Room size in sq.mt
2109	8	84 sq.mt
2110	8	84 sq.mt

6.2.2 Room equipped with white/black board, computer, Internet, and such other amenities/facilities (5) Institute Marks : 5.00

(Instruction: Assessment based on the information provided in the preceding table)

- Some of the faculty rooms have a white board aiding for discussions.
- Each faculty room has easy access to a common desktop computer, scanner and printer, apart from the use of portable laptop computers available with the programme. They can use their personal gadgets for which power sockets are provided in the faculty rooms.
- The cubicles also have lockable storage racks for keeping the academic material apart from the individual desk storage space with lockable drawers.
- The faculty is connected both by LAN and Wi-Fi communication network for Internet access.
- They also have constant supply of RO water through dispensers, and a kitchenette for the recreation of the faculty.

Room No	White/ Black Board	Computer/ Internet Facilities	Cupboards	Amenities/facilities
2109	Yes	Wi-Fi and Laptops	Adequate in number	common desktop computer, scanner, printer, external DVD writer, Water purifier, refrigerator and kitchenette
2110	Yes			

6.2.3 Usage of room for counselling/discussion with students (5) Institute Marks : 5.00

(Instruction: Assessment based on the information provided in the preceding table and the inspection thereof.)

- Adequate space is available in the faculty rooms for discussions/clarifications/ counseling with the students.
- Each faculty can have discussion with his / her project team or research group in their respective cabins.
- Faculty mentors are assigned to students in the program. Mentors meet one – on – one with students in their respective cubicles to counsel on course planning, inspire students to gain confidence and self- motivation.

Room No	Space For Discussions with Students	Department library facility for faculty
2109A	Yes	Yes
2110A		

Laboratory description in the curriculum	Exclusive use / shared	Space, number of students	Number of experiments	Quality of instruments	Laboratory manuals
2101(Power Electronics Lab)	Exclusive	84sq.mt,36	19	Excellent	Available
2104(Sensors measurments & instrumentation Lab)	Exclusive	84 sq.mt,36	13	Excellent	Available
2105(Control Systems Lab)	Exclusive	84 sq.mt,36	18	Excellent	Available
2310(Electrical Machines DC Lab)	Exclusive	84 sq.mt,36	12	Excellent	Available
2404 (Elecrical Machines AC Lab)	Exclusive	156 sq.mt,36	09	Excellent	Available
3005(Micro Controllers Lab) UG	Exclusive	85 sq.mt,36	15	Excellent	Available
3006(Multisim/Networks Lab)	Exclusive	85 sq.mt,36	15	Excellent	Available
3119(LabVIEW and Matlab Lab)	Exclusive	85 sq.mt,36	15	Excellent	Available
3125(Elecrical systems Simulation Lab) PG	Exclusive	80 sq.mt,36	20	Excellent	Available
2405(Power System Simulation Lab)	Exclusive	100 sq.mt,36	16	Excellent	Available
2106(Power converters Lab)	Shared	84 sq.mt,36	8	Excellent	Available
2107(Power Systems Lab) PG	Shared	84 sq.mt,36	8	Excellent	Available

6.3 Laboratories in the Department to meet the Curriculum Requirements and the POs (30) Total Marks : 30.00

6.3.1 Adequate, well-equipped laboratories to meet the curriculum requirements and the POs (10) Institute Marks : 10.00

(Instruction: Assessment based on the information provided in the preceding table.)

- The department has excellent laboratory infrastructural facilities and all the year students are trained in their respective laboratories to enhance their practical skills and also to meet their curriculum requirements.

- Laboratories are equipped with sufficient hardware & licensed software to run program specific curriculum and off program curriculum.
- These laboratories are under the guidance of well experienced faculty, lab assistants and lab technicians.
- Lab manuals are available for all the lab courses which consist of solutions for curriculum experiments and additional experiments.
- Product laboratory is available for faculty and students to carry their innovative products and projects.
- Exclusively a project lab has been provided for the students to carry out their mini and major project work.

Lab Description in the Curriculum	Exclusive / Shared	Space (Sq.mts), Number of Students	Number of Experiments	Quality of instruments	Lab manuals
Power Electronics Lab	Exclusive	84 sq.mt,36	12	Excellent	Available
Measurements Lab.		84 sq.mt,36	13		
Control Systems Lab		84 sq.mt,36	12		
Electrical Machines (D.C.)Lab		84 sq.mt,36	12		
Electrical Machines Lab(AC) Lab		84 sq.mt,36	09		
Micro Controller Lab		95 sq.mt,36	14		
Multisim/Networks Lab		156 sq.mt,36	15		
LabVIEW and MatLab		100 sq.mt,36	15		

PG LABS:

Laboratory description in the curriculum	Exclusive use / shared	Space, number of students	Number of experiments	Quality of instruments	Laboratory manuals
Electrical Syatem Simulation Lab	Exclusive	84 sq.mt,36	12	Excellent	Available
Power System Simulation Lab	Exclusive	84 sq.mt,36	11	Excellent	Available
Power Converters Lab	Shared	84 sq.mt,36	8	Excellent	Available
Power Systems Lab	Shared	84 sq.mt,36	8	Excellent	Available

Lab Description in the Curriculum	P-Outcomes										
	a	b	c	d	e	f	g	h	i	j	k	l
Power Electronics Lab	X		X					X			X	X
Measurements Lab.		X		X		X		X			X	
Control Systems Lab	X		X				X					X
Electrical Machines (D.C.)Lab	X	X		X				X			X	X
Electrical Machines Lab(AC) Lab			X				X					
Micro Processor and Micro Controller Lab	X	X		X				X			X	X
Multisim/Networks Lab			X			X		X			X	
LabVIEW and MatLab	X	X		X				X			X	X

PG Labs:

Lab Description in the Curriculum	P-Outcomes										
	a	b	c	d	e	f	g	h	i	j	k	l
Electrical Syatem Simulation Lab	X		X		X			X			X	X
Power System Simulation Lab		X		X			X			X		
Power Converters Lab	X		X		X			X			X	X
Power Systems Lab		X		X		X		X	X			X

6.3.2 Availability of computing facilities in the department (5) Institute Marks : 5.00

(Instruction: Assessment based on the information provided in the preceding table.)

UG

Laboratory	Room Number	No of Computers/ Laptops	Condition of Equipment	Hardware / Software	PEOs

Power Electronics Lab	2309	20	Excellent	PSIM, Matlab, Multisim, Pspice, Eagle	2,4
sensors measurements & instrumentation Lab	2105	15	Excellent	Arduino/Labview	2,4
Electrical Machines (D.C.)Lab	2106	3	Excellent	PS-Millennium, Codesys	1,2,4
Electrical Machines Lab(AC) Lab	2107	3	Excellent	PS-Millennium, Codesys, SIEMENS	1,2,4
Micro Controller Lab	2104	30	Excellent	TASM, Proteus, Keil	1,2,4
Multisim/Networks Lab	2404	30	Excellent	Multisim	1,2,4
LabVIEW and Mat Lab	2405	10	Excellent	Multisim	1,2,4

PG

Laboratory	Room Number	No of Computers/ Laptops	Condition of Equipment	Hardware / Software	PEOs
Electrical Syatem Simulation Lab	**2101**	**18**	Excellent	**MATLAB**	1,2,4
Power System Simulation Lab	**2410**	**9**	Excellent	**E-TAB**	1,2,4
Power Converters Lab	**2309**	10	Excellent	**Converter Kits**	1,2,4
Power Systems Lab	**2310**	9	Excellent	**Relay kits**	1,2,4

6.3.3 Availability of research facilities to conduct project works / thesis work (5) Institute Marks : 5.00

(Articulate the facilities provided to carry out the project works/thesis).

- The department has excellent laboratory infrastructural facilities and all the year students are trained in their respective laboratories to enhance their practical skills and also to do their research work requirements.
- Laboratories are equipped with sufficient hardware & licensed software to run program specific curriculum and off program curriculum for their research.
- The Research work is under the guidance of well experienced faculty, lab assistants also.
- Digital library is available for search of papers with free internet facility and with latest journals.
- Product laboratory is available for faculty and students to carry their innovative products and projects.

Exclusively a research lab has been provided for the students to carry out their research work and major project work

6.3.4 Availability of laboratories with technical support within and beyond working hours (5) Institute Marks : 5.00

(Instruction: Assessment based on the information provided in the preceding table.)

- The college timings are staggered for all the four year students in order to avoid any discrepancy in the laboratory schedules.
- All the laboratories are open from 8:00AM in the morning till 6:00PM in the evening and the technical staff is made available for the time the laboratory is open to assist the students in their respective sessions irrespective of their lab schedules.
- All the laboratories have sufficient equipment in running condition for the students to perform their experiments.
- The ratio of student to equipment available is maintained to be 2:1 to have a clear understanding of all the experiments performed in the lab sessions.
- Technical staff is trained to handle all the laboratory activities and every laboratory has an in-charge who takes care of all the laboratory equipment.
- To ensure the smooth functioning of the laboratory a couple of staff members accompany the technical staff along with lab assistants and lab technicians.

Year	College Timings	Laboratories & Student projects Lab timings	Availability of tech support in lab timings
II	8.00 A.M to 2.00 P.M	8.00 A.M to 6.00 P.M	YES
III	9.00 A.M to 3.00 P.M	8.00 A.M to 6.00 P.M	YES
IV	11.00 A.M to 5.00 P.M	8.00 A.M to 6.00 P.M	YES
M.Tech	9.00AM to 4.00PM	8.00 A.M to 6.00 P.M	YES

Name of the Laboratory	Working Hours	Work carried out in beyond working hours	Lab In-charge	Lab Faculty
Power Electronics Lab	9.00 A.M to 3.00 P.M	Design of power electronics equipment	B. Naga siva	G.Swapna

		Using Eagle Software		
sensors measurements & instrumentation Lab	11.00 A.M to 5.00 P.M	Calibration of electrical meters	K Barghav	U.Vijaya Laxmi
Control Systems Lab	8.00 A.M to 2.00 P.M	Simulation of control system model using Matlab	B. Nageshwar Rao	V.V.S.Madhuri
Electrical Machines (D.C.)Lab	8.00 A.M to 2.00 P.M	Simulation of Electrical DC Machines using Matlab	D. Sreedhar Varma	V.V.Ramaraju
Electrical Machines Lab(AC) Lab	9.00 A.M to 3.00 P.M	Simulation of Electrical Machines AC using Matlab	D.Sreedhar Varma	M.Srikanth
Micro Controller Lab	11.00 A.M to 5.00 P.M	Interfacing micro controllers with external devices.	B.R.Prasad	M N Sandhya rani
Multisim/Networks Lab	8.00 A.M to 2.00 P.M	Simulation of Networks model using Matlab	Bh. Rama Raju	Sita.Radhika
LabVIEW and MatLab	8.00 A.M to 2.00 P.M	Simulation of Electrical networks, control systems and system model using Matlab	K. Phani Varma	A.Vinay Kumar
Electrical Syatem Simulation Lab	9.00AM to 4.00PM	Programs in DSP for pulses produced for inverter	B.Naga Siva	Syed Sarfaraz Nawaz
Power System Simulation Lab	9.00AM to 4.00PM	Matlab programming for synchronous machine analaysis	K Barghav	G Sandhya Rani
Power Converters Lab	9.00AM to 4.00PM	Inverter design Hardware with MYRIO.	B.Naga Siva	P Praveen Kumar
Power Systems Lab	9.00AM to 4.00PM	Relays Operations study characteristics of different relays.	K Barghav	Dr.J.Sridevi

6.3.5 Equipment to run experiments and their maintenance, number of students per experimental setup, size of the laboratories, overall ambience, etc (5)

Institute Marks : 5.00

(Instruction: Assessment based on the information provided in the preceding table.)

- The laboratories are equipped with high-end configuration systems needed for execution of experiments.
- Laboratories are well maintained by the technical and non-technical staff.
- Sufficient number of systems is available for the students to carry out the experiments.

Laboratory	Equipment	Maintenance	No of Students per Exper-iment	Size of the Labo-ratory	Overall ambience
Power Electronics Lab	Kits, Bread boards, CROs, Computers	Maintained by Skilled lab technician & Skilled computer Hardware Professional	2	84sq.mt	Students should get Knowledge in Circuit Design and converters
Measurements Lab.	Computers, CROs with LABVIEW software	Maintained by Skilled lab technician & Skilled computer Hardware Professional	2	84sq.mt	Students should get Knowledge in measuring instruments
Control Systems Lab	Kits, Computers and MATLAB software	Maintained by Skilled lab technician & Skilled computer Hardware Professional	2	84sq.mt	Students should get Knowledge in P, PI, PID controllers
	Machines,	Maintained by Skilled lab			

Electrical Machines (D.C.)Lab	CROs, connecting wires, Computers.	technician & Skilled computer Hardware Professional	1	84sq.mt	Students should get Knowledge in dc machines
Electrical Machines Lab(AC) Lab	Machines, CROs, connecting wires, Computers.	Maintained by Skilled lab technician & Skilled Hardware Professional	2	84sq.mt	Students should get Knowledge in ac machines
Micro Controller Lab	Kits, CROs, connecting wires, Computers, Tasm software	Maintained by Skilled lab technician & Skilled computer Professional	2	95sq.mt	Students will get Knowledge in microprocessor applications
Multisim/Networks Lab	Kits, Computers, CROs, bread boards, function generators, connecting wires, Multi Sim software,	Maintained by Skilled lab technician & Skilled computer Hardware Professional	2	156sq.mt	Students will get Knowledge in basic circuit analysis.
LabVIEW and MatLab	CROs, Computers with Lab VIEW and MatLab software	Maintained by Skilled lab technician & Skilled Hardware Professional	2	100sq.mt	Students will get Knowledge in Labview

PG Labs:-

Electrical Syatem Simulation Lab	CROs, Computers with Lab VIEW and MatLab software	Maintained by Skilled lab technician & Skilled computer Hardware Professional	**1**	**85 sqmts**	Students will get Knowledge in basic programming for firing circuits.
Power System Simulation Lab	Computers with Lab VIEW MatLab and E-Tap software	Maintained by Skilled lab technician & Skilled computer Hardware Professional	**1**	**85 sqmts**	Students will get Knowledge in basic programming for power system circuits
Power Converters Lab	Converter Kits	Maintained by Skilled lab technician & Skilled computer Hardware Professional	**1**	**85 sqmts**	Students will get Knowledge in basic power circuit analysis.
Power Systems Lab	Relay kits	Maintained by Skilled lab technician & Skilled computer Hardware Professional	**1**	**85sqmts**	Students will get Knowledge in basic Relay circuit analysis.

