



SRI MANAKULA VINAYAGAR
ENGINEERING COLLEGE
(An Autonomous Institution)

Department of Electrical and Electronics Engineering

Minutes of 6th Meeting of BoS (UG)

Venue : Seminar Hall,
Department of EEE,
Sri Manakula Vinayagar Engineering College

Date & Time : 19th July, 2023 at 10.00 A.M



SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE

(An Autonomous Institution)

(Approved by AICTE, New Delhi and Affiliated to Pondicherry University)
(Accredited by NAAC with 'A' Grade and Accredited by NBA-AICTE, New Delhi)
Madagadipet, Puducherry



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Minutes of 6th Meeting of BoS

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Minutes of 6th Meeting of Board of Studies (UG)

The Sixth meeting of Board of Studies in Electrical and Electronics Engineering Department was held on **19th July 2023 at 10:00 A.M** in the Seminar Hall, Department of EEE, Sri Manakula Vinayagar Engineering College, with Head of Department in the Chair.

The following members were present for the BoS meeting

Sl. No.	Name of the Member	Designation
Head of the Department (Chairman)		
1	Dr. S. Anbumalar, M.E., Ph.D., Professor and Head Specialization: Control System Years of Experience: 33 years Sri Manakula Vinayagar Engineering College saravanan.anbumalar@gmail.com 9443179533	Chairman
The entire faculty of each specialization		
2	Dr. P. Jamuna, M.E., Ph.D., Professor Specialization: Power Electronics and Drives Years of Experience: 17 Sri Manakula Vinayagar Engineering College jamuna1981@gmail.com 9789544379	Member
3	Dr. D. Raja, M.Tech., Ph.D., Professor Specialization: Electrical Drives and Control Years of Experience: 16 Sri Manakula Vinayagar Engineering College rajaapeee@gmail.com 9944337970	Member
4	Dr. S. Ganesh Kumaran, M.E., Ph.D., Associate Professor Specialization: Electrical Machines Years of Experience: 12 Sri Manakula Vinayagar Engineering College ganeshphd4u@gmail.com 9677624378	Member
5	Dr.D.Sivaraj , M.Tech., Ph.D., Associate Professor Specialization: Electric Drives and Control Years of Experience: 13 Sri Manakula Vinayagar Engineering College sivarajdeee@smvec.ac.in 9043117533	Member

6	Mr.A.Janagiraman, M.E., Assistant Professor Specialization: Power Electronics and Drives Years of Experience:15 Sri Manakula Vinayagar Engineering College janagiraman16@smvec.ac.in 9965597940	Member
S&H Faculty		
7	Dr.T. Gayathri Professor, Dept of Mathematics, SMVEC.	Member
8	Dr.K.Kathikeyan Associate Professor, Dept. of Chemistry, SMVEC.	Member
9	Mrs.G.Namita Associate Professor, Dept. of English, SMVEC.	Member
10	Dr. P. Jayavardhan Associate Professor Dept. of Physics, SMVEC.	Member
Two subject experts from outside the Parent University nominated by the Academic Council		
11	Dr. J. Kanagaraj, M.E., Ph.D., Professor & Head (In charge) Specialization: Control System Years of Experience:25 PSG College of Technology (Autonomous) Coimbatore – 641 004. jkr.eee@psgtech.ac.in 94436 54496	Subject Expert
12	Dr. P. Lakshmi,M.E., Ph.D., Professor Specialization: Electrical Engineering Years of Experience:23 College of Engineering Guindy, Anna University, Chennai. 600 025. p_lakshmi@annauniv.edu 9444266117	Subject Expert
One expert nominated by the Vice-Chancellor from a panel of six recommended by the college principal.		
13	Dr. A. Kavitha, M.Tech., Ph.D Professor Specialization: Electrical Engineering Years of Experience: 25 College of Engineering Guindy, Anna University, Chennai-600025 akavitha@annauniv.edu, 9444388778	Subject Expert

One representative from industry/corporate sector/allied area relating to placement.		
14	Er.S. Selva Kumar, B.Tech. Senior Engineer Qualcomm India Private Limited Bengaluru, Karnataka - 560001 selvakumarsam95@gmail.com, 7358850881	Member
One postgraduate meritorious alumnus nominated by the Chairman, Board of Studies, with the approval of the principal of the college		
15	Er.K.Ramraj, M.Tech Senior Engineer Lucas TVS Puducherry – 605 107. ramrajeee@gmail.com, 9786714116	Member

Agenda of the Meeting

Agenda 1/ BoS/ 6 /2023 /EEE /UG	Confirmation of minutes of 5 th meeting of BoS and the Syllabi of B.Tech Electrical and Electronics Engineering of R-2020 Regulations – Modifications if any.
Agenda 2/ BoS/ 6 /2023 /EEE /UG	To discuss and modify the syllabi of VII and VIII semesters, under Autonomous Regulations R-2020 for the B. Tech – Electrical and Electronics Engineering students admitted from the Academic Year 2020-21.
Agenda 3/ BoS/ 6 /2023 /EEE /UG	To discuss the common courses offering to the III year and IV year students under R-2020 regulations.
Agenda 4/ BoS/ 6 /2023 /EEE /UG	To discuss the Academic Calendar for the even Semester of Academic year 2022-23 and odd Semester of Academic year 2023-24.
Agenda 5/ BoS/ 6 /2023 /EEE /UG	To discuss the online SWAYAM/MOOCs courses for the III year and IV year students under R-2020 regulations.
Agenda 6/ BoS/ 6 /2023 /EEE /UG	To approve the professional and open Elective courses offering to the III year and IV year students under R-2020 regulations.
Agenda 7/ BoS/ 6 /2023 /EEE /UG	To discuss the Certification courses offered to the I Year, II year and III year students under R-2020 regulations.
Agenda 8/ BoS/ 6 /2023 /EEE /UG	To discuss and approve the new regulations R-2023 for the B. Tech – Electrical and Electronics Engineering students admitted from the Academic Year 2023-24.

Agenda 9/ BoS/ 6 /2023 /EEE /UG	To discuss and approve the new curriculum R-2023 (I to VIII semesters), for the B. Tech – Electrical and Electronics Engineering students admitted from the Academic Year 2023-24.
Agenda 10/ BoS/ 6 /2023 /EEE /UG	To discuss and approve the syllabi of I and II Semesters of new curriculum R-2023, for the B. Tech – Electrical and Electronics Engineering students admitted from the Academic Year 2023-24.
Agenda 11/ BoS/ 6 /2023 /EEE /UG	To discuss the Research activities in the department <ul style="list-style-type: none"> • Implementation of AICTE-MODROB during the period 2021-2023. • Patents Publications • Journal Publications
Agenda 12/ BoS/ 6 /2023 /EEE /UG	To discuss and apprise the Institutional credentials, Students and Faculty Achievements for the Academic year 2022-23
Agenda 13/ BoS/ 6 /2023 /EEE /UG	To discuss and apprise the Result Analysis for the Academic year 2022-23.
Agenda 14/ BoS/ 6 /2023 /EEE /UG	To discuss and recommend the panel of examiners to the Academic Council.
Agenda 14/ BoS/ 6 /2023 /EEE /UG	Any other additional points to be discussed with the permission of Chair.

Minutes of the Meeting

Dr. S. Anbumalar, Chairman, BoS opened the meeting by welcoming the external members, the internal members and the meeting thereafter deliberated on agenda items that had been approved by the Chairman.

Agenda 1/ BoS /6 /2023 /EEE /UG

Confirmation of minutes of 5th meeting of BoS and the syllabi of B.Tech Electrical and Electronics Engineering of R-2020 Regulations – Modifications if any.

Chairman, BoS, apprised the minutes of 5th BoS, its implementation and then it is confirmed with the approval in 6th BoS meeting.

Agenda 2/ BoS /6 /2023 /EEE /UG

To discuss and modify the syllabi of VII and VIII semesters, under Autonomous Regulations R-2020 for the B. Tech – Electrical and Electronics Engineering students admitted from the Academic Year 2020-21.

The syllabi of VII and VIII semesters, under Autonomous Regulations R-2020 for the B. Tech – Electrical and Electronics Engineering were discussed and approved without any corrections.

Agenda 3/ BoS /6 /2023 /EEE /UG

To discuss the common courses offering to the III year and IV year students under R-2020 regulations.

The common courses offering to the III year and IV year students under R-2020 regulations were discussed and approved **(given in Annexure-I)**

Agenda 4/ BoS /6 /2023 /EEE /UG

To discuss the Academic Calendar for the even Semester of Academic year 2022-23 and odd Semester of Academic year 2023-24.

The Academic Calendars are prepared for EVEN Semester of Academic year 2022-23 and it includes the schedule for CAT, Model Exam, QCM and Internal Marks distributions were discussed and approved **(given in Annexure-II)**. The commencement of classes for the odd semester will be scheduled in the month of August/September 2023 tentatively.

Agenda 5/ BoS /6 /2023 /EEE /UG

To discuss the online SWAYAM/MOOCs courses for the III year and IV year students under R-2020 regulations.

- The list of online SWAYAM / MOOCs courses chosen by II Year, III Year and IV year students under R-2020 regulations during the period Jan 2023 to April 2023 was successfully completed and approved by the BoS members.
- The list of online SWAYAM / MOOCs courses chosen by III Year and IV year students under R-2020 regulations during the period July 2023 to December 2023 was presented and approved by the BoS members.
- The list of online SWAYAM / MOOCs courses chosen by the Faculty of Electrical and Electronics Engineering department during the period July 2023 to December 2023 was presented and approved by the BoS members. **(given in Annexure- III)**

Agenda 6/ BoS /6 /2023 /EEE /UG

To approve the professional and open Elective courses offering to the III year and IV year students under R-2020 regulations.

- The Professional Elective and Open Elective courses opted by II year / IV semester, III year / VI semester students under R-2020 regulations and IV year / VIII semester students under R-2019 regulations are listed below and approved by the BoS members. **(given in Annexure- IV)**

Table 1: Elective list for Even Semester under R-2020 regulations

S. No.	Year/Sem	Course Name	Course Code
Professional Elective – I			
1	II/IV	Energy Storage Technology	U20EEE405
Open Elective – I			
1	II/IV	Engineering Computation with MATLAB	U20ECO401
Professional Elective – III			
1	III/VI	Electric Drives	U20EEE613
2	III/VI	Robotics and Automation	U20ECCM02
Open Elective – III			
1	III/VI	Mobile App Development	U20ITO604
2	III/VI	Electronic Product Design and Packaging	U20ECO603

Table 2: Elective list for Even Semester under R-2019 regulations

S. No.	Year/Sem	Course Name	Course Code
Professional Elective - V			
1	IV/VIII	Power System Economics	U19EEE80
2	IV/VIII	Soft Computing Techniques	U19EEE83
Professional Elective - VI			
1	IV/VIII	EHV AC and DC transmission	U19EEE86
2	IV/VIII	Robotics and Control	U19EEE89

- The Professional Elective and Open Elective courses opted by III year / V semester students and IV year / VII semester students under R-2020 regulations are listed below and approved by the BoS members. (given in Annexure- IV)

Table 3: Elective list for Odd Semester under R-2020 regulations

S. No.	Year/Sem	Course Name	Course Code
Professional Elective – II			
1	III/V	Electrical Energy Audit and Conservation	U20EEE508
Open Elective – II			
1	III/V	Product Development and Design	U20HSO501
Professional Elective – IV			
1	IV/VII	Special Electrical Machines	U20EEE720
2	IV/VII	Fuzzy Logic and Neural Networks	U20ICCM01
Open Elective – IV			
1	IV/VII	Internet of Things	U20ECCM04
2	IV/VII	Artificial Intelligence	U20CSO705

Agenda 7/ BoS /6 /2023 /EEE /UG

To discuss the Certification courses offered to the I year, II year and III year students under R-2020 regulations.

- The Certification courses offered to the I year, II year and III year students under R-2020 regulations were approved by the BoS members.
- The Certification courses offering to the I year students under R-2023 regulations was presented and approved. (given in Annexure- V)

Agenda 8/ BoS /6 /2023 /EEE /UG

To discuss and approve the new regulations R-2023 for the B. Tech – Electrical and Electronics Engineering students admitted from the Academic Year 2023-24.

The SMVEC Autonomous Regulations R-2023 for B. Tech – Electrical and Electronics Engineering students was presented and approved by the BoS members.

Agenda 9/ BoS /6 /2023 /EEE /UG

To discuss and approve the new curriculum R-2023 (I to VIII semesters), for the B. Tech – Electrical and Electronics Engineering students admitted from the Academic Year 2023-24.

To discuss and approve the syllabi of I and II Semesters of new curriculum R-2023, for the B. Tech – Electrical and Electronics Engineering students admitted from the Academic Year 2023-24.

The SMVEC Autonomous Regulations R-2023 Curriculum for 1 to 8 semesters and syllabi for 1 and 2 semesters, for B. Tech – Electrical and Electronics Engineering students were discussed and suggestions were given by BoS members for the Syllabi of R-2023 Regulations

S. No.	Regulations	Semester	Course Name with Code	Unit	Changes incorporated
1	R-2023	I	Electrical Technology (ECE)	II	The topic "OC-SC test" is removed
2	R-2023	I	Electrical Technology Laboratory (ECE)	-	The following two experiments are removed <ul style="list-style-type: none">• OC and SC test on single phase transformer.• Load test on DC series generator.

The above corrections are incorporated and the updated version of SMVEC Autonomous Regulations R-2023 Curriculum and Syllabi are approved by the BoS members for the students admitted from the Academic Year 2023-24 onwards. (given in Annexure- VI)

Agenda 10/ BoS /6 /2023 /EEE /UG

To discuss the Research activities in the department

- Implementation of AICTE-MODROB during the period 2021-2023.
- Patents Publications
- Journal Publications

The efforts taken to improve the Research activities in the department were presented and the BoS noted the Agenda.

- Implementation of AICTE-MODROB was successfully completed and the report has been submitted to the AICTE.
- 07 design patents, 07 product patents and 01 Journal copyright patent has been submitted during the Academic year 2022–2023.
- 13 International Journals and 15 International Conferences had published during the Academic year 2022–2023. (given in Annexure- VII)

Agenda 11/ BoS /6 /2023 /EEE /UG

To discuss and apprise the Institutional credentials, Students and Faculty Achievements for the Academic year 2022-23

- The Institutional credentials, Students and Faculty Achievements for the Academic year 2022-23 were presented and the **BoS noted the Agenda. (given in Annexure – VIII)**

Agenda 12/ BoS /6 /2023 /EEE /UG

To discuss and apprise the Result Analysis for the Academic year 2022-23.


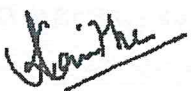
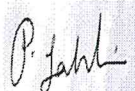
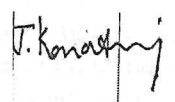
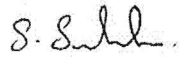
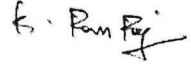
The Result Analysis of I year, II year, III year and IV year for the Academic year 2022-23 was presented and the **BoS noted the Agenda.**


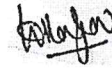
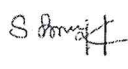
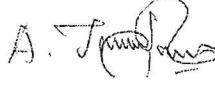



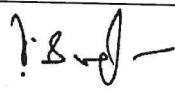
Agenda 13/ BoS /6 /2023 /EEE /UG

To discuss and recommend the panel of examiners to the Academic Council.

- The list of Question Paper Setters and Evaluators **(given in Annexure-IX)** was presented and recommended by the BoS members to the academic council.

The Sixth meeting of BoS approval was concluded at 12.00 P.M by **Dr. S. Anbumalar**, Chairman, Board of Studies, Department of Electrical and Electronics Engineering, Sri Manakula Vinayagar Engineering College.

Sl.No	Name of the Member with Designation and official Address	MEMBERS AS PER UGC NORMS	Signature
1	Dr.S.Anbumalar Professor and Head Department of EEE SMVEC,Madagadipet-605107	Chairman	
2	Dr.A.Kavitha Professor, Department of EEE College of Engineering Guindy Anna University Chennai. 600 025.	Subject Expert (University Nominee)	
3	Dr. P. Lakshmi Professor, Department of EEE College of Engineering Guindy Anna University Chennai. 600 025.	Subject Expert (Academic Council Nominee)	
4	Dr. J. Kanakaraj Professor & Head Department of EEE PSG College of Technology (Autonomous) Coimbatore – 641 004.	Subject Expert (Academic Council Nominee)	
5	Er.S. Selva Kumar Senior Engineer Qualcomm India Private Limited Bengaluru, Karnataka - 560001	Representative from Industry	
6	Er.K.Ramraj, M.Tech Senior Engineer Lucas TVS Puducherry – 605 107. ramraje@ gmail.com, 9786714116	Postgraduate Alumnus (nominated by the Principal)	

7	Dr. P. Jamuna Professor Department of EEE, SMVEC	Internal Member	
8	Dr.D.Raja Professor Department of EEE, SMVEC, Madagadipet-605107	Internal Member	
10	Dr.S.Ganesh Kumaran Associate Professor Department of EEE, SMVEC, Madagadipet-605107	Internal Member	
11	Mr.A.Janagiraman, M.E., Assistant Professor Department of EEE, SMVEC, Madagadipet-605107	Internal Member	
12	Dr.T.Gayathri Professor and Head Dept of Mathematics, SMVEC, Madagadipet-605107	Internal Member	
13	Dr.K.Kathikeyan Associate Professor Dept. of Chemistry, SMVEC, Madagadipet-605107	Internal Member	
14	Mrs.G.Namita Associate Professor Dept. of English, SMVEC Madagadipet-605107	Internal Member	
15	Dr. T. Jayavarthan Professor and Head Dept. of Physics, SMVEC, Madagadipet-605107	Internal Member (Science & Humanity)	

2.A.1.14

Annexure – I



SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE
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DEPARTMENT OF EEE, ECE, ICE, BME and CCE

Report on common Courses

Regulations: R-2020

SL.No	Course Name	Existing Course Code	Year / Sem/Dept.	Deviations Identified	Justifications if there is no modification	Proposed Modifications	Common syllabus Applicable Departments	Common Course Name with Code
1	Linear Control Systems	U20ICT408	III/IV/ICE	Same title for EEE and ECE	IV sem was completed. So Modifications for ICE is possible only in the next Regulations.	-	-	-
	Control Systems	U20EET514	III/V/EEE		Syllabus is different for EEE and ECE with same title.	Course Title of ECE department is changed as "Control systemsEngineering" (U20ECT612)	-	
	Control Systems	U20ECT612	III/VI/ECE					
2	Biomedical Instrumentation	U20BMT511	III/V/BME	Syllabus are different with same title	-	Course Title of ICE department is changed as "Medical Instrumentation" (U20ICT613)	-	-
	Biomedical Instrumentation	U20ICT613	III/VI/ICE				-	
3	Advanced Control Systems	U20EEE717	IV/VII/EEE (PE-IV)	Three units are different for EEE and ICE	Syllabus is different for EEE and ICE. So, there is no possibilities of making as a common syllabus	Course Title of ICE department is changed as "Non-Linear control system" (U20ICE507)	-	-
	Advanced Control System	U20ICE507	III/IV/ICE (PE-II)					


4	Renewable Energy Sources	U20EET617	III/VI/EEE	80% of the Syllabus is common for EEE and ICE.	-	Agreed to follow EEE syllabus for both EEE and ICE departments with the course Title "Renewable Energy Sources" in 6 th semester	EEE and ICE	Renewable Energy Sources U20EECM01
	Renewable Energy Resources	U20ICE827	IV/VIII/ICE					
5	Electric and Hybrid Vehicle	U20EET721	IV/VII/EEE	80% of the Syllabus is common for all branches	-	Course Title of EEE department is changed as "Electric Vehicle Technology" Agreed to follow EEE syllabus for EEE, ECE, Mechatronics, MECH	EEE, ECE, Mechatronics, MECH	Electric Vehicle Technology U20EECM02
	Hybrid and Electrical Vehicle	U20EE0705	Open Elective					
	Electric and Hybrid Vehicles	U20ICE402	II/IV/ICE (PE-I)		IV sem was completed. So Modifications for ICE is possible only in the next Regulations.	-	-	-
6	Vehicular Communication	U20CCE506	III/V/CCE (PE-II)	90% of the Syllabus is common	-	Agreed to follow ECE syllabus for both ECE and CCE in V Semester	ECE and CCE	Vehicular Communication U20ECCM01
	Vehicular Communication	U20ECE507	III/V/ECE (PE-II)					
7	Robotics and Control	U20EEE830	IV/VIII/EEE (PE-VI)	80% of the Syllabus is common	-	Agreed to follow common syllabus for EEE, ECE and ICE departments with the course title "Robotics and Automation" in 5 th semester for ECE and in 6 th semester for EEE & ICE	EEE, ECE, ICE	Robotics and Automation U20ECCM02
	Robotics and Control	U20ECE510	III/V/ECE (PE-II)					
	Robotics and Automation	U20ICE613	III/VI/ICE (PE-III)					

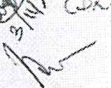
8	Digital Image Processing	U20ECT614	III/VI/ECE	90% of the Syllabus is common for ECE and CCE.	-	Agreed to follow ECE syllabus for both ECE and CCE departments with the course Title "Digital Image Processing" in 6 th semester	ECE and CCE	Digital Image Processing U20ECCM03
	Digital Image Processing	U20CCE719	IV/VII/CCE					
9	IoT and Applications	U20CCT613	III/VI/CCE	90% of the Syllabus is common for all branches	-	Agreed to follow ECE syllabus for all the departments in 6 th and 7 th semester.	ECE, ICE, CCE EEE, CSE, MECH, IT, CIVIL, FT	Internet of Things U20ECCM04
	IoT for Automation	U20ICT615	III/VI/ICE					
	IoT and its Applications	U20ECO705	Open Elective					
	Internet of Things	U20ECT717	IV/VII/ECE					
10	Satellite Communication	U20CCE611	III/VI/CCE (PE-III)	90% of the Syllabus is common	-	Agreed to follow ECE syllabus for both ECE and CCE in VII Semester	ECE and CCE	Satellite Communication U20ECCM05
	Satellite Communication	U20ECE717	III/VII/ECE (PE-IV)					
11	Fuzzy and Neural Systems	U20EEE615	III/VI/EEE (PE-III)	80% of the Syllabus is common	-	Agreed to follow common syllabus for all departments with course title as "Fuzzy Logic and Neural Networks" in 5 th semester for CCE and in 7 th semester for ECE & EEE.	EEE ECE, CCE, CSE, IT, CIVIL, BME, AI&DS	Fuzzy Logic and Neural Networks U20ICCM01
	Fuzzy logic and Neural Network	U20ECE718	IV/VII/ECE (PE-IV)					
	Neural Networks and Fuzzy Logic	U20CCE510	III/V/CCE (PE-II)					
	Fuzzy logic and neural networks	U20ICO503/ U20ICO603	Open elective (CSE, IT,					
12	Principles of Virtual Instrumentation	U20EEE826	IV/VIII/EEE (PE-VI)	80% of the Syllabus is common for		Agreed to follow ICE syllabus for both EEE and ICE departments	EEE and ICE	Virtual Instrumentation U20ICCM02

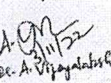
Virtual Instrumentation	U20ICE612	IV/VI/ICE (PE-IV)	EEE and ICE.		with the course Title "Virtual Instrumentation" in 6 th semester.		
Applied soft Computing	U20ICE611	III/VI/ICE (PE-III)	90% of the Syllabus is common		Agreed to follow BME syllabus for all departments with the course Title "Soft Computing"	ICE, ECE, BME and CCE	Soft Computing U20BMCM01
Soft Computing	U20ECE615	III/VI/ECE (PE-III)					
Soft Computing Techniques	U20BME613	III/VI/BME (PE-III)					
Soft computing	U20CCE615	III/VI/CCE (PE-III)					

Heads of the Departments

EEE -  (Dr. P. JAMUNA)


ECE -  (Dr. P. RAJA)

ICE -  (Dr. L. M. Narasimhan)

BME -  (Dr. A. Vijayalakshmi)

CCE -  (Dr. V. BHARATHI)

Dean Academics


DIRECTOR CUM PRINCIPAL
SRI SIVAKUMAR ENGINEERING COLLEGE
(An Autonomous Institution)
Madagadipet, Pondicherry-605 107.

Sri Manakula Vinayagar Engineering College has been conferred with Autonomous Status by the University Grants Commission on 26th September 2019 and the same was approved by Pondicherry University on 19th June 2020. SMVEC Autonomous Regulations R2020 is followed for the students admitted from the Academic Year 2020-21 onwards.

Our Institution got many awards and credentials since its inception. Some of the credentials achieved during the academic Years 2020-21, 2021-22 and 2022-23

☆ Data Quest ranked in 40th position among the top 100 Technical Institutions in India

- ❖ Data Quest ranked in 40th position among the top 100 Technical schools overall in India 2021-22
- ❖ Winner of International Blockchain skill summit hackathon 2022
- ❖ Winner of Unisys Innovation (Y13) 2022
- ❖ Winner of Smart India Hackathon - 2022
- ❖ Winner of Virtusa Jatayu - 2022
- ❖ 4-Star rating from IIC-MHRD Innovation Council, New delhi
- ❖ ATAL Ranking award - ARIA 2021 ranked in the "Excellent Band Category"
- ❖ Edufuture Excellence award and e-campus Award from Zee News - 2021
- ❖ Virtusa Campus Partner
- ❖ Best Engineering College from National Educational Excellence Award
- ❖ Best Performing Institute Award 2022 by EduSkills in collaboration with AICTE
- ❖ Best Engineering College Award from ICT Academy in the year 2022

- ❖ Industry 4.0 ready curriculum
- ❖ Focus on Multidisciplinary and skill development courses to create extensive career opportunities
- ❖ Certifications Courses
- ❖ Internships
- ❖ Orientation toward entrepreneurship
- ❖ Choice to learn IELTS / Foreign Languages
- ❖ Supplementary Examination in 5th and 8th semester for the students having maximum of 2 arrears

We provide 91 International Associate level Certification courses through 17 Centre of Excellences from IBM, Google, Cisco, Microsoft, Autodesk, Texas instruments, Festo, Bentley, Schneider Electric, Amazon web services, Siemens, Tally, DELL, EMC, Haria Techserv, PTC, LN and Excellence in Technology & Didactic solutions. All students should enrol in one certification course from semester I to VI.

Students may undergo training or internship during summer / winter vacation at an Industry/ Research organization. Students are also permitted to undergo internships during their eighth semester after the completion of theory classes.

சலித்துக் கொள்பவன் ஒவ்வொரு வாய்ப்பிலும் உள்ள ஆபத்தைப் பார்க்கிறான். சாதிப்பவன் ஒவ்வொரு ஆபத்திலும் உள்ள வாய்ப்பினைப் பார்க்கிறான்.

August 2023			
Date	Day	Schedule	Working day/ Holiday
1	Tue		85
2	Wed		86
3	Thu		87
4	Fri		88
5	Sat	Submission of Attendance & Assessment Record 3	89
6	Sun		Holiday
7	Mon	Model Practical Exam	90
8	Tue		91
9	Wed		92
10	Thu	Model Exam Result Analysis Submission	93
11	Fri		94
12	Sat	Last Working Day	95
13	Sun		Holiday
14	Mon		
15	Tue	Independance Day	Holiday
16	Wed	De Jure Transfer Day	Holiday
17	Thu	Tentative End Semester Practical Exam	
18	Fri		
19	Sat		
20	Sun		Holiday
21	Mon		
22	Tue		
23	Wed		
24	Thu		
25	Fri		
26	Sat		
27	Sun		Holiday
28	Mon		
29	Tue		
30	Wed		
31	Thu		
Total number of working days : 11			
Total number of holidays : 01			
நகல் குளிர்ந்து எவ்வளவு டார், தலைநிலிந்து உருவான நட்சத் தாபனம் -- 1997			

SRIMANAKULAVINAYAGAR ENGINEERING COLLEGE	
VISION	
To be globally recognized for excellence in quality education, innovation and research for the transformation of lives to serve the society.	
MISSION	
M1: Quality Education: To provide comprehensive academic system that amalgamates the cutting edge technologies with best practices.	
M2: Research and Innovation: To foster value-based research and innovation in collaboration with industries and institutions globally for creating intellectuals with new avenues.	
M3: Employability and Entrepreneurship: To inculcate the employability and entrepreneurial skills through value and skill based training.	
M4: Ethical Values: To instill deep sense of human values by blending societal righteousness with academic professionalism for the growth of society.	
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING	
VISION	
To promote proficiency in the field of Electrical and Electronics Engineering by creating a stimulating environment for research, innovation and entrepreneurship.	
MISSION	
M1: Quality Education: To impart high quality technical education with problem solving capabilities by innovative pedagogy in emerging technologies.	
M2: Industrial and Societal needs: To cater the dynamic needs of the industry and society by strengthening industry-institute interaction.	
M3: Research and Innovation: To nurture the spirit of research attitude by carrying out innovative technologies pragmatically.	
M4: Placement and Entrepreneurship: To inculcate the professionalism in career by advancing synergistic skills to compete in the corporate world.	

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO1: Professional Knowledge

To possess strong educational foundation in Electrical and Electronics Engineering to attain successful career with professional responsibility

PEO2: Innovative Skills

To enrich the skills to design and develop innovative solutions for engineering problems in a multidisciplinary environment

PEO3: Ethics

To actively embrace leadership qualities for achieving professional goals with ethical values

PEO4: Adaptability

To enhance intellectual competency along with technical skills by adapting to the current trends through eternal learning

PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1: Core Proficiency

Utilize the engineering core knowledge to identify, formulate, design, and investigate the complex engineering problems of power electronics, electrical machines and power systems.

PSO2: Cutting Edge Technologies

Explore the new cutting edge technologies in the field of Electric vehicle, Automation, Artificial Intelligence, Robotics and Renewable Energy to compete in global market.

PSO3: Design and Evolution

Capability to comprehend the technological advancements with the usage of modern design tools for analysing and designing systems to confront the rapid pace of industrial innovations.

July 2023			
Date	Day	Schedule	Working day/ Holiday
1	Sat	CAT - II Result Analysis Submission / SCC XGP/Seminar/GL/	60
2	Sun		Holiday
3	Mon		61
4	Tue		62
5	Wed		63
6	Thu		64
7	Fri	Assignment - 3	65
8	Sat		66
9	Sun		Holiday
10	Mon		67
11	Tue		68
12	Wed		69
13	Thu		70
14	Fri		71
15	Sat		Holiday
16	Sun		Holiday
17	Mon		72
18	Tue		73
19	Wed		74
20	Thu		75
21	Fri		76
22	Sat	Special coaching class / GP / Seminar / GL / Placement / Academic Activities	77
23	Sun		Holiday
24	Mon	Online feedback-3 from the Students and Analysis	78
25	Tue		79
26	Wed	OCM - 3 and Syllabus Coverage Submission	80
27	Thu		81
28	Fri		82
29	Sat		83
30	Sun		Holiday
31	Mon	Model Theory Exam	84
Total number of working days : 25			
Total number of holidays : 06			

சென்றதுக் கொண்டபவன் ஒவ்வொரு வாய்ப்புரிதும் உள்ள ஆபத்தைப் பாரக்கிறான்.
சாத்தியபவன் ஒவ்வொரு ஆபத்திலும் உள்ள வாய்ப்புரிதனைப் பாரக்கிறான்.

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June 2023			
Date	Day	Schedule	Working day/ Holiday
1	Thu		36
2	Fri		37
3	Sat	Special coaching class / GP / Seminar / GL / Placement / Academic Activities	38
4	Sun		Holiday
5	Mon		39
6	Tue		40
7	Wed		41
8	Thu		42
9	Fri	Assignment - 2	43
10	Sat	Special coaching class / GP / Seminar / GL / Placement / Academic Activities	44
11	Sun		Holiday
12	Mon		45
13	Tue	Online feedback-2 from the Students and Analysis	46
14	Wed		47
15	Thu		48
16	Fri	QCM - 2 and Syllabus Coverage Submission	49
17	Sat		Holiday
18	Sun		Holiday
19	Mon	CAT II Starts (1½ units)	50
20	Tue		51
21	Wed		52
22	Thu		53
23	Fri		54
24	Sat	CAT II Ends / SCC / GP / Seminar / GL / Placement / Academic Activities	55
25	Sun		Holiday
26	Mon		56
27	Tue		57
28	Wed		58
29	Thu	Bakrid	Holiday
30	Fri	Submission of Attendance & Assessment Record 2	59
Total number of working days : 24			
Total number of holidays : 06			
<ul style="list-style-type: none"> Ethnotech course -1 should be completed between the period of CAT 1 and CAT 2 Ethnotech course - 2 should be completed between the period of CAT 2 and Model Exam 			

சலித்தூக் கொள்பவன் ஒவ்வொரு வாய்ப்பிலும் உள்ள ஆயத்தப்பை பங்கிடுவான்.
சாதிப்பவன் ஒவ்வொரு ஆயத்திலும் உள்ள வாய்ப்பைப் பங்கிடுவான்.

PROGRAM OUTCOMES (POs)	
Engineering graduates will be able to	
PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.	
PO2: Problem analysis: Identify, formulate, review, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.	
PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety and the cultural, societal and environmental considerations.	
PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of the information to provide valid conclusions.	
PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.	
PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.	
PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of and need for sustainable development.	
PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.	
PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams and in multidisciplinary settings.	
PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.	
PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.	
PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.	

Supplementary Examinations

Supplementary examination is an additional examination conducted within a month of time after declaring the results of end semester examination. In order to complete the program within 4 years, the student with maximum of two arrears will be permitted to appear for supplementary examination. The supplementary examination will be conducted in fifth and eighth semester only. For supplementary examination, the continuous assessment marks of the last attempt will be considered.

Re-earn of Continuous Assessment Mark (CAM)

In the first attempt of writing the End Semester Examination of a course if a student fails, he / she can retain the existing CAM and proceeds to write the supplementary exams / End Semester Examinations as and when they are conducted. If a student wishes to re-earn the continuous assessment Marks (CAM), he / she has to re-register by paying the prescribed fee for the course when it is offered next in the subsequent academic year. The student has to re-earn the CAM by taking up all the internal tests, assignments and presentation as per the norms of regulations clause 7.2.

Benefits

- ❖ More number of students will receive the degree within the stipulated time
- ❖ Industries prefer to recruit students with no standing arrears. If the supplementary examinations are conducted then more number of students will be eligible for the recruitment
- ❖ **Photo copy of answer book**
After the publication of the result, photocopy of the answer booklet shall be provided to the student on request with stipulated fee fixed by the College from time to time

Requirements for Appearing End Semester Examination

A student is expected to maintain 100% attendance in all courses as attendance also carries internal marks (Clause 10.3). A student will be qualified to appear for end semester examinations in a particular course of a semester only if he/she satisfies the below mentioned requirements.

The student is permitted to appear for End Semester Examinations, only if he/she maintains minimum 75% of attendance. If he/she secured attendance greater than or equal to 60% and less than 75% in any course in the current semester can be considered in case of the following reasons:

- i. Medical reasons (hospitalization / accident and or illness)
- ii. Due to participation in sports events or any competitions or NCC / NSS activities with prior written permission from the Head of the Institution / Dean Academics through the Head of the Department

He/she has to pay the necessary condonation prescribed by the college authority with necessary supporting documents for his/her absence.

May 2023

Date	Day	Schedule	Working day/ Holiday
1	Mon	May Day	Holiday
2	Tue		11
3	Wed		12
4	Thu	Online feedback-1 from the Students and Analysis	13
5	Fri	Assignment - I	14
6	Sat	Special coaching class / GP / Seminar / Q. / Placement / Academic Activities	15
7	Sun		Holiday
8	Mon		16
9	Tue	OCM - 1 and Syllabus Coverage Submission	17
10	Wed	CAT I Starts (1½ units)	18
11	Thu		19
12	Fri		20
13	Sat	Special coaching class / GP / Seminar / Q. / Placement / Academic Activities	21
14	Sun		Holiday
15	Mon		22
16	Tue	CAT I Ends	23
17	Wed		24
18	Thu		25
19	Fri		26
20	Sat		Holiday
21	Sun		Holiday
22	Mon	CAT - I Result Analysis Submission	27
23	Tue		28
24	Wed		29
25	Thu		30
26	Fri	Submission of Attendance & Assessment Record 1	31
27	Sat	Special coaching class / GP / Seminar / Q. / Placement / Academic Activities	32
28	Sun		Holiday
29	Mon		33
30	Tue		34
31	Wed		35

Total number of working days : 25
Total number of holidays : 06

தலைவர் குறிப்பிட்டு எடுக்கப்படும் பணி, தலைவரின் குறிப்பிட்டு உள்வகம் வைக்கப்படும் - 18/05/2023

2.A.1.24

**Marks Distribution of Continuous Assessment Marks (CAM) and
End Semester Examination Marks (ESM)
Scheme for Continuous Assessment Test (CAT)**

S. No	Course Type	Continuous Assessment components							
		Test Marks	Average of pre/post test/ viva for each experiment	Average of marks for experiment report for each experiment	Model Exam / Report	Assignment	Review - 1	Review - 2	Review - 3
1.	Theory	15	-	-	-	5	-	-	5
2.	Practical	-	10	15	15	-	-	-	10
3.	Project Phase-I	-	-	-	-	-	15	15	20
4.	Project Phase-II	-	-	-	-	-	10	10	20

The internal marks will be provided fully based on the continuous assessment tests
Weightage of Assessment for Theory Course

S.No.	Test	Portion for Test	Test Marks	Duration of Test	Weightage for Internal
1	CAT 1	1½ Units	50	1 ½ hours	10
2	CAT 2	1½ Units	50	1 ½ hours	
3	Model	5 Units	75	3 hours	05
Continuous Assessment for Theory Course					15

Question Paper Pattern

Question paper for CAT and ESE will be based on the pattern shown in Table (a) and (b)
Table (a) Question Paper pattern for CAT/Model Exam

Test Type	2 Marks	5 Marks	10 Marks	Total Marks
CAT 1 / CAT 2	5 (questions) (10 Marks)	4 (questions) (20 Marks)	2 (questions) (20 Marks)	50
Model	End Semester Examination Question Pattern			75

Table (b) Question paper pattern for End semester Examination (ESE)

2 Marks	5 Marks	10 Marks	Total Marks
10 (20 Marks)	5 (25 Marks) (one question from each unit)	3 (30 Marks) (one question from each unit)	75

End Semester Examination Question Paper Pattern for Six Units Courses

Course	2 Mark	5 Mark	8 / 9 Mark	Total Marks
Part A	5	2 (out of 3 questions, one from each unit)	one 8 mark question (out of 2 questions from Unit I and Unit II)	37
			One 9 mark question (compulsory question from unit III)	
Part B	5	2 (out of 3 questions, one from each unit)	Two 9 mark questions (out of 3 questions from IV, V & VI)	38

Important points for the kind attention of the Parents

Dear Parents !

Marks in the continuous assessment test decide the major part of the Continuous Assessment Marks. So, availing leave for the continuous assessment test must be avoided at any cost as this would seriously affect the continuous assessment marks.

Practicals are very important not only to score more marks but also it will help to understand the theory part of the subject. Hence advice your ward not to avail leave during practical classes.

Please spare your valuable time to talk to your son/daughter every day and try to understand what he/she is doing in respect of his/her studies. Kindly extend all your support to your son/daughter which will help them to come out successfully. For any assistance from our side you may always feel free to contact the respective Coordinator / HOD any time during the working hours.

Gold Medals and Top Ten Ranks

The details of the University Goldmedals and Top Ten Ranks bagged by our students are given below.

Year of Passing	Gold Medals	Top Ten Ranks
2012	9	58
2013	7	56
2014	7	56
2015	12	71
2016	8	72
2017	10	94
2018	11	74
2019	12	71

Gold Medals and Ranks

As per the Regulation 2020, for the Award of Gold Medal and ranks for each branch of study, the CGPA secured from 1st to 8th semester should be considered and it is mandatory that the candidate should have passed all the subjects from 1st to 8th semester in the first attempt. Rank Certificates would be issued to the first five candidates in each branch of study.

Distribution of Attendance marks for theory : 5 marks

The distribution of 5 marks for theory class attendance is as follows :
5 marks for 95% attendance and above
4 marks for 90% attendance and above but below 95%
3 marks for 85% attendance and above but below 90%
2 marks for 80% attendance and above but below 85%
1 mark for 75% attendance and above but below 80%

Distribution of Attendance marks for practical : 10 marks

The distribution of 10 marks for practical class attendance is as follows :
10 marks for 95% attendance and above
8 marks for 90% attendance and above but below 95%
6 marks for 85% attendance and above but below 90%
4 marks for 80% attendance and above but below 85%
2 marks for 75% attendance and above but below 80%

Note : Students should not be absent for the online classes/regular classes. Attendance for the online classes/regular classes are monitored systematically and recorded. Continuous assessment mark will be based on the performance of the students in the continuous assessment tests, assignment and attendance percentage.

Assignments : 5 marks

Out of 25 continuous assessment marks, 5 marks will be awarded for the assignment. The assignment questions will be different for each and every student. The students have to submit 3 assignments in each subject. The best 2 out of 3 assignments will be considered for marking.

Women Empowerment Cell

For the welfare of the girl students, a Women Cell has been constituted in the college. The girl students may approach the Chairperson / members for assistance. Mail id : wcc@smvec.ac.in

Grievance Redressal Cell

There is a Grievance Redressal Cell under the Chairmanship of the Director of the institution. Students are requested to approach the Chairman / members to redress their grievances. Mail id : grievance@smvec.ac.in

Anti Ragging Cell

Ragging is strictly prohibited in the campus. Prevention of Sexual Harassment (POSH) cell has been constituted for the benefit of students to report against ragging. Mail id : antiragging@smvec.ac.in

Importance of CAT-I/CAT-II/ Model Examination

Continuous assessment marks are awarded for the performance in the CAT-I, CAT-II & Model Exam. Hence all the students are requested to prepare well for each test / examination to earn the maximum continuous assessment marks.

Undertaking Minor / Major Projects

Each student is advised to take atleast one minor project. Involving in the project will be helping to understand the basics of the subject. Some of the minor / major project will also be benefiting the society. Moreover, the Management awards cash prizes for the best projects in each department.

Participation In the Curricular / Co-curricular / Extra curricular Activities

All the students are encouraged to participate in the curricular / co-curricular / extra curricular activities. Involvement in these activities will improve their knowledge level in the subject. If a student or a team gets cash prize / award in the technical event organized by the recognised institutions, then the management of this institution will also sanction an amount equivalent to the winning award / cash prize as a token of appreciation.

Leave Account Record

For each student, leave account record has been provided. The students are instructed to show the leave record to their parents and strictly adhere to the instructions given for availing the leave. The leave account record should be maintained properly and prior approval must be obtained for availing the leave. In exceptional cases, the students are permitted to get the approval after availing the leave.

Transport Facility

61 buses have been arranged for the students to reach the college from Pudukcherry, Kanagachetukulam, Thiruchitrambalam X Road, Villupuram, Neyveli, Panruti, Vadalur, Kurunchipadi, Cuddalore, Nellikuppam, Madukarai, Tindivanam, Ulundurpet, Thirukoilur, Chidambaram, Tiruvannamalai and Virudhachalam covering almost all the areas. Separate transport facility has been arranged for the students who remain in the college after 5 p.m. for utilising computer lab, library and sports facilities. The students are requested to utilise the transport facility.

Tutor Ward System

In the tutor ward system, 30 students are allotted to a tutor who will be taking care of these students in all academic and personal well being. The students are requested to utilize the resourceful faculty effectively.

All the students are requested to avoid mobile phones and travel by two wheelers considering their safety and security.

Placement and Training Division

The placement cell functions round the clock throughout the year to establish contact with reputed multinational companies, well established industrial organizations and plays an important role in locating various job opportunities and placing large number of students every year at these organizations.

Activities of the Training Division

- ✧ Arranges trainings for personality and interpersonal skill development
- ✧ Assists the students to get in-plant training
- ✧ Arranges industrial visits
- ✧ Creates awareness on the opportunities open for higher studies
- ✧ Arranges coaching classes for GATE, GRE, TOEFL, IELTS, IAS, IES etc.

Placement Record

Academic Year	Students Placed	Details of Placed Students : 2022-23	
2013-14	85%	SOPRA STERIA	10
2014-15	95%	CTS	199
2015-16	95%	TCS	243
2016-17	93%	EMBED UR	5
2017-18	95%	ZOHU	18
2018-19	95%	VIRTUSA	43
2019-20	95%	MULTICORE WARE	1
2020-21	96%	ACCENTURE - PEGA	4
2021-22	95%	TVM INFOTECH	3
2022-23	841*	WEB DIGITAL MANTHRA	3
		INCEDEO	1
		UNISYS	6
		KAAR	13
		SOCIETE GENERALE	6
		HEXWARE	11
		MICROCHIP	2
		RENAULT NISSAN	1
		ZIFO	3
		CARATLANE	6
		Avalon	8
		Total	841*

* till February 2023

Library Working Hours

8.30 a.m. to 8.30 p.m. (On all the working days)
8.30 a.m. to 10.00 p.m. (During the examination days)

Academic calendar – II Year / IV Sem

Use of Cell Phones

It has been decided not to permit cell phones inside the college campus. If any student is found using the cell phone inside the college campus, it would be confiscated and will not be returned back on any circumstances. Hence the students are instructed not to attend the college with the mobile phones.

Dress Code

The students are requested to attend the college neatly dressed. While the male students should attend the college with the shirts neatly tucked in and with the shoes, the female students are permitted to come with churidar and dupatta properly pinned. Students wearing full hand-shirts should wear it as such without folding it to half etc. Casual wears like jeans, T-shirts etc., both for boys and girls are strictly prohibited inside the campus. Each department has prescribed uniforms for the labs. The students are requested to strictly adhere to the dress codes as well as the rules and regulations of the college.

Maintenance of Discipline

Discipline is an important factor that shapes one's personality. It is considered as a golden key capable of opening many doors. This institution expects each and every student to follow the rules and regulations in total. Maintaining discipline in the campus will promote a conducive environment for studies.

Working hours

I hour	09.00 a.m. to	09.50 a.m.
II hour	09.50 a.m. to	10.40 a.m.
Break	10.40 a.m. to	10.55 a.m.
III hour	10.55 a.m. to	11.45 a.m.
IV hour	11.45 a.m. to	12.35 p.m.
V hour	01.15 p.m. to	02.05 p.m.
VI hour	02.05 p.m. to	02.55 p.m.
Break	02.55 p.m. to	03.10 p.m.
VII hour	03.10 p.m. to	04.00 p.m.
VIII hour	04.00 p.m. to	04.50 p.m.
Lunch break	12.35 p.m. to	1.15 p.m.

SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE

An Autonomous Institution

(Accredited by NBA-AICTE, New Delhi, NAAC with "A" Grade)

Madagadipet, Puducherry - 605 107



Academic Calendar

March 2023 to August 2023

Name :

Programme : B.Tech.

Department : Electrical and Electronics Engineering

Year / Sem : II Year / IV Semester

அங்கு சிலப்பதிகாரம், பாடல்கள், காவியங்களைத் தான்
பாடுகளை வாழ்க்கை, வளம் தரும் நாயகத்துப்பாட்கள்;
மலர்வளைப் பூவாழ்க்கைகள், புதிதில்லையெனக் கையெழுத்துகளைத் தான்;
கல்வியாகக் கற்றுக்கொள், கருவியும் கையெழுத்துகள்;
தெய்வமாக வாழ்க்கைகள், மனப்பாடல் பாடல்கள் தான்;
புதுவாழ்க்கைகள், வாழ்க்கைகள் கையெழுத்துகள்;
கருவியாக வாழ்க்கைகள், வாழ்க்கை, வாழ்க்கை, வாழ்க்கை;
வாழ்க்கைத் துறியின், வாழ்க்கைகள், வாழ்க்கைகள்;
உருவியாக வாழ்க்கைகள், உருவியாக வாழ்க்கைகள்;
உருவியாக வாழ்க்கைகள், உருவியாக வாழ்க்கைகள்;
உருவியாக வாழ்க்கைகள், உருவியாக வாழ்க்கைகள்;



2.A.1.29

About Autonomous

Sri Manakula Vinayagar Engineering College has been conferred with Autonomous Status by the University Grants Commission on 26th September 2019 and the same was approved by Pondicherry University on 19th June 2020. SMVEC Autonomous Regulations R2020 is followed for the students admitted from the Academic Year 2020-21 onwards.