6.4 Technical Manpower Support in the Department (15) Total Marks : 15.00

Name of the technical staff	Designation	pay-scale	Exclusive / shared work	Date of joining	Qualification		Other technical skills gained	Responsibility
					At Joining	Now		
D. Sreedhar Varma	Technician	6700-55600	Exclusive	01/11/1997	ITI in Electrical	D.E.E	Testing of DC motors & generators, AC machines using megger. Checkup connections repairing and trouble shooting	Maintaining of lab experiments and helping students in lab
Bh. Rama Raju	Technician	6700-55600	Exclusive	08/10/2005	ITI in Electrical	ITI in Electrical	soldering repairing of PCB's populating PCB and checking and designing of PCB's	Maintaining of lab experiments and helping students in lab
K. Nageshwara	Technician	6700-55600	Exclusive	02/03/2007	ITI in Electrical	ITI in Electrical	soldering repairing of PCB's populating PCB and checking and designing of PCB's	Maintaining of lab experiments and helping

Rao								students in lab
D. Phani Varma	Technician	6700-55600	Exclusive	11/12/2007	ITI in Electrical	ITI in Electrical	soldering repairing of PCB's populating PCB and checking and designing of PCB's	Maintaining of lab experiments and helping students in lab
B.Nagasiva	Technician	6700-55600	Exclusive	27/01/2010	ITI in Electrical	ITI in Electrical	soldering repairing of PCB's populating PCB and checking and designing of PCB's	Maintaining of lab experiments and helping students in lab
M.A. Leelavathi	D.E.O	6700-55600	Exclusive	05/07/2007	B.Ed	B.Ed	Trained on Software loading and maintenance	Maintaining of lab experiments and helping students in lab
B.R.Prasad	Technician	6700-55600	Exclusive	05/10/2010	D.E.E	D.E.E	soldering repairing of PCB's populating PCB and checking and designing of PCB's	Maintaining of lab experiments and helping students in lab
K Bhargav	Technician	6700-55600	Exclusive	30/12/2014	B.Tech	B.Tech	soldering repairing of PCB's populating PCB and checking and designing of PCB's	Maintaining of lab experiments and helping students in lab

6.4.1 Availability of adequate and qualified technical supporting staff for programme-specific laboratories (10) Institute Marks : 10.00

(Instruction: Assessment based on the information provided in the preceding table.)

- The technical proficiency of the technical staff is such that they are highly versatile in adapting as per programme needs and running the experiment and cater to requirements of all the three year-wise batches and their experiments.
- Each laboratory is maintained by one Technical Staff and they are available exclusively for that laboratory based on the semester requirements.
- Their duties are:
  - Issuing the components and equipment, Monitoring and take the responsibilities along with concerned lab in charge faculty.
  - Maintenance of the equipment, collecting the complaints from students / staff on equipment and resolve their complaints.
  - Maintain the stock register as per the guidelines from the higher authorities.
  - Taking safety precautionary measures while handling the equipment.

The technical staff regularly enhances their skills through participating in workshops

S.No	Laboratory	Qualified technical Staff	Designation
1	Multisim/Networks Lab	D. Phani Varma	Lab Assistant
2	Electrical Machines (DC)Lab	D.Sreedhar Varma	Lab Assistant
3	LabVIEW and MatLab	B.R.Prasad	Lab Assistant
4	Electrical Machines(AC) Lab	D. Sreedhar Varma	Lab Assistant
5	Control Systems Lab	B. Nageshwar Rao	Lab Assistant
6	Power Electronics Lab	B. Naga siva	Lab Assistant
7	Electrical Measurements Lab	D. Phani Varma	Lab Assistant
8	MPMC Lab	Bh. Rama Raju	Lab Assistant
9	Electrical systems simulation Lab	B. Naga siva	Lab Assistant
10	Power Converters Lab	B. Naga siva	Lab Assistant
11	Power Systems simulation lab	K Barghav	Lab Assistant
12	Power Systems Lab	K Barghav	Lab Assistant

6.4.2 Incentives, skill-upgrade, and professional advancement (5) Institute Marks : 5.00

(Instruction: Assessment based on the information provided in the preceding table.)

INCENTIVES:-

- College provides incentives to non teaching and technical staff members
- The staff on official work are compensated for the conveyance expenses
- Staff deputed for any outstation programs is reimbursed the amount by the administration.
- Group Insurance Schemes are implemented.
- Interest free loans are disbursed for emergency needs on a case-to-case basis.
- Subsidized lunch & snacks facility are provided.
- Free lunch coupons are provided under a general scheme to help staff in times of need.
- Transportation is free
- Free medical facility is provided in the campus, apart from medical leaves and medical allowances.
- Educational loan for higher studies is available in eligible cases.
- Employee State Insurance (ESI), Employee Provident Fund (EPF) subscription available as per norms.
- College arranges get-together every year for non teaching and technical staff along with their family members.
- Annual award is given for best performance Supporting Staff.

SKILL UPGRADE

- Staff training programmes are organized and conducted regularly to upgrade the technical skills of both technical and non teaching staff members
- Staff is trained on new equipments or tool by the Vendor during induction and installation in the department.
- Training is provided on operation of PCs, Printer, and Scanner, Internet modems, configuring IP address, power connection, software installations, PC format activity and antivirus installation.
- Training is provided on MS Office, Excel to non teaching and technical staff members as part of computer literacy programme
- Regular Training is provided to improve soft skills and communication skills.
- Training is provided on the aspects of safety, security and best laboratory practices.
- Training is provided on energy conservation for optimum use of all other resources.
- Induction and orientation programmes are conducted for all new recruits
- Intensive training provided on all laboratory experiments to meet changing syllabus requirements.

PROFESSIONAL DEVELOPMENT:

- Eligible non teaching and technical staff members are given chance to study B.Tech and M.Tech course with subsidized tuition fee
- Eligible staff is promoted to the next cadre upon accumulation of seniority and experience in service e.g., eligible Lab assistant are promoted as Lab supervisors.
- Administrative staff is promoted as senior assistants; senior assistants are promoted to the next level in administration.
- Lab staff upon successful completion of B.Tech and M.Tech programmes is considered for promotion as teaching faculty after suitable orientation training like FDP.
- Technical staff are given free time to upgrade their knowledge and technical skill.

7 Teaching-Learning Process (75) **Total Marks : 75.00**

7.1 Evaluation process: course work (25) Total Marks : 25.00

7.1.1 Evaluation Process – Class test / mid-term test schedules and procedures for (10) Institute Marks : 10.00

Assessment is based upon the efficacy of the evaluation process being followed.

a. Paper setting and Evaluation of the Answer Scripts shall be done as per the procedures laid down by the Academic Council of the College from time to time.

b. The following is the division of marks between internal and external evaluations.

S.No	Particulars	Internal	External	Total
1	Theory	40	60	100
2	Practical	40	60	100
3	Comprehensive Viva	----	100	100
4	Seminar	50	----	50
5	Project Work	Grade	----	----
6	Project work & dissertation (Grading System)	----	Grade	----

c. **Continuous Internal Evaluation and Semester End Examinations**

The assessment of the student's performance in each course will be based on continuous internal evaluation and semester-end examinations. The marks for each of the component of assessment are fixed as shown in the following Table.

Assessment Procedure

d. **Mid-Term Written Examination:**

There shall be **two mid-term** written examinations during a semester. The first mid-term written examination shall be conducted from the first 50 per cent of the syllabus and the second mid-term written examination shall be conducted from the remaining **50 per cent** of the syllabus. The mid-term written examinations shall be evaluated for **30 marks** and average of the marks scored in the two mid-term written examinations shall be taken as the marks scored by each student in the mid-term written examination for that semester.

e. **Tutorial:**

Tutorials are to be conducted, students participation and performance are to be observed and marks not exceeding 5 (5%) per semester per paper are to be awarded by the teacher concerned.

f. **Attendance:**

A maximum **of 5 marks (5%) per semester per course** are to be awarded on the basis of attendance one puts in. Course-wise attendance is taken for this purpose. These 5 marks are awarded as follows.

I. For **75%** or more attendance: **5 Marks**
II. For **65%** or more but less than less than 75% attendance: **3 Marks**
III. For **less than 65%** attendance: **0 Marks**

S. No	Component of Assessment	Marks Allotted	Type of Assessment	Scheme of Examinations
1	Theory	40	Internal Exams & Continuous Evaluation	1. Mid Examination –30 marks (Two mid semester examinations shall be conducted for 30 marks each for duration of 2 hours. Average of the two mid exams shall be considered). 2) Assignment - 5 marks 3) Attendance - 5 marks
		60	Semester-end examination	The semester-end examination is for a duration of 3 hours
2	Practical	40	Internal Exams & Continuous Evaluation	1. Lab Internal :15 Marks 2. Continuous Assessment :15 Marks 3. Attendance : 5 Marks 4. Record : 5Marks
		60	Semester-end examination	The semester-end examination is for a duration of 3 hours

7.1.2 Seminar and Presentation Evaluation (10) Institute Marks : 10.00

Assessment is based upon the methodology being followed and its effectiveness

a. **Comprehensive Viva:** There shall be a Comprehensive Viva-Voce in II year I semester. The Comprehensive Viva-Voce will be conducted by the committee consisting of Head of the Department and two senior faculty members of the Department. The Comprehensive Viva-Voce is aimed to assess the student's understanding in various subjects he/she studies during the M.Tech course of study. The Comprehensive Viva-Voce is valued for 100 marks by the committee. There are no internal marks for the Comprehensive Viva-voce.
b. **Seminar:** There shall be three Seminar Presentations by the student, one each in the I,II and III semesters. For the seminar, the student shall collect the information on a specialized topic other than his/her project and prepare a technical report, showing his understanding over the topic, and submit to the department, which shall be evaluated by a Departmental committee consisting of the Head of the department, seminar Supervisor and a senior faculty member. The seminar report shall be evaluated for **50 marks**. There shall be *no external examination for seminar***.**
c. **Project:** The work on the project shall be initiated in the beginning of the second year and the duration of the project is for two semesters (III & IV). Every candidate shall be required to submit thesis or dissertation after taking up a topic approved by the Project Review Committee (PRC).

i. PRC shall be constituted with HOD as chair person, two senior faculty members and project supervisor.
ii. Registration of Project Work: A candidate is permitted to register for the project work after satisfying the attendance requirement of all the subjects (theory and practical subjects).
iii. A candidate has to submit, in consultation with his project supervisor, the title,

objective and plan of action of his project work to the PRC for its approval. Only after obtaining the approval of PRC the student can initiate the Project work.

iv. If a candidate wishes to change his supervisor or topic of the project he/she can do so with approval of PRC. However, the PRC shall examine whether the change of topic/supervisor leads to a major change of his initial plans of project proposal. If so, his date of registration for the project work starts from the date of change of supervisor or topic as the case may be.
v. **Project Work:** The candidate should be continuously observed by the project supervisor. His performance is assessed by the PRC through a seminar and interim report. Full credits are awarded **'SAT'** on satisfactory performance of the student. **'US'** grade is given on unsatisfactory performance. If the performance is unsatisfactory, the PRC should redefined the project and the candidate is allowed to appear for the evaluation only after six months.
vi. **Project Work & Dissertation:** A candidate shall submit status report (in a bound-form) in two stages at least with a gap of 3 months between them to the project supervisor.
vii. A candidate is permitted to submit Project dissertation only after successful completion of theory and practical course with the approval of PRC not earlier than 40 weeks from the date of registration of the project work. For the approval of PRC the candidate shall submit the draft copy of dissertation to the Head of the Department and shall make an oral presentation before the PRC along with project supervisor.
viii. Student has to submit to the department three copies of the Project dissertation along with a soft copy on CD certified by the supervisor.
ix. The dissertation shall be adjudicated by one examiner selected by the Controller of examination from the panel of 3 examiners as suggested by Head of the Department, who are eminent in that field with the help of the concerned guide and head of the department.
x. If the report of the Examiner is not favorable, the candidate shall revise and resubmit the dissertation, in the time frame as described by PRC. If the report of the examiner is unfavorable again, the thesis shall be summarily rejected.
xi. If the report of the examiner is favorable, viva-voce examination shall be conducted by a board consisting of the supervisor, Head of the Department and the examiner who adjudicated the dissertation. The Board shall jointly report candidates work as:

A. **Excellent**
B. **Good**
C. **Satisfactory**
D. **Unsatisfactory**.

Head of the Department shall coordinate and make arrangements for the conduct of viva-voce examination.

If the report of the viva-voce is unsatisfactory, the candidate will retake the viva-voce examination after three months. If he/she fails to get a satisfactory report at the second viva-voce examination, he/she will not be eligible for the award of the degree

7.1.3 Performance and Feedback (3) Institute Marks : 3.00

Assessment is based upon effective implementation of the following activities:
o Post-semester feedback to students on their performance
o Extra care for poor performers and remedial classes
o Comparison of mid and end semester performance

Tutorial classes are also conducted for M.Tech for all subjects. Additional exercises are designed for critical theory or practical subjects so as to enhance subject knowledge. Tutorials help the students to understand the subject through analysis, problem solving and in a discussion mode with the tutor. Tutorial impact is apparent through the higher performance level of the students and subsequent evaluation stages and their higher confidence levels when the subject is discussed in subsequent lecture classes.

- Mentoring System : Yes
- Type of Mentoring : Total Development
- Number of faculty mentors : All
- Number of students per mentor : 20UG/5PG max
- Frequency of meeting : Fortnightly or on need basis

Mentoring program is adopted in GRIET in order to improve the performance of the graduate students and post graduates. Each mentor is assigned with a group of students (mentees) to closely monitor their academic performance and give timely guidance**.** Good mentoring is crucial to student success both during and after

graduation. Mentoring moves beyond advising because it becomes a more personal relationship that involves socialization into the norms of the profession, role modeling, career guidance, and friendship along with support for all activities.

Duties and Responsibilities of Mentor:

A ***Mentor*** is a teacher donning the role of friend, philosopher and guide to strengthen the weak student's academic performance. A Mentor is responsible for his/her mentees assigned, for the entire academic year and is answerable to the programme coordinator and has the following responsibilities:

- Maintaining the mentoring record of the students containing the information such as contact details, admission details, academic record, co / extra-curricular activities, achievements and disciplinary actions if any.
- Conducting counseling sessions at least once a fort night and keeping a record of it. The frequency of meeting may be increased based on need.
- Noting the physical, mental, and emotional status of the assigned mentees and to provide assistance.
- Keeping a tab on absenteeism in classes or exams, poor academic performance, unacceptable behavior and bringing to the notice of the college authorities and their parents.
- All the counseling sessions lay emphasis on attitudes, value systems, hard work, and career planning.

7.1.4 Mechanism for addressing evaluation related grievances (2) Institute Marks : 2.00

Assessment is based upon the efficacy of the mechanism being followed.

1. **Recounting of Marks in the End Examination Answer Books:** A student can request for re-counting of his/her answer book on payment of a prescribed fee.
2. **Re-evaluation of the End Examination Answer Books:** A student can request for re-evaluation

   of his/her answer book on payment of a prescribed fee.

3. **Supplementary Examinations:** A student who has failed in an end semester examination can

   appear for a supplementary examination, as per the schedule announced by the College/Institute.

4. **Malpractices in Examinations:** Disciplinary action shall be taken in case of malpractices during Mid/ End-examinations as per the rules framed by the Academic Council.
5. **Academic Requirements:**
   a. A student shall be deemed to have secured the minimum academic requirements in a subject if he / she secures a minimum of 40% of marks in the Semester-end Examination and a minimum aggregate of 50% of the total marks in the Semester-end examination and Internal Evaluation taken together.
   b. In order to qualify for the award of M.Tech Degree, the student shall complete the academic requirements of passing in all the Courses as per the course structure including Seminars and Projects.
   c. In case a Student does not secure the minimum academic requirements in any course, he/she has to reappear for the Semester-end Examination in the course, or re-register for the same course when next offered or re-register for any other specified course, as may be required. However, one more additional chance may be provided for each student, for improving the internal marks provided the internal marks secured by a student are less than 50% and he/she failed finally in the course concerned. In the event of taking another chance for re-registration, both the internal and external marks obtained in the previous attempt are nullified. In case of re-registration, the student has to pay the re-registration fee for each course, when next offered.