Awards and Credentials

Our Institution got many awards and credentials since its inception. Some of the credentials achieved during the academic Years 2020-21, 2021-22 and 2022-23

- ❖ Data Quest ranked in 46th position among the top 100 Technical schools overall in India 2021-22
- ❖ Winner of International Blockchain skill summit hackathon 2022
- ❖ Winner of Unisys Innovation (Y13) 2022
- ❖ Winner of Smart India Hackathon - 2022
- ❖ Winner of Virtusa Jarayu - 2022
- ❖ 4-Star rating from IIC-MHRD Innovation Council, New Delhi
- ❖ ATAL Ranking award - ARIIA 2021 ranked in the "Excellent Band Category"
- ❖ Edufuture Excellence award and e-campus Award from ZeeNews - 2021
- ❖ Virtusa Campus Partner
- ❖ Best Engineering College from National Educational Excellence Award
- ❖ Best Performing Institute Award 2022 by Eduskills in collaboration with AICTE
- ❖ Best Engineering College Award from ICT Academy in the year 2022

HIGHLIGHTS OF SMVEC AUTONOMOUS REGULATIONS

- ❖ Industry 4.0 ready curriculum
- ❖ Focus on Multidisciplinary and skill development courses to create extensive career opportunities
- ❖ Certifications Courses
- ❖ Internships
- ❖ Orientation towards entrepreneurship
- ❖ Choice to learn IELTS / Foreign Languages
- ❖ Supplementary Examination in 5th and 8th semester for the students having maximum of 2 arrears

Certification Courses

We provide 91 International Associate level Certification courses through 17 Centre of Excellences from IBM, Google, Cisco, Microsoft, Autodesk, Texas instruments, Festo, Bentley, Schneider Electric, Amazon web services, Siemens, Tally, DELL, EMC, Harita Techserv, PTC, LN and Excellence in Technology & Didactic solutions. All students should enrol in one certification course from semester I to VI.

Industrial Training / Internship

Students may undergo training or internship during summer / winter vacation at an Industry/ Research organization. Students are also permitted to undergo internships during their eighth semester after the completion of theory classes.

August 2023

Date	Day	Schedule	Working day/ Holiday
1	Tue		
2	Wed		
3	Thu		
4	Fri		
5	Sat		
6	Sun		Holiday
7	Mon		
8	Tue	Tentative End Semester Theory Exam	
9	Wed		
10	Thu		
11	Fri		
12	Sat		
13	Sun		Holiday
14	Mon		
15	Tue	Independence Day	Holiday
16	Wed	De Jure Transfer Day	Holiday
17	Thu		
18	Fri		
19	Sat		
20	Sun		Holiday
21	Mon		
22	Tue		
23	Wed		
24	Thu		
25	Fri		
26	Sat		
27	Sun		Holiday
28	Mon		
29	Tue		
30	Wed		
31	Thu		

Total number of working days :

Total number of holidays :

தகவல் குவியல்து எய்துணை டயர், தகவல்துரிருந்து உய்துணை நுட்தக வையுயைன் - 15^{து}தகவல்

July 2023			
Date	Day	Schedule	Working day/ Holiday
1	Sat	Assignment III	79
2	Sun		Holiday
3	Mon	Model Theory Exam Starts	80
4	Tue		81
5	Wed		82
6	Thu		83
7	Fri		84
8	Sat	Submission of Attendance and Assessment Record III	85
9	Sun		Holiday
10	Mon	Model Exam Result Analysis Submission	86
11	Tue		87
12	Wed	Model Practical Starts	88
13	Thu		89
14	Fri		90
15	Sat		Holiday
16	Sun		Holiday
17	Mon		91
18	Tue		92
19	Wed	Last Working Day	93
20	Thu	Tentative End Semester Practical Exam	
21	Fri		
22	Sat		
23	Sun		Holiday
24	Mon		
25	Tue		
26	Wed		
27	Thu		
28	Fri		
29	Sat		
30	Sun		Holiday
31	Mon		
Total number of working days : 15			
Total number of holidays : 04			
சனிக்கிழமை மற்றும் ஓய்வொழுது வாரியத்திலும் உள்ள ஆயத்தகம் பார்க்கிறோம். சனிக்கிழமை ஓய்வொழுது ஆயத்தகம் உள்ள வாரியத்திலும் பார்க்கிறோம்.			

SRIMANAKULAVINAYAGAR ENGINEERING COLLEGE	
VISION	
To be globally recognized for excellence in quality education, innovation and research for the transformation of lives to serve the society.	
MISSION	
M1: Quality Education: To provide comprehensive academic system that amalgamates the cutting edge technologies with best practices.	
M2: Research and Innovation: To foster value-based research and innovation in collaboration with industries and institutions globally for creating intellectuals with new avenues.	
M3: Employability and Entrepreneurship: To inculcate the employability and entrepreneurial skills through value and skill based training.	
M4: Ethical Values: To instill deep sense of human values by blending societal righteousness with academic professionalism for the growth of society.	
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING	
VISION	
To promote proficiency in the field of Electrical and Electronics Engineering by creating a stimulating environment for research, innovation and entrepreneurship.	
MISSION	
M1: Quality Education: To impart high quality technical education with problem solving capabilities by innovative pedagogy in emerging technologies.	
M2: Industrial and Societal needs: To cater the dynamic needs of the industry and society by strengthening industry-institute interaction.	
M3: Research and Innovation: To nurture the spirit of research attitude by carrying out innovative technologies pragmatically.	
M4: Placement and Entrepreneurship: To inculcate the professionalism in career by advancing synergistic skills to compete in the corporate world.	

PEO1: Professional Knowledge
To possess strong educational foundation in Electrical and Electronics Engineering to attain successful career with professional responsibility

PEO2: Innovative Skills
To enrich the skills to design and develop innovative solutions for engineering problems in a multidisciplinary environment

PEO3: Ethics
To actively embrace leadership qualities for achieving professional goals with ethical values

PEO4: Adaptability
To enhance intellectual competency along with technical skills by adapting to the current trends through eternal learning

PS01: Core Proficiency

Utilize the engineering core knowledge to identify, formulate, design, and investigate the complex engineering problems of power electronics, electrical machines and power systems.

PS02: Cutting Edge Technologies

Explore the new cutting edge technologies in the field of Electric vehicle, Automation, Artificial Intelligence, Robotics and Renewable Energy to compete in global market.

PS03: Design and Evolution

Capability to comprehend the technological advancements with the usage of modern design tools for analysing and designing systems to confront the rapid pace of industrial innovations.

சலித்துக் கொள்பவன் ஒவ்வொரு வாய்ப்பிலும் உள்ள ஆபத்தைப் பார்க்கிறான். சாதிப்பவன் ஒவ்வொரு ஆபத்திலும் உள்ள வாய்ப்பினைப் பார்க்கிறான்.

May 2023			
Date	Day	Schedule	Working day/ Holiday
1	Mon	May Day	Holiday
2	Tue	CAT I Result Analysis Submission	30
3	Wed		31
4	Thu		32
5	Fri		33
6	Sat	Special coaching class / GP / Seminar / GL / Placement / Academic Activities	34
7	Sun		Holiday
8	Mon		35
9	Tue		36
10	Wed		37
11	Thu		38
12	Fri		39
13	Sat	Special coaching class / GP / Seminar / GL / Placement / Academic Activities	40
14	Sun		Holiday
15	Mon		41
16	Tue		42
17	Wed		43
18	Thu		44
19	Fri		45
20	Sat		Holiday
21	Sun		Holiday
22	Mon		46
23	Tue		47
24	Wed	Online Feedback-2 from the students and Analysis	48
25	Thu	QCM - 2	49
26	Fri	Syllabus coverage Submission 2	50
27	Sat	Assignment II / SSC / GP / Seminar / GL / Placement / AA	51
28	Sun		Holiday
29	Mon	CAT II Starts (1½ units)	52
30	Tue		53
31	Wed		54
Total number of working days : 25			
Total number of holidays : 06			
தகவல் குறிப்பிட்டு எண்ணை மூர், தகவல்பெற்றுள்ள எண்ணை முடிந்த காலகாலம் -- பிழைகள்			

PROGRAM OUTCOMES (POs)	
Engineering graduates will be able to	
PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.	
PO2: Problem analysis: Identify, formulate, review, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.	
PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety and the cultural, societal and environmental considerations.	
PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of the information to provide valid conclusions.	
PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.	
PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.	
PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of and need for sustainable development.	
PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.	
PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams and in multidisciplinary settings.	
PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.	
PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.	
PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.	

Supplementary Examinations

Supplementary examination is an additional examination conducted within a month of time after declaring the results of end semester examination. In order to complete the program within 4 years, the student with maximum of two arrears will be permitted to appear for supplementary examination. The supplementary examination will be conducted in fifth and eighth semester only. For supplementary examination, the continuous assessment marks of the last attempt will be considered.

Re-earn of Continuous Assessment Mark (CAM)

In the first attempt of writing the End Semester Examination of a course if a student fails, he / she can retain the existing CAM and proceeds to write the supplementary exams / End Semester Examinations as and when they are conducted. If a student wishes to re-earn the continuous assessment Marks (CAM), he / she has to re-register by paying the prescribed fee for the course when it is offered next in the subsequent academic year. The student has to re-earn the CAM by taking up all the internal tests, assignments and presentation as per the norms of regulations clause 7.2.

Benefits

- ❖ More number of students will receive the degree within the stipulated time
 - ❖ Industries prefer to recruit students with no standing arrears. If the supplementary examinations are conducted then more number of students will be eligible for the recruitment
 - ❖ Photo copy of answer book
- After the publication of the result, photocopy of the answer booklet shall be provided to the student on request with stipulated fee fixed by the College from time to time

Requirements for Appearing End Semester Examination

A student is expected to maintain 100% attendance in all courses as attendance also carries internal marks (Clause 10.3). A student will be qualified to appear for end semester examinations in a particular course of a semester only if he/she satisfies the below mentioned requirements.

The student is permitted to appear for End Semester Examinations, only if he/she maintains minimum 75% of attendance. If he/she secured attendance greater than or equal to 60 % and less than 75% in any course in the current semester can be considered in case of the following reasons:

- i. Medical reasons (hospitalization / accident and or illness)
- ii. Due to participation in sports events or any competitions or NCC / NSS activities with prior written permission from the Head of the Institution / Dean Academics through the Head of the Department

He/she has to pay the necessary condonation prescribed by the college authority with necessary supporting documents for his/her absence.

April 2023

Date	Day	Schedule	Working day/ Holiday
1	Sat	Special coaching class / GP / Seminar / Q. / Placement / Academic Activities	9
2	Sun		Holiday
3	Mon		10
4	Tue		11
5	Wed		12
6	Thu		13
7	Fri	Good Friday	Holiday
8	Sat	Special coaching class / GP / Seminar / Q. / Placement / Academic Activities	14
9	Sun		Holiday
10	Mon		15
11	Tue		16
12	Wed		17
13	Thu		18
14	Fri	Tamil New Year / Dr. B.R. Ambedkar Birthday	Holiday
15	Sat	Special coaching class / GP / Seminar / Q. / Placement / Academic Activities	19
16	Sun		Holiday
17	Mon	Online Feedback-1 from the students and Analysis	20
18	Tue	QCM-1	21
19	Wed		22
20	Thu	Syllabus coverage Submission 1/Assignment I	23
21	Fri	Ramzan	Holiday
22	Sat		Holiday
23	Sun		Holiday
24	Mon	CAT I Starts (1½ units)	24
25	Tue		25
26	Wed		26
27	Thu		27
28	Fri	Submission of Attendance and Assessment Record I	28
29	Sat	CAT I Ends / SCC / GP / Seminar / Q. / Placement / AA	29
30	Sun		Holiday
Total number of working days : 21			
Total number of holidays : 09			
சனிக்குக் கொண்டிவன் ஒவ்வொரு வாய்ப்பிலும் உன் அபத்தைப் பார்க்கிறான். சாதிப்பவன் ஒவ்வொரு அபத்திலும் உன் வாய்ப்பினைப் பார்க்கிறான்.			

March 2023			
Date	Day	Schedule	Working day/ Holiday
1	Wed		
2	Thu		
3	Fri		
4	Sat		
5	Sun		Holiday
6	Mon		
7	Tue		
8	Wed		
9	Thu		
10	Fri		
11	Sat		
12	Sun		Holiday
13	Mon		
14	Tue		
15	Wed		
16	Thu		
17	Fri		
18	Sat		
19	Sun		Holiday
20	Mon		
21	Tue		
22	Wed		
23	Thu	Commencement of classes for II year	1
24	Fri		2
25	Sat		3
26	Sun		Holiday
27	Mon		4
28	Tue		5
29	Wed		6
30	Thu		7
31	Fri		8
Total number of working days : 8			
Total number of holidays : 01			
சனிக்கிழமை கொண்டிவரவன் ஒவ்வொரு வாரப்பயிற்சியும் உள்ள ஆயத்ததைப் பார்க்கிறார். சாதிப்பவன் ஒவ்வொரு ஆயத்ததிலும் உள்ள வாரப்பயிற்சியைப் பார்க்கிறார்.			

❖ The student shall be considered for exemption from the prescribed attendance requirement for the reasons stated above and if exempted, the student shall be permitted to appear for the end semester examination of that course. In all such cases, the students should have submitted the required documents on joining after the absence, to the Head of the Department through the Class Advisor.

❖ If any student is suspended for any reason during the semester, the days of suspension of a student on disciplinary grounds will be considered as days of absence for calculating the percentage of attendance for each individual course.

Provision for Withdrawal from Examination

❖ Complete Withdrawal (applicable only for all arrears students): A student, who is eligible to appear for the semester examinations, will be permitted to withdraw from appearing for the entire End Semester Examinations as one unit (Complete Withdrawal) for valid reasons and on the recommendation of the Head of the Department and with the approval of the Dean Academics. Complete Withdrawal application shall be made before the commencement of the first examination pertaining to the semester. Such withdrawal shall be permitted *only once* during the entire programme.

❖ A student who has completely withdrawn from appearing for end semester examinations in a particular semester should appear for the examinations of all the withdrawn subjects in the next semester itself.

❖ If all other conditions are satisfactory, the candidate who withdraws is also eligible to be awarded DISTINCTION whereas he/she is not eligible to be awarded a rank.

Punctuality in Attendance

The students are requested to keep up punctuality in attending the college. The late comers will be losing their attendance and in turn the internal marks. Hence all the students are requested to attend the college in time. A student shall be permitted to appear for the End Semester Examination at the end of the semester only if he/she secures not less than 75% of overall attendance.

Redo Category

A student who secures overall attendance less than 60% has to repeat the course with the approval, when it is next offered. A student secures attendance greater than or equal to 60% and less than 75% will be promoted to next higher semester only if loss of attendance is due to medical reasons(hospitalization/ accident/illness) or participation in sports event or any competitions or NCC or NSS activities with prior permission from the Head of Institution through the Head of the department with necessary supporting documents and payment of necessary condonation fee as prescribed by the college authority. However student secures more than 75% of attendance in the current semester will be moved to next higher semester.

**Marks Distribution of Continuous Assessment Marks (CAM) and
End Semester Examination Marks (ESM)
Scheme for Continuous Assessment Test (CAT)**

S. No	Course Type	Continuous Assessment components							
		Test Marks	Average of marks for each experiment	Average of marks for experiment report for each experiment	Model Exam / Report	Assignment	Review - 1	Review - 2	Review - 3
1.	Theory	15	-	-	-	5	-	-	5
2.	Practical	-	10	15	15	-	-	-	10
3.	Project Phase-I	-	-	-	-	15	15	20	-
4.	Project Phase-II	-	-	-	-	-	10	20	-

The internal marks will be provided fully based on the continuous assessment tests
Weightage of Assessment for Theory Course

S. No.	Test	Portion for Test	Test Marks	Duration of Test	Weightage for Internal
1	CAT 1	1½ Units	50	1 ½ hours	10
2	CAT 2	1½ Units	50	1 ½ hours	
3	Model	5 Units	75	3 hours	05
Continuous Assessment for Theory Course					15

Question Paper Pattern

Question paper for CAT and ESE will be based on the pattern shown in Table (a) and (b)

Table (a) Question Paper pattern for CAT/Model Exam

Test Type	2 Marks	5 Marks	10 Marks	Total Marks
CAT 1 / CAT 2	5 (questions) (10 Marks)	4 (questions) (20 Marks)	2 (questions) (20 Marks)	50
Model	End Semester Examination Question Pattern			75

Table (b) Question paper pattern for End semester Examination(ESE)

2 Marks	5 Marks	10 Marks	Total Marks
10 (20 Marks)	5 (25 Marks) (one question from each unit)	3 (30 Marks) (one question from each unit)	75

End Semester Examination Question Paper Pattern for Six Units Courses

Course	2 Mark	5 Mark	8 / 9 Mark	Total Marks
Part A	5	2 (out of 3 questions, one from each unit)	one 8 mark question (out of 2 questions from Unit I and Unit II)	37
			One 9 mark question (compulsory question from unit III)	
Part B	5	2 (out of 3 questions, one from each unit)	Two 9 mark questions (out of 3 questions from IV, V & VI)	38

Important points for the kind attention of the Parents

Dear Parents !

Marks in the continuous assessment test decide the major part of the Continuous Assessment Marks. So, availing leave for the continuous assessment test must be avoided at any cost as this would seriously affect the continuous assessment marks.

Practicals are very important not only to score more marks but also it will help to understand the theory part of the subject. Hence advice your ward not to avail leave during practical classes.

Please spare your valuable time to talk to your son/daughter every day and try to understand what he/she is doing in respect of his/her studies. Kindly extend all your support to your son/daughter which will help them to come out successfully. For any assistance from our side you may always feel free to contact the respective Coordinator / HOD any time during the working hours.

Gold Medals and Top Ten Ranks

The details of the University Gold medals and Top Ten Ranks bagged by our students are given below.

Year of Passing	Gold Medals	Top Ten Ranks
2012	9	58
2013	7	56
2014	7	56
2015	12	71
2016	8	72
2017	10	94
2018	11	74
2019	12	71

Gold Medals and Ranks

As per the Regulation 2020, for the Award of Gold Medal and ranks for each branch of study, the CGPA secured from 1st to 8th semester should be considered and it is mandatory that the candidate should have passed all the subjects from 1st to 8th semester in the first attempt. Rank Certificates would be issued to the first five candidates in each branch of study.

Distribution of Attendance marks for theory : 5 marks

The distribution of 5 marks for theory class attendance is as follows :

- 5 marks for 95% attendance and above
- 4 marks for 90% attendance and above but below 95%
- 3 marks for 85% attendance and above but below 90%
- 2 marks for 80% attendance and above but below 85%
- 1 mark for 75% attendance and above but below 80%

Distribution of Attendance marks for practical : 10 marks

The distribution of 10 marks for practical class attendance is as follows :

- 10 marks for 95% attendance and above
- 8 marks for 90% attendance and above but below 95%
- 6 marks for 85% attendance and above but below 90%
- 4 marks for 80% attendance and above but below 85%
- 2 marks for 75% attendance and above but below 80%

Note : Students should not be absent for the online classes/regular classes. Attendance for the online classes/regular classes are monitored systematically and recorded. Continuous assessment mark will be based on the performance of the students in the continuous assessment tests, assignment and attendance percentage.

Assignments : 5 marks

Out of 25 continuous assessment marks, 5 marks will be awarded for the assignment. The assignment questions will be different for each and every student. The students have to submit 3 assignments in each subject. The best 2 out of 3 assignments will be considered for marking.

Women Empowerment Cell

For the welfare of the girl students, a Women Cell has been constituted in the college. The girl students may approach the Chairperson / members for assistance. Mail id : wec@smvec.ac.in

Grievance Redressal Cell

There is a Grievance Redressal Cell under the Chairmanship of the Director of the institution. Students are requested to approach the Chairman / members to redress their grievances. Mail id : grievance@smvec.ac.in

Anti Ragging Cell

Ragging is strictly prohibited in the campus. Prevention of Sexual Harassment (POSH) cell has been constituted for the benefit of students to report against ragging. Mail id : antiragging@smvec.ac.in

Importance of CAT-I/CAT-II/ Model Examination

Continuous assessment marks are awarded for the performance in the CAT-I, CAT-II & Model Exam. Hence all the students are requested to prepare well for each test / examination to earn the maximum continuous assessment marks.

Undertaking Minor / Major Projects

Each student is advised to take atleast one minor project. Involving in the project will be helping to understand the basics of the subject. Some of the minor / major project will also be benefiting the society. Moreover, the Management awards cash prizes for the best projects in each department.

Participation in the Curricular / Co-curricular / Extra curricular Activities

All the students are encouraged to participate in the curricular / co-curricular / extra curricular activities. Involvement in these activities will improve their knowledge level in the subject. If a student or a team gets cash prize / award in the technical event organized by the recognised institutions, then the management of this institution will also sanction an amount equivalent to the winning award / cash prize as a token of appreciation.

Leave Account Record

For each student, leave account record has been provided. The students are instructed to show the leave record to their parents and strictly adhere to the instructions given for availing the leave. The leave account record should be maintained properly and prior approval must be obtained for availing the leave. In exceptional cases, the students are permitted to get the approval after availing the leave.

Transport Facility

61 buses have been arranged for the students to reach the college from Pudukcherry, Kanagachetukulam, Thiruchitrambalam X Road, Villupuram, Neyveli, Panruti, Vadalur, Kurunchipadi, Cuddalore, Nellikuppam, Madukarai, Tindivanam, Ulundurpet, Thirukoilur, Chidambaram, Tiruvannamalai and Virudhachalam covering almost all the areas. Separate transport facility has been arranged for the students who remain in the college after 5 p.m. for utilising computer lab, library and sports facilities. The students are requested to utilise the transport facility.

Tutor Ward System

In the tutor ward system, 30 students are allotted to a tutor who will be taking care of these students in all academic and personal well being. The students are requested to utilize the resourceful faculty effectively.

All the students are requested to avoid mobile phones and travel by two wheelers considering their safety and security.

Placement and Training Division

The placement cell functions round the clock throughout the year to establish contact with reputed multinational companies, well established industrial organizations and plays an important role in locating various job opportunities and placing large number of students every year at these organizations.

Activities of the Training Division

- ✧ Arranges trainings for personality and interpersonal skill development
- ✧ Assists the students to get in-plant training
- ✧ Arranges industrial visits
- ✧ Creates awareness on the opportunities open for higher studies
- ✧ Arranges coaching classes for GATE, GRE, TOEFL, IELTS, IAS, IES etc.

Placement Record

Academic Year	Students Placed
2013-14	85%
2014-15	95%
2015-16	95%
2016-17	93%
2017-18	95%
2018-19	95%
2019-20	95%
2020-21	96%
2021-22	95%
2022-23	841*

* till February 2023

Details of Placed Students : 2022-23

SOPRA STERIA	10	CSS CORP	3
CTS	199	MSI	4
TCS	243	Zentience	2
EMBED UR	5	EMERSON	1
ZOHO	18	Abishowa	1
VIRTUSA	43	DR. AXION	8
MULTICORE WARE	1	Star Engineering	1
ACCENTURE - PEGA	4	FSS	7
TVM INFOTECH	3	Integra	84
WEB DIGITAL MANTRA	3	Justdial	36
INCEDO	1	Kanur Vysya Bank	13
UNISYS	6	Oppo Mobiles	9
KAAR	13	TCS - MBA	1
SOCIETE GENERALE	6	Fasttrack HR Services	9
HEXWARE	11	Pvt. Ltd	6
MICROCHIP	2	HEFC	6
RENAULT NISSAN	1	Ford Motors Pega	6
ZIFO	3	BYDE ELECTRONICS	4
CARATLANE	6	Others	60
Avalon	8		
Total			841*

Library Working Hours

- 8.30 a.m. to 8.30 p.m. (On all the working days)
- 8.30 a.m. to 10.00 p.m. (During the examination days)

Academic calendar – III Year / VI Sem

Use of Cell Phones

It has been decided not to permit cell phones inside the college campus. If any student is found using the cell phone inside the college campus, it would be confiscated and will not be returned back on any circumstances. Hence the students are instructed not to attend the college with the mobile phones.

Dress Code

The students are requested to attend the college neatly dressed. While the male students should attend the college with the shirts neatly tucked in and with the shoes, the female students are permitted to come with churidar and dupatta properly pinned. Students wearing full hand shirts should wear it as such without folding it to half etc. Casual wear like jeans, T-shirts etc., both for boys and girls are strictly prohibited inside the campus. Each department has prescribed uniforms for the labs. The students are requested to strictly adhere to the dress codes as well as the rules and regulations of the college.

Maintenance of Discipline

Discipline is an important factor that shapes one's personality. It is considered as a golden key capable of opening many doors. This institution expects each and every student to follow the rules and regulations in total. Maintaining discipline in the campus will promote a conducive environment for studies.