6. **Award of Class:** After a student satisfies all the requirements prescribed for the completion of the Degree and becomes eligible for the award of M. Tech Degree by JNTUH, he/she shall be placed in one of the following three classes:

Class Awarded	% of Marks Secured
First Class With Distinction	Marks >= 70%
First Class	60% ≤ Marks < 70%
Second Class	50% ≤ Marks < 60%

7. **Withholding of Results:** If the student has not paid dues to the Institute/ University, or if any case of indiscipline is pending against him, the result of the student (for that Semester) may be withheld and he/she will not be allowed to go into the next Semester. The award or issue of the Degree may also be withheld in such cases.
8. **Transfer of students from the Constituent Colleges of JNTUH or from other Colleges/ Universities:** Transfer of students from the Constituent Colleges of JNTUH or from other Colleges/ Universities shall be considered only on case-to-case basis by the Academic Council of the Institute.
9. **Transitory Regulations:** Students who have discontinued or have been detained for want of attendance, or who have failed after having undergone the Degree Programme, may be considered eligible for re-registration to the same or equivalent subjects as and when they are offered.
10. **General Rules**
    a. The academic regulations should be read as a whole for the purpose of any interpretation.
    b. In the case of any doubt or ambiguity in the interpretation of the above rules, the decision of the Academic Council is final.
    c. In case of any error in the above rules and regulations, the decision of the Academic Council is final.

The college may change or amend the academic regulations or syllabi at any time and the changes or amendments made shall be applicable to all the students with effect from the dates notified by the Institute/ University

7.2 Evaluation Process: Project Work / THESIS (25) Total Marks : 25.00

Details of Thesis Allocation, Evaluation and Presentation

Year	Name of Candidate	Name of Supervisor/ Joint Supervisor	Title of Thesis	Whether Evaluation Committee was Constituted (Yes/No)	Name of the External Member	Thesis Presentation Dates
2012-2014	G Tushara Lakshmi	Dr J Praveen	Design of solar PV based Inverter fed Induction Motor	Yes	Dr JayaLakshmi	21-11-2014
2012-	P Venkata	B Vasanth reddy	A High step up Three port DC-DC Converter Using	YES	Dr JayaLakshmi	21-11-2014

2014	Ramaiah		Arduino			
2012-2014	R Pavan kumar	M Srikanth	C ascaded H-bridge Multilevel Inverter Using selective Harmonic Elimination Technique	YES	Dr JayaLakshmi	21-11-2014
2012-2014	Y Satya vani	R Anil Kumar	Real Time implementation of fuzzy logic based DC Drive speed control System using Lab VIEW	YES	Dr JayaLakshmi	21-11-2014
2012-2014	M Prashanth	V Vijaya Rama Raju	Synchrophasor based Static VAR Compensation	YES	Dr JayaLakshmi	21-11-2014
2012-2014	D Rohan	U Vijaya Lakshmi	Design Of Shunt Active power Filter for harmonic Compensation in Power Systems	YES	Dr Venkateshwarlu	21-11-2014
2012-2014	K Swetha	A Vinay Kumar	Implementation Of Digital filter to Improve Dynamic Response of a single phase PWM Rectifier	YES	Dr Venkateshwarlu	21-11-2014
2012-2014	O Ashwini	V V S Madhuri	Automation of Three Phase Induction motor using DTMF	YES	Dr Venkateshwarlu	21-11-2014
2012-2014	T Ramesh	E Venkateswarlu	Design & simulation of Inverter fed Five phase induction motor	YES	Dr Venkateshwarlu	21-11-2014
2012-2014	Hari Prasad M	Dr D V Pushpalatha	Implementation of perturb and observe MPPT of PV system Direct control method using Boost converter	YES	Dr Venkateshwarlu	21-11-2014
2012-2014	B Siva Sankar Reddy	V Vijaya Rama Raju	Reconfigurable Solar Converter:A Single Stage Power Conversion PV Battery system	YES	Dr P Srinivas	01-08-2015
2012-2014	D Pavan Kumar	Dr J Sridevi	A Positive buck boost converter controlled by digital combination to improve the output trasients	YES	Dr P Srinivas	01-08-2015
2012-2014	R Murali	P Praveen Kumar	Performance of a high efficiency switched capacitor based resonant converter with phase shift control	YES	Dr P Srinivas	01-08-2015
2012-2014	V Sruthi	Syed Sarfaraz Nawaz	Multilevel inverter using Digital controller	YES	Dr P Srinivas	01-08-2015

7.2.1 Allocation of Students to Eligible Faculty Members (supervisors) (10) Institute Marks : 10.00

Year	Name Of Candidate	Name of Supervisor
2012-2014	G Tushara Lakshmi	Dr J Praveen
2012-2014	P Venkata Ramaniah	B Vasanth reddy
2012-2014	R Pavan kumar	M Srikanth
2012-2014	Y Satya vani	R Anil Kumar
2012-2014	M Prashanth	V Vijaya Rama Raju
2012-2014	D Rohan	U Vijaya Lakshmi
2012-2014	K Swetha	A Vinay Kumar
2012-2014	O Ashwini	V V S Madhuri
2012-2014	T Ramesh	E Venkateswarlu
2012-2014	Hari Prasad M	Dr D V Pushpalatha
2012-2014	B Siva Sankar Reddy	V Vijaya Rama Raju
2012-2014	D Pavan Kumar	Dr J Sridevi
2012-2014	R Murali	P Praveen Kumar
2012-2014	V Sruthi	Syed Sarfaraz Nawaz

7.2.2 Constitution of Evaluation Committee with at least One External Member (10) Institute Marks : 10.00

Year	Name Of Candidate	Name of theExternal Member	Evaluation Committee
2012-2014	G Tushara Lakshmi	Dr JayaLakshmi	1.Dr .J.Praveen 2.V.Vijaya Rama Raju 3.S.S.Nawaz
2012-2014	P Venkata Ramaniah	Dr JayaLakshmi	1.Dr .J.Praveen 2.V.Vijaya Rama Raju 3.S.S.Nawaz
2012-2014	R Pavan kumar	Dr JayaLakshmi	1.Dr .J.Praveen 2.V.Vijaya Rama Raju 3.S.S.Nawaz
2012-2014	Y Satya vani	Dr JayaLakshmi	1.Dr .J.Praveen 2.V.Vijaya Rama Raju 3.S.S.Nawaz
2012-2014	M Prashanth	Dr JayaLakshmi	1.Dr .J.Praveen 2.V.Vijaya Rama Raju 3.S.S.Nawaz
2012-2014	D Rohan	Dr Venkateshwarlu	1.Dr .J.Praveen 2.V.Vijaya Rama Raju 3.S.S.Nawaz

2012-2014	K Swetha	Dr Venkateshwarlu	1.Dr .J.Praveen 2.V.Vijaya Rama Raju 3.S.S.Nawaz
2012-2014	O Ashwini	Dr Venkateshwarlu	1.Dr .J.Praveen 2.V.Vijaya Rama Raju 3.S.S.Nawaz
2012-2014	T Ramesh	Dr Venkateshwarlu	1.Dr .J.Praveen 2.V.Vijaya Rama Raju 3.S.S.Nawaz
2012-2014	Hari Prasad M	Dr Venkateshwarlu	1.Dr .J.Praveen 2.V.Vijaya Rama Raju 3.S.S.Nawaz
2012-2014	B Siva Sankar Reddy	Dr P Srinivas	1.Dr .J.Praveen 2.V.Vijaya Rama Raju 3.S.S.Nawaz
2012-2014	D Pavan Kumar	Dr P Srinivas	1.Dr .J.Praveen 2.V.Vijaya Rama Raju 3.S.S.Nawaz
2012-2014	R Murali	Dr P Srinivas	1.Dr .J.Praveen 2.V.Vijaya Rama Raju 3.S.S.Nawaz
2012-2014	V Sruthi	Dr P Srinivas	1.Dr .J.Praveen 2.V.Vijaya Rama Raju 3.S.S.Nawaz

7.2.3 Schedule Showing Thesis Presentation at least twice during the semester (5) Institute Marks : 5.00

Assessment =

Project Work & Dissertation: A candidate shall submit status report (in a bound-form) in two stages at least with a gap of 3 months between them to the project supervisor

Academic calander for M.Tech gives the sechudle

Gokaraju Rangaraju Institute of Engineering & Technology

(Autonomous)

Bachupally, Kukatpally,Hyderabad-500 090 , India.(040) 6586 4440

GRIET/DAA/2A/G/14-15 10 Nov 14

ACADEMIC CALENDAR

Academic Year 2014-15

M.TECH - FIRST SEMESTER

S.No	EVENT	PERIOD	DURATION
1	Orientation Program	17-11-2014	
2	Commencement of Class work	17-11-2014	
3	I Unit of Instructions	17-11-2014 to17-01-2015	9 Weeks
4	I Mid Examinations	19-01-2015 to 24-01-2015	1 Week
5	II Unit of Instructions	27-01-2015 to 21-03-2015	8 Weeks
6	II Mid Examinations	23-03-2015 to 28-03-2015	1 Week
7	Preparation and Practical Examinations	30-03-2015 to 04-04-2015	1 Week
8	End Semester Examinations	06-04-2015 to 18-04-2015	2 Weeks
9	Commencement of Class Work	20-04-2015	

M.TECH - SECOND SEMESTER

S.No	EVENT	PERIOD	DURATION
1	I Unit of Instructions	20-04-2015 to 16-05-2015	4 Weeks
2	Summer Vacation	18-05-2015 to 13-06-2015	4 Weeks
3	I Unit of Instructions	15-06-2015 to 18-07-2015	5Weeks
4	I Mid Examinations	20-07-2015 to 25-07-2015	1 Week
5	II Unit of Instructions	27-07-2015 to 19-09-2015	8 Weeks
6	II Mid Examinations	21-09-2015 to 26-09-2015	1 Week
7	Preparation and Practical Examinations	28-09-2015 to 03-10-2015	1Week
8	End Semester Examinations	05-10-2015 to 17-10-2015	2 Weeks

II Year - I Semester: 19-10-2015 to 05-03-2016 (20W)

ject work Registrations 19-10-2015 to 24-10-2015

Seminar/ Comprehensive Viva Dates 04-01-2016 to 09-01-2016

II Year - II Semester: 07-03-2016 to 23-07-2016 (20W)

Thesis Submission duration 25-07-2016 to 07-01-2017 (24 W)

Thesis submission with late fee after 09-01-2017

Copy to: Director, Principal, All Deans, HODs, A.O **Dean of Academic Affairs**

7.3 Teaching Evaluation and Feedback System (10) **Total Marks : 10.00**

7.3.1 Guidelines for Student Feedback System (3) Institute Marks : 3.00

Assessment is based upon the effectiveness of the guidelines for student feedback system. The design and effective implementation of the guidelines are essential for student feedback system.

Assessment is based upon the effectiveness of the guidelines for student feedback system. The design and effective implementation of the guidelines are essential for student feedback system.

Assessment =

Guidelines :

1. Feedback form consists of 10 questionnaires
2. Each questionnaire consists of the grading 4-1
3. Cumulative analysis is done taking help of the feedback form for every faculty
4. Based on the analysis the teaching /learning process in improved

7.3.2 Analysis of Feedback by HOD and the Faculty (2) Institute Marks : 2.00

Assessment is based upon the methodology being followed for analysis of feedback and its effectiveness.

Assessment is based upon the methodology being followed for analysis of feedback and its effectiveness.

Assessment =

Feedback collected for all courses (Yes/No) : Yes

- Specify the feedback collection process:

1. Feedback is collected through structured forms from students, parents, employees and alumina.
2. Student's feedback on faculty is collected twice in semester once at the beginning of the course and one at the end.
3. Same feedback can also be taken through online

4. Parents, Employers, Alumina as and when they visit the institute, every effort is made to collect feedback.

(a) Organisation is responsive to the needs of the stakeholders by continuously monitoring the pulse of the Institution. This will ensure proper implementation of programmes, help to take mid course corrections, provide a mechanism to monitor and reward the good performers at the same time make the lagging behind to improve. Also to ensure an effective feedback and corrective mechanisms

(b) Feedback forms are carefully designed for the following stake holders with responsibility indicated in brackets.

i. Students (Head of Individual Dept)
ii. Faculty (Dean of Faculty Development)
iii. Parents (HOD of Individual Dept)
iv. Employers (Dean of Training &Placements)
v. Alumni (GRIET Alumni Association)

- Percentage of students participating : 60%
- Specify the feedback analysis process :

1. Feedback form consists of 10 questionnaires
2. Each questionnaire consists of the grading 4-1
3. Cumulative analysis is done taking help of the feedback form for every faculty
4. Based on the analysis the teaching /learning process in improved

Periodicity

The Periodicity is chosen to form a valuable and appropriate input

a. Student: Twice in a academic session once after a month of subject coverage and second after the subject completion.
b. Faculty: Twice a year in the month of May and November.
c. Parent: Once on Institute Parent Interaction Day and as and when a parent visits the institution.
d. Employer: Once a year at least.
e. Alumni: Once on Alumni Day i.e. on 15th August of each year.

7.3.3 Corrective Measures and Implementation Followed (5) Institute Marks : 5.00

Assessment is based upon the effectiveness of the implementation of the corrective measures and subsequent follow-up.

Assessment is based upon the effectiveness of the implementation of the corrective measures and subsequent follow-up.

Assessment =

- Basis of reward / corrective measures, if any

Rewards:

Letters of appreciation

- Monetary benefits
- Encouragement in terms of privileges
- Appreciations through mention in public functions

Corrective Mechanism

a. The feedbacks are analyzed by respective departmental Heads and provide the summary for discussion for Departmental and Institutional Developmental Monitoring meetings.
b. The student feedback is confidential. Therefore each HOD should exercise while preparing the summary sheet strictly for the benefit of the individual concerned, take his/her signature on the summary sheet and the same needs to be transferred to the appraisal system.
c. Alumni feedback is perused by GRIET alumni association secretary.
d. Employer's feedback need to be reviewed by Dean Training and Placements.

- Number of corrective actions taken in the last three years : 3

Faculty with top feedback grade are appreciated by the department, incentives of the current year are based on the past feedback reports. Faculties with bad feedback are sent to the Faculty Development Programs.

7.4 Self-learning beyond syllabus and outreach activities (15) Total Marks : 15.00

7.4.1 Scope for self-learning (5) Institute Marks : 5.00

(Instruction: The institution needs to specify the scope for self learning / learning beyond syllabus and creation of facilities for self learning / learning beyond syllabus.)

Scope:

- The Co-curricular calendar is published at the beginning of each year which helps students to time their activity and involvement in self-learning.
- College timings are much wider than student working hours, giving students the time to refer and research, consult and learn.
- Time table is framed and provides for adequate leisure time to focus on self learning.
- Two electives in fourth year I Semester and three electives in fourth year II Semester gives ample flexibility to probe into advanced topics in the discipline concerned.
- Students are encouraged to utilize facilities to promote synthesis of knowledge by research while choosing topics for seminars, industry-oriented mini projects or Main project/Dissertation.
- The Programme centers introduce from time to time, innovative ways of combining Certification courses with the curriculums to give a professional touch to the learning process.
- College is created a digital class room as a remote center of IIT Bombay with facilities such as specialized internet 2mbps bandwidth to watch programmes through Aview software. Computers, LCD projector and sound system is provided in the digital to see special video classes from the web.
- Digital library access is given to all the students through wifi internet where they can read latest research papers from the IEEE, Elsevier, Science Direct, McGraw Hill and ACM in the college campus.
- Professional Society Events are conducted in the college through IEEE, ISTE, IETE, IEI and CSI to create a platform for students to discuss various technical topics and demonstrate, exhibit their projects.
- Hardware and software project exhibition is conducted yearly once in the college to encourage students to demonstrate their work to all the college students, faculty, invitees, press and media
- Group discussions and technical quiz actives are conducted regularly to make students curious about innovating things.
- New additional facilities are provided to the students to explore innovative things in the laboratories.