Working hours

I hour	09.00 a.m to	09.50 a.m
II hour	09.50 a.m to	10.40 a.m
Break	10.40 a.m to	10.55 a.m
III hour	10.55 a.m to	11.45 a.m
IV hour	11.45 a.m to	12.35 p.m
V hour	01.15 p.m to	02.05 p.m
VI hour	02.05 p.m to	02.55 p.m
VII hour	02.55 p.m to	03.10 p.m
VIII hour	03.10 p.m to	04.00 p.m
Lunch break	04.00 p.m to	04.50 p.m
	12.35 p.m. to	1.15 p.m.

SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE

An Autonomous Institution

(Accredited by NBA-AICTE, New Delhi, NAAC with "A" Grade)

Madagadipet, Puducherry - 605 107



Academic Calendar

March 2023 to August 2023

Name :

Programme : B.Tech

Department : Electrical and Electronics Engineering

Year / Sem : III Year / VI Semester

[illegible]

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ஆயிரிபுநாள்.

About Autonomous

Sri Manakula Vinayagar Engineering College has been conferred with Autonomous Status by the University Grants Commission on 26th September 2019 and the same was approved by Pondicherry University on 19th June 2020. SMVEC Autonomous Regulations R2020 is followed for the students admitted from the Academic Year 2020-21 onwards.

Awards and Credentials

Our Institution got many awards and credentials since its inception. Some of the credentials achieved during the academic Years 2020-21, 2021-22 and 2022-23

- ❖ Data Quest ranked in 46th position among the top 100 Technical schools overall in India 2021-22
- ❖ Winner of International Blockchain skill summit hackathon 2022
- ❖ Winner of Unisys Innovation (Y13) 2022
- ❖ Winner of Smart India Hackathon - 2022
- ❖ Winner of Virtusa Jatayu - 2022
- ❖ 4-Star rating from IIC-MHRD Innovation Council, New Delhi
- ❖ ATAL Ranking award - ARIJA 2021 ranked in the "Excellent Band Category"
- ❖ Edufuture Excellence award and e-campus Award from Zee News - 2021
- ❖ Virtusa Campus Partner
- ❖ Best Engineering College from National Educational Excellence Award
- ❖ Best Performing Institute Award 2022 by Eduskills in collaboration with AICTE
- ❖ Best Engineering College Award from ICT Academy in the year 2022

HIGHLIGHTS OF SMVEC AUTONOMOUS REGULATIONS

- ❖ Industry 4.0 ready curriculum
- ❖ Focus on Multidisciplinary and skill development courses to create extensive career opportunities
- ❖ Certifications Courses
- ❖ Internships
- ❖ Orientation towards entrepreneurship
- ❖ Choice to learn IELTS / Foreign Languages
- ❖ Supplementary Examination in 5th and 8th semester for the students having maximum of 2 arrears

Certification Courses

We provide 91 International Associate level Certification courses through 17 Centre of Excellences from IBM, Google, Cisco, Microsoft, Autodesk, Texas instruments, Festo, Bentley, Schneider Electric, Amazon web services, Siemens, Tally, DELL, EMC, Harita Techserv, PTC, L&N and Excellence in Technology & Didactic solutions. All students should enrol in one certification course from semester I to VI.

Industrial Training / Internship

Students may undergo training or internship during summer / winter vacation at an Industry/ Research organization. Students are also permitted to undergo internships during their eighth semester after the completion of theory classes.

August 2023

Date	Day	Schedule	Working day/ Holiday
1	Tue	Tentative End Semester Practical Exam	
2	Wed		
3	Thu		
4	Fri		
5	Sat		
6	Sun		Holiday
7	Mon		
8	Tue		
9	Wed		
10	Thu		
11	Fri		
12	Sat		
13	Sun		Holiday
14	Mon		
15	Tue	Independence Day	Holiday
16	Wed	De Jure Transfer Day	Holiday
17	Thu		
18	Fri		
19	Sat		
20	Sun		Holiday
21	Mon		
22	Tue		
23	Wed	Tentative End Semester Theory Exam	
24	Thu		
25	Fri		
26	Sat		
27	Sun		Holiday
28	Mon		
29	Tue		
30	Wed		
31	Thu		
Total number of working days :			
Total number of holidays :			
தலைவரவர்களேயும், தலைவரவர்களின் உதவியுடன் நடைமுறைப்படுத்தப்படும் - 15 ^{வது} திகதி			

July 2023			
Date	Day	Schedule	Working day/ Holiday
1	Sat		79
2	Sun		Holiday
3	Mon		80
4	Tue		81
5	Wed	Assignment III	82
6	Thu		83
7	Fri		84
8	Sat		85
9	Sun		Holiday
10	Mon		86
11	Tue		87
12	Wed	Online Feedback-3 from the students and Analysis	88
13	Thu	QCM - 3	89
14	Fri	Syllabus Coverage Submission 3	90
15	Sat		Holiday
16	Sun		Holiday
17	Mon	Model Exam Theory	91
18	Tue		92
19	Wed		93
20	Thu		94
21	Fri		95
22	Sat	Submission of Attendance and Assessment III	96
23	Sun		Holiday
24	Mon	Model Practical Exam	97
25	Tue	Model Exam Result Analysis	98
26	Wed		99
27	Thu		100
28	Fri		101
29	Sat	Last working day	102
30	Sun		Holiday
31	Mon		
Total number of working days : 24			
Total number of holidays : 05			
சனித்தேதி கொள்பவன் ஒவ்வொரு வாய்ப்பிலும் உள்ள ஆபத்தைப் பார்த்துக்கொள். நாதிமகன் ஒவ்வொரு ஆபத்திலும் உள்ள வாய்ப்பைப் பார்த்துக்கொள்.			

SRIMANAKULAVINAYAGAR ENGINEERING COLLEGE	
VISION	
To be globally recognized for excellence in quality education, innovation and research for the transformation of lives to serve the society.	
MISSION	
M1: Quality Education: To provide comprehensive academic system that amalgamates the cutting edge technologies with best practices.	
M2: Research and Innovation: To foster value-based research and innovation in collaboration with industries and institutions globally for creating intellectuals with new avenues.	
M3: Employability and Entrepreneurship: To inculcate the employability and entrepreneurial skills through value and skill based training.	
M4: Ethical Values: To instill deep sense of human values by blending societal righteousness with academic professionalism for the growth of society.	
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING	
VISION	
To promote proficiency in the field of Electrical and Electronics Engineering by creating a stimulating environment for research, innovation and entrepreneurship.	
MISSION	
M1: Quality Education: To impart high quality technical education with problem solving capabilities by innovative pedagogy in emerging technologies.	
M2: Industrial and Societal needs: To cater the dynamic needs of the industry and society by strengthening industry-institute interaction.	
M3: Research and Innovation: To nurture the spirit of research attitude by carrying out innovative technologies pragmatically.	
M4: Placement and Entrepreneurship: To inculcate the professionalism in career by advancing synergetic skills to compete in the corporate world.	

PEO1: Professional Knowledge
To possess strong educational foundation in Electrical and Electronics Engineering to attain successful career with professional responsibility

To enrich the skills to design and develop innovative solutions for engineering problems in a multidisciplinary environment

To actively embrace leadership qualities for achieving professional goals with ethical values

To enhance intellectual competency along with technical skills by adapting to the current trends through eternal learning

PSO1: Core Proficiency

Utilize the engineering core knowledge to identify, formulate, design, and investigate the complex engineering problems of power electronics, electrical machines and power systems.

PSO2: Cutting Edge Technologies

Explore the new cutting edge technologies in the field of Electric vehicle, Automation, Artificial Intelligence, Robotics and Renewable Energy to compete in global market.

PSO3: Design and Evolution

Capability to comprehend the technological advancements with the usage of modern design tools for analysing and designing systems to confront the rapid pace of industrial innovations.

சலித்துக் கொள்பவன் ஒவ்வொரு வாய்ப்பிலும் உள்ள ஆபத்தைப் பாய்ச்சுகிறான். சாதிப்பவன் ஒவ்வொரு ஆபத்திலும் உள்ள வாய்ப்பினைப் பாய்ச்சுகிறான்.

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May 2023			
Date	Day	Schedule	Working day, Holiday
1	Mon	May Day	Holiday
2	Tue		30
3	Wed		31
4	Thu		32
5	Fri		33
6	Sat	Special coaching class / GP / Seminar / GL / Placement / Academic Activities	34
7	Sun		Holiday
8	Mon		35
9	Tue		36
10	Wed		37
11	Thu		38
12	Fri		39
13	Sat	Special coaching class / GP / Seminar / GL / Placement / Academic Activities	40
14	Sun		Holiday
15	Mon		41
16	Tue		42
17	Wed		43
18	Thu		44
19	Fri		45
20	Sat		Holiday
21	Sun		Holiday
22	Mon	Assignment II	46
23	Tue		47
24	Wed		48
25	Thu		49
26	Fri		50
27	Sat	Special coaching class / GP / Seminar / GL / Placement / Academic Activities	51
28	Sun		Holiday
29	Mon		52
30	Tue		53
31	Wed		54
Total number of working days : 25			
Total number of holidays : 06			
தலைவரின் உத்தரவு: 14.05.2023, தலைவரின் உத்தரவு 14.05.2023 - 14.05.2023			

PROGRAM OUTCOMES (POs)	
Engineering graduates will be able to	
PO1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.	
PO2: Problem analysis: Identify, formulate, review, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.	
PO3: Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety and the cultural, societal and environmental considerations.	
PO4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of the information to provide valid conclusions.	
PO5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.	
PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.	
PO7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of and need for sustainable development.	
PO8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.	
PO9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams and in multidisciplinary settings.	
PO10: Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.	
PO11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.	
PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.	

Supplementary Examinations

Supplementary examination is an additional examination conducted within a month of time after declaring the results of end semester examination. In order to complete the program within 4 years, the student with maximum of two arrears will be permitted to appear for supplementary examination. The supplementary examination will be conducted in fifth and eighth semester only. For supplementary examination, the continuous assessment marks of the last attempt will be considered.

Re-earn of Continuous Assessment Mark (CAM)

In the first attempt of writing the End Semester Examination of a course if a student fails, he / she can retain the existing CAM and proceeds to write the supplementary exams / End Semester Examinations as and when they are conducted. If a student wishes to re-earn the continuous assessment Marks (CAM), he / she has to re-register by paying the prescribed fee for the course when it is offered next in the subsequent academic year. The student has to re-earn the CAM by taking up all the internal tests, assignments and presentation as per the norms of regulations clause 7.2.

Benefits

- ❖ More number of students will receive the degree within the stipulated time
- ❖ Industries prefer to recruit students with no standing arrears. If the supplementary examinations are conducted then more number of students will be eligible for the recruitment

❖ Photo copy of answer book

After the publication of the result, photocopy of the answer booklet shall be provided to the student on request with stipulated fee fixed by the College from time to time

Requirements for Appearing End Semester Examination

A student is expected to maintain 100% attendance in all courses as attendance also carries internal marks (Clause 10.3). A student will be qualified to appear for end semester examinations in a particular course of a semester only if he/she satisfies the below mentioned requirements.

The student is permitted to appear for End Semester Examinations, only if he/she maintains minimum 75% of attendance. If he/she secured attendance greater than or equal to 60 % and less than 75% in any course in the current semester can be considered in case of the following reasons:

- i. Medical reasons (hospitalization / accident and or illness)
- ii. Due to participation in sports events or any competitions or NCC / NSS activities with prior written permission from the Head of the Institution / Dean Academics through the Head of the Department

He/she has to pay the necessary condonation prescribed by the college authority with necessary supporting documents for his/her absence.

April 2023

Date	Day	Schedule	Working day/ Holiday
1	Sat	Special coaching class / GP / Seminar / GL / Placement / Academic Activities	9
2	Sun		Holiday
3	Mon		10
4	Tue		11
5	Wed		12
6	Thu	Online Feedback-1 from the students and Analysis	13
7	Fri	Good Friday	Holiday
8	Sat	Assignment I / SSC / GP / Seminar / GL / Placement / AA	14
8	Sun		Holiday
10	Mon	Syllabus coverage Submission 1	15
11	Tue	OCM-I	16
12	Wed	CAT I Starts (1½ units)	17
13	Thu		18
14	Fri	Tamil New Year / Dr. B.R. Ambedkar Birthday	Holiday
15	Sat	Special coaching class / GP / Seminar / GL / Placement / Academic Activities	19
16	Sun		Holiday
17	Mon		20
18	Tue		21
19	Wed		22
20	Thu	CAT I Ends	23
21	Fri	Ramzan	Holiday
22	Sat		Holiday
23	Sun		Holiday
24	Mon		24
25	Tue		25
26	Wed	CAT I Result Analysis Submission	26
27	Thu		27
28	Fri	Submission of Attendance and Assessment Record I	28
29	Sat	Special coaching class / GP / Seminar / GL / Placement / Academic Activities	29
30	Sun		Holiday
Total number of working days : 21			
Total number of holidays : 09			
சனிக்கிழமை கொண்டாட்டம் ஒவ்வொரு வாரப்படுதியும் உள்ள ஆயத்ததைப் பார்த்துக்கொள். சாதிப்பவன் ஒவ்வொரு ஆயத்தத்திலும் உள்ள வாரப்படுதியைப் பார்த்துக்கொள்.			

March 2023			
Date	Day	Schedule	Working day/ Holiday
1	Wed		
2	Thu		
3	Fri		
4	Sat		
5	Sun		Holiday
6	Mon		
7	Tue		
8	Wed		
9	Thu		
10	Fri		
11	Sat		
12	Sun		Holiday
13	Mon		
14	Tue		
15	Wed		
16	Thu		
17	Fri		
18	Sat		
19	Sun		Holiday
20	Mon		
21	Tue		
22	Wed		
23	Thu	Commencement of classes for III year	1
24	Fri		2
25	Sat		3
26	Sun		Holiday
27	Mon		4
28	Tue		5
29	Wed		6
30	Thu		7
31	Fri		8
Total number of working days : 8			
Total number of holidays : 01			
சலித்தூக் கௌரவவர் ஒவ்வொரு வாரப்பிலும் உள்ள ஆபத்தைப் பங்கிற்றார். சாதிப்பவன் ஒவ்வொரு ஆபத்திலும் உள்ள வாரப்பிலைப் பங்கிற்றான்.			

❖ The student shall be considered for exemption from the prescribed attendance requirement for the reasons stated above and if exempted, the student shall be permitted to appear for the end semester examination of that course. In all such cases, the students should have submitted the required documents on joining after the absence, to the Head of the Department through the Class Advisor.

❖ If any student is suspended for any reason during the semester, the days of suspension of a student on disciplinary grounds will be considered as days of absence for calculating the percentage of attendance for each individual course.

Provision for Withdrawal from Examination

❖ **Complete Withdrawal (applicable only for nil arrear students):** A student, who is eligible to appear for the semester examinations, will be permitted to withdraw from appearing for the entire End Semester Examinations as one unit (*Complete Withdrawal*) for valid reasons and on the recommendation of the Head of the Department and with the approval of the Dean Academics. Complete Withdrawal application shall be made before the commencement of the first examination pertaining to the semester. Such withdrawal shall be permitted *only once* during the entire programme.

❖ A student who has completely withdrawn from appearing for end semester examinations in a particular semester should appear for the examinations of all the withdrawn subjects in the next semester itself.

❖ If all other conditions are satisfactory, the candidate who withdraws is also eligible to be awarded **DISTINCTION** whereas he/she is not eligible to be awarded a rank.

Punctuality in Attendance

The students are requested to keep up punctuality in attending the college. The late comers will be losing their attendance and in turn the internal marks. Hence all the students are requested to attend the college in time. A student shall be permitted to appear for the End Semester Examination at the end of the semester only if he/she secures not less than 75% of overall attendance.

Redo Category

A student who secures overall attendance less than 60% has to repeat the course with the approval, when it is next offered. A student secures attendance greater than or equal to 60% and less than 75% will be promoted to next higher semester only if loss of attendance is due to medical reasons (hospitalization/ accident/illness) or participation in sports event or any competitions or NCC or NSS activities with prior permission from the Head of Institution through the Head of the department with necessary supporting documents and payment of necessary condonation fee as prescribed by the college authority. However student secures more than 75% of attendance in the current semester will be moved to next higher semester.

**Marks Distribution of Continuous Assessment Marks (CAM) and
End Semester Examination Marks (ESM)
Scheme for Continuous Assessment Test (CAT)**

S. No	Course Type	Continuous Assessment components						
		Test Marks	Average of per post test/ viva for each experiment	Average of marks for experiment report for each experiment	Model Exam / Report	Assignment	Review - 1	Review - 2
1. Theory		15	-	-	-	5	-	-
2. Practical		-	10	15	15	-	-	-
3. Project Phase-I		-	-	-	-	15	15	20
4. Project Phase-II		-	-	-	-	10	10	20
		Attendance						
		Total						
		25						
		50						
		50						
		40						

The internal marks will be provided fully based on the continuous assessment tests
Weightage of Assessment for Theory Course

S.No.	Test	Portion for Test	Test Marks	Duration of Test	Weightage for Internal
1	CAT 1	1½ Units	50	1 ½ hours	10
2	CAT 2	1½ Units	50	1 ½ hours	
3	Model	5 Units	75	3 hours	05
Continuous Assessment for Theory Course					15

Question Paper Pattern

Question paper for CAT and ESE will be based on the pattern shown in Table (a) and (b)
Table (a) Question Paper pattern for CAT/Model Exam

Test Type	2 Marks	5 Marks	10 Marks	Total Marks
CAT 1 / CAT 2	5 (questions) (10 Marks)	4 (questions) (20 Marks)	2 (questions) (20 Marks)	50
Model	End Semester Examination Question Pattern			75

Table (b) Question paper pattern for End semester Examination (ESE)

2 Marks	5 Marks	10 Marks	Total Marks
10 (20 Marks)	5 (25 Marks) (one question from each unit)	3 (30 Marks) (one question from each unit)	75

End Semester Examination Question Paper Pattern for Six Units Courses

Course	2 Mark	5 Mark	8 / 9 Mark	Total Marks
Part A	5	(out of 3 questions, one from each unit)	one 8 mark question (out of 2 questions from Unit I and Unit II)	37
			One 9 mark question (compulsory question from unit III)	
Part B	5	(out of 3 questions, one from each unit)	Two 9 mark questions (out of 3 questions from IV, V & VI)	38

Important points for the kind attention of the Parents

Dear Parents !

Marks in the continuous assessment test decide the major part of the Continuous Assessment Marks. So, availing leave for the continuous assessment test must be avoided at any cost as this would seriously affect the continuous assessment marks.

Practicals are very important not only to score more marks but also it will help to understand the theory part of the subject. Hence advice your ward not to avail leave during practical classes.

Please spare your valuable time to talk to your son/daughter every day and try to understand what he/she is doing in respect of his/her studies. Kindly extend all your support to your son/daughter which will help them to come out successfully. For any assistance from our side you may always feel free to contact the respective Coordinator / HOD any time during the working hours.

Gold Medals and Top Ten Ranks

The details of the University Goldmedals and Top Ten Ranks bagged by our students are given below.

Year of Passing	Gold Medals	Top Ten Ranks
2012	9	58
2013	7	56
2014	7	56
2015	12	71
2016	8	72
2017	10	94
2018	11	74
2019	12	71

Gold Medals and Ranks

As per the Regulation 2020, for the Award of Gold Medal and ranks for each branch of study, the CGPA secured from 1st to 8th semester should be considered and it is mandatory that the candidate should have passed all the subjects from 1st to 8th semester in the first attempt. Rank Certificates would be issued to the first five candidates in each branch of study.

Distribution of Attendance marks for theory : 5 marks

The distribution of 5 marks for theory class attendance is as follows :
5 marks for 95% attendance and above
4 marks for 90% attendance and above but below 95%
3 marks for 85% attendance and above but below 90%
2 marks for 80% attendance and above but below 85%
1 mark for 75% attendance and above but below 80%

Distribution of Attendance marks for practical : 10 marks

The distribution of 10 marks for practical class attendance is as follows :
10 marks for 95% attendance and above
8 marks for 90% attendance and above but below 95%
6 marks for 85% attendance and above but below 90%
4 marks for 80% attendance and above but below 85%
2 marks for 75% attendance and above but below 80%

Note : Students should not be absent for the online classes/regular classes. Attendance for the online classes/regular classes are monitored systematically and recorded. Continuous assessment mark will be based on the performance of the students in the continuous assessment tests, assignment and attendance percentage.

Assignments : 5 marks

Out of 25 continuous assessment marks, 5 marks will be awarded for the assignment. The assignment questions will be different for each and every student. The students have to submit 3 assignments in each subject. The best 2 out of 3 assignments will be considered for marking.

Women Empowerment Cell

For the welfare of the girl students, a Women Cell has been constituted in the college. The girl students may approach the Chairperson / members for assistance. Mail id : weec@smvec.ac.in

Grievance Redressal Cell

There is a Grievance Redressal Cell under the Chairmanship of the Director of the institution. Students are requested to approach the Chairman / members to redress their grievances. Mail id : grievance@smvec.ac.in

Anti Ragging Cell

Ragging is strictly prohibited in the campus. Prevention of Sexual Harassment (POSH) cell has been constituted for the benefit of students to report against ragging. Mail id : antiragging@smvec.ac.in

Importance of CAT-I/CAT-II/ Model Examination

Continuous assessment marks are awarded for the performance in the CAT-I, CAT-II & Model Exam. Hence all the students are requested to prepare well for each test / examination to earn the maximum continuous assessment marks.

Undertaking Minor / Major Projects

Each student is advised to take atleast one minor project. Involving in the project will be helping to understand the basics of the subject. Some of the minor / major project will also be benefiting the society. Moreover, the Management awards cash prizes for the best projects in each department.

Participation In the Curricular / Co-curricular / Extra curricular Activities

All the students are encouraged to participate in the curricular / co-curricular / extra curricular activities. Involvement in these activities will improve their knowledge level in the subject. If a student or a team gets cash prize / award in the technical event organized by the recognised institutions, then the management of this institution will also sanction an amount equivalent to the winning award / cash prize as a token of appreciation.

Leave Account Record

For each student, leave account record has been provided. The students are instructed to show the leave record to their parents and strictly adhere to the instructions given for availing the leave. The leave account record should be maintained properly and prior approval must be obtained for availing the leave. In exceptional cases, the students are permitted to get the approval after availing the leave.

Transport Facility

61 buses have been arranged for the students to reach the college from Pudukcherry, Kaungachettikulam, Thiruchitrambalam X Road, Villupuram, Neyveli, Paurai, Vadalur, Kurunchipadi, Cuddalore, Nellikuppam, Madukarai, Tindivanam, Ulundurpet, Thirukodur, Chidambaram, Tiruvannamalai and Virudhachalam covering almost all the areas. Separate transport facility has been arranged for the students who remain in the college after 5 p.m. for utilising computer lab, library and sports facilities. The students are requested to utilise the transport facility.

Tutor Ward System

In the tutor ward system, 30 students are allotted to a tutor who will be taking care of these students in all academic and personal well being. The students are requested to utilize the resourceful faculty effectively.

All the students are requested to avoid mobile phones and travel by two wheelers considering their safety and security.

Placement and Training Division

The placement cell functions round the clock throughout the year to establish contact with reputed multinational companies, well established industrial organizations and plays an important role in locating various job opportunities and placing large number of students every year at these organizations.

Activities of the Training Division

- ✧ Arranges trainings for personality and interpersonal skill development
- ✧ Assists the students to get in-plant training
- ✧ Arranges industrial visits
- ✧ Creates awareness on the opportunities open for higher studies
- ✧ Arranges coaching classes for GATE, GRE, TOEFL, IELTS, IAS, IES etc.

Placement Record

Details of Placed Students - 2022-23

Academic Year	Students Placed	Company	Count
2013-14	85%	SOPRA STERIA	10
2014-15	95%	CTS	109
2015-16	95%	TCS	243
2016-17	93%	EMBED UR	5
2017-18	95%	ZOHIO	18
2018-19	95%	VIRTUSA	43
2019-20	95%	MULTICORE WARE	1
2020-21	96%	ACCENTURE - PEGA	4
2021-22	95%	TVM INFOTECH	3
2022-23	841*	WEB DIGITAL MANTHRA	3
		INCEDO	1
		UNISYS	6
		KAAR	13
		SOCIETE GENERALE	6
		HEXWARE	11
		MICROCHIP	2
		RENAULT NISSAN	1
		ZIFO	3
		CARATLANE	6
		Avilon	8
		Total	841*

* till February 2023

Library Working Hours

8.30 a.m. to 8.30 p.m. (On all the working days)
8.30 a.m. to 10.00 p.m. (During the examination days)

Annexure – III



SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE

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Madagadipol, Puducherry - 605 107



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

LIST OF STUDENTS AND FACULTIES ENROLLED NPTEL COURSE

FOR PERIOD JULY – OCTOBER 2023



PERIOD	DEPARTMENT	No. of Faculties Registered	No. of Students Registered
JULY-OCT 2023	EEE	17	106
Total Enrollment		123	


NPTEL Coordinator


HOD/EEE

2, A, 1, 50



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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

List of faculty enrolled for NPTEL exam for period July – October 2023

S.No	Name	Designation	Name of the course registered	Duration of the Course
1	Dr.P.Jamuna	Professor	Design of Photovoltaic Systems	12 Weeks
2	Dr.D.Raja	Professor	Design of Photovoltaic Systems	12 Weeks
3	Dr.G.GaneshKumaran	Associate Professor	Research Methodology	8 Weeks
4	Dr.D.Sivaraj	Assistant Professor	Advance Power Electronics and Control	8 weeks
5	Mr.B.Parthiban	Assistant Professor	Design of Photovoltaic Systems	12 Weeks
6	Mr.S.John Powl	Assistant Professor	Research Methodology	8 Weeks
6	Mr.S.John Powl	Assistant Professor	Design of Photovoltaic Systems	12 Weeks
7	Mr.A.Janagiraman	Assistant Professor	Research Methodology	8 Weeks
8	Mr.K.Thangaraj	Assistant Professor	Research Methodology	8 Weeks
8	Mr.K.Thangaraj	Assistant Professor	Design of Electric Motors	12 Weeks
9	Mr.J.Muruganandam	Assistant Professor	Data Structures and Algorithm by Java	12 Weeks
10	Mr.C.Adrien Perianayagam	Assistant Professor	Research Methodology	8 Weeks
10	Mr.C.Adrien Perianayagam	Assistant Professor	Design of Photovoltaic Systems	12 Weeks
11	Mr.R.Ragupathy	Assistant Professor	Research Methodology	8 Weeks
12	Mr.I.Shivashankar	Assistant Professor	Data Structures and Algorithm by Java	12 Weeks
13	Ms. T.Abinaya saraswathy	Assistant Professor	Stress Management	4 Weeks
14	Mrs. Kavinilavu	Assistant Professor	Introduction to Semiconductors	12 Weeks
15	Mr. G.Rajavel	Assistant Professor	Introduction to Semiconductors	12 Weeks
16	Mr.R.Vignesh	Assistant Professor	Stress Management	4 Weeks
16	Mr.R.Vignesh	Assistant Professor	Awareness program on solar Pump	4 Weeks
17	Mr.Ellanthamizh	Assistant Professor	Electrical Production and switchgear	8 weeks

NPTEL Coordinator

HOD/EEE



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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

List of students enrolled for NPTEL exam for period July – October 2023

S.No	REGISTER NUMBER	NAME OF THE STUDENT	YEAR/SEM	NAME OF THE NPTEL COURSE REGISTERED	DURATION OF THE COURSE
1.	20EEL001	Ajayraj.K	IV YEAR / VII SEM	Power Plant Engineering	8 Weeks
2.	20EEL002	Akash SV	IV YEAR / VII SEM	Power Plant Engineering	8 Weeks
3.	20EEL003	Anbarasu A	IV YEAR / VII SEM	Power Plant Engineering	8 Weeks
4.	20EEL004	Godeshwaran K	IV YEAR / VII SEM	Power Plant Engineering	8 Weeks
5.	20EEL006	Hariharah G	IV YEAR / VII SEM	Software Testing	4 Weeks
6.	20EEL007	Kamidi Roopak Chandra	IV YEAR / VII SEM	Sustainable Power Generation Systems	12 Weeks
7.	20EEL009	Koushik S	IV YEAR / VII SEM	Technologies for Clean and Renewable Energy Production	8 Weeks
8.	20EEL010	Krishnakumar V	IV YEAR / VII SEM	Energy Conservation Technologies (Biomass and Coal)	4 Weeks
9.	20EEL012	Sanjai.R	IV YEAR / VII SEM	Product Design and Development	4 Weeks
10.	20EEL013	Sasidharan R	IV YEAR / VII SEM	Availability and Management of Groundwater Resources	12 Weeks
11.	20EEL015	Vigneshwar.M	IV YEAR / VII SEM	Availability and Management of Groundwater Resources	12 Weeks
12.	20EEL005	Gopinath K	IV YEAR / VII SEM	Software Testing	4 Weeks
13.	20UEE001	Aarthi.P	IV YEAR / VII SEM	Programming in Java	12 Weeks
14.	20UEE002	Abdullah E K	IV YEAR / VII SEM	Product Design and Development	4 Weeks
15.	20UEE003	Akash J	IV YEAR / VII SEM	Technologies for Clean and Renewable Energy Production	8 Weeks
16.	20UEE004	Akshaya M	IV YEAR / VII SEM	Fundamentals of Electrical Engineering	12 Weeks
17.	20UEE005	Anbarasan N	IV YEAR / VII SEM	.Programming in Java	12 Weeks
18.	20UEE006	Andal.J	IV YEAR / VII SEM	Sustainable Power Generation Systems	12 Weeks

19.	20UEE007	Anjana Berlin	IV YEAR / VII SEM	Introduction to Internet of Things	12 Weeks
20.	20UEE008	Anusha.C	IV YEAR / VII SEM	Availability and Management of Groundwater Resources	12 Weeks
21.	20UEE009	Arthi.V	IV YEAR / VII SEM	Energy Conversion Technologies (Biomass and Coal)	8 Weeks
22.	20UEE010	Arun Prasath S	IV YEAR / VII SEM	Availability and Management of Groundwater Resources	12 Weeks
23.	20UEE011	Badhma Priya M	IV YEAR / VII SEM	Product Design and Development	4 Weeks
24.	20UEE012	Balamugesh S	IV YEAR / VII SEM	Power Plant Engineering	8 Weeks
25.	20UEE013	Balamurugan.G	IV YEAR / VII SEM	Power Plant Engineering	8 Weeks
26.	20UEE014	Bharath E	IV YEAR / VII SEM	Power Plant Engineering	8 Weeks
27.	20UEE015	Bhuvanesh M	IV YEAR / VII SEM	Software Testing	4 Weeks
28.	20UEE017	Danush Balaji.S	IV YEAR / VII SEM	Power Plant Engineering	8 Weeks
29.	20UEE018	Deebiga.D	IV YEAR / VII SEM	Availability and Management of Groundwater Resources	12 Weeks
30.	20UEE019	Devapriya. D	IV YEAR / VII SEM	Software Testing	4 Weeks
31.	20UEE020	Devnath V	IV YEAR / VII SEM	Energy Conversion Technologies(Biomass and Coal)	8 Weeks
32.	20UEE021	Dhinakaran.N.D	IV YEAR / VII SEM	Power Plant Engineering	8 Weeks
33.	20UEE022	Giridharan.S.B	IV YEAR / VII SEM	Software Testing	4 Weeks
34.	20UEE025	Gopinath V	IV YEAR / VII SEM	Power Plant Engineering	8 Weeks
35.	20UEE026	Harishraman Ps	IV YEAR / VII SEM	Joy of Computing using Python	12 Weeks
36.	20UEE027	Jenifer. F	IV YEAR / VII SEM	Data Base Management System	8 Weeks
37.	20UEE029	Kalpana Devi.M	IV YEAR / VII SEM	Software Testing	4 Weeks
38.	20UEE031	Karthikeyan.P	IV YEAR / VII SEM	Design Innovation and Technology	12 Weeks
39.	20UEE032	Keerthana R.M	IV YEAR / VII SEM	Energy Conservation Technology	12 Weeks
40.	20UEE033	Keerthiga M	IV YEAR / VII SEM	Basic Electrical Circuits	12 Weeks
41.	20UEE034	Kirankumar S	IV YEAR / VII SEM	Product Design and Development	4 Weeks
42.	20UEE035	Kirubhanidhi T	IV YEAR / VII SEM	Programming in Java	12 Weeks
43.	20UEE036	Kokilavani S	IV YEAR / VII SEM	Cloud Computing	12 Weeks

44.	20UEE038	Latchiavasana.M	IV YEAR / VII SEM	Power Plant Engineering and Programming in Java	12 Weeks
45.	20UEE039	Maran Vikas Purushothaman	IV YEAR / VII SEM	Power Plant Engineering	8 Weeks
46.	20UEE040	Mohamed Thofique	IV YEAR / VII SEM	Principles of Management	12 Weeks
47.	20UEE043	Mugilan P	IV YEAR / VII SEM	Power Plant Engineering	8 Weeks
48.	20UEE045	Navanithiyen K	IV YEAR / VII SEM	Power Plant Engineering	8 Weeks
49.	20UEE048	Pavithran.S	IV YEAR / VII SEM	Availability and Management of Groundwater Resources	12 Weeks
50.	20UEE049	Poobathi.P	IV YEAR / VII SEM	Energy Conversion Technologies (Biomass and Coal)	8 Weeks
51.	20UEE051	Prem Kumar T	IV YEAR / VII SEM	Power Plant Engineering	8 Weeks
52.	20UEE052	Raghul.S	IV YEAR / VII SEM	Power Plant Engineering	8 Weeks
53.	20UEE053	Raghul. S	IV YEAR / VII SEM	Power Plant Engineering	8 Weeks
54.	20UEE056	Rozalan J	IV YEAR / VII SEM	Power Plant Engineering	8 Weeks
55.	20UEE057	Sakthi A	IV YEAR / VII SEM	Availability and Management of Groundwater Resources	12 Weeks
56.	20UEE059	Sanjay.K	IV YEAR / VII SEM	Power Plant Engineering	12 Weeks
57.	20UEE060	Savitha.M	IV YEAR / VII SEM	Design, Technology and Innovation	8 Weeks
58.	20UEE062	Sivabalan G	IV YEAR / VII SEM	Power Plant Engineering	8 Weeks
59.	20UEE063	Sivaguru.S	IV YEAR / VII SEM	Power Plant Engineering	8 Weeks
60.	20UEE064	Sivaprakash	IV YEAR / VII SEM	Cloud Computing	12 Weeks
61.	20UEE065	Srimanikandan	IV YEAR / VII SEM	Programming in Java	12 Weeks
62.	20UEE067	Srisanthosh B	IV YEAR / VII SEM	Programming in Java	12 Weeks
63.	20UEE068	Surendhar	IV YEAR / VII SEM	Product Design And Development	12 Weeks
64.	20UEE069	Suwathy M.S.	IV YEAR / VII SEM	Basic Electrical Circuits	12 Weeks
65.	20UEE070	Swetha M	IV YEAR / VII SEM	Availability and Management of Groundwater Resources	12 Weeks
66.	20UEE071	Tamilvanan A	IV YEAR / VII SEM	Cloud Computing	12 Weeks
67.	20UEE072	Tarshan Kumar V	IV YEAR / VII SEM	Availability and Management of Groundwater Resources	12 Weeks
68.	20UEE073	Thamizh Selvan.B	IV YEAR / VII SEM	Energy Conversion Technologies (Biomass and Coal)	12 Weeks

69.	20UEE074	Thirumoorthy T	IV YEAR / VII SEM	Power Plant Engineering, Cyber Security and Privacy	12 Weeks
70.	20UEE075	Vaitheeswaran N	IV YEAR / VII SEM	Programming in Java	12 Weeks
71.	20UEE076	Varun S	IV YEAR / VII SEM	Software Testing	4 Weeks
72.	20UEE077	Vighneshwar V	IV YEAR / VII SEM	Power Plant Engineering	8 Weeks
73.	20UEE078	Vijaya Boopathy.S	IV YEAR / VII SEM	Power Plant Engineering	8 Weeks
74.	20UEE080	Yogesh G	IV YEAR / VII SEM	Database Management System	8 Weeks
75.	21EEL001	Abilash P	III YEAR / V SEM	Electrical Machines-1	12 Weeks
76.	21EEL002	Gautham.G.D	III YEAR / V SEM	Electrical Machines-1	12 Weeks
77.	21EEL004	Pasupathi.S	III YEAR / V SEM	D&C, Electrical Machines-1	12 Weeks
78.	21EEL007	Sowmiya.J	IV YEAR / VII SEM	Power Plant Engineering	8 Weeks
79.	21EEL008	Visuvamourthy.G	III YEAR / V SEM	Electrical Machines-1	12 Weeks
80.	21UEE001	Abdul Hafreed H	IV YEAR / VII SEM	Power Plant Engineering	8 Weeks
81.	21UEE005	Dhivyashree	III YEAR / V SEM	Introduction to Internet of Things	12 Weeks
82.	21UEE010	Gladson Joshua Paulraj. I	III YEAR / V SEM	Integrated Waste Management For A Smart City	12 Weeks
83.	21UEE011	Gunapriya S	III YEAR / V SEM	Introduction to Internet of Things	12 Weeks
84.	21UEE012	Gurudevan L	III YEAR / V SEM	Integrated Waste Management For A Smart City	12 Weeks
85.	21UEE014	Jayakumar D	III YEAR / V SEM	Ethical Hacking	12 Weeks
86.	21UEE016	Jothikrishnan K	III YEAR / V SEM	Power Plant Engineering	8 Weeks
87.	21UEE018	Karthikeyan	III YEAR / V SEM	Cyber Security and Privacy	12 Weeks
88.	21UEE021	Kaveeya. k	III YEAR / V SEM	Internet of Things	12 Weeks
89.	21UEE022	Kaviarasan. M	III YEAR / V SEM	Integrated Waste Management For A Smart City	12 Weeks
90.	21UEE027	Lokeshwari D	III YEAR / V SEM	Cloud Computing	12 Weeks
91.	21UEE029	Mohan Lal S.	III YEAR / V SEM	Power Plant Engineering	8 Weeks
92.	21UEE030	Murugan S.	III YEAR / V SEM	Programming in Java	12 Weeks

93.	21UEE032	Nivedha.G	III YEAR / V SEM	Cloud Computing	12 Weeks
94.	21UEE035	Raghul R	III YEAR / V SEM	Integrated Waste Management for Smart City	12 Weeks
95.	21UEE036	Raghul T	III YEAR / V SEM	Integrated Waste Management for Smart City	12 Weeks
96.	21UEE038	Roshan Arvind.V	III YEAR / V SEM	Programming in Java	12 Weeks
97.	21UEE045	Sivaganesh.M	III YEAR / V SEM	Integrated Waste Management For A Smart City	12 Weeks
98.	21UEE046	Soniya V	III YEAR / V SEM	Cloud Computing	12 Weeks
99.	21UEE047	Sowmya S	III YEAR / V SEM	Availability and Management of Groundwater Resources	12 Weeks
100.	21UEE050	Srinivasan S	III YEAR / V SEM	Power Plant Engineering	8 Weeks
101.	21UEE051	Susangati Samantaray	III YEAR / V SEM	Cloud Computing	12 Weeks
102.	21UEE052	Swetha.S	III YEAR / V SEM	Cloud Computing	12 Weeks
103.	21UEE058	Vijayalakshmi.S	III YEAR / V SEM	Power Plant Engineering	8 Weeks
104.	21UEE059	Vinisha laxmi.G	III YEAR / V SEM	Power Plant Engineering	8 Weeks
105.	21UEE061	Yogarajan.R	III YEAR / V SEM	Programming in Java	12 Weeks
106.	21UEE062	Yogesh R	III YEAR / V SEM	Electrical Mechines-1	12 Weeks


NPTEL Coordinator


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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING LIST OF STUDENTS SUCCESSFULLY COMPLETED NPTEL COURSE FOR PERIOD JANUARY – APRIL 2023



PERIOD	DEPARTMENT	No. of Students Completed	No. of Faculties Completed
JAN-APRIL 2023	EEE	59	04
Total		63	


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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

*List of faculties completed the course successfully for the
period*

JANUARY – APRIL 2023

S.N O	Name	Course Name	Duration	Certificate Type
1	Dr.D.Raja	Smart Grid: Basics To Advanced Technologies	12 Weeks	Successfully completed
2	Dr.P.Jamuna	Smart Grid: Basics To Advanced Technologies	12 Weeks	Successfully completed
3	Mr.J.Muruganandham	Non-Conventional Energy Resources	12 Weeks	Successfully completed
4	Mr.I.Shivasankkar	Non-Conventional Energy Resources	12 Weeks	Successfully completed


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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

List of students completed the course successfully for the period

JANUARY – APRIL 2023

S.N O	Name	Course Name	Certificate Type
1	Akash	Manufacturing Automation	Successfully completed
2	Anjana Berlin	Cloud Computing	Successfully completed
3	Anjana V	Air Pollution and Control	Successfully completed
4	Aripasath	Air Pollution and Control	Successfully completed
5	Aruleeswaran P	Electronic Waste Management - Issues and Challenges	Elite
6	Asmabegam M	Air Pollution and Control	Elite
7	Badhma Priya M	Programming in Java	Successfully completed
8	Bhuvanesh	Air Pollution and Control	Elite
9	Bomidi Pujitha	Sensors and Actuators	Elite
10	Bomidi Pujitha	Basic Electronics	Successfully completed
11	Chris Delishia B	Programming in Java	Elite
13	Deepa Pragasan	Electronic Waste Management - Issues and Challenges	Elite
14	Deivaprasath A	Electronic Waste Management - Issues and Challenges	Elite
15	Delli Babu S	Software Testing	Elite
16	Devnath V	Cloud Computing	Successfully completed
17	Dinesh Babu A	Air Pollution and Control	Successfully completed
18	Dinesh Babu A	Electric Vehicles - Part 1	Successfully completed
19	Dinesh Kumar	Air Pollution and Control	Successfully completed
21	Gokul S	Non-Conventional Energy Resources	Successfully completed
22	Gokul S	Air Pollution and Control	Elite
23	Gokulraj	Manufacturing Automation	Successfully completed
24	Gopi Krishna S	Cloud Computing	Elite
25	Gunavathi	Air Pollution and Control	Successfully completed

26	Hariharan S	Enhancing Soft Skills and Personality	Elite+Silver
27	Hemamaalan	Electronic Waste Management - Issues and Challenges	Elite
28	Jeevajothi K	Electronic Waste Management - Issues and Challenges	Elite
29	Jenifer F	Programming in Java	Elite
30	Jensy Albiyaa	Air Pollution and Control	Elite
31	Karthik	Air Pollution and Control	Successfully completed
32	Karthik	Non-Conventional Energy Resources	Successfully completed
33	Karthikeyan P	Principles of Management	Successfully completed
34	Karthikeyan P	Design, Technology and Innovation	Successfully completed
35	Keerthiga M	Cloud Computing	Successfully completed
36	Khaja Moideen	Manufacturing Automation	Successfully completed
37	Loganathan S	Air Pollution and Control	Successfully completed
38	Logeshwaran	Software Testing	Successfully completed
39	M S Suwathy	Cloud Computing	Successfully completed
40	Mohamed Thofique	Principles of Management	Successfully completed
41	Mohamed Thofique	Design, Technology and Innovation	Successfully completed
42	Mohan Raj P	Electric Vehicles - Part 1	Successfully completed
43	Mohanraaji B	Cloud Computing	Elite
44	Muruganandham J	Non-Conventional Energy Resources	Successfully completed
45	Nidhikumar	Cloud Computing	Successfully completed
46	Nithishkumar K	Safety in Construction	Successfully completed
47	Nivethitha Sri P R	Air Pollution and Control	Successfully completed
48	Nivethitha Sri P R	Electric Vehicles - Part 1	Successfully completed
49	Pravin	Manufacturing Automation	Successfully completed
50	Priyadharsan S	Electric Vehicles - Part 1	Successfully completed
51	Ramanan K	Programming in Java	Elite
52	Ramanan K	Problem Solving through Programming in C	Successfully completed
53	S Sowmya	Smart Grid: Basics to Advanced Technologies	Successfully completed

54	Sanchuna	Air Pollution and Control	Successfully completed
55	Sandhiya V	Cloud Computing	Successfully completed
56	Sanjay M	Electronic Waste Management - Issues and Challenges	Elite+Silver
57	Sharan	Manufacturing Automation	Elite
59	Srinivasan S	Op-Amp Practical Applications: Design, Simulation and Implementation	Successfully completed
60	Sriram	Cloud Computing	Successfully completed
61	Vidhyalakshmi	Electronic Waste Management - Issues and Challenges	Elite
62	Vijayalakshmi B	Cloud Computing	Successfully completed
63	Yogarajan R	Op-Amp Practical Applications: Design, Simulation and Implementation	Successfully completed


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Annexure – IV

Professional and Open Elective Courses – II Year / IV Sem



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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

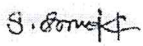
DETAILS OF PROFESSIONAL ELECTIVE COURSES

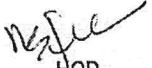
EVEN SEMESTER – MAR 2023 to AUG 2023

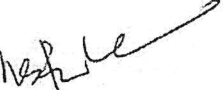
Batch : 2021 - 2025

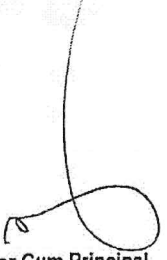
Year/Sem/Sec: II / IV / A

S.NO	Name of the Professional Elective Courses	Course Code	No of students opted
1	Energy Storage Technology	U20EEE405	70
Total no of students			70


Class Advisors
(Dr.S.Ganesh Kumaran)


HOD
(Dr.S.Anbumalar)


Dean Academics
(Dr.S.Anbumalar)


Director Cum Principal
(Dr.V.S.K.Venkatachalapathy)

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

DETAILS OF PROFESSIONAL ELECTIVE COURSE

Batch : 2021 - 2025

Year/Sem/Sec: II / IV / A

Name of the Professional Elective: Energy Storage Technology

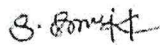
Subject Code: U20EEE405


S.NO	Enroll Number	Register Number	Name	Sec
1.	211101	21UEE001	ABDUL HAFREED H	A
2.	220193	21UEE002	ARCHANA R	A
3.	220200	21UEE004	DEVANATHAN A	A
4.	220209	21UEE005	DHIVYASHREE M	A
5.	210652	21UEE006	DINESH R S	A
6.	220191	21UEE007	ELAMPARUTHI K	A
7.	211853	21UEE008	GANDHAM NAGENDRA KARTHIK	A
8.	220026	21UEE009	GAYATHRY G	A
9.	211845	21UEE010	GLADSON JOSHUA PAULRAJ I	A
10.	220210	21UEE011	GUNAPRIYA S	A
11.	210913	21UEE012	GURUDEVAN L	A
12.	220197	21UEE013	HEMANATHAN D	A
13.	220118	21UEE014	JAYAKUMAR D	A
14.	210639	21UEE015	JEEVASUDHAN G	A
15.	210637	21UEE016	JOTHIKRISHNAN.K	A
16.	220128	21UEE017	KALAIYARASSI M	A
17.	211355	21UEE018	KARTHIKEYAN P	A
18.	210726	21UEE019	KARTHIKRAJA S.D	A
19.	220063	21UEE020	KASTHURI C	A
20.	220168	21UEE021	KAVEEYA K	A
21.	210867	21UEE022	KAVIARASAN M	A
22.	210695	21UEE023	KAVIYA S	A
23.	212011	21UEE024	KEERTHIRAJ. V	A
24.	211591	21UEE025	LOGESH.S	A
25.	211253	21UEE026	LOKESH N	A
26.	210778	21UEE027	LOKESHWARI D	A
27.	210650	21UEE028	MAHEYNDIRAN.S	A

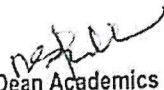
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28.	210688	21UEE029	MOHAN LAL S	A
29.	211897	21UEE030	MURUGAN.S	A
30.	211584	21UEE031	NIRMAL D	A
31.	211217	21UEE032	NIVEDHA G	A
32.	211400	21UEE033	PRANAV B	A
33.	220102	21UEE034	PRIYADHARSHINI A	A
34.	211769	21UEE035	RAGHUL R	A
35.	211148	21UEE036	RAHUL T	A
36.	220138	21UEE037	RAMANAKRISHNAN S	A
37.	211606	21UEE038	ROSHAN ARVIND. V	A
38.	211404	21UEE039	SABARIGIREESANE J	A
39.	210787	21UEE040	SABARISH R	A
40.	211291	21UEE041	SAI SIDDARTH T S	A
41.	211433	21UEE042	SANJAI S	A
42.	210680	21UEE043	SANTHANA KRISHNAN E	A
43.	220137	21UEE044	SATHISH FRANCIS XAVIER R	A
44.	211987	21UEE045	SIVAGANESH M	A
45.	220090	21UEE046	SONIYA V	A
46.	210702	21UEE047	SOWMYA.S	A
47.	220100	21UEE048	SREE VARDNI P	A
48.	211973	21UEE049	SRIDHASAN NAMBI	A
49.	210667	21UEE050	SRINIVASAN S	A
50.	211040	21UEE051	SUSANGATI SAMANTARAY	A
51.	211503	21UEE052	SWETHA S	A
52.	211970	21UEE053	THAMIZHARASAN. S	A
53.	220073	21UEE054	THILAK BASKARAN C M	A
54.	210813	21UEE055	TOM TIJO EDATTUKARAN	A
55.	211193	21UEE056	VENKATESHWARAN R	A
56.	211334	21UEE057	VIGNESHWARAN V	A
57.	220119	21UEE058	VIJAYALAKSHMI S	A
58.	220159	21UEE059	VINISHA LAXMI G	A
59.	210678	21UEE060	VISHWA M	A
60.	210716	21UEE061	YOGARAJAN R	A
61.	211975	21UEE062	YOGESH .R	A
62.	221057	21EEL001	ABILASH P	A
63.	220405	21EEL002	GAUTHAM G.D	A
64.	221360	21EEL003	NIJANTHAN S	A
65.	220382	21EEL004	PASUPATHI S	A