7.4.2 Generation of self-learning facilities, and availability of materials for learning beyond syllabus (5) Institute Marks : 5.00

(Instruction: The institution needs to specify the facilities for self-learning / learning beyond syllabus.)

The institute patronizes self-leaning environment and has invested in facility building to support and enhance teaching-learning process.

Self learning facilities available for both the staff and students alike are:

- The Institute Library, a vast repository of volumes and titles
- Department Library, a specialized repository of volumes and titles and projects.
- e-learning Tools

- Digital Libraries (IEEE(Institute of Electrical and Electronics Engineers) ,ACM(Association for computing Machinery), NPTEL(National Programme on Technology Enhanced Learning))
- e-lessons by faculty on college portal
- CDs, Video bank in the library

- Links to other institutions locally and across the country:

- Organizing seminars / Technical and Hands-on workshops; taking part in them by students
- Membership in students-chapter of professional bodies like IEEE(Institute of Electrical and Electronics Engineers), ISTE(International Society for Technology in Education), IETE(Institute of Electronics and Telecommunication Engineers), CSI(Computer Society of India), SAE(Society of Automotive Engineers).
- Availability of course material from IUCEE(Indo-US collaboration for Engineering Education)
- Interaction with eminent academic personalities through Guest lectures.
- Interaction with industry experts through academic alliance events.
- Organizing and take part in displays and road shows of industry oriented mini projects at the institute.
- Taking part in Co-curricular activities, contests like X-kernal, Scientific Fore Step and activities of Entrepreneurship Development Cell.
- Access to streaming videos from 'You Tube' and uploading the projects on to 'You Tube' for receiving open critique.
- Accessibility to popular Free access journals and resources on line such as:

www.howstuffworks.com

www.eng-tips.com

www.sakshat.ac.in

www.ocw.mit.edu

The above facilities go on, not only to strengthen the teaching–learning process for the students but also generates- academic discipline, scientific attitude, innovativeness and inculcates the self-learning process, and availability of materials support learning beyond syllabus whose beneficiary are both the faculty and the students.

7.4.3 Career Guidance, Training, Placement, and Entrepreneurship Cell (5) Institute Marks : 5.00

(Instruction: The institution may specify the facility and management to facilitate career guidance including counselling for higher studies, industry interaction for training/internship/placement, Entrepreneurship cell and incubation facility and impact of such systems.)

GRIET has set up separate cells as per guidelines prescribed, to facilitate and manage career guidance, counseling, industry interaction, entrepreneurship development, incubation facility.

Career and Counseling, Training and Placement and the Entrepreneurship Development cell are under the charge of a senior faculty with industrial experience.

Career Guidance and Counseling Cell (CG &C):

The Dean of Career Guidance and Counseling monitors the cell. The cell provides, Career Guidance and Counseling to students as per requirement.

- The Dean CG &C is assisted by 32 Counselors (8 Branches x 4 Batches each) who are faculty from respective Programme/Branch/Discipline.
- The cell reaches out to the students both professionally and personally.
- All eligible and employable graduates are transformed into competent employees for prospective industrial houses both in India and overseas with the help of CG&C
- In its service CG&C apart from career guidance, it also organizes seminars on career planning, soft skills development and campus recruitments and also interacts proactively with Industry HRD cells to facilitate campus placements.
- The Dean CG&C and his counselors are accessible to the students and it makes adequate arrangements for the guidance of students during admissions. They are counseled on choice of careers, and show empathy to their state of confusion and anxiety. They are also given psychological and social counseling apart from academic and career counseling.
- CG&C share a common facility created with the training and placement cell. Facilities available includes: One air conditioned Seminar hall with seating capacity for 250 persons with Wi-Fi and LCD projectors and screens, stage lighting and audio equipment. This is used for seminars on soft skills and technical subjects and for free placement seminars by companies.
- Air conditioned cabins are available for conducting interviews and one to one discussions.
- There are 19 discussion rooms provide the necessary accommodation for any information exchange.
- Dean Career Guidance and Counseling also assists the Training and Placement cell on the vital aspect of higher education.
- Awareness lectures are given by Dean and other senior faculty from time to time.
- Alumni studying at IIMs, IITs whenever they visit GRIET are made to interact with students.
- Consultants of Higher Education and Universities of repute are invited to interact with students for clarification on higher studies, admission procedures, requirements and immigration rules.

Impact:

Higher studies information (M. Tech and MS)

UG

For higher studies both in India and abroad for last three years record is as follows:

Batch	Higher Studies Students in Abroad	Higher Studies Students In India	Total
2012	13	29	42

2013	17	19	36
2014	12	13	25

PG

For higher studies both in India and abroad for last three years record is as follows:

Batch	Higher Studies Students in Abroad	Higher Studies Students In India	Total
2012	-	1	1
2013	-	1	1
2014	-	1	1

Training & Placements Cell:

Training and placements is one of the vital departments at GRIET. The cell is handled by a senior faculty with rich experience who is also Dean Training and Placement. He is also associated with Dean CG & C. The broad areas handled by the cell are:

1. Training on Soft Skills and personality development right from first year so as to prepare students for careers in industry.
2. It coordinates with industry for campus training, internship and for suitable placements.

The activities consist of:-

- Arranging personality development sessions both by experts from college, and from industry consultants like Time, Globe Arena, Career Path etc, appropriate to the year of study.

  - In the first year B.Tech. the focus is on goal setting and value systems
  - In the second year B.Tech. Time Management, Communication and Analytical Skills.
  - In the pre final and final years B.Tech. Group discussions, Interview skills, mock Interviews, H.R. & Technical Aptitude tests are conducted.

- College organize a unique Programme called 'Parampara', which is an interactive session between students in final year who are placed with pre-final students and also with the alumni who are about to face placement interviews.
- Periodic motivational lectures from industry experts.
- Periodic psychometric tests to assess the students.
- Arrange internships with industry and R&D.
- Arrange noted Consultants of Higher Education and Universities of repute- interaction sessions to clarify on higher studies, admission procedures, requirements and immigration rules.

Facilities

GRIET Training and Placement section is staffed well with qualified personal as below.

- GRIET Training and Placement section is staffed well with qualified personal as below.

• Dean Training and Placements	1
• Dean Career Guidance and Counseling	1
• Training and Placement Officer	1
• Placement Coordinators	2
• Placement Assistant	1

- One Air conditioned Conference Hall is available with capacity of 250 students at a time. This is being used for giving training to the students of all academic years for soft skills development and technical subjects. This is also being used for the Pre-placement Talk by companies during Campus Placements.
- Air-conditioned rooms are available to simultaneously conduct a number of panels of Group Discussions (GDs), with each panel accommodating up to about 12 students.
- Air-conditioned cabins are available to simultaneously conduct interviews for a large number of students.
- Rooms are available to simultaneously conduct written test for a large number of students during Campus Placements.
- Online test can be conducted for about 200 students at a time.
- E-mail groups are formed every year for each batch of final year students for effective communication with the final year and passed out students.

Impact:

Batch	Placements
2011-2012	475
2012-2013	434
2013-2014	407

Entrepreneurship Development Cell and Incubation Facility:

Entrepreneurship Development Cell (EDC) is inaugurated on 5^{tn} October 2005 at Gokaraju Rangaraju Institute of Engineering and Technology with the aim of

- Developing entrepreneurial awareness and ability in students
- Creating a forum for potential entrepreneurs
- Developing an interface between academy and industry

The following programs are organized to develop entrepreneurship skills in students and also to familiarize them with various procedures required in converting an idea into a successful business.

It is handled by EC &IF coordinator who is senior faculty with experience.

Entrepreneurship Activities:

Year	Event	Achievement/ Impact
2014-15	1.Faculty Development programme in Entrepreneurship sponsored by NSTEDB ,organized by center for Entrepreneurship Development (CED). 2. Conducted Guest lecture on "Industrial opportunities,Entrepreneurship and soft skills" 3. Constituting managing committee for implementation of the scheme support for Entrepreneurial and managerial Development of SMEs through Incubators.	1. Establishment of Incubation center 2. Students actively joining family business. 3. process and practice of entrepreneurship development, communication and inter-personal skills, creativity, problem solving, achievement motivation training.
2013-14	1. conducted a competition on exhibiting and product development. 2. Organized a guest lecture on Creativity and innovation. 3. Conducted Round table discussion on Employability initiatives in life sciences segment.	
2012-13	1. conducted a CEO speak Session on "The Entrepreneurial Journey". 2. Conducted a guest lecture on "Entrepreneur opportunities and challenges " 4. Submitted propoasl for implementation of the scheme "support support for Entrepreneurial and managerial Development of SMEs through Incubators".	

8 Governance, Institutional Support and Financial Resources (75) **Total Marks : 80.00**

8.1 Campus Infrastructure and Facility (5) **Total Marks : 5.00**

8.1.1 Maintenance of academic infrastructure and facilities (2) Institute Marks : 2.00

(Instruction: Specify distinct features)

- Immaculately maintained campus with aesthetic Green coverage by Housekeeping and gardening personnel.
- All rooms have ample and large windows for day light and ventilation, Electrical illumination and electric fans as backup.
- Furnished Class rooms and labs with Desks and chairs, experiment tables; Lecture halls have White board, Over–head Projectors and LCD projectors-on demand, Wi-Fi internet. Maintained by qualified and trained Technical support staff.
- Laboratories are well equipped for the contemporary experiments as well as for projects, maintained by Laboratory Technicians and support staff.
- The campus has a fiber-optic cable backbone between the buildings and has Wi-Fi internet connectivity manned by qualified technical staff.
- Well-equipped workshops.
- Library Facility available at both Central and Department levels. Central library is maintained by the Librarian and support staff.
- Four seminar halls with seating capacity of 250 persons and a Main seminar hall with seating capacity for 450 persons, maintained by the House keeping and Trade technicians.
- Fully furnished and equipped Department Seminar Halls with LCD TV/Monitor, Projection screen, Lectern, Audio-Video equipment, Power backup and Air-conditioners, maintained by the House keeping and Trade technicians.
- Fully equipped and manned Career Guidance, Training and Placement cell.
- Open air Amphitheater and stage with seating capacity for 2000 persons.
- Adequate Toilet facilities are maintained by housekeeping.
- Reverse Osmosis water treatment Plant for purified drinking water. The raw water is brought by water tankers on a need basis for drinking and general purposes.
- Ample parking space on campus, coordinated by the Security wing.
- Oriental Bank of Commerce, Bachupally, GRIET campus- a nationalized bank with ATM facility on campus is maintained by branch personnel.
- Equipped Sports facilities for both Outdoor and Indoor games supervised by the Physical Director and manned by support staff.
- Hygienic Food Service by a Canteen, Kiosks and other catering facilities maintained by contractors.
- Institute owns a Fleet of Buses and Vans to cater to transportation needs of staff and students. They are operated and maintained by a team of experienced drivers, cleaners overseen by a Supervisor-Transport department and his support staff. The bus service covers all the corners of the city as per student

demand.

- Stationery and Reprographic Centre maintained by contractor.
- Stand by Generators for uninterrupted power supply apart from UPS at vital nodes maintained by Support staff.
- The Institute contributes to reduction in Carbon foot print by adopting Green initiative -Solar Power generation with an installed capacity of 110 kW, the excess power being transferred to the State Power grid.
- Established Infrastructure Maintenance team of Housekeeping, Mechanical, Electrical, Plumbing, civil trades.
- Round-the-clock Security Team and Surveillance devices, maintained by Contractor.
- Dedicated Health Centre with Doctor and a Paramedic.

8.1.2 Hostel (boys and girls), transportation facility, and canteen (1) Institute Marks : 1.00

Transport facility:

College owns an exclusive fleet of 32 Light and Heavy vehicles for students and staff, ferrying them to and from notified stops on prominent routes in the surrounding areas and Special routes running across the city connecting borders of the city limits including maintenance vehicles.

Category	Passenger Buses	Mini Buses	Minivan /Trucks/Trollies
Student	19	7	-
Staff	1	1	-
Maintenance	-	-	Mini trucks-2; Water Tanker -1; Tractor Trolly-1

The routes and destinations are designed to transport students residing along an axis based on their density. The drivers are whetted for their experience and driving skills required to drive Education Institution vehicles and the support staff are trained to ensure safe and prompt shuttle services keeping the schedules. All Vehicles used are complying with the safety norms laid down by the Road Transport Authority for educational institution passenger vehicles. The Institute Transport committee periodically updates the staff on safety and related issues.

Canteen Facility:

Meeting the shift timings of Instructions for each batch of students the diet component is kept in mind to facilitate them with healthy food made by approved contractors. A spacious built-up facility is provided specifically for dining and refreshments for both staff and students. The Boys and girls section is demarcated so is the staff section to provide relaxed environment while consuming food. Hygiene is constantly monitored via feed back to the Canteen committee. The students and staff have a variety of food available both ‘a la carte’ and ‘table dhôte’ or platter. They also have the choice of specialist kiosks.

Additionally the institute runs the “Annaprasadam Scheme”, a social initiative to promote “sharing/ giving food” concept amongst GRIET members. The scheme started with providing ‘free lunch’ for 5 persons and has grown with voluntary contributions from staff members to provide free meals to up to 200 persons by noon. Volunteers from both students and staff apart from 2 cooks from support staff prepare homely meals and also help in self-service.

8.1.3 Electricity, power backup, telecom facility, drinking water, and security (2) Institute Marks : 2.00

(Instruction: Specify the details of installed capacity, quality, availability, etc.)

a) Electricity

Description	Qty
Transformers	2

b) Power Backup

Description	Qty
Diesel Generator Sets: 250 KVA -1 No. 160 KVA -1 No.	2
UPS 10 KVA	1
UPS 5KVA	6
Solar power systems 10 KVA	1
Solar power systems 100 KVA	1

c) Telecom Facility

Description	Qty
Tata Indicom (Land lines)	10
Mobiles	10

d) Drinking Water

Description	Qty

R.O. Plant with a capacity of 3000 litres per hour	1
Tanker (12 KL) to convey	1
Mineral Water coolers with purifiers	30

e) Security

Description	Total
Security staff	35
Supervisors	3

8.2 Organisation, Governance, and Transparency (10) — Total Marks : 10.00

8.2.1 Governing body, administrative setup, and functions of various bodies (2) — Institute Marks : 2.00

(Instruction: List the governing, senate, and all other academic and administrative bodies; their memberships, functions, and responsibilities; frequency of the meetings; and attendance therein, in a tabular form. A few sample minutes of the meetings and action taken reports should be annexed.)

Committee	Chair	Members			
Governing Body	President Dr. Gokaraju Ganga Raju	Management	Sri G.V.K. Ranga Raju	Vice-President	1. To set and monitor the organization's mission, purpose, direction, priorities and strategies within the boundaries of the organizational policies and bye-laws. 2. To approve the institution of new programmes of study, leading to the award of Degrees and or Diplomas based on the recommendations of the Academic Council. 3. To develop policies that allows the organization to serve well all its stakeholders. 4. To monitor the organization's programmes and services by influencing decisions and finances. 5. To institute scholarships, fellowships, studentships, medals, prizes and certificates. 6. To monitor development, the direction and growth of the institute and issue directions and recommendations. 7. To perform such other functions and institute committees, as may be necessary and deemed fit for the proper development and fulfill the objectives of the institute. 8. To approve appointments made by the Appointment/Selection Committee. **Committee Scheduled Meetings:** Once in Three months (A copy of sample is annexed)
			Sri G. Rama Raju	Member	
			Smt A. Vani	Member	
			Prof P S Raju	Member	
		Teachers of the Institute	Dr. S. V. Jayaram Kumar	Member	
			Dr. S. Rama Murthy	Member	
		Educationist/ Industrialist	Prof. V S Raju	Member	
			Sri V Rajanna	Member	
		AICTE Nominee	Mr. S. K. Jena	Member	
		UGC Nominee	Dr. S. Devaneshan	Member	
		State Government Nominee	Sri. A. Ravindra Babu	Member	
		University Nominee	Dr. A. Damodaram	Member	
		Principal of Institute	Dr. Jandhyala N Murthy	Member-Secretary	
Academic Council	Principal	1. Heads of Departments. 2. Four faculty members other than the Heads of Departments representing the various categories (by rotation and seniority). 3. Four persons including educationalists of repute, one person from the industry and engineering related to the activities of the institute, who are not in the service of the institute and nominated by the Governing Body. 4. Three nominees of the parent university 5. A faculty member nominated by the Principal of the institute to act as Member Secretary.			1. To exercise general supervision over the academic work of the institute, to give directions regarding method(s) of instruction, evaluation, research and improvements in academic standards. 2. To scrutinize and approve the proposals of the Board of Studies related to courses of study, academic regulations, curricula, syllabi, their objectives and outcomes and modifications, instructional and evaluation arrangements, methods, procedures etc. 3. To make regulations regarding the admission of students to different programs of study. 4. To recommend to the Governing Body the proposals of institution for new programs of study. 5. To recommend to the Governing Body, institution of scholarships, studentships, fellowships, prizes and medals, and to frame regulations for the award of the same. 6. To advise the Governing Body on suggestion(s) pertaining to academic affairs made by it. 7. To perform such other functions as may be assigned by the Governing Body. **Committee Scheduled Meetings:** Two time a year (A copy of sample is annexed)
Board of Studies	Chairman Board of	1. Programme Coordinators of the Department. 2. All teaching faculty of each course/ specialization offered. 3. Module coordinators. 4. Two external experts in the course concerned and nominated by the Academic Council. 5. One expert to be nominated by the Vice-chancellor from a panel of six recommended by Principal of the institute. 6. Not more than two persons to be co-opted for their expert knowledge including those belonging to the concerned profession or industry.			1. To prepare, frame and modify the syllabus for the various courses keeping in view the Programme objectives of the programme. 2. Evaluates programme effectiveness and proposes continuous improvement. 3. To suggest panel of names for appointment of examiners; and coordinate research, teaching, extension and other academic activities in the programme / institute. 4. To suggest new methodologies for innovative teaching and evaluation techniques and tools.

	Studies	7. One post-graduate meritorious alumni nominated by the Principal. 8. The Chairman Board of Studies may with the approval of the Principal of the Institute co-opt: a. Experts from outside the institute whenever special courses of studies are to be formulated. b. Other members of the staff of the same faculty.	5. To review implementation of institutional quality assurance in the department for improving programme. 6. Guiding in evolving POs and COs based on assessment. **Committee Scheduled Meetings:** As and when necessary (A copy of sample is annexed)
Finance Committee	Principal	1. One person nominated by the Governing Body of the institute for a period of two years. 2. Two senior-most faculty member of the institute to be nominated in rotation by the principal for two years. 3. Administrative Officer (Finance).	1. To review the financial affairs of the Institute and report it to the Governing body. 2. To consider budget estimates relating to the grant received/receivable from funding agencies, and income from fees, etc. collected for the activities to undertake the scheme of autonomy; 3. To prepare Annual Budget of the institution and Audited accounts for all the incomes and expenditures. 4. To review the audit reports and making recommendations. 5. To contribute to the preparation of the draft budget and recommending their approval to the Governing Body. **Committees Scheduled Meetings**: Once a Year (A copy of sample is annexed)
Selection Committee	Chairman of Governing Body or his nominee	1. Principal / Director of the institute. 2. Two nominees of the Vice Chancellor of the affiliating University. 3. Two subject experts 4. Head of the concerned programme of Professor Cadre.	1. To prepare a detailed list of vacant posts in all the programmes of the institute based on consultations with the Institute development committee, the HOD's of various programmes and guidelines from various agencies like UGC, AICTE, Parent University and the State Government. 2. To oversee notification, publication and scrutiny of the applications received before scheduling the tests, interviews and demo lectures. 3. To involve in the pro-active recruitment periodically of high quality faculty with exceptional qualifications from India or overseas. 4. To facilitate highly qualified personnel from both industry and R & D institutions as adjunct or visiting faculty for short durations to undertake teaching / research assignments. **Committee Scheduled Meetings:** Two time a year
Institutional Development Monitoring Committee (IDMC)	Principal-IDMC Coordinator	1. Heads of all Departments/ Programme coordinators. 2. Two external members, 3. The administrative officer, 4. Two deans/senior Professors. 5. Student Representative from UG and PG programmes.	1. Principle Planning Body 2. Monitoring of Institute performance by Top Down-Bottom Up approach. 3. Monitors the attainment of Mission and Vision of Institute. 4. Evaluation of Departmental Mission and Vision, Programme specific POs and PEOs. 5. Taking suggestions from all stake holders and its subcommittees -Academic Affairs Committee, Departmental Development and Monitoring Committee, Class Coordinators Committee. 6. To provide the developmental and application of quality benchmarks/ parameters for the various academic and administrative activities of the institution. 7. To monitor promotion, implementation and continuous improvement of innovations in Curriculum, Co-curricular and Extra-curricular activities and facilities of the institution. 8. To advice and recommend the General Body and the academic council on any matter, that is considered necessary for the fulfillment of the objectives of the institute for consideration and approval. 9. To promote synergetic relationship with the industry and society, and promote Research and Consultancy. **Committee Scheduled Meetings:** Once in three months. (A copy of sample is annexed)
Academic Affairs Committee	Dean Academic Affairs	1. Deans of the institute 2. HODs of all the programmes.	1. To monitor and review academic activities as per academic calendar. 2. To monitor programme adherence of course work as per framed time tables. 3. To monitor attendance and implement promotional policy based on attendance and credits. 4. To generate student data required for Student Information System (SIS).

			Committee Scheduled Meetings: Once in three months or as and when needed
Departmental Development and Monitoring Committee (DDMC)	Head of the Department	1. All faculty are members- one among them will act as Secretary, 2. Members may be co-opted from other programmes, University, industry and key stake holders as per requirement	1. To formalize the departmental vision and mission. 2. Deliberates on the report of Programme Assessment Committee (PAC) and future issues. 3. To plan and monitor the growth of programmes of the department. 4. Develops and recommends new or revised PEOs 5. To ensure infrastructure, support facilities and activities to ensure for attainment of PEOs. **Committee Scheduled Meetings:** Two times a semester or as and when needed. (A copy of sample is annexed)
Programme Assessment Committee (PAC)	Programme Coordinator	1. Module Coordinators 2. Faculty of a particular course 3. Class Coordinators	1. To monitor feed backs from stake holders and taking action thereafter on academic matters 2. To monitor assessment and attainment of COs, POs and PEOs. 3. Evaluate Programme effectiveness and propose necessary changes for continuous improvement. 4. Motivate faculty and students to attend workshops, developing projects, working models, paper publications and research. 5. Interacts with Students, faculties, Programme coordinator, Module coordinators, and external stake holders in facilitating PEOs. 6. The report is submitted to the Department Development & Monitoring Committee **Committee Scheduled Meetings:** Once a semester or as and when needed. (A copy of sample is annexed)
Class Coordinating Committee (CCC)	Respective Class Coordinator	1. Faculty of a particular course 2. Student representatives.	1. To tap the suggestions of the students, to enhance teaching-learning process. 2. To monitor and improve the relations and shortfalls between academics and teaching environment. 3. Review of activities related to attainment of course outcomes **Committee Scheduled Meetings:** Two times a semester or as and when needed. (A copy of sample is annexed)
Research committee	Dean R&D	1. Five Staff members with R &D /Industry experience nominated by the Principal of the institute	1. To encourage faculty from each programme to submit research projects for extra-mural funding. 2. To screen, modify and submit the projects to funding agencies. 3. To promote tie-up with industry and other reputed universities. 4. To monitor the progress of the sanctioned projects, consultancy, patents and tie-ups. 5. To initiate industry-institute interaction for promoting new projects. 6. To guide and counsel, conduct courses on Entrepreneurship. **Committee Scheduled Meetings:** Two times a year or as and when needed.
Institute Coordinators Committee (ICC)	Dean Student Affairs	1. Coordinators of Extra- curricular Groups, Student Clubs and Faculty In-charge for college diary and The Physical Director	1. Prepare college diary for the academic year 2. Monitor the progress of events as per diary 3. Collect and act on feedback of extra-curricular and beyond curricular activities for overall development of students. **Committee Scheduled Meetings:** Two times a year or as and when needed.

8.2.2 Defined rules, procedures, recruitment, and promotional policies, etc (2) Institute Marks : 2.00

(Instruction: List the published rules, policies, and procedures; year of publications; and state the extent of awareness among the employees/students. Also comment on its availability on Internet, etc.)

Policy:

The institution is constantly upgrading its quality of education and increasing the intake. To match changes in existing staff strength (both Teaching & Non-teaching), the human resources are constantly upgraded through fresh recruitments on biannual basis, also during emergencies/exigencies to meet the academic schedule. The institution recruits once in May / June and in Nov / Dec of the academic year.

Following acts and rules are adopted as guidelines for procedures, recruitments, promotional policies, code of conduct issued from time to time by the regulatory bodies:

- Rules for Affiliation by Jawaharlal Nehru Technological University Hyderabad 2011-12
- AICTE Norms
- UGC Norms for autonomous college 2012-2017
- Rules and Bye laws of Society

Recruitment Procedure:

Teaching Staff:

Cadre Structure for Teaching Staff:

(a) Director

(b) Principal

(c) Dean -Professor / Associate Professor

(d) Professor / Associate Professor

(e) Assistant Professors / Lecturer (Selection Grade)

(f) Senior Lecturer / Senior Librarian

(g) Lecturer / Librarian / Director of Physical Education

(h) Teaching Assistants

Qualifications:

Faculty has been recruited based on the qualifications prescribed by the AICTE from time to time. Additionally JNTUH-FET, UGC-CSIR NET, PhD, and Post graduates with Industry Experience are preferred.

For the top administrative position of the Principal, apart from the guidelines given by the AICTE and JNTUH, administrative experience and ratification by the University is taken into consideration.

Mode of Selection of Teaching Staff:

Direct recruitment to all cadres is based strictly on merit. Invariably in almost all cases, the following procedure is followed:

(a) Advertisements are issued in leading newspapers.

(b) Applications are scrutinized on the fourth day after the last day for receipt of application.

(c) A Selection Committee is constituted as per Affiliating University and AICTE norms.

(d) Call letters for interviews are sent to eligible candidates, specifying place, date and time of interview.

(e) Selection Committee decides and recommends the candidates.

(f) Letters of appointment are issued to selected candidates.

Sometimes depending on emergency / exigency of the situation, adhoc appointments are made on contract basis for specified periods.

Non-Teaching Staff:

Cadre Structure for Non-Teaching Staff:

(a) Office

- Administrative Officer
- Office Superintendent
- Senior Assistant
- Junior Assistant
- Record Assistant/ Data Entry Operator
- Attender

(b) Labs (other than computer Labs)

- Lab Assistant
- Lab Technician (Diploma)
- Lab Attender (SSC/Inter/ITI)

(c) Computer Labs

- System Administrator
- Programmer
- Lab Assistant
- Lab Technician

Qualifications:

Non-Teaching Staff has been recruited based on the guidelines prescribed by state government.

Mode of Selection for Non – Teaching Staff:

All positions are advertised in the news papers or notified in the local notice boards. After scrutiny of applications received, a short listing is made by the GRES Secretary / Principal. Interview call letters are sent to eligible candidates to appear for a trade test and subsequent personal interview. The selection committee

consists of some or all of the following:

(a) President / nominee of President of the society

(b) Principal

(c) Administrative Head

(d) HOD of concerned department

- All appointments (Teaching and Non-teaching staff) made after selection, are forwarded to the Chairman for approval and the governing body is notified.
- Management is a single term, used to collectively represent the society through resident of GRES also known as Chief Executive Officer (CEO), Vice President also known as Chief Operations Officer (COO).

Promotion Policy:

Teaching Staff:

- Career Advancement Scheme implemented strictly in accordance with AICTE Rules.
- Higher Posts such as Professor and Associate Professor are offered through selection procedure.

Non-Teaching Staff:

- Time Bound promotions given to Non-Teaching Staff.
- Promotion to higher post through selection procedure.

Awareness:

- The administrative rules and regulations covering all cadres of staff employed also all information relating to roles, powers and administration is mentioned with clarity in the Institutes Administrative Manual/ GRIET Manual.
- The rules and regulations cover general administration, recruitment of staff, service conditions, duties, promotion policies, increments, awards and disciplinary actions etc.
- Syllabus books containing current regulation and rules, Programme and course related information are made available for all students and staff, apart from its availability on the institute Web site www.griet.ac.in.
- Awareness of staff recruitment is made utilizing Newspaper and electronic media and widely broadcasted to attract fresh talents and skills.
- At the time of joining and through periodic departmental meetings and notices, awareness of rules and procedures is being maintained.
- The institute website publishes information on fresh vacancies and appointments for new posts.
- The 'College Diary', gives the academic calendar and all activities (circular and beyond), and the same information is accessible on the institute web site.

8.2.3 Decentralisation in working including delegation of financial power and grievance redressal system (3) Institute Marks : 3.00

(Instruction: List the names of the faculty members who are administrators/decision makers for various responsibilities. Specify the mechanism and composition of grievance redressal system, including faculty association, staff-union, if any.)

The management of the institute consists of a Governing Body with a panel of members as per norms of Society (GRES), nominees from industry, regulatory bodies such as UGC, AICTE, Affiliating University and the State Government.

I. **Decentralization in working**:

(i) Administration

- The Principal of the college is the head of the institution providing the required leadership to the institution and its system. The principal ensures that all provision of the university bye-laws, statutes and the regulations are observed. He convenes the meetings of the Advisory councils, the Academic council, Board of Studies, Finance committee, Institutional Development and Monitoring Committee, Selection Committee. He also oversees admission of students, recruitment of faculty, curricular co-curricular and extra-curricular activities, student feedback, internal and external assessments, financial implications, course contents.
- B.Tech I Year is monitored by Vice-Principal (I Year) while the B.Tech II, III and IV Year and PG Programmes are monitored by the respective Head of Departments.
- The faculty are actively engaged and involved in decision making process.
- Periodic meetings of HODs of all of the departments and also the intra-departmental meetings, convey and implement decisions taken by the committees and endorsed by management. Senior faculty members are represented in all committees by rotation to enhance administrative experience of all staff. This will help to refine and run the system of administration to continuously sustain, renew and enhance quality of the education by the institution.
- The Senior Administrative Officer oversees the non-academic aspects of Management of the institutes support systems including HR and is assisted by the Administrative Officer and Office Assistants who look after correspondence, admissions, HR, scholarships etc.
- The Finance aspects are looked after by the Finance Officer and are assisted by the Accountant and Deputy Accountant.