66.	220968	21EE1005	PERIASAMY R	A
67.	221959	21EE1006	SESHATHIRIN	A
68.	220644	21EE1007	SOWMIYA J	A
69.	221522	21EE1008	VISUVAMOORTHY G	A
70.	220407	21EE1009	YUVARAJ N	A


Class Advisors
 (Dr.S.Ganesh Kumaran)


HOD
 (Dr.S.Anbumalar)


Dean Academics
 (Dr.S.Anbumalar)


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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

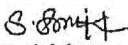
DETAILS OF OPEN ELECTIVE COURSES


EVEN SEMESTER – MAR 2023 to AUG 2023


Batch : 2021 - 2025

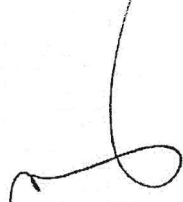
Year/Sem/Sec: II / IV / A

S.NO	Name of the Open Elective Courses	Course Code	No of students opted
1	Engineering Computation with MATLAB	U20ECO401	70
Total no of students			70


Class Advisors
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HOD
(Dr.S.Anbumalar)


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(Dr.V.S.K.Venkatalachalpathy)

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

DETAILS OF OPEN ELECTIVE COURSE

Batch : 2021 - 2025

Year/Sem/Sec: II / IV / A

Name of the Open Elective: Engineering Computation with MATLAB

Subject Code: U20ECO401

S.NO	Enroll Number	Register Number	Name	Sec
1.	211101	21UEE001	ABDUL HAFREED H	A
2.	220193	21UEE002	ARCHANA R	A
3.	220200	21UEE004	DEVANATHAN A	A
4.	220209	21UEE005	DHIVYASHREE M	A
5.	210652	21UEE006	DINESH R S	A
6.	220191	21UEE007	ELAMPARUTHI K	A
7.	211853	21UEE008	GANDHAM NAGENDRA KARTHIK	A
8.	220026	21UEE009	GAYATHRY G	A
9.	211845	21UEE010	GLADSON JOSHUA PAULRAJ I	A
10.	220210	21UEE011	GUNAPRIYA S	A
11.	210913	21UEE012	GURUDEVAN L	A
12.	220197	21UEE013	HEMANATHAN D	A
13.	220118	21UEE014	JAYAKUMAR D	A
14.	210639	21UEE015	JEEVASUDHAN G	A
15.	210637	21UEE016	JOTHIKRISHNAN.K	A
16.	220128	21UEE017	KALAIYARASSI M	A
17.	211355	21UEE018	KARTHIKEYAN P	A
18.	210726	21UEE019	KARTHIKRAJA S.D	A
19.	220063	21UEE020	KASTHURI C	A
20.	220168	21UEE021	KAVEEYA K	A
21.	210867	21UEE022	KAVIARASAN M	A
22.	210695	21UEE023	KAVIYA S	A
23.	212011	21UEE024	KEERTHIRAJ. V	A
24.	211591	21UEE025	LOGESH.S	A
25.	211253	21UEE026	LOKESH N	A
26.	210778	21UEE027	LOKESHWARI D	A

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27.	210650	21UEE028	MAHEYNDIRAN.S	✓	A
28.	210688	21UEE029	MOHAN LAL S	✓	A
29.	211897	21UEE030	MURUGAN.S	✓	A
30.	211584	21UEE031	NIRMAL D	✓	A
31.	211217	21UEE032	NIVEDHA G	✓	A
32.	211400	21UEE033	PRANAV B	✓	A
33.	220102	21UEE034	PRIYADHARSHINI A	✓	A
34.	211769	21UEE035	RAGHUL R	✓	A
35.	211148	21UEE036	RAHUL T	✓	A
36.	220138	21UEE037	RAMANAKRISHNAN S	✓	A
37.	211606	21UEE038	ROSHAN ARVIND. V	✓	A
38.	211404	21UEE039	SABARIGIREESANE J	✓	A
39.	210787	21UEE040	SABARISH R	✓	A
40.	211291	21UEE041	SAI SIDDARTH T S	✓	A
41.	211433	21UEE042	SANJAI S	✓	A
42.	210680	21UEE043	SANTHANA KRISHNAN E	✓	A
43.	220137	21UEE044	SATHISH FRANCIS XAVIER R	✓	A
44.	211987	21UEE045	SIVAGANESH M	✓	A
45.	220090	21UEE046	SONIYA V	✓	A
46.	210702	21UEE047	SOWMYA.S	✓	A
47.	220100	21UEE048	SREE VARDNI P	✓	A
48.	211973	21UEE049	SRIDHASAN NAMBI	✓	A
49.	210667	21UEE050	SRINIVASAN S	✓	A
50.	211040	21UEE051	SUSANGATI SAMANTARAY	✓	A
51.	211503	21UEE052	SWETHA S	✓	A
52.	211970	21UEE053	THAMIZHARASAN. S	✓	A
53.	220073	21UEE054	THILAK BASKARAN C M	✓	A
54.	210813	21UEE055	TOM TIJO EDATTUKARAN	✓	A
55.	211193	21UEE056	VENKATESHWARAN R	✓	A
56.	211334	21UEE057	VIGNESHWARAN V	✓	A
57.	220119	21UEE058	VUAYALAKSHMI S	✓	A
58.	220159	21UEE059	VINISHA LAXMI G	✓	A
59.	210678	21UEE060	VISHWA M	✓	A
60.	210716	21UEE061	YOGARAJAN R	✓	A
61.	211975	21UEE062	YOGESH .R	✓	A
62.	221057	21EEL001	ABILASH P	✓	A
63.	220405	21EEL002	GAUTHAM G.D	✓	A
64.	221360	21EEL003	NIJANTHAN S	✓	A

65.	220382	21EEL004	PASUPATHI S	✓	A
66.	220968	21EEL005	PERIASAMY R	✓	A
67.	221959	21EEL006	SESHATHRI N	✓	A
68.	220644	21EEL007	SOWMIYA J	✓	A
69.	221522	21EEL008	VISUVAMOORTHY G	✓	A
70.	220407	21EEL009	YUVARAJ N	✓	A

S. Ganesh Kumar
Class Advisors
(Dr.S.Ganesh Kumaran)

Dr. S. Anbumalar
HOD
(Dr.S.Anbumalar)

Dr. S. Anbumalar
Dean Academics
(Dr.S.Anbumalar)

Dr. V. S. K. Venkatachalapathy
Director Cum Principal
(Dr.V.S.K.Venkatachalapathy)

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Professional and Open Elective Courses – III Year / VI Sem



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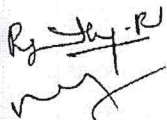
DETAILS OF PROFESSIONAL ELECTIVE COURSES

EVEN SEMESTER – MAR 2023 to AUG 2023

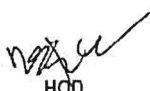
Batch : 2020 - 2024

Year/Sem/Sec: III / VI / A&B

S.NO	Name of the Professional Elective Courses	Course Code	No of students opted
1	Electric Drives	U20EEE613	43
2	Robotics and Automation	U20ECCM02	51
Total no of students			94



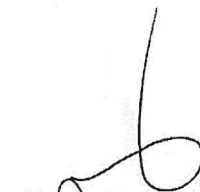
Class Advisors
(Mr.R.Ragupathy)
(Mr.K.Thangaraj)



HOD
(Dr.S.Anbumalar)



Dean Academics
(Dr.S.Anbumalar)



Director Cum Principal
(Dr.V.S.K.Venkatachalapathy)

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

DETAILS OF PROFESSIONAL ELECTIVE COURSE

Batch : 2020 - 2024

Year/Sem: III / VI

Name of the Professional Elective: Electric Drives

Subject Code: U20EEE613

S.NO	Enroll Number	Register Number	Name	Sec
1.	210914	20EEL001	AJAYRAJ K	A
2.	210621	20EEL002	AKASH S V	B
3.	211741	20EEL003	ANBARASU A	A
4.	220036	20EEL004	GODESHWARAN K	B
5.	210809	20EEL005	GOPINATH K	B
6.	211794	20EEL006	HARIHARAN G	B
7.	211740	20EEL007	KAMIDI ROOPAK CHANDRA	A
8.	210992	20EEL010	KRISHNAKUMAR V	B
9.	210746	20EEL012	SANJAI R	B
10.	210829	20EEL013	SASIDHARAN R	A
11.	211796	20EEL014	SRINEVAN V	A
12.	210953	20EEL015	VIGNESHWAR M	B
13.	20098168	20UEE001	AARTHI P	B
14.	210240	20UEE005	ANBARASAN N	A
15.	20098908	20UEE006	ANDAL J	A
16.	20098173	20UEE017	DANUSH BALAJI S	B
17.	20098835	20UEE021	DHINAKARAN N D	B
18.	210172	20UEE026	HARISHRAMAN P S	A
19.	20098496	20UEE030	KANDULURU YUGESH	B
20.	20098153	20UEE032	KEERTHANA R M	A
21.	20098916	20UEE036	KOKILAVANI S	B
22.	20098074	20UEE037	KRISHNA KUMAR R	A
23.	20098116	20UEE038	LATCHIAVASAN M	A
24.	20098106	20UEE039	MARAN VIKAS MARAN PURUSHOTHAMAN	A
25.	20098670	20UEE041	MOHAN RAJ P	B
26.	20098107	20UEE042	MOHANRAAJI B	A



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27.	210020	20UEE046	NIDHIKUMAR	B
28.	20098104	20UEE047	NITHISHKUMAR K	B
29.	20098874	20UEE048	PAVITHRAN S	B
30.	20098598	20UEE050	PRAVEENKUMAR S	B
31.	210170	20UEE051	PREM KUMAR T	B
32.	210560	20UEE052	RAGHUL S	A
33.	20098903	20UEE053	RAGHUL S	B
34.	210420	20UEE055	RAMANAN K	B
35.	20098166	20UEE061	SEDHURAM K	B
36.	210276	20UEE062	SIVABALAN G	A
37.	20098685	20UEE065	SRIMANIKANDAN S	A
38.	20098875	20UEE067	SRISANTHOSH B	B
39.	20098260	20UEE072	TARSHAN KUMAR V	A
40.	20098068	20UEE073	THAMIZH SELVAN B	A
41.	20098128	20UEE075	VAITHEESWARAN N	B
42.	20098674	20UEE078	VIJAYA BOOPATHY S	A
43.	20098431	20UEE080	YOGESH G	B

Ragupathy R
may

Class Advisors
(Mr.R.Ragupathy)
(Mr.K.Thangara)

Dr. S. Anbumalar
HOD
(Dr.S.Anbumalar)

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

DETAILS OF PROFESSIONAL ELECTIVE COURSE

Batch : 2020 - 2024

Year/Sem: III / VI

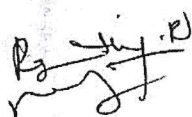
Name of the Professional Elective: Robotics and Automation

Subject Code: U20ECCM02

S.NO	Enroll Number	Register Number	Name	Sec
1.	211785	20EEL008	KIRUBAGARAN P	B
2.	211071	20EEL009	KOUSHIK S	A
3.	211788	20EEL011	SAMUELJABARAJ V	A
4.	20098404	20UEE002	ABDULLAH E K	B
5.	210386	20UEE003	AKASH J	A
6.	20098466	20UEE004	AKSHAYA M	A
7.	20098213	20UEE007	ANJANA BERLIN	B
8.	20098750	20UEE008	ANUSHA C	B
9.	210269	20UEE009	ARTHI V	B
10.	20098319	20UEE010	ARUNPRASATH S	B
11.	20098766	20UEE011	BADHMA PRIYA M	B
12.	210148	20UEE012	BALAMUGESH S	A
13.	210550	20UEE013	BALAMURUGAN G	A
14.	20098178	20UEE014	BHARATH E	A
15.	20098569	20UEE015	BHUVANESH M	B
16.	20098411	20UEE016	CHRIS DELISHIA B	A
17.	210428	20UEE018	DEEBIGA D	A
18.	20098679	20UEE019	DEVAPRIYA D	B
19.	20098091	20UEE020	DEVNATH V	A
20.	20098332	20UEE022	GIRIDHARAN S B	A
21.	20098059	20UEE024	GOPI KRISHNA S	A
22.	210383	20UEE025	GOPINATH V	A
23.	20098090	20UEE027	JENIFER F	A
24.	210140	20UEE028	KABILAN S	B
25.	20098098	20UEE029	KALPANADEV I M	B
26.	210210	20UEE031	KARTHIKEYAN P	B
27.	20098692	20UEE033	KEERTHIGA M	A

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28.	20098412	20UEE034	KIRANKUMAR S	B
29.	20098155	20UEE035	KIRUBHANIDHI T	A
30.	20098576	20UEE040	MOHAMED THOFIQUE	B
31.	20098222	20UEE043	MUGILAN P	B
32.	20098180	20UEE044	NARESH S	A
33.	210232	20UEE045	NAVANITHIYAN K	A
34.	210230	20UEE049	POOBATHI P	B
35.	20098211	20UEE054	RAJASRI S	B
36.	210283	20UEE056	ROZALAN J	B
37.	210011	20UEE057	SAKTHI A	A
38.	210399	20UEE058	SANDHIYA V	A
39.	20098350	20UEE059	SANJAY K	A
40.	210404	20UEE060	SAVITHA M	B
41.	210128	20UEE063	SIVAGURU S	A
42.	20098517	20UEE064	SIVAPRAKASH B	A
43.	20098064	20UEE066	SRIRAM M	B
44.	210304	20UEE068	SURENDHAR V	B
45.	20098511	20UEE069	SUWATHY M S	A
46.	210260	20UEE070	SWETHA M	A
47.	210301	20UEE071	TAMILVANAN A	B
48.	20098829	20UEE074	THIRUMOORTHY T	A
49.	20098360	20UEE076	VARUN S	B
50.	20098515	20UEE077	VIGNNESHWAR V	B
51.	210266	20UEE079	VIJAYALAKSHMI B	A



Class Advisors
(Mr.R.Ragupathy)
(Mr.K.Thangaraj)



HOD
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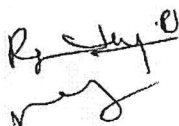
DETAILS OF OPEN ELECTIVE COURSES

EVEN SEMESTER – MAR 2023 to AUG 2023

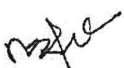
Batch : 2020 - 2024

Year/Sem/Sec: III / VI / A&B

S.NO	Name of the Open Elective Courses	Course Code	No of students opted
1	Electronic Product Design and Packaging	U20ECO603	44
2	Mobile App Development	U20ITO604	50
Total no of students			94



Class Advisors
(Mr.R.Ragupathy)
(Mr.K.Thangaraj)



HOD
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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

DETAILS OF OPEN ELECTIVE COURSE

Batch : 2020 - 2024

Year/Sem: III / VI

Name of the Open Elective: Electronic Product Design and Packaging

Subject Code: U20ECO603

S.NO	Enroll Number	Register Number	Name	Sec
1.	210914	20EEL001	AJAYRAJ K	A
2.	210621	20EEL002	AKASH S V	B
3.	211741	20EEL003	ANBARASU A	A
4.	220036	20EEL004	GODESHWARAN K	B
5.	210809	20EEL005	GOPINATH K	B
6.	211794	20EEL006	HARIHARAN G	B
7.	211740	20EEL007	KAMIDI ROOPAK CHANDRA	A
8.	210992	20EEL010	KRISHNAKUMAR V	B
9.	210746	20EEL012	SANJAI R	B
10.	210829	20EEL013	SASIDHARAN R	A
11.	210953	20EEL015	VIGNESHWAR M	B
12.	20098168	20UEE001	AARTHI P	B
13.	210240	20UEE005	ANBARASAN N	A
14.	20098908	20UEE006	ANDAL J	A
15.	20098213	20UEE007	ANJANA BERLIN	B
16.	20098569	20UEE015	BHUVANESH M	B
17.	20098173	20UEE017	DANUSH BALAJI S	B
18.	20098835	20UEE021	DHINAKARAN N D	B
19.	210172	20UEE026	HARISHRAMAN P S	A
20.	20098496	20UEE030	KANDULURU YUGESH	B
21.	20098153	20UEE032	KEERTHANA R M	A
22.	20098916	20UEE036	KOKILAVANI S	B
23.	20098074	20UEE037	KRISHNA KUMAR R	A
24.	20098116	20UEE038	LATCHIAVASAN M	A
25.	20098106	20UEE039	MARAN VIKAS MARAN PURUSHOTHAMAN	A
26.	20098670	20UEE041	MOHAN RAJ P	B
27.	20098107	20UEE042	MOHANRAAJI B	A
28.	210020	20UEE046	NIDHIKUMAR	B
29.	20098104	20UEE047	NITHISHKUMAR K	B
30.	20098874	20UEE048	PAVITHRAN S	B

31.	20098598	20UEE050	PRAVEENKUMAR S	B
32.	210170	20UEE051	PREM KUMAR T	B
33.	210560	20UEE052	RAGHUL S	A
34.	20098903	20UEE053	RAGHUL S	B
35.	210420	20UEE055	RAMANAN K	B
36.	210404	20UEE060	SAVITHA M	B
37.	20098166	20UEE061	SEDHURAM K	B
38.	210276	20UEE062	SIVABALAN G	A
39.	20098685	20UEE065	SRIMANIKANDAN S	A
40.	20098875	20UEE067	SRISANTHOSH B	B
41.	20098260	20UEE072	TARSHAN KUMAR V	A
42.	20098068	20UEE073	THAMIZH SELVAN B	A
43.	20098674	20UEE078	VIJAYA BOOPATHY S	A
44.	20098431	20UEE080	YOGESH G	B

Mr. R. Ragupathy
Mr. K. Thangaraj

Class Advisors
(Mr.R.Ragupathy)
(Mr.K.Thangaraj)

Dr. S. Anbumalar

HOP
(Dr.S.Anbumalar)

Dr. S. Anbumalar

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Dr. V. S. K. Venkatachalapathy

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

DETAILS OF OPEN ELECTIVE COURSE

Batch : 2020 - 2024

Year/Sem: III / VI

Name of the Open Elective: Mobile App Development

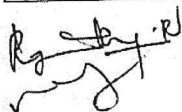
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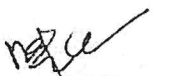
S.NO	Enroll Number	Register Number	Name	Sec
1.	211785	20EEL008	KIRUBAGARAN P	B
2.	211071	20EEL009	KOUSHIK S	A
3.	211788	20EEL011	SAMUELJABARAJ V	A
4.	211796	20EEL014	SRINEVAN V	A
5.	20098404	20UEE002	ABDULLAH E K	B
6.	210386	20UEE003	AKASH J	A
7.	20098466	20UEE004	AKSHAYA M	A
8.	20098750	20UEE008	ANUSHA C	B
9.	210269	20UEE009	ARTHI V	B
10.	20098319	20UEE010	ARUNPRASATH S	B
11.	20098766	20UEE011	BADHMA PRIYA M	B
12.	210148	20UEE012	BALAMUGESH S	A
13.	210550	20UEE013	BALAMURUGAN G	A
14.	20098178	20UEE014	BHARATH E	A
15.	20098411	20UEE016	CHRIS DELISHIA B	A
16.	210428	20UEE018	DEEBIGA D	A
17.	20098679	20UEE019	DEVAPRIYA D	B
18.	20098091	20UEE020	DEVNATH V	A
19.	20098332	20UEE022	GIRIDHARAN S B	A
20.	20098059	20UEE024	GOPI KRISHNA S	A
21.	210383	20UEE025	GOPINATH V	A
22.	20098090	20UEE027	JENIFER F	A
23.	210140	20UEE028	KABILAN S	B
24.	20098098	20UEE029	KALPANADEVI M	B
25.	210210	20UEE031	KARTHIKEYAN P	B
26.	20098692	20UEE033	KEERTHIGA M	A
27.	20098412	20UEE034	KIRANKUMAR S	B
28.	20098155	20UEE035	KIRUBHANIDHI T	A
29.	20098576	20UEE040	MOHAMED THOFIQUE	B
30.	20098222	20UEE043	MUGILAN P	B

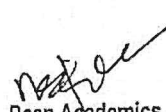
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31.	20098180	20UEE044	NARESH S	A
32.	210232	20UEE045	NAVANITHIYAN K	A
33.	210230	20UEE049	POOBATHI P	B
34.	20098211	20UEE054	RAJASRI S	B
35.	210283	20UEE056	ROZALAN J	B
36.	210011	20UEE057	SAKTHI A	A
37.	210399	20UEE058	SANDHIYA V	A
38.	20098350	20UEE059	SANJAY K	A
39.	210128	20UEE063	SIVAGURU S	A
40.	20098517	20UEE064	SIVAPRAKASH B	A
41.	20098064	20UEE066	SRIRAM M	B
42.	210304	20UEE068	SURENDHAR V	B
43.	20098511	20UEE069	SUWATHY M S	A
44.	210260	20UEE070	SWETHA M	A
45.	210301	20UEE071	TAMILVANAN A	B
46.	20098829	20UEE074	THIRUMOORTHY T	A
47.	20098128	20UEE075	VAITHEESWARAN N	B
48.	20098360	20UEE076	VARUN S	B
49.	20098515	20UEE077	VIGHNESHWAR V	B
50.	210266	20UEE079	VIJAYALAKSHMI B	A


Class Advisors
 (Mr.R.Ragupathy)
 (Mr.K.Thangaraj)


HOD
 (Dr.S.Anbumalar)


Dean Academics
 (Dr.S.Anbumalar)


Director Cum Principal
 (Dr.V.S.K.Venkatachalapathy)

Professional and Open Elective Courses – IV Year / VIII Sem



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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

DETAILS OF PROFESSIONAL ELECTIVE COURSES

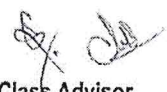
EVEN SEMESTER – December 2022 to APRIL 2023

Batch : 2019 -2023

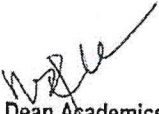
Year/Sem: IV / VIII

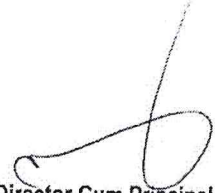
S.NO	Name of the Professional Elective Course V	Course Code	No of students opted
1	Power System Economics	U19EEE80	54
2	Soft Computing Techniques	U19EEE83	57
Total no of students			111

S.NO	Name of the Professional Elective Course VI	Course Code	No of students opted
1	EHV AC and DC transmission	U19EEE86	56
2	Robotics and Control	U19EEE89	55
Total no of students			111


Class Advisor
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Mr.C.Adrien Perianayagam)


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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

DETAILS OF PROFESSIONAL ELECTIVE COURSE V

Batch : 2019 -2023

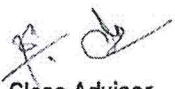
Year/Sem: IV / VIII

Name of the Professional Elective V: Power System Economics

Subject Code: U19EEE80

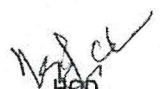
S.NO	E.R.No.	Reg.No.	Name	Sec
1	190280	19TE0052	ABIRAAMI. V ✓	A
2	191210	19TE0053	AKASH. S ✓	B
3	190595	19TE0054	AKSHAYA S ✓	B
4	190596	19TE0056	ANAND M V ✓	B
5	190980	19TE0061	ARAVINDA. C ✓	A
6	190974	19TE0062	ARAVINDHAN. A ✓	B
7	190999	19TE0065	ARULEESWARAN.P	B
8	190499	19TE0067	ARVIND.D ✓	B
9	190187	19TE0068	ASMA BEGAM. M	B
10	190019	19TE0072	DEEPA PRAGASAN. V ✓	A
11	190649	19TE0074	DEIVAPRASATH.A ✓	B
12	190420	19TE0075	DELLI BABU. S ✓	B
13	190318	19TE0076	DEVANATHAN. J. ✓	A
14	190122	19TE0077	DHILIPKUMAR. S ✓	A
15	190464	19TE0084	GOKULRAJ N ✓	B
16	190738	19TE0088	GUNAVATHI S ✓	B
17	190813	19TE0093	HEMALATHA. V ✓	B
18	190867	19TE0095	ISRAK HUSSAIN. S ✓	B
19	191047	19TE0099	JAI GANESH. J ✓	A
20	190010	19TE0100	JAWAHAR. G ✓	B
21	190655	19TE0104	KHAJA MOIDEEN S ✓	B
22	190489	19TE0105	KIRUTHIGA. C ✓	A
23	191135	19TE0106	KISHOR. G ✓	A
24	190691	19TE0109	LOGANATHAN S ✓	B
25	191167	19TE0114	NANDHINI.C ✓	A
26	190661	19TE0115	NARENDIRAN.A ✓	B