(ii) Examinations

- All the examination matters are dealt by Dean of Examinations (DOE) assisted the Controller of Examinations (CE) and by five Assistant Controllers of Examination (ACEs). The duties are delegated to the ACEs to assist the DOE in smooth functioning of both conduct and evaluation of examinations, publishing of result and maintaining records.

(iii) Departments

- HODs through their departmental committees and coordinators, administer each department's activity.
- Various annual activities, professional bodies and clubs are organized through their respective coordinators. The activities are grouped as given below:

(a) Academic Activities

S.No	Academic Activity
1	Ist Year B.Tech (All Branches)
2	M.Tech Programme
3	B.Tech (CCC)
4	TASK
5	EDP Cell
6	Technology Cell
7	College Diary
8	College Web Page
9	GRIP
10	Faculty Club
11	Women Development Cell
12	FSW
13	GRIET Alumni Association
14	Gaming Club
15	Robotic Club

(b) Co-Curricular & Extra-Curricular Activities

S No.	Activity
1	Annual Day
2	Graduation Day
3	NSS
4	Pragnya
5	Pulse
6	Quizzicals
7	Reflections
8	Rhythms
9	Scientific Forestep
10	Souvenir
11	Spices
12	Spirals
13	Sports & Games
14	x-Kernel

(c) Other Committees

S No	Committee
1	Canteen
2	Editorial
3	Library
4	Public Relations
5	Time Table
6	Transport
7	e-Resources

(d) Professional Bodies

S No.	Professional Bodies
1	CSI
2	IEEE
3	ISTE
4	SAE
5	SME
6	ICI
7	IEI
8	IETE
9	HMA
10	AIMS
11	TIE

12	DMSI
13	CII
14	CREAM

II. Delegation of financial power

(i) Director / Principal

Director / Principal is delegated with financial powers up to a maximum of Rs. 200,000/- for purchase and unplanned up to Rs. 50,000/-

(a) To authorize purchase of consumables for laboratories over and above the powers of the Head of the Departments.

(b) To permit reimbursement of traveling and other expenses for official purposes within the permitted limit to be decided by the CEO.

(c) To entertain guests.

(d) To sponsor faculty / staff for any academic and co-curricular activities as per norms.

(e) To authorize any other expenses he may deem essential.

The Principal may in case of any contingency obtain oral permission from the CEO, if the expenditure to be incurred exceeds his powers and get ratified by the CEO along with required receipts.

(ii) Heads of Departments:

The HODs are delegated with powers up to Rs.25,000/- for sanctioned work and Rs.10,000/- for unplanned work

(a) To make urgent consumable purchases for Lab.

(b) To meet small non-recurring expenses.

(c) To incur any other expense deemed necessary.

III. Grievance Redressal Cell

All grievances of staff and students are to be redressed expeditiously, and each member is a key stakeholder of the organization. Any grievance reported verbally or written will be appropriately dealt with by the concerned Head of the Department. However, the aggrieved, if so desires or feels that his/her grievance is not redressed satisfactorily, can approach the Grievance Redressal Cell for Redressal. The composition of Cell is as follows:

Chairman

- Vice President, Governing Body

Members

- Director
- Principal
- Dean Student Affairs
- Dean Faculty Development
- Dean Discipline

The Grievance Redressal cell delegates to three other sub committees to deal with specific complaints, which are described as follows:

(i) Discipline Committee

The main role of discipline cell is to address the complaints from Student and Staff.

Self-discipline is primarily desirable, and all members in the institutions environment are expected to adhere to rules and regulations in an ideal situation. Any aberrations in this regard are to be referred to the Discipline Committee, who should dispose of the case expeditiously. All discipline matters of students and matters related to Teaching and non-Teaching staff are to be referred to Discipline Committee, consisting of:

Chairman

- Dean Discipline

Members

- Dean Student Affairs
- Physical Director
- Two faculty Members nominated by the Principal

Co-opted

- HOD of concerned member staff/student
- Student member/Non-teaching staff member

(ii) Anti-ragging Committee

Ragging involves an act by senior students in baiting or bullying new students. Though a Universal phenomena, it often takes a malignant form wherein the newcomers may be subjected to psychological or physical discomfort or harassment.

To prevent and deter such incidents in Higher Educational Institutions, the Government of India has taken serious view on the cases of ragging. The other effective steps taken by the Government include notification of anti-ragging regulations by regulatory authorities viz. All Indian Council for Technical Education (AICTE) and University Grants Commission (UGC) vide F.1-16/2009(CPP-II) dated 21 October 2009. The media campaign started by Government since 2009 through print, audio/visual has created awareness throughout the country is reiterated every year.

Anti-ragging Committee members are as below:

- Principal
- Dean Discipline
- Circle Inspector of Police of Local Police Station
- Dean Student Affairs
- Dean Academic Affairs
- Physical Director
- Senior Administrative Officer
- Students Members –One from each Programme

GRIET follows the notification strictly and implements to protect its academic atmosphere from being marred by the acts of ragging. GRIET follows a three pronged approach of "Awareness, Avoidance & Action". All direct approaches of talking to students in addition to using various media to make aware of the bad effects and strict punishments if indulged in. Under Avoidance it has instituted Anti Ragging squads under the Anti Ragging Committee to prevent ragging at the time of joining and continues the monitoring through the first year session. It also procedurally segregates Instructions, Travel and Canteen timings respectively. Any cases of ragging observed are to be referred to Disciplinary Committee for appropriate action. The students/parents are required to submit anti-ragging related affidavit to the Institute at the time of admissions.

(iii) Anti Sexual Harassment Cell

The Honorable Supreme Court in the case of Vishaka and Others Vs State of Rajasthan and Others (JT1997 (7) SC 384), has laid down guidelines and norms to be observed to prevent sexual harassment of working women. These are ingrained in the Government of India CCS Conduct Rules [Rule 3 (1) (iii)] in the light of misconduct which attracts appropriate disciplinary action at work place and where ever such conduct amounts to a specific offence under IPC the concerned authorities can initiate appropriate action under the law. Being a private academic institution GRIET is also within the purview of the law and its jurisdiction as UGC in its notification F.No.14-4/ 2012 (CPP-II) of December 2012 has formulated regulations in the letter (Para 1.1 and 1.2, which also applies to institutions recognized under Clause (f) of Section 2 of UGC act 1956).

At GRIET, the Principal has constituted the Anti Sexual Harassment Cell for prevention of sexual harassment in the campus, and the cell is empowered to deal with cases concerning sexual harassment of women staff and students and hence will function as a sub-committee of the institute.

The list of members and terms of references are given below:-

1. Chairperson
2. Faculty members from all departments
3. Senior Administrative Office
4. Co-opted Members
    i. Social Activist
    ii. Student Representative
    iii. Non-teaching Staff Representative

Functions:

- To deal appropriately with reported cases of sexual harassment, abuse or discrimination, and initiate action against particular grievances in respect of unfair treatment due to gender bias.
- The Anti Sexual Harassment Cell is responsible for initiating the necessary process of inquest on receipt of complaint from the dean Discipline.
- In case of the complaint is against any staff member of the committee then the Principal shall nominate appropriate Chair or member for the enquiry.
- The Anti Sexual Harassment Cell arbitrates sexual harassment cases, complete with provisions to recommend suitable punishment of the guilty to the Grievance Cell for further action.
- The guidelines have provisions depending on the different degrees of fault or offence-Minor, Moderate or Major, there are different degrees of "punishment" to deal with such offences

    Tools to respond to offences include (1) Communication of the standard, (2) Disapproval, (3) Verbal warning, (4) Written warning, (5) Suspension/ Rustication of the guilty parties, (6) Termination of employment, in order to protect complainants from victimization.

- The guidelines followed are meant to act as a deterrent, and that this cell can be effective only influence suitable attitudinal change.

IV. Women's Development Cell

The activity of WDC addresses problems of women employees and empowerment of women.

(i) History & Inception

The JNT University Hyderabad, makes it mandatory for all affiliated colleges to have a Women's Development Cell and gives guidelines to the college establishment relating to functioning of gender issues cells (2001). Following in the footsteps of the JNT University, Gokaraju Rangaraju Institute of Engineering & Technology also has established a Women's Development Cell.

(ii) Scope

The Women's Development Cell of GRIET purports to conduct activities for the students, teachers and administrative / supporting staff of the college at 3 levels- Apex, College and Departmental levels. Activities at the Institutional Apex, level will aim at the community at large, the focus being on providing community interaction and meaningful humanitarian experience to students and teachers. It will also interact with governmental social bodies that address women's issue such as sexual harassment — verbal or physical in nature.

(iii) Objectives

- Create awareness on equal opportunity for women that will ultimately lead to improved attitude and behavior.
- To raise awareness vide lectures/ workshops for GRIET women students and staff members on different aspects of women's welfare.
- Bring about attitudinal and behavioral change in adolescent youth of the female gender.
- To discuss and suggest methods to promote gender amity amongst all GRIET women employees and students.
- Conduct programmers for ladies to empower them physically, emotionally, mentally and financially.
- To educate the women students to break out of social impediments and to convince them to come forward with problems and complaints.
- Provide a harassment free working atmosphere, by identifying and fixing responsibility on the concerned persons for ensuring equal treatment of and participation by women in all areas.
- To consider any other matter on women's issues referred to the cell.

(iv) Constitution of the Women's Development Cell:

1. Coordinator

Lady Faculty

2. Members

Dean Faculty Development

Dean Student Affairs

Senior Lady Faculty

3. Co-opted members

Lady Faculty

Female Student

(v) Programmes/Activities:

In order to achieve the stated goals, the following programmers will be conducted / celebrated.

March 8 - Women's Day

April 7 - Health Day

Lectures will be organized, as per convenient timings, on adolescent health issues, women's professional problems, women's domestic / personal problems due to work-place pressures, and gender discrimination at different levels. Competitions such as Quiz, Debates and, Elocution competitions will be held besides activities of interest to ladies such as Rangoli, Mehendi, and Cooking etc.

V. Malpractice Prevention Committee:

A Malpractice Prevention Committee shall be constituted to examine and punish the students who indulge in malpractice/behave in an undisciplined way in examinations as per the punishment guidelines approved by the Academic Council.

Composition

- The Principal
- Controller of Examinations of the college
- Observer/ Invigilator
- Subject Expert (case/offence dependent)
- Head of Department of concerned candidate

8.2.4 Transparency and availability of correct/unambiguous information (3) Institute Marks : 3.00

(Instruction: Availability and dissemination of information through the Internet. Information provisioning in accordance with the Right to Information Act, 2005).

- Personal information, qualifications, professional skills and experience are taken from new recruits at the time of joining and used to leverage the strengths of the departments and the institute.
- The data of all staff are periodically collected and updated, the teaching faculty information is uploaded on the college web site.
- The administrative rules and regulations covering all cadre of staff employed is mentioned with clarity in the GRIET Manual which is updated. This manual is available with all the administrative heads as well as Head of Departments. Transparency is maintained relating to rules followed which include general administration, recruitment of staff, service conditions, duties, promotion policies, increments and awards and disciplinary actions.
- Recruitment and interview of all staff is done by issuing advertisements in leading local and national News papers and on college web site.
- The Selection Committee chaired by the Chairman, Governing Body or his nominee , the Principal, subject experts, Head of Departments and nominee of affiliating university form the constituent members and the recruitment and the short listed candidates are intimated by telephone and e mail.
- Recruited teaching faculty are interviewed and ratified by the University Ratification Committee and the result is intimated.
- All activities at the institute are recorded and posted on the institute web site.
- Periodic meetings of the Governing Body, Academic Council, Board of Studies are recorded as minutes of the meeting and the decisions and ratifications are handed down to the department levels. The departments in turn intimate the faculty members during the Departmental meetings. All administrative meetings held are recorded for transparency in order to maintain unambiguity.
- Mobile phone Short Messaging Service (SMS) are also effectively utilized to alert Students, staff, and other stake holders.
- All schedules are displayed on the Notice Boards, College Diary and the Web site. The College Diary gives the academic calendar and all activities (curricular and beyond) and the same can be accessed through the college web site.
- The Academic Regulations and Syllabus give transparency in implementing academic plans and gives information on the current regulations in force and its rules, credits , courses, attendance, examination etc. this information is available on the college web site.
- All relevant documents of the administrative and academic processes are displayed and available for inspections by several regulatory bodies such as the Affiliating University Task Force, State Government Task Force/ Committee, AICTE, NAAC, UGC and NBA teams. It is also available for corporate

entities who recruit students, such as TCS, Infosys etc.

- The mandatory disclosure presented on the website provides all the academic details including the academic regulations and syllabus
- There are notice boards in all the blocks through which information is made available to the staff and students and very significant circulars are sent to the classrooms.

8.3 Budget Allocation, Utilisation, and Public Accounting (10)

Total Marks : 10.00

Summary of current financial year's budget and the actual expenditure incurred

Item	Budgeted in 2014-2015	Expenses in 2014-2015	Expenses in 2013-2014	Expenses in 2012-2013
Infrastructure built-up	10000000	600000	1257200	2109000
Library	3000000	1772000	1844000	2654000
Laboratory equipment	25000000	25891000	11448000	10620000
Laboratory consumables	20000000	13714000	975000	1537000
Teaching and non-teaching staff salary	180000000	177394000	144049000	116452000
R&D	15000000	10237000	6989000	2841000
Training and Travel	5000000	3760000	1957000	2205000
Others	60000000	47703000	52599000	41222000
Total	318000000	281071000	221118200	179640000

8.3.1 Adequacy of budget allocation (4) Institute Marks : 4.00

(Instruction: Here the institution needs to justify that the budget allocated over the years was adequate.)

GRIET follows the process of distributing the available financial resources to departments in a manner consistent with our institute's vision, mission, long-term goals which is transparent to stakeholders. The allocation model is updated annually and will continue to serve as the allocation instrument. Keeping in view that no budgeting process is perfect and that ideally there would be more funds to allocate, the goals of the process are to:

- Recognize the importance of staff to our long term success
- Encourage areas to focus on outputs directly related to our strategic plan
- Improve instructional and support facilities to make the learning environment vibrant
- Increase Research and Development

The institute allocates the available resources to the departments based on the forecasted requirements of the departments keeping the curricular and beyond curricular activities, R&D, Library, Transport, Welfare and Maintenance. It is the responsibility of the Departmental Development and Monitoring Committee (DDMC) to ensure the allocated resources are expended as per their forecasted plans. The emphasis will be to increase quality of academic inputs delivered and positively contribute to the institute in terms of development of new technologies, methods and practices.

8.3.2 Utilisation of allocated funds (5) Institute Marks : 5.00

(Instruction: Here the institution needs to state how the budget was utilised during the last three years.)

The respective academic and supportive units are informed on allocation of funds under various heads. At the department level, the DDMC decides the utilization for the financial year's allocated funds following the purchase procedures.

Purchases are done up to the level of allocated funds, however under some special priority considerations, the purchases can go beyond the allocated funds which will be later ratified by the Governing Body. Delegation of financial powers done to keep the autonomy of the departments and reduce time delays.