27	190146	19TE0118	NIVETHITHAASRI. P.R. ✓	B
28	190265	19TE0121	PALEPU SHIVA ✓	B
29	190039	19TE0122	PRAVIN. M ✓	A
30	190227	19TE0123	PRIYADHARSHAN. S ✓	B
31	190037	19TE0125	RAJARAJAN. D. ✓	A
32	190591	19TE0127	RASIN A ✓	B
33	190432	19TE0129	SAKTHI ESWARAN.S ✓	B
34	191019	19TE0130	SANCHUNA .S ✓	B
35	190891	19TE0131	SANJAY. M ✓	B
36	190018	19TE0132	SANJAY. M ✓	A
37	190026	19TE0133	SARAVANAKRISHNAN. V. ✓	B
38	190471	19TE0138	SIVARAMAN P. ✓	A
39	190083	19TE0139	SOWMYA S ✓	B
40	190460	19TE0140	SUNIL KUMAR. M ✓	B
41	190819	19TE0142	SURYAPRAKASH. P ✓	B
42	190196	19TE0143	THAMARAISELVAN. S ✓	B
43	190741	19TE0145	THAMIZHSELVAN V ✓	A
44	191174	19TE0146	THANYASRI.S.K ✓	A
45	190029	19TE0147	THIRUMANIRAJ. P ✓	A
46	190059	19TE0148	THIRUMARAN. D. ✓	A
47	191109	19TE0149	VASANTHAKUMAR. R ✓	B
48	190941	19TE0150	VETRIVEL.V ✓	A
49	190675	19TE0151	VIDHYALAKSHMI E ✓	B
50	190030	19TE0152	VIGNESH. K ✓	B
51	20098073	19TEL001	ATHMAJAN.S ✓	B
52	20098512	19TEL002	DHANUSH.N ✓	B
53	20098342	19TEL004	JAVITH AHAMED.J ✓	B
54	20098047	19TEL010	THAHAADHAMSHARIF.N ✓	B

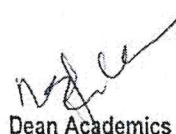


Class Advisor
(Dr.D.Sivaraj /

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HOD
(Dr.S.Anbumalar)



Dean Academics
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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

DETAILS OF PROFESSIONAL ELECTIVE COURSE V

Batch : 2019 -2023

Year/Sem: IV / VIII

Name of the Professional Elective V: Soft Computing Techniques

Subject Code: U19EEE83

S.NO	E.R.No.	Reg.No.	Name	Sec
1	190202	19TE0051	ABDUL RAZAAK. A ✓	A
2	190658	19TE0055	ALASHFAK M ✓	B
3	190786	19TE0057	ANJANA. V ✓	A
4	190035	19TE0058	ANNAMALAI. E ✓	A
5	190345	19TE0059	ARAVIND. G ✓	A
6	190963	19TE0063	ARIPRASATH. N ✓	A
7	190873	19TE0064	ARTHI. A ✓	A
8	190961	19TE0066	ARUNACHALAM.T ✓	A
9	190579	19TE0070	BHUVANESH I ✓	A
10	190736	19TE0071	BOMIDI PUJITHA ✓	B
11	190338	19TE0073	DEEPIKA. V ✓	A
12	190518	19TE0078	DHINESHE. S ✓	A
13	190848	19TE0079	DHIVYADARSHNI. V ✓	A
14	190652	19TE0080	DILEEP PRASATH K ✓	B
15	190956	19TE0081	DINESH BABU.A ✓	A
16	190531	19TE0082	DINESH KUMAR. M ✓	B
17	190886	19TE0083	GOGULARAJ.V ✓	A
18	190009	19TE0085	GOKUL S ✓	A
19	190225	19TE0087	GUGAN. M ✓	A
20	190567	19TE0089	HARIHARAN S ✓	B
21	190545	19TE0090	HARI PRASAD K ✓	A
22	190164	19TE0091	HARISH. A ✓	A
23	190513	19TE0092	HEMALATHA A ✓	A
24	190123	19TE0094	HEMAMAALAN. C ✓	B
25	190014	19TE0096	IYYAPPAN. M ✓	A
26	190215	19TE0097	JAGADHEESAN. P ✓	B
27	190982	19TE0098	JAGAN.P ✓	A

28	190229	19TE0101	JEEVAJOTHI. K	B
29	191033	19TE0102	JENSY ALBIYA. A.J.	B
30	190116	19TE0103	KARTHIK. R	B
31	191029	19TE0107	KISHORE.D	B
32	190834	19TE0108	KUMARAN. S	A
33	190317	19TE0110	LOGESHWARAN. V	A
34	191190	19TE0111	LOKESWARI. G	B
35	190195	19TE0112	MESHACH. E	B
36	190042	19TE0113	MOHAMED FAWAZ.Y	A
37	190007	19TE0117	NIVETHITHA. R	A
38	190267	19TE0119	OUMAR GOURU. O	A
39	191118	19TE0124	PRIYENGA.E	A
40	190174	19TE0126	RAJMUGILAN. R	B
41	190664	19TE0128	RATHINASABAPATHY A	A
42	190915	19TE0134	SATHYANARAYANAN.V	A
43	190453	19TE0135	SHARAN. S	B
44	190459	19TE0136	SINDHUJA. K	A
45	190619	19TE0137	SIVABALAN S	B
46	190581	19TE0141	SURENDAR.G	A
47	190909	19TE0144	THAMIZHSELVAN. G	B
48	190919	19TE0153	VIGNESHWARAN.V	A
49	190072	19TE0154	YOGESH. A	B
50	190598	19TE0155	YOGESH. R	A
51	190575	19TE0156	YOGESHWAR S	A
52	20098405	19TEL003	GANESAMURTHY. S	A
53	20098048	19TEL005	MUTHUKUMARAN.R	A
54	20098053	19TEL006	NANTHAKUMAR.B	A
55	20098339	19TEL007	NAYAKAN.S.T	A
56	20098284	19TEL008	SAMEER.B	A
57	20098167	19TEL009	SETHURAM.S	B

Class Advisor
(Dr.D.Sivaraj /
Mr.C.Adrien Perianayagam)

(Dr.S.Anbumalar)

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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

DETAILS OF PROFESSIONAL ELECTIVE COURSE VI

Batch : 2019 -2023

Year/Sem: IV / VIII

Name of the Professional Elective VI: Robotics and Control

Subject Code: U19EEE89

S.NO	E.R.No.	Reg.No.	Name	Sec
1	190280	19TE0052	ABIRAAMI. V	A
2	191210	19TE0053	AKASH. S	B
3	190658	19TE0055	ALASHFAK M	B
4	190596	19TE0056	ANAND M V	B
5	190786	19TE0057	ANJANA. V	A
6	190035	19TE0058	ANNAMALAI. E	A
7	190980	19TE0061	ARAVINDA. C	A
8	190974	19TE0062	ARAVINDHAN. A	B
9	190963	19TE0063	ARIPRASATH. N	A
10	190961	19TE0066	ARUNACHALAM.T.	A
11	190579	19TE0070	BHUVANESH I	A
12	190736	19TE0071	BOMIDI PUJITHA	B
13	190318	19TE0076	DEVANATHAN. J	A
14	190122	19TE0077	DHILIPKUMAR. S	A
15	190848	19TE0079	DHIVYADARSHNI. V	A
16	190652	19TE0080	DILEEP PRASATH K	B
17	190956	19TE0081	DINESH BABU.A	A
18	190886	19TE0083	GOGULARAJ.V	A
19	190464	19TE0084	GOKULRAJ N	B
20	190123	19TE0094	HEMAMAALAN. C	B
21	190867	19TE0095	ISRAK HUSSAIN. S	B
22	190014	19TE0096	IYYAPPAN. M	A
23	190215	19TE0097	JAGADHEESAN. P	B
24	190982	19TE0098	JAGAN.P	A
25	191047	19TE0099	JAI GANESH. J	A
26	190010	19TE0100	JAWAHAR. G	B

27	191033	19TE0102	JENSY ALBIYA. A.J.	B
28	190655	19TE0104	KHAJA MOIDEEN S	B
29	190834	19TE0108	KUMARAN. S	A
30	190691	19TE0109	LOGANATHAN S	B
31	190317	19TE0110	LOGESHWARAN. V	A
32	191190	19TE0111	LOKESWARI. G	B
33	190195	19TE0112	MESHACH. E	B
34	190042	19TE0113	MOHAMED FAWAZ.Y	A
35	190661	19TE0115	NARENDIRAN.A	B
36	190267	19TE0119	OUMAR GOURU. O	A
37	190039	19TE0122	PRAVIN. M	A
38	190227	19TE0123	PRIYADHARSHAN. S	B
39	191118	19TE0124	PRIYENGA.E	A
40	190037	19TE0125	RAJARAJAN. D	A
41	190591	19TE0127	RASIN A	B
42	190915	19TE0134	SATHYANARAYANAN.V	A
43	190459	19TE0136	SINDHUJA. K	A
44	190083	19TE0139	SOWMYA S	B
45	190460	19TE0140	SUNIL KUMAR. M	B
46	190581	19TE0141	SURENDAR.G	A
47	190029	19TE0147	THIRUMANIRAJ. P	A
48	191109	19TE0149	VASANTHAKUMAR. R	B
49	190941	19TE0150	VETRIVEL.V	A
50	190030	19TE0152	VIGNESH. K	B
51	190919	19TE0153	VIGNESHWARAN.V	A
52	20098048	19TEL005	MUTHUKUMARAN.R	A
53	20098284	19TEL008	SAMEER.B	A
54	20098167	19TEL009	SETHURAM.S	B
55	20098047	19TEL010	THAHAADHAMSHARIF.N	B

Class Advisor
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DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

DETAILS OF PROFESSIONAL ELECTIVE COURSE VI

Batch : 2019 -2023

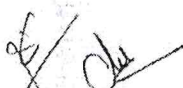
Year/Sem: IV / VIII

Name of the Professional Elective VI: EHV AC and DC transmission

Subject Code: U19EEE86

S.NO	E.R.No.	Reg.No.	Name	Sec
1	190202	19TE0051	ABDUL RAZAAK. A	A
2	190595	19TE0054	AKSHAYA S	B
3	190345	19TE0059	ARAVIND. G	A
4	190873	19TE0064	ARTHI. A	A
5	190999	19TE0065	ARULEESWARAN.P	B
6	190499	19TE0067	ARVIND.D	B
7	190187	19TE0068	ASMA BEGAM. M	B
8	190019	19TE0072	DEEPA PRAGASAN. V	A
9	190338	19TE0073	DEEPIKA. V	A
10	190649	19TE0074	DEIVAPRASATH.A	B
11	190420	19TE0075	DELLI BABU. S	B
12	190518	19TE0078	DHINESHE. S	A
13	190531	19TE0082	DINESH KUMAR. M	B
14	190009	19TE0085	GOKUL S	A
15	190225	19TE0087	GUGAN. M	A
16	190738	19TE0088	GUNAVATHI S	B
17	190567	19TE0089	HARIHARAN S	B
18	190545	19TE0090	HARI PRASAD K	A
19	190164	19TE0091	HARISH. A	A
20	190513	19TE0092	HEMALATHA A	A
21	190813	19TE0093	HEMALATHA. V	B
22	190229	19TE0101	JEEVAJOTHI. K	B
23	190116	19TE0103	KARTHIK. R	B
24	190489	19TE0105	KIRUTHIGA. C	A
25	191135	19TE0106	KISHOR. G	A
26	191029	19TE0107	KISHORE.D	B
27	191167	19TE0114	NANDHINI.C	A
28	190007	19TE0117	NIVETHITHA. R	A
29	190146	19TE0118	NIVETHITHAASRI. P.R.	B
30	190265	19TE0121	PALEPU SHIVA	B
31	190174	19TE0126	RAJMUGILAN. R	B
32	190664	19TE0128	RATHINASABAPATHY A	A
33	190432	19TE0129	SAKTHI ESWARAN.S	B
34	191019	19TE0130	SANCHUNA .S	B

35	190891	19TE0131	SANJAY. M	B
36	190018	19TE0132	SANJAY. M	A
37	190026	19TE0133	SARAVANAKRISHNAN. V	B
38	190453	19TE0135	SHARAN. S	B
39	190619	19TE0137	SIVABALAN S	B
40	190471	19TE0138	SIVARAMAN P	A
41	190819	19TE0142	SURYAPRAKASH. P.	B
42	190196	19TE0143	THAMARAISELVAN. S	B
43	190909	19TE0144	THAMIZHSELVAN. G	B
44	190741	19TE0145	THAMIZHSELVAN V	A
45	191174	19TE0146	THANYASRI.S.K	A
46	190059	19TE0148	THIRUMARAN. D	A
47	190675	19TE0151	VIDHYALAKSHMI E	B
48	190072	19TE0154	YOGESH. A	B
49	190598	19TE0155	YOGESH. R	A
50	190575	19TE0156	YOGESHWAR S	A
51	20098073	19TEL001	ATHMAJAN.S	B
52	20098512	19TEL002	DHANUSH.N	B
53	20098405	19TEL003	GANESAMURTHY. S	A
54	20098342	19TEL004	JAVITH AHAMED.J	B
55	20098053	19TEL006	NANTHAKUMAR.B	A
56	20098339	19TEL007	NAYAKAN.S.T	A

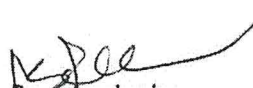


Class Advisor
(Dr.D.Sivaraj /

Mr.C.Adrien Perianayagam)



HOD
(Dr.S.Anbumalar)



Dean Academics
(Dr.S.Anbumalar)



Director Cum Principal
(Dr.V.S.K.Venkatachalapathy)

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Annexure – V



SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE

(An Autonomous Institution)
(Approved by AICTE, New Delhi and Affiliated to Pondicherry University)
(Accredited by NAAC with 'A' Grade and Accredited by NBA-AICTE, New Delhi)
Madagadipet, Puducherry



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

TRAINING & CERTIFICATION COMPLETED REPORT

Sl. No	Batch	Certification Course Name	Year/Sem	No of Students Completed	Training Completed Yes/ No	Internal Exam Yes/ No	Global Examination Yes/ No
1.	2019-2023	AutoCAD for Electrical / Solar and Smart Energy System with IoT	II / III	104	Yes	No	Yes
2.	2019-2023	Java Programming	II / IV	111	Yes	Yes	Yes
3.	2019-2023	Python Programming	III / V	111	Yes	Yes	Yes
4.	2019-2023	Artificial Intelligence and Edge Computing	III/ VI	111	Yes	Yes	Yes
5.	2020-2024	AutoCAD for Electrical	I / I	80	Yes	-	Yes
6.	2020-2024	Python Programming	I / II	94	Yes	-	Yes
7.	2020-2024	Solar and Smart Energy System with IoT	II / III	94	Yes	Yes	No
8.	2020-2024	Java Programming	II / IV	94	Yes	Yes	No
9.	2020-2024	Embedded System with IoT	III / V	94	Due to Placement classes Certification course not yet conducted		
10.	2020-2024	Artificial Intelligence and Edge Computing	III/ VI	94			
11.	2021-2025	AutoCAD for Electrical	I / I	62	Yes	Yes	No
12.	2021-2025	Python Programming	I / II	62	Yes	Yes	No
13.	2021-2025	Solar and Smart Energy System with IoT	II / III	70	Yes	Yes	No
14.	2021-2025	Java Programming	II / IV	70	Yes	Yes	No
15.	2022-2026	AutoCAD for Electrical	I / I	102	Yes	Yes	No
16.	2022-2026	Python Programming	I / II	102	Yes	Yes	No

Coordinator

HOD/EEE



SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE

(An Autonomous Institution)

(Approved by AICTE, New Delhi and Affiliated to Pondicherry University)
(Accredited by NAAC with 'A' Grade and Accredited by NBA-AICTE, New Delhi)
Madagadipet, Pudukcherry



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING TRAINING & CERTIFICATION PLANNED FOR R2023 REGULATION

Sl. No	Semester	Certification Course Name
1.	I	AutoCAD for Electrical
2.	II	Solar and Smart Energy System with IoT
3.	III	Python Programming
4.	IV	Java Programming
5.	V	Embedded System with IoT
6.	VI	Artificial Intelligence and Edge Computing


Coordinator


HOD/EEE

Annexure – VI



SRI MANAKULA VINAYAGAR
ENGINEERING COLLEGE
(An Autonomous Institution)

Puducherry

B.TECH. ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC REGULATIONS 2023
(R-2023)

CURRICULUM AND SYLLABI

Volume – I



COLLEGE VISION AND MISSION

Vision

To be globally recognized for excellence in quality education, innovation and research for the transformation of lives to serve the society.

Mission

M1: Quality Education:

To provide comprehensive academic system that amalgamates the cutting edge technologies with best practices.

M2: Research and Innovation:

To foster value based research and innovation in collaboration with industries and institutions globally for creating intellectuals with new avenues.

M3: Employability and Entrepreneurship:

To inculcate the employability and entrepreneurial skills through value and skill based training.

M4: Ethical Values:

To instill deep sense of human values by blending societal righteousness with academic professionalism for the growth of society.

DEPARTMENT VISION AND MISSION

Vision

To promote proficiency in the field of Electrical and Electronics Engineering by creating a stimulating environment for research, innovation and entrepreneurship

Mission

M1: Quality Education:

To impart high quality technical education with problem solving capabilities by innovative pedagogy in emerging technologies.

M2: Industrial and Societal Needs:

To cater the dynamic needs of the industry and society by strengthening industry-institute interaction.

M3: Research and Innovation:

To nurture the spirit of research attitude by carrying out innovative technologies pragmatically.

M4: Placement and Entrepreneurship:

To inculcate the professionalism in career by advancing synergetic skills to compete in the corporate world.



PROGRAMME OUTCOMES (POs)

PO1: Engineering knowledge:

Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2: Problem analysis:

Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3: Design/development of solutions:

Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4: Conduct investigations of complex problems:

Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of the information to provide valid conclusions.

PO5: Modern tool usage:

Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6: The engineer and society:

Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7: Environment and sustainability:

Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of and need for sustainable development.

PO8: Ethics:

Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9: Individual and team work:

Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10: Communication:

Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

PO11: Project management and finance:

Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12: Life-long learning:

Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAMME EDUCATIONAL OBJECTIVES (PEOs)

PEO1: Professional Knowledge:

To possess strong educational foundation in Electrical and Electronics Engineering to attain successful career with professional responsibility

PEO2: Innovative Skills:

To enrich the skills to design and develop innovative solutions for engineering problems in a multidisciplinary environment

PEO3: Ethics:

To actively embrace leadership qualities for achieving professional goals with ethical values

PEO4: Adaptability:

To enhance intellectual competency along with technical skills by adapting to the current trends through eternal learning.

PROGRAMME SPECIFIC OUTCOMES (PSOs)

PSO1: Core Proficiency:

Utilize the engineering core knowledge to identify, formulate, design, and investigate the complex engineering problems of Power Electronics, Electrical Machines and Power Systems.

PSO2: Cutting Edge Technologies:

Explore the new cutting edge technologies in the field of Electric Vehicle, Automation, Artificial Intelligence, Robotics and Renewable Energy to compete in global market

PSO3: Design and Evolution:

Capability to comprehend the technological advancements with the usage of modern design tools for analysing and designing systems to confront the rapid pace of industrial innovations.

STRUCTURE FOR UNDERGRADUATE ENGINEERING PROGRAMME

Sl. No	Course Category	Breakdown of Credits
1	Humanities and Social Sciences including Management courses (HS)	15
2	Basic Science Courses (BS)	20
3	Engineering Science including workshop, drawing, basics of electrical / mechanical / computer etc. (ES)	24
4	Professional Core Courses (PC)	71
5	Professional Electives Courses (PE)	18
6	Open Electives Courses (OE)	09
7	Project Work and Internship (PA)	13
8	Ability Enhancement Courses (AEC*)	-
9	Mandatory Courses (MC*)	-
Total		170

SCHEME OF CREDIT DISTRIBUTION – SUMMARY

Sl. No	AICTE Suggested Course Category	Credits per Semester								Total Credits
		I	II	III	IV	V	VI	VII	VIII	
1	Humanities and Social Science (HS)	3	5	1	1	2	-	-	3	15
2	Basic Sciences(BS)	7	4	5	4	-	-	-	-	20
3	Engineering Sciences (ES)	4	8	4	4	4	-	-	-	24
4	Professional Core (PC)	8	4	13	11	8	15	12	-	71
5	Professional Electives (PE)	-	-	-	3	3	3	3	6	18
6	Open Electives (OE)	-	-	-	-	3	3	3	-	09
7	Project Work (PA)	-	-	-	-	1	1	2	8	12
8	Internship (PA)	-	-	-	-	-	-	1	-	01
9	Ability Enhancement Courses (AEC*)	-	-	-	-	-	-	-	-	-
10	Mandatory courses (MC*)	-	-	-	-	-	-	-	-	-
Total		22	21	23	23	21	22	21	17	170

* AEC and MC are not included for CGPA calculation

HONOURS DEGREE PROGRAMME:

The student is permitted to opt for earning an honours degree in the same discipline of engineering in addition to the degree in his/her own discipline. To earn an honours degree the student is required to earn an additional 18 - 20 credits (over and above the total 170 credits prescribed in the curriculum) starting from fourth semester onwards by completing 5 additional courses offered in respective semesters. A student is eligible to exercise this option if he/she has passed all the courses offered upto third semester in the first attempt itself and has earned a CGPA / GPA* (*for lateral entry) of not less than 8.0. The prescribed courses offered for Honours degree are given in Annexure - IV

SEMESTER – I										
Sl. No.	Course Code	Course Title	Category	Periods			Credits	Max. Marks		
				L	T	P		CAM	ESM	Total
Theory										
1	U23MATC01	Engineering Mathematics – I	BS	3	1	0	4	25	75	100
2	U23BSTC01	Physical Science for Engineers	BS	3	0	0	3	25	75	100
3	U23ESTC02	Engineering Mechanics	ES	2	1	0	3	25	75	100
4	U23EET101	Electrical Engineering	PC	3	0	0	3	25	75	100
5	U23EET102	Electronics – I	PC	3	0	0	3	25	75	100
Theory cum Practical										
6	U23ENBC01	Communicative English – I	HS	2	0	2	3	50	50	100
Practical										
7	U23ESPC02	Design Thinking and IDEA Lab	ES	0	0	2	1	50	50	100
8	U23EEP101	Electrical Engineering Laboratory	PC	0	0	2	1	50	50	100
9	U23EEP102	Electronics – I Laboratory	PC	0	0	2	1	50	50	100
Ability Enhancement Course										
10	U23EEC1XX	Certification Course – I**	AEC	0	0	4	-	100	-	100
Mandatory Course										
11	U23EEM101	Induction Programme (UHV- I)	MC	2 Weeks			-	-	-	-
							22	425	575	1000

SEMESTER – II										
Sl. No.	Course Code	Course Title	Category	Periods			Credits	Max. Marks		
				L	T	P		CAM	ESM	Total
Theory										
1	U23MATC02	Engineering Mathematics – II	BS	3	1	0	4	25	75	100
2	U23CSTC01	Programming in C	ES	3	0	0	3	25	75	100
3	U23ESTC01	Basics of Civil and Mechanical Engineering	ES	3	0	0	3	25	75	100
4	U23EET203	Electronics – II	PC	3	0	0	3	25	75	100
5	U23HSTC01	Universal Human Values – II	HS	2	0	0	2	25	75	100
Theory cum Practical										
6	U23ENBC02	Communicative English – II	HS	2	0	2	3	50	50	100
Practical										
7	U23ESPC03	Engineering Graphics using AutoCAD	ES	0	0	2	1	50	50	100
8	U23CSPC01	Programming in C Laboratory	ES	0	0	2	1	50	50	100
9	U23EEP203	Electronics – II Laboratory	PC	0	0	2	1	50	50	100
Ability Enhancement Course										
10	U23EEC2XX	Certification Course – II **	AEC	0	0	4	-	100	-	100
Mandatory Course										
11	U23EEM202	Sports Yoga and NSS	MC	0	0	2	-	100	-	100
							21	525	575	1100