Regular auditing and inventory checks keep the mechanism free from over or unjust spending.

8.3.3 Availability of the audited statements on the institute's website (1) Institute Marks : 1.00

(Instruction: Here the institution needs to state whether the audited statements are available on its website.)

YES, the Audited statements are available on GRIET website www.griet.ac.in

8.4 Programme Specific Budget Allocation, Utilisation (10)

Total Marks : 10.00

Summary of budget for the CFY and the actual expenditure incurred in the CFYm1 and CFYm2

Items	Budgeted in 2014-2015	Actual Expenses in 2014-2015	Budgeted in 2013-2014	Actual Expenses in 2013-2014	Budgeted in 2012-2013	Actual Expenses in 2012-2013
Laboratory equipment	300000	180000	100000	59000	200000	36000
Software	100000	31000	50000	3000	20000	4000
R&D	100000	110000	200000	73000	50000	1000
Laboratory consumables	50000	7000	50000	3000	50000	15000
Maintenance and spares	100000	66000	200000	19000	100000	19000

Training and Travel	50000	9000	50000	6000	20000	1000
Miscellaneous expenses for academic activities	50000	12000	50000	3000	20000	2000
Total	750000	415000	700000	166000	460000	78000

8.4.1 Adequacy of budget allocation (3) Institute Marks : 3.00

(Instruction: Here the institution needs to justify that the budget allocated over the years was adequate.)

The process of analyzing the adequacy of budget allocation involves the analysis of information pertaining to each item of the budget with respect to the priorities and policies set out by the institution. The priorities of the organization are:-

1. Improvement in the quality of education.
2. Development of infrastructure including classrooms, teaching aids and student facilities in classroom.
3. Research and Development.
4. Addition of latest Laboratory equipment.
5. Addition of resources in the Library.

In this regard, by comparing the priorities set out with the allocations made, it can be informed that the items included are in line with the policies and long term goals of the institution.

(Programme expenses specific example!)For example, in the year 2014-15, three fourth of the budget amount was spent towards the M.TECH Power Electronics (PG). This was due to Improving Power Converters Lab & Power Electronics Drives Lab's in PG. The quality of an Educational Institution is based and enhanced by its quality teaching staff.

Another substantial spending amount was for building infrastructure making GRIET one of the leading institutions having state of the art infrastructure. For any service, institutional infrastructure is the key and the base to provide quality service. Similar emphasis was given towards development of laboratory equipment and resources.

8.4.2 Budget allocation for Research facilities (4) Institute Marks : 4.00

(Instruction:- Articulate the provisions in the budget to carry out the research by post graduate students)

R&D is the next key area where major funds are allocated for projects, patents and tie-ups.

A good emphasis is given on training both teaching and non-teaching staff by conducting FDP's and workshops in the college and also encouraging staff to attend FDP's, workshops and conferences outside the institution with sufficient funds. Hence it can interpret that the allocated funds are very much in line with the priorities set out by the institution.

(Programme expenses specific example!)For example, in the year 2014-15, three fourth of the budget amount was spent towards the M.TECH Power Electronics (PG). This was due to Improving Power Converters Lab & Power Electronics Drives Lab's in PG. The quality of an Educational Institution is based and enhanced by its quality teaching staff

8.4.3 Utilisation of allocated funds (3) Institute Marks : 3.00

(Instruction: Here the institution needs to state how the budget was utilised during the last three years.)

The allocated funds act as guideline towards making purchase of lab equipment, programme conduction, training activities and other miscellaneous needs. The department conducts regular meeting to see that the allocated funds are properly utilized vis-à-vis the projection and plans.

The allocated funds are utilized as per the priorities set at the department level. The emphasis is on increasing quality of academic inputs delivered and positively contributes to the Institute in terms of development of new technologies, methods and practices.

Programme specific example: POWER Electonics.

GRIET management is a forerunner in terms of providing the best and updated infrastructural facilities to its staff and students and also in facilitating funds for the purpose of improving quality of teaching and research. Departments make optimum utilization of this attitude and policy of the management by utilizing the funds allocated by spending it in lines with the mission and objectives.

8.5 Library (25) Total Marks : 25.00

8.5.1 Library space and ambience, timings and usage, availability of a qualified librarian and other staff, library automation, online access, networking, etc (5) Institute Marks : 5.00

(Instruction: Provide information on the following items.)

• Library Services	Yes
• Carpet area of library (in m2)	1670
• Reading space (in m2)	1355
• Number of seats in reading space	300
• Number of users (issue book) per day	200
• Number of users (reading space) per day	300

Timings: During working day, weekend, and vacation 8 A.M to 8 P.M

• Number of library staff 08

• Number of library staff with degree in Library 04

• Management Computerisation for search, indexing, issue/return records Bar coding used

At present the Library Information Center uses in-house developed Library Management Software

• Library services on Internet/Intranet INDEST or other similar membership Archives

The following Library services are present on Internet / Intranet.

Library Management Computerization for search, indexing, issue/return records Bar coding used

At present the Library Information Center uses in-house developed Library Management Software with the following functions automated

- Circulation Section – Issue / Return using bar codes and code reader
- Information Retrieval Services

- Which includes searching of data and retrieval of data using various search options like title, author, subject, publisher etc.
- Recently barcoding of library holdings was taken up and successfully completed.

Library Services on internet / intranet, membership archives

- **Library Services on internet / intranet, membership archives**

1. NPTEL (National Programme for Technology Enhanced Learning) lessons are procured and are available all over campus through intranet at link http://172.16.0.88 LocalG that can be accessed from any system with LAN connection. These lessons are stored at IBM server of library with capacity of 3TB.
2. DELNET (Developing Library Network): GRIET Library is a member of DELNET through which 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.

- **Links to E-Journals / Databases**

The following e-resources / online e-Journals Packages of various publishers can be accessed from any computer (with internet) connected to the campus LAN including Library. IP based access to the subscribed journals are provided through these resources.

1. IEEE ASPP - Transactions & Magazines (for CSE, ECE, EEE, IT Depts.) http://ieeexplore.ieee.org
2. ELSEVIER - Science Direct (for Engineering) http://www.sciencedirect.com
3. ASCE Digital library (for Civil Dept.) http://ascelibrary.org
4. ASME Digital Library Online : (for Mechanical Dept.) http://asmedl.org
5. Springerlink: (for CSE, ECE, EEE, IT Depts.) http://springerlink.com/journals
6. McGraw-Hills Access Engineering (for Engineering) http://accessengineeringlibrary.com
7. J-Gate Engineering and Technology (JET) (for Engineering & Technology) http://jgateplus.com
8. ASTM Digital Library (for Engineering) http://enterprise.astm.org
9. J-Gate Social and Management Sciences (JSMS) (for Management Sciences) http://jgateplus.com
10. EBSCO-BSA (for Management Sciences)

S.No	Package	No of Journals	Back files up to
11`	IEEE-ASPP	145	2000
2	ASCE	34	1983
3	McGraw Hill	Access Engineering-274 titles	All
4	Springer-EEE,ECE,CSE	149 (Titles Collection)	1997
5	ASME	26	2000
6	J-Gate (E & T)	1700	2001
7	Elesevier-Science Direct	275(Engg & Comp.Sc)	2000
8	ASTM	Digital Library	complete
9	J-Gate Management Science	2000	2001
10	EBSCO-BSA	1102 titles	

8.5.2 Titles and volumes per title (4) Institute Marks : 4.00

Year	Number Of New Titles Added	Number Of New Editions Added	Number Of New Volumes Added
2012-2013	318	44	4000
2013-2014	655	475	4764
2014-2015	395	230	1572

Number of Titles : 1368

Number of Volumes : 10336

8.5.3 Scholarly journal subscription specific to the programme (8) Institute Marks : 8.00

(Instruction:- Indicate the journals subscribed/available specifically for this programme)

Year	No. of Technical Magazines / Periodicals	No. of Total Technical Journals subscribed		Scholarly Journal Titles(in originals, reprints)
		In Hardcopy	In Softcopy	
2011-2012	240	240	35	240
2012-2013	300	300	8412	300
2013-2014	300	300	300	300
2014-2015	293	293	6849	6849

8.5.4 Digital Library (3) Institute Marks : 3.00

• Digital Library Services	Yes
• Availability of digital library contents (If available, then mention number of courses, number of e-books, etc. Availability of an exclusive server)	YES, 260 NPTEL Lessons / Exclusive Server Available
• Availability of an exclusive server	YES
• Availability over Intranet/Internet	YES
• Availability of exclusive space/room	YES
• Number of users per day	150

GRIET Digital Library provides literature search through Internet and provides Online Access to the following e-resources

1. IEEE ASPP - Transactions & Magazines (for CSE, ECE, EEE, IT Depts.) http://ieeexplore.ieee.org
2. ELSEVIER - Science Direct (for Engineering) http://www.sciencedirect.com
3. ASCE Digital library (for Civil Dept.) http://ascelibrary.org
4. ASME Digital Library Online : (for Mechanical Dept.) http://asmedl.org
5. Springer link : (for CSE, ECE, EEE, IT Depts.) http://springerlink.com/journals
6. McGraw-Hills Access Engineering (for Engineering) http://accessengineeringlibrary.com
7. J-Gate Engineering and Technology (JET) (for Engineering & Technology) http://jgateplus.com
8. ASTM Digital Library (for Engineering) http://enterprise.astm.org
9. J-Gate Social and Management Sciences (JSMS) (for Management Sciences) http://jgateplus.com
10. EBSCO-BSE (for Management Sciences)

An Online Public Access Catalogue (OPAC) terminal is kept to the users to facilitate them to search through catalogue to ascertain the availability of documents. It can be searched using various options like title, author, subject, publisher etc.

8.5.5 Library expenditure on books, magazines/journals, and miscellaneous contents (5) Institute Marks : 5.00

Year	Expenditure (in Rs.)				Comments, If Any
	Book	Magazines/Journals (for hard copy subscription)	Magazines/Journals (for soft copy subscription)	Misc. Contents	
2012-2013	15,53000	7,80000	16,3000	-	-
2013-2014	19,06000	6,00000	16,2000	-	-
2014-2015	15,13000	6,75000	20,2000	2,00000	-

8.6 Incubation facility (5) Total Marks : 5.00

Institute Marks : 5.00

(Instruction: Specify the details of incubation facility in terms of capacity, utilisation terms and conditions, usage by students)

GRIET initiated the culture of establishing Incubation centers in association with industry.

- Bus-i solutions ,a startup company training our students in web technologies and mobile technologies for CSE ,IT, MCA& MBA from 2013-2014.
- EDS Technologies for Mechanical and Civil Engineering and Techno lexis for EEE & ECE from 2014-2015.
- GRIET has been recognized as business Incubation center by (Central Govt.) MSME(Micro small medium) which encourages innovative products through financial support from 2013-2014.
- This year we receive fund of worth Rs. 19.63 lacs.

8.7 Internet (5)

Total Marks : 5.00

Institute Marks : 5.00

(Instruction: The institute may report the availability of Internet in the campus and its quality of service.)

• Internet Services	Yes
• Name of the Internet provider	AIRTEL
• Available bandwidth	54 Mbps
• Access speed	100 Mbps
• Availability of Internet in an exclusive lab	Yes
• Availability in most computing labs	Yes
• Availability in departments and other units	Yes
• Availability in faculty rooms	Yes
• Institute's own e-mail facility to faculty/students	Yes
• Security/privacy to e-mail/Internet users	Yes

- The Institute is currently subscribed with the service provider "Bharti -Airtel" for the internet services.
- The required bandwidth is 15 Mbps with 100 Mbps combined for the growing number of users both in Departments, Examination cell and student labs.
- The internet is available via LAN exclusively in IT, CSE and ECE labs for performing practical's.
- Wi-Fi routers in all vantage points connecting all registered laptops in the Departments and faculty rooms.
- The same network is used for institute's intra-mail.

The network is secure in that it has its own firewalls and anti-virus/worm programmes to protect vital institute information and database apart from confidential emails of all its users.

8.8 Safety Norms and Checks (5)

Total Marks : 5.00

8.8.1 Checks for wiring and electrical installations for leakage and earthing (1)

Institute Marks : 1.00

- Institute buildings are well designed with proper electrical installations.
- Special care is taken at the time of installation by using quality certified components in terms of wiring, switches, plugs and circuit breakers.
- Monthly maintenance is done which includes arrest of any leakage, working condition check for lighting conductor, earthing / grounding system checks and inspection of electrical installations for safety.
- Separate Electrical Maintenance is monitored by the Maintenance & Safety Officer with a dedicated team to deal with routine and emergency maintenance.

8.8.2 Fire-fighting measurements: Effective safety arrangements with emergency / multiple exits and ventilation/exhausts in auditoriums and large classrooms/labs, fire-fighting equipment and training, availability of water, and such other facilities (1)

Institute Marks : 1.00

- Institute buildings are designed with adequate light, ventilation, stairs, corridors, pathways, multiple / wide staircases and all round approach.
- Pathways, corridors and stairs are wide enough to handle emergencies.
- Large size class rooms, Seminar halls and laboratories have two exits.
- Laboratories handling chemicals have adequate ventilation and exhaust facilities.
- Fire extinguishers are provided at key points in all buildings.
- First Aid facility is available in all emergencies.
- Each building is being provided with automatic alarm system with water tanks and fire prevention system.
- Safety instructions are prominently displayed throughout the college.
- Quarterly maintenance drills are done for awareness and familiarity with hazards and safety actions in case of emergencies.

8.8.3 Safety of civil structure (1)

Institute Marks : 1.00

- Buildings are well designed by expert architects and qualified structural engineers
- Quarterly inspection is carried out for the safety of civil structures

Adequate maintenance is done by taking care of painting and white-wash, crack filling, water logging, and leakages

8.8.4 Handling of hazardous chemicals and such other activities (2)

Institute Marks : 2.00

(Instruction: The institution may provide evidence that it is taking enough measures for the safety of the civil structures, fire, electrical installations, wiring, and safety of handling and disposal of hazardous substances. Moreover, the institution needs to show the effectiveness of the measures that it has developed to accomplish these tasks.)

- Safety precautions such as shoes, aprons, safety glasses are insisted upon for staff and students.
- Special drives are done to collect electronic wastage.
- Awareness of safety precautions for handling chemicals is done every semester.

8.9 Counselling and Emergency Medical Care and First-aid (5)

Total Marks : 5.00

8.9.1 Availability of counselling facility (1)

Institute Marks : 1.00

(Instruction: The institution needs to report the availability of the facilities discussed here.)

- An experienced psychiatrist Revathi Thuraga, life member of the International Association of Holistic Psychology (IAHP), is being consulted whenever needed

Dean Career Guidance and Counseling, GRIET deals with students and parents by giving counseling and motivating them in all aspects

8.9.2 Arrangement for emergency medical care (2) Institute Marks : 2.00

(Instruction: The institution needs to report the availability of the facilities discussed here.)

Medical facility within the Institution:

- A Qualified Medical Practitioner is available every day between 9:30 am-1.00 pm on the campus medical centre.
- He is being assisted by a qualified medical assistant, who is available throughout the college working hours

Medical facility nearby:

- College is being situated at a distance of 4.5 km from busy KPHB (Kukatpally Housing Board) area. Even the connecting road called Nizampet Road is densely populated with all medical facilities doctors, clinics, pharmaceutics & diagnostic centres.
- Nearest Hospitals: Apollo- 2 km, Remedy Hospitals-4.5 km at KPHB (Multi Specialty Hospital with good emergency facilities)
- Many private practitioners of every specialty are available at 1.5 km.
- Number of ambulances within the Institution : **one**
- Facility in ambulances : **First Aid**
- Response-time in calling ambulance services from outside : **7-10mins**
- College has a fleet of 32 buses, LMVs which can be used to ferry people in emergency as and when needed.

Remedy Hospitals Ambulances and 108 EMRI-State Ambulance facility situated at Kukatpally Police station which is at 4 km, have very good track record of response time in meeting the emergencies. The journey time is involved in response to any emergency calls which is around 7-10 mins.

8.9.3 Availability of first-aid unit (2) Institute Marks : 2.00

(Instruction: The institution needs to report the availability of the facilities discussed here.)

- College Medical centre provide first aid facility equipped with 4 beds, wheel chair, stretcher facility, consulting room with all emergency care and medical centre facility.
- The Medical Center consists of Emergency Medical equipment such as ECG, EMG machines, Pace Maker, Holter Monitor
- It is open throughout college working hours including sports periods.

9 Continuous Improvement (75) **Total Marks : 69.59**

9.1 Improvement in Success Index of Students (5) Total Marks : 5.00

Institute Marks : 5.00

From 4.2
a, b and c are the success indices which correspond to LYGm2, LYGm1 and LYG respectively
Assessment = (b-a) + (c-b) + (a+b+c)x(5/3)

Items	2010-2011(c)	2009-2010(b)	2008-2009(a)	Assessment
Success Index	1.00	1.00	1.00	5.00

9.2 Improvement in Academic Performance Index of Students (5) Total Marks : 3.86

Institute Marks : 3.86

From 4.3
a, b and c are calculated respectively for LYGm2, LYGm1 and LYG by dividing the API values, obtained from the criterion 4.3 by 10 . The maximum value of a, b, and c should not exceed one.
Assessment = (b-a) + (c-b) + (a+b+c)x(5/3)

Items	2010-2011(c)	2009-2010(b)	2008-2009(a)	Assessment
API	0.79	0.75	0.76	3.86

9.3 Improvement in Student-Teacher Ratio (5) Total Marks : 3.40

Institute Marks : 3.40

From 5.1
a, b and c are calculated respectively for CAYm2, CAYm1 and CAY by dividing the STR values, obtained from the criterion 5.1 by 20. The maximum value of a, b, and c should not exceed one.
Assessment = (b-a) + (c-b) + (a+b+c)x(5/3)

Items	2014-2015 (c)	2013-2014 (b)	2012-2013 (a)	Assessment
STR	0.68	0.72	0.58	3.40

9.4 Enhancement of Faculty Qualification Index (5)

Total Marks : 5.00

Institute Marks : 5.00

From 5.3
a, b and c are calculated respectively for CAYm2, CAYm1 and CAY by dividing the FQI values, obtained from the criterion 5.3 by 10. The maximum value of a, b, and c should not exceed one.
Assessment = (b-a) + (c-b) + (a+b+c)x(5/3)

Items	2014-2015 (c)	2013-2014 (b)	2012-2013 (a)	Assessment
FQI	1.00	1.00	1.00	5.00

9.5 Improvement in Faculty Research Publications, R&D Work and Consultancy Work (10)

Total Marks : 7.33

Institute Marks : 7.33

From 5.7 & 5.9
a, b and c are calculated respectively for CAYm2, CAYm1 and CAY by dividing the FRP and FRDC values, obtained from the criterion 5.7 and 5.9 by 30 . The maximum value of a, b, and c should not exceed one.
Assessment = (b-a) + (c-b) + (a+b+c)x(10/3)

Items	2014-2015 (c)	2013-2014 (b)	2012-2013 (a)	Assessment
FRP	1.00	1.00	1.00	10.00
FRDC	0.60	0.33	0.50	4.67

9.6 Continuing Education (10)

Total Marks : 10.00

9.6 In this criterion, the institution needs to specify the contributory efforts made by the faculty members by developing the course/laboratory modules, conducting short-term courses/workshops, etc., for continuing education during the last three years (10)

Institute Marks : 10.00

Module Description	Any Other Contributory Institute/Industry	Developed/Organized By	Duration	Resource Persons	Target Audience	Usage and Citation,etc
PROTEUS	Institution	G.Swapna (Asst.Prof.)	5-01-2015 to 6-01-2015	R Anil Kumar (Asst.Prof.)	M.Tech Students & Faculty	Helpful in improvement of education
Teaching Methodology for GRIET Faculty	Institution	Dr J Praveen(Prof)	11-05-2015 to 12-05-2015	P.S.Raju (Director)	Faculty & Staff	Helpful in improvement of education
EAGLE	Institution	G.Swapna (Asst.Prof.)	02-06-2015 to 03-06-2015	R Anil Kumar (Asst.Prof.)	M.Tech Students	Helpful for projects
LABVIEW	Institution	V.Hima Bindu (Asst.Prof.)	16-02-2015 to 18-02-2015	Vijayaramaraju (Assoc. Prof)	M.Tech Students & Faculty	Helpful in improvement of education
Higher Education and Research in Canada	IIT Bombay	Dr D Padhan(Prof)	10/02/2015.	Dr J Praveen(Prof)	Faculty & Staff	Helpful in improvement of education
Seminar on PLC	Institution	VVS Madhuri(Asst Prof)	25-05-2015	Dr J Praveen(Prof)	M.Tech Students	Helpful for projects
Electromagnetic Energy and its behavior in Electrical Engg	Institution	B.Vasanth Reddy	06-05-2015	Dr J Praveen(Prof)	M.Tech Students & Faculty	Helpful in improvement of education
Pedagogy for Effectiveness use of ICT in Engg Education	IIT Bombay	Vijayaramaraju (Assoc. Prof)	5-01-2015 to 7-01-2015 & 19-01-2015 to 21-2015	Dr J Praveen(Prof)	Faculty & Staff	Helpful in improvement of education
Interactive Orientation Session on M. Tech and PhD through A-View by CTARA	IIT Bombay	M.Chakravarty (Assoc. Prof.)	2-04-2014	Dr J Praveen(Prof)	M.Tech Students & Faculty	Helpful in improvement of education
Guest Lecture on Excellence in Teaching	Institution	Dr J Praveen(Prof)	20-03-2014	P.S.Raju (Director)	Faculty & Staff	Helpful in improvement of education
Fluid Mechanics	IIT Bombay	Dr J Praveen(Prof)	20-05-2014 to 30-05-2014	Vijayaramaraju (Assoc. Prof)	M.Tech Students & Faculty	Helpful in improvement of education
Workshop on Engineering Mechanics	IIT Bombay	M.Chakravarty (Assoc. Prof.)	28-01-2014 to 06-02-2014	Dr J Praveen(Prof)	M.Tech Students & Faculty	Helpful for projects
Workshop on Signal Systems.	IIT Bombay	M.Chakravarty	02-01-2014 to 12-01-	Vijayaramaraju	M.Tech Students &	Helpful for

Control Systems	IIT Bombay	Dr. D. V. Pushpa Latha(Prof)	02-12-2014 To 12-12-2014	Vijayaramaraju (Assoc. Prof)	M.Tech Students & Faculty	Helpful for projects
Seminar on “Android Code Labs”	Institution	R Anil Kumar (Asst.Prof.)	25-10-2014	Dr J Praveen(Prof)	M.Tech Students & Faculty	Helpful in improvement of education
Seminar on PLC and SCADA	Institution	Dr J Praveen(Prof)	18-09-2014	Madhukar (Associate Director)	M.Tech Students & Faculty	Helpful in improvement of education
Workshop on AUTOEXPO	Institution	Dr J Praveen(Prof)	02-09-2013 to 04-09-2013	P.S.Raju (Director)	M.Tech Students & Faculty	Helpful in improvement of education
Workshop on Analog Electronics	IIT Bombay	M.Chakravarty (Assoc. Prof.)	04-06-2013 To 14-06-2013	R Anil Kumar (Asst.Prof.)	M.Tech Students & Faculty	Helpful in improvement of education
Management capacity enhancement program for higher education institutions	Institution	Vijayaramaraju (Assoc. Prof)	11-03-2013 to 23-03-2013	P.P.C. Prasad	M.Tech Students & Faculty	Helpful for projects
Auto Expo	Institution	M.Chakravarty (Assoc. Prof.)	02-09-2013 to 04-09-2013	Vijayaramaraju (Assoc. Prof)	M.Tech Students & Faculty	Helpful for projects
Electrical CAD	Institution	Vijayaramaraju (Assoc. Prof)	19-02-2013 20-02-2013	M.Chakravarty (Assoc. Prof.)	M.Tech Students & Faculty	Helpful for projects
FDP(Smart Grid)	Institution	Vijayaramaraju (Assoc. Prof)	09-02-2013	Sri Trinath & Sri. K. Anil	Faculty & Staff	Helpful in improvement of education
LABVIEW	Institution	V.Hima Bindu (Asst.Prof.)	4-10-2012 to 8-10-2012	Vijayaramaraju (Assoc. Prof)	M.Tech Students & Faculty	Helpful for projects
IRM	IIT Bombay	M. Chakravarthy	25-11-2012 to 26-11-2012	Vijayaramaraju (Assoc. Prof)	Faculty & Staff	Helpful in improvement of education
AAKASH FOR EDUCATION	IIT Bombay	M. Chakravarthy	11-7-2012 to 12-07-2012	P.M.Sarma (Prof.)	Faculty & Staff	Helpful in improvement of education
Teaching Methodology for GRIET Faculty	Institution	P.M.Sarma (Prof.)	04-7-2012 TO 5-7-2012	P.S.Raju (Director)	PG&UG Students & Faculty	Helpful for projects
PROTEUS	Institution	M. Chakravarthy	06-7-2012 TO 7-7-2012	P.M.Sarma (Prof.)	PG&UG Students & Faculty	Helpful for projects
EAGLE	Institution	G.Swapna (Asst.Prof.)	19-12-2012 TO 20-12-2012	M. Chakravarthy	PG&UG Students & Faculty	Helpful for projects

9.7 New Facility Created (15)

Total Marks : 15.00

9.7 Specify new facilities created during the last three years for strengthening the curriculum and/or meeting the POs (15)

Institute Marks : 15.00

New Facility Created :

Module Description	Any other contributory Inst./Industry	Developed /Organized by	Duration	Resource Persons	Target Audience	Usage and citation etc
2012-13						
Virtual Instruments Lab	Institution	P.M.Sarma (Prof.) Dr.D.V.PushpaLata(Prof) P.Srividya Devi (Asst Prof)	3 Months	P.S.Raju (Director)	M Tech Students	Application of the subject in industry
Development of PLC Trainers in Control Systems Lab	Institution	P.M.Sarma (Prof.) B.Vasantha Reddy, (Asst Prof) S Radhika (Asst Prof)	3 Months	P.S.Raju (Director)	M Tech Students	Application of the subject in industry
Development of Software based1ph, 3ph Inverter boards	Institution	P.M.Sarma (Prof.) G.Swapna, V.HimaBindu, (Asst Prof) V.Usha Rani (Asst Prof)	3 Months	P.S.Raju (Director)	M Tech Students	Application of the subject in industry
Development of Solar Tracker in Control Systems Lab	Institution	P.M.Sarma (Prof.) P.Prasanth, (Asst Prof) SS Nawaz (Asst Prof)	3 Months	P.S.Raju (Director)	M Tech Students	Application of the Subject in industry
		P.M.Sarma(Prof.)				

Automation of rotor resistance starter of 3ph induction motor	Institution	M.NagaSandhya Rani(Asst Prof) G.Sandhyarani Rani (Asst Prof)	3 Months	P.S.Raju (Director)	M Tech Students	Application of the subject in industry
Development of table top Dc machines laboratory	Institution	P.M.Sarma(Prof.) V Vijaya Rama Raju(Assoc Prof) P Praveen Kumar(Asst.Prof.)	3 Months	P.S.Raju (Director)	M Tech Students	Application of the Subject in industry
2013-2014						
Applications of PLC like Street lighting Control & PID Control Of DC motor	Institution	Dr .D V Pushapa Latha(Prof) M N Sandhya Rani(Asst.Prof) P Sri Vidya Devi (Asst Prof)	3 Months	P.S.Raju (Director)	M Tech Students	Application of the Subject in industry
Model Lift with Siemen's PLc	Institution	P.M.Sarma(Prof) M.Chakravarthy(Prof) V.V.S.Madhuri(Assistant.Prof)	3 Months	P.S.Raju (Director)	M Tech Students	Application of the Subject in industry
Automatic tuning PID Control of DC motor	Institution	Dr .D V Pushapa Latha(Prof) P Sri Vidya Devi (Asst Prof) M .Rekha(Asst Prof)	3 Months	P.S.Raju (Director)	M Tech Students	Application of the Subject in industry
Developed the Lab of DSP based electromechanical control	Institution	Dr .D V Pushapa Latha A Vinay Kumar V Hima Bindu	3 Months	P.S.Raju (Director)	M Tech Students	Application of the Subject in industry
Differential Current Protection Using Arduino	Institution	SS Nawaz(Asst Prof) Dr J Praveen (Prof)	3 Months	P.S.Raju (Director)	M Tech Students	Application of the Subject in industry
2014-2015						
Sensors & Measurements Lab	Institution	Dr J Praveen(Prof.) P.Sri Vidya Devi(Asst.Prof.) P Sirisha(Asst.Prof.)	3 Months	P.S.Raju (Director)	M Tech Students	Application of the Subject in industry
Designed & tested 3 phase induction motors of different specifications	Institution	Dr.D. V Pushapa Latha(Prof) B Vasanth Reddy	3 Months	P.S.Raju (Director)	M Tech Students	Application of the Subject in industry
1 Phase Inverter Using NI-My Rio	Institution	Dr J Praveen A Vinay Kumar V Vijaya Rama Raju	3 Months	P.S.Raju (Director)	M Tech Students	Application of the Subject in industry
3 Phase Inverter fed to 3 Phase Induction Motor using Arduino Mega	Institution	Dr J Praveen A Vinay Kumar R Anil Kumar	3 Months	P.S.Raju (Director)	M Tech Students	Application of the Subject in industry
1 Phase DVR	Institution	Dr J Praveen A Vinay Kumar Dr S V Jayaram Kumar	3 Months	P.S.Raju (Director)	M Tech Students	Application of the Subject in industry

9.8 Overall Improvements since last accreditation, if any, otherwise, since the commencement of the programme (20)

Total Marks : 20.00

9.8 Specify the overall improvement (20)

Institute Marks : 20.00

Specify the Strenghths/Weakness	Improvement Brought In	Contributed By	List the PO(s), which are strengthened	Comments, if any
2014-2015	Drives & Power Converters	Dr. J Praveen& B. Vasanth	a,b,c,e,l	State of art laboratory develop on par

	Laboratory	Reddy		with the industry
2013-2014	DSP & Power System Laboratory	Dr .D. V .Pushapa Latha &Dr. J.Sridevi	a,b,c,e,l	State of art laboratory develop on par with the industry
2012-2013	Solar Electrical Laboratory	Prof P.S. Raju, Prof P.M Sarma	a,b,c,e,l	State of art laboratory develop on par with the industry
2011-2012	Power Electronics Laboratory	Dr. S.N. Saxena, Prof P.M.Sarma	a,b,c,e,l	State of art laboratory develop on par with the industry