* Professional Electives are to be selected from the list given in Annexure I

\$ Open electives are to be selected from the list given in Annexure II

** Certification courses are to be selected from the list given in Annexure III (A)

* Skill Enhancement Courses (I and II) are to be selected from the list given in Annexure III (B)

SEMESTER – III										
Sl. No.	Course Code	Course Title	Category	Periods			Credits	Max. Marks		
				L	T	P		CAM	ESM	Total
Theory										
1	U23MATC03	Probability and Statistics	BS	3	1	0	4	25	75	100
2	U23ADTC01	Programming in Python	ES	3	0	0	3	25	75	100
3	U23EET304	Electromagnetic Theory	PC	2	1	0	3	25	75	100
4	U23EET305	Electrical Machines – I	PC	3	0	0	3	25	75	100
5	U23EET306	Electronics – III	PC	3	0	0	3	25	75	100
Theory cum Practical										
6	U23EEB301	Electric Circuit Analysis	PC	2	0	2	3	50	50	100
Practical										
7	U23ENPC01	General Proficiency – I	HS	0	0	2	1	50	50	100
8	U23MAPC01	Engineering Mathematics Laboratory	BS	0	0	2	1	50	50	100
9	U23ADPC01	Programming in Python Laboratory	ES	0	0	2	1	50	50	100
10	U23EEP304	Electrical Machines – I Laboratory	PC	0	0	2	1	50	50	100
Ability Enhancement Course										
11	U23EEC3XX	Certification Course – III **	AEC	0	0	4	-	100	-	100
12	U23EES301	Skill Enhancement Course – I*	AEC	0	0	2	-	100	-	100
Mandatory Course										
13	U23EEM303	Climate Change	MC	2	0	0	-	100	-	100
							23	675	625	1300

SEMESTER – IV										
Sl. No	Course Code	Course Title	Category	Periods			Credits	Max. Marks		
				L	T	P		CAM	ESM	Total
Theory										
1	U23MATC04	Numerical Methods and Optimization	BS	3	1	0	4	25	75	100
2	U23CSTC03	Data Structures	ES	3	0	0	3	25	75	100
3	U23EET407	Electrical Machines – II	PC	3	0	0	3	25	75	100
4	U23EET408	Transmission and Distribution	PC	2	1	0	3	25	75	100
5	U23EEE4XX	Professional Elective - I [#]	PE	3	0	0	3	25	75	100
Theory cum Practical										
6	U23EEB402	Control Systems	PC	2	0	2	3	50	50	100
Practical										
7	U23ENPC02	General Proficiency – II	HS	0	0	2	1	50	50	100
8	U23CSPC02	Data Structures Laboratory	ES	0	0	2	1	50	50	100
9	U23EEP405	Electrical Machines - II Laboratory	PC	0	0	2	1	50	50	100
10	U23EEP406	Electronics - III Laboratory	PC	0	0	2	1	50	50	100
Ability Enhancement Course										
11	U23EEC4XX	Certification Course – IV **	AEC	0	0	4	-	100	-	100
12	U23EES402	Skill Enhancement Course – II*	AEC	0	0	2	-	100	-	100
Mandatory Course										
13	U23EEM404	Right to Information and Good Governance	MC	2	0	0	-	100	-	100
							23	675	625	1300

SEMESTER – V										
Sl. No.	Course Code	Course Title	Category	Periods			Credits	Max. Marks		
				L	T	P		CAM	ESM	Total
Theory										
1	U23HSTC02	Research Methodology	HS	2	0	0	2	25	75	100
2	U23ITTC03	Programming in Java	ES	3	0	0	3	25	75	100
3	U23EET509	Electrical Measurements and Instrumentation	PC	3	0	0	3	25	75	100
4	U23EET510	Microprocessor and Microcontroller	PC	3	0	0	3	25	75	100
5	U23EEE5XX	Professional Elective - II [#]	PE	3	0	0	3	25	75	100
6	U23XXO5XX	Open Elective - I ^{\$}	OE	3	0	0	3	25	75	100
Practical										
7	U23ITPC03	Programming in Java Laboratory	ES	0	0	2	1	50	50	100
8	U23EEP507	Electrical Measurements and Instrumentation Laboratory	PC	0	0	2	1	50	50	100
9	U23EEP508	Microprocessor and Microcontroller Laboratory	PC	0	0	2	1	50	50	100
Project Work										
10	U23EEW501	Micro Project	PA	0	0	2	1	100	-	100
Ability Enhancement Course										
11	U23EEC5XX	Certification Course – V ^{**}	AEC	0	0	4	-	100	-	100
Mandatory Course										
12	U23EEM505	Essence of Indian Traditional Knowledge	MC	2	0	0	-	100	-	100
							21	600	600	1200

SEMESTER – VI										
Sl. No	Course Code	Course Title	Category	Periods			Credits	Max. Marks		
				L	T	P		CAM	ESM	Total
Theory										
1	U23EET611	Power System Analysis	PC	2	1	0	3	25	75	100
2	U23EET612	Embedded System	PC	3	0	0	3	25	75	100
3	U23EET613	Power Electronics	PC	3	0	0	3	25	75	100
4	U23EEE6XX	Professional Elective - III [#]	PE	3	0	0	3	25	75	100
5	U23XXO6XX	Open Elective – II ^{\$}	OE	3	0	0	3	25	75	100
Theory cum Practical										
6	U23EEB603	Electrical Machine Design	PC	2	0	2	3	50	50	100
Practical										
7	U23EEP609	Power System Analysis Laboratory	PC	0	0	2	1	50	50	100
8	U23EEP610	Embedded System Laboratory	PC	0	0	2	1	50	50	100
9	U23EEP611	Power Electronics Laboratory	PC	0	0	2	1	50	50	100
Project Work										
10	U23EEW602	Mini Project	PA	0	0	2	1	100	-	100
Ability Enhancement Course										
11	U23EEC6XX	Certification Course – VI ^{**}	AEC	0	0	4	-	100	-	100
Mandatory Course										
12	U23EEM606	Gender Equality	MC	2	0	0	-	100	-	100
							22	625	575	1200

SEMESTER – VII										
Sl. No	Course Code	Course Title	Category	Periods			Credits	Max. Marks		
				L	T	P		CAM	ESM	Total
Theory										
1	U23EET714	Industrial Automation and Control	PC	3	0	0	3	25	75	100
2	U23EET715	Renewable Energy Sources	PC	3	0	0	3	25	75	100
3	U23EET716	Electric Vehicles	PC	3	0	0	3	25	75	100
4	U23EEE7XX	Professional Elective – IV #	PE	3	0	0	3	25	75	100
5	U23XXO7XX	Open Elective – III \$	OE	3	0	0	3	25	75	100
Practical										
6	U23EEP712	Industrial Automation and Control Laboratory	PC	0	0	2	1	50	50	100
7	U23EEP713	Renewable Energy Sources Laboratory	PC	0	0	2	1	50	50	100
8	U23EEP714	Electric Vehicles Laboratory	PC	0	0	2	1	50	50	100
Project Work										
9	U23EEW703	Project Phase – I	PA	0	0	4	2	50	50	100
10	U23EEW704	Internship / Inplant Training	PA	0	0	2	1	100	-	100
							21	425	575	1000

SEMESTER – VIII										
Sl. No.	Course Code	Course Title	Category	Periods			Credits	Max. Marks		
				L	T	P		CAM	ESM	Total
Theory										
1	U23HSTC03	Entrepreneurship and Business Management	HS	3	0	0	3	25	75	100
2	U23EEE8XX	Professional Elective – V #	PE	3	0	0	3	25	75	100
3	U23EEE8XX	Professional Elective – VI #	PE	3	0	0	3	25	75	100
Project Work										
4	U23EEW805	Project Phase – II	PA	0	0	16	8	50	100	150
							17	125	325	450



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Annexure – I
PROFESSIONAL ELECTIVE COURSES

Professional Elective – I (Offered in Semester IV)		
Sl. No.	Course Code	Course Title
1	U23EEDC01	Electrical Safety Engineering
2	U23EEE402	Nano Electronics
3	U23EEE403	Power Plant Engineering
4	U23EEE404	Energy Storage Technology
5	U23EEE405	Digital Logic Design using VHDL
Professional Elective – II (Offered in Semester V)		
Sl. No.	Course Code	Course Title
1	U23EEE506	Utilization of Electrical Energy
2	U23EEE507	Special Electrical Machines
3	U23EEE508	High Voltage Engineering
4	U23EEE509	Automotive Electronics for Electrical Engineering
5	U23ECEC04	VLSI System
Professional Elective – III (Offered in Semester VI)		
Sl. No.	Course Code	Course Title
1	U23EEE611	Finite Element Analysis
2	U23EEE612	SMPS and UPS
3	U23EEE613	Flexible AC Transmission System
4	U23ICEC02	Soft Computing Techniques
5	U23EEE615	Internet of Things for Smart System
Professional Elective – IV (Offered in Semester VII)		
Sl. No.	Course Code	Course Title
1	U23EEE716	Electrical Energy Audit and Conservation
2	U23EEE717	Multilevel Power Converters
3	U23ICEC01	Virtual Instrumentation
4	U23EEE719	Modern Control System
5	U23EEE720	Robotics and Automation
Professional Elective – V (Offered in Semester VIII)		
Sl. No.	Course Code	Course Title
1	U23EEE821	Electric Traction
2	U23EEE822	Advanced Electric Drives and Control
3	U23EEE823	Protection and Switchgear
4	U23EEE824	Digital Signal Processing for Electrical Engineering
5	U23EEE825	AI Techniques in Electrical System
Professional Elective – VI (Offered in Semester VIII)		
Sl. No.	Course Code	Course Title
1	U23EEE826	Industrial Electrical System
2	U23EEE827	Power Electronics for Renewable Energy Systems
3	U23EEE828	Power System Operation and Control
4	U23EEE829	Optimization Techniques
5	U23EEE830	Smart Grid

Annexure – II

OPEN ELECTIVE COURSES

Sl. No.	Course Code	Course Title	Offering Department	Permitted Department
Open Elective – I / Open Elective – II (Offered in Semester V for CSE, IT, MECH, Mechatronics, AI&DS) (Offered in Semester VI for EEE, ECE, ICE, CIVIL, BME, CCE, FT)				
1.	U23EEDC01	Electrical Safety Engineering	EEE	ECE, ICE, MECH, CIVIL, MCTR, CCE, BME, IT, CSE, FT, AI&DS, CSBS
2.	U23EEOC02	Solar Photovoltaic Fundamental and Applications	EEE	ECE, ICE, MECH, CIVIL, MCTR, CCE, BME, IT, CSE, FT, AI&DS, CSBS
Open Elective – III (Offered in Semester VII)				
1.	U23EEOC03	Electric and Hybrid Vehicles	EEE	ECE, ICE, MECH, MCTR, CCE, BME, AI&DS
2.	U23EEOC04	Energy Conservation and Management	EEE	ECE, ICE, MECH, CIVIL, MCTR, CCE, BME, IT, CSE, AI&DS



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Annexure – III

ABILITY ENHANCEMENT COURSES – (A) CERTIFICATION COURSES

S. No	Course Code	Course Title
1	U23EECX01	Adobe Photoshop
2	U23EECX02	Adobe Animate
3	U23EECX03	Adobe Dreamweaver
4	U23EECX04	Adobe After Effects
5	U23EECX05	Adobe Illustrator
6	U23EECX06	Adobe InDesign
7	U23EECX07	Autodesk AutoCAD -ACU
8	U23EECX08	Autodesk Inventor - ACU
9	U23EECX09	Autodesk Revit - ACU
10	U23EECX10	Autodesk Fusion 360 - ACU
11	U23EECX11	Autodesk 3ds Max - ACU
12	U23EECX12	Autodesk Maya - ACU
13	U23EECX13	Cloud Security Foundations
14	U23EECX14	Cloud Computing Architecture
15	U23EECX15	Cloud Foundation
16	U23EECX16	Cloud Practitioner
17	U23EECX17	Cloud Solution Architect
18	U23EECX18	Data Engineering
19	U23EECX19	Machine Learning Foundation
20	U23EECX20	Robotic Process Automation / Medical Robotics
21	U23EECX21	Advance Programming Using C
22	U23EECX22	Advance Programming Using C ++
23	U23EECX23	C Programming



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24	U23EECX24	C++ Programming
25	U23EECX25	CCNP Enterprise: Advanced Routing
26	U23EECX26	CCNP Enterprise: Core Networking
27	U23EECX27	Cisco Certified Network Associate - Level 2
28	U23EECX28	Cisco Certified Network Associate- Level 1
29	U23EECX29	Cisco Certified Network Associate- Level 3
30	U23EECX30	Fundamentals Of Internet of Things
31	U23EECX31	Internet Of Things / Solar and Smart Energy System with IoT
32	U23EECX32	Java Script Programming
33	U23EECX33	NGD Linux Essentials
34	U23EECX34	NGD Linux I
35	U23EECX35	NGD Linux II
36	U23EECX36	Advance Java Programming
37	U23EECX37	Android Programming / Android Medical App Development
38	U23EECX38	Angular JS
39	U23EECX39	Catia
40	U23EECX40	Communication Skills for Business
41	U23EECX41	Coral Draw
42	U23EECX42	Data Science Using R
43	U23EECX43	Digital Marketing
44	U23EECX44	Embedded System Using C
45	U23EECX45	Embedded System with IOT / Arduino
46	U23EECX46	English For IT
47	U23EECX47	Plaxis
48	U23EECX48	Sketch Up
49	U23EECX49	Financial Planning, Banking and Investment Management
50	U23EECX50	Foundation Of Stock Market Investing



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51	U23EECX51	Machine Learning / Machine Learning for Medical Diagnosis
52	U23EECX52	IOT Using Python
53	U23EECX53	Creo (Modelling & Simulation)
54	U23EECX54	Soft Skills, Verbal, Aptitude
55	U23EECX55	Software Testing
56	U23EECX56	MX-Road
57	U23EECX57	CLO 3D
58	U23EECX58	Solid works
59	U23EECX59	Staad Pro
60	U23EECX60	Total Station
61	U23EECX61	Hydraulic Automation
62	U23EECX62	Industrial Automation
63	U23EECX63	Pneumatics Automation
64	U23EECX64	Agile Methodologies
65	U23EECX65	Block Chain
66	U23EECX66	Devops
67	U23EECX67	Artificial Intelligence
68	U23EECX68	Cloud Computing
69	U23EECX69	Computational Thinking
70	U23EECX70	Cyber Security
71	U23EECX71	Data Analytics
72	U23EECX72	Databases
73	U23EECX73	Java Programming
74	U23EECX74	Networking
75	U23EECX75	Python Programming
76	U23EECX76	Web Application Development (HTML, CSS, JS)
77	U23EECX77	Network Security



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78	U23EECX78	MATLAB
79	U23EECX79	Azure Fundamentals
80	U23EECX80	Azure AI (AI-900)
81	U23EECX81	Azure Data (DP -900)
82	U23EECX82	Microsoft 365 Fundamentals (SS-900)
83	U23EECX83	Microsoft Security, Compliance and Identity (SC-900)
84	U23EECX84	Microsoft Power Platform (PI-900)
85	U23EECX85	Microsoft Dynamics Fundamentals 365 – CRM
86	U23EECX86	Microsoft Excel
87	U23EECX87	Microsoft Excel Expert
88	U23EECX88	Securities Market Foundation
89	U23EECX89	Derivatives Equity
90	U23EECX90	Research Analyst
91	U23EECX91	Portfolio Management Services
92	U23EECX92	Cyber Security
93	U23EECX93	Cloud Security
94	U23EECX94	PMI – Ready
95	U23EECX95	Tally – GST & TDS
96	U23EECX96	Advance Tally
97	U23EECX97	Associate Artist
98	U23EECX98	Certified Unity Programming
99	U23EECX99	VR Development

ABILITY ENHANCEMENT COURSES – (B) SKILL ENHANCEMENT COURSES

Sl. No.	Course Code	Course Title
1	U23EES301	Skill Enhancement Course 1 *
		1) Testing of Electronics Devices and PCB Board Designing
		2) Design of Solar power plant and Installation
		3) Demonstration / Troubleshooting of Electrical and Electronics Equipments
2	U23EES402	Skill Enhancement Course 2 *
		1) Mobile Phone Servicing
		2) Autonomous Robotics
		3) Repair and Maintenance of Power Supply, Inverter and UPS

* Any one course to be selected from the list



Annexure – IV

Honours Programme - Electric Vehicle Technology

COURSE DETAILS											
Sl. No.	Semester	Course Code	Course Title	Category	Periods			Credits	Max. Marks		
					L	T	P		CAM	ESM	Total
Theory											
1	IV	U23EEH401	Advanced Power Train Engineering	PC	3	1	0	4	25	75	100
2	V	U23EEH502	Energy Storage and Management in Electric Vehicles	PC	3	1	0	4	25	75	100
3	VI	U23EEH603	Electrical Drives and Controllers for EV	PC	3	1	0	4	25	75	100
4	VII	U23EEH704	Noise,Vibration and Harshness in Electric Vehicles	PC	3	1	0	4	25	75	100
5	VIII	U23EEH805	Autonomous and Connected Vehicles	PC	3	1	0	4	25	75	100
Total								20	125	375	500
Equivalent NPTEL courses ^{##}											
1	Course Code U23EEHN01		Electric Vehicles and Renewable Energy					3	12 WEEK Course		
2			Electrochemical Energy Storage					3			
3			Design of Photovoltaic Systems					3			
4			Design of Electric Motors					3			
5			Digital Control in Switched Mode Power Converters and FPGA -based Prototyping					3			

^{##} The student shall be given an option to earn 3 credits through one 12 week NPTEL course (Equivalent) instead of any one course listed for honours degree programme and shall be completed before the commencement of eighth semester. The equivalent courses are subject to change based on its availability as per NPTEL course list.



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Department	Mathematics				Programme: B. Tech.						
Semester	First				Course Category: BS		End Semester Exam Type :TE				
Course Code	U23MATC01				Periods/Week		Credit	Maximum Marks			
					L	T	P	C	CAM	ESE	TM
Course Name	ENGINEERING MATHEMATICS – I				3	1	0	4	25	75	100
(Common to ALL Branches Except CSBS)											
Prerequisite	Basic Mathematics										
Course Outcomes	On completion of the course, the students will be able to										BT Mapping (Highest Level)
	CO1	Understand the concept of Eigen values and Eigen vectors, Diagonalization of a Matrix									K3
	CO2	Solve higher order differential equations									K3
	CO3	Understand the different types of partial differential equations									K3
	CO4	Know about the Applications of double and triple integrals									K3
	CO5	Gain the knowledge about Vector Calculus and its Applications									K3
UNIT – I	Matrices							Periods:12			
Rank of a Matrix – Systems of Linear Equations – Characteristic equation – Cayley Hamilton Theorem – Eigen values and Eigen vectors of a real Matrix – Diagonalization of Matrices.											CO1
UNIT – II	Differential Equations (Higher Order)							Periods:12			
Linear Differential equations of higher order with constant coefficients – Euler's linear equation of higher order with variable coefficients – Method of Variation of parameters.											CO2
UNIT – III	Functions of Several Variables							Periods:12			
Partial derivatives – Total derivatives – Maxima and Minima of two variables – Lagrange's Method of multipliers.											CO3
UNIT – IV	Multiple Integrals							Periods:12			
Multiple Integrals – Change of order of integration (Cartesian form). Applications: Area as a double integral (Cartesian form) – Volume as a triple integral (Cartesian form).											CO4
UNIT – V	Vector Calculus							Periods:12			
Gradient – Divergence and Curl – Directional derivatives – Irrotational and Solenoidal vector fields – Properties (Statement only) – Gauss Divergence Theorem and Stoke's Theorem (without proofs).											CO5
Lecture Periods: 45		Tutorial Periods: 15			Practical Periods: -			Total Periods: 60			
Text Books											
1. M.K. Venkataraman, "Engineering Mathematics", The National Publishing Company, Chennai, 2 nd Edition, 2016. 2. N. P Bali and Manish Goyal, "A Text Book of Engineering Mathematics", Lakshmi Publications, New Delhi, 9 th Edition, 2018. 3. S.Narayanan and T.K. Manickavasagam Pillay, "Differential Equations and Its Applications", Viswanathan Printers & Publishers Pvt Ltd, 2014.											
Reference Books											
1. G. Balaji, "Matrices and Calculus (Engineering Mathematics – I)", Balaji Publications, 9 th Edition, 2023. 2. A. Singaravelu, "Engineering Mathematics – I", Meenakshi Agency, Chennai, 23 rd Edition, 2016. 3. Erwin Kreyszig, "Advanced Engineering Mathematics", Wiley, 10 th Edition, 2019. 4. B.V. Ramana, "Higher Engineering Mathematics", Tata McGraw Hill, New Delhi, 6 th Edition, 2018. 5. C W. Evans, "Engineering Mathematics - A Programmed Approach", 3 rd Edition, 2019.											
Web References											
1. http://www.yorku.ca/yaoguo/math1025/slides/chapter/kuttler-linearalgebra-slides-systemsofequation-handout.pdf 2. http://www.math.cum.edu/~wn0g/2ch6a.pdf 3. https://nptel.ac.in/courses/122/104/122104017/ 4. https://nptel.ac.in/courses/111/106/111106051/ 5. https://nptel.ac.in/courses/111/108/111108081/											

COs/POs/PSOs Mapping

COs	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	3	2	1	-	2	1	1	-	-	-	-	1	2	1	1
2	3	2	1	1	-	1	1	-	-	-	-	1	2	1	1
3	3	2	1	1	-	1	1	-	-	-	-	1	2	1	1
4	3	2	1	1	-	1	1	-	-	-	-	1	2	1	1
5	2	2	1	-	-	-	1	-	-	-	-	1	2	1	1

Correlation Level: 1 – Low, 2 – Medium, 3 – High

Evaluation Methods

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment*	Attendance		
Marks	5	5	5	5	5	75	100

* Application oriented / Problem solving / Design / Analytical in content beyond the syllabus

Department	Physics / Chemistry				Programme: B. Tech.						
Semester	First / Second				Course Category: BS		End Semester Exam Type :TE				
Course Code	U23BSTC01				Periods/Week			Credit	Maximum Marks		
					L	T	P	C	CAM	ESE	TM
Course Name	PHYSICAL SCIENCE FOR ENGINEERS				3	0	0	3	25	75	100
(Common to ALL Branches)											
Prerequisite	Physics of 12th standard or equivalent / Chemistry of 12th standard or equivalent.										
Course Outcomes	On completion of the course, the students will be able to										BT Mapping (Highest Level)
	CO1	Understand the basic of properties of magnetic, dielectric and superconductors.									K2
	CO2	Identify the wave nature of the particles, physical significance of wave functions									K3
	CO3	Understand the basic principles of laser and fiber optics communication									K2
	CO4	Understand and familiar with the water treatment.									K2
	CO5	Understand the electrode potential for its feasibility in electrochemical reaction and uses of various batteries.									K2
	CO6	Understand the specific operating condition under which corrosion occurs and suggest a method to control corrosion.									K2
Section A - Physics											
UNIT – I	Magnetic, Dielectric and Superconducting Materials							Periods:8			
Introduction to magnetic materials, Ferromagnetism- Domain theory-Types of energy-Hysteresis-Hard and Soft magnetic materials-ferrites-Dielectric materials-Types of polarization – Langevin-Debye equation-Frequency effects on polarization-Dielectric breakdown- Ferroelectric materials-Superconducting materials and their properties										CO1	
UNIT – II	Quantum Mechanics							Periods:7			
Matter Waves - de Broglie Wavelength - Uncertainty Principle –Physical Significance of wave functions - Schrodinger wave Equation - Time Dependent - Time Independent - Application to Particle in a One Dimensional Box - Tunnel Diode.										CO2	
UNIT – III	Laser and Fiber Optics							Periods:7			
Lasers - Principles of Laser - Spontaneous and Stimulated Emissions - Einstein's Coefficients - Population Inversion and Laser Action – components of laser - Types of Lasers – NdYAG, CO ₂ laser, GaAs Laser Fiber Optics - Principle and Propagation of light in optical fiber - Numerical aperture and acceptance angle - Types of optical fibers (material, refractive index, mode)										CO3	
Section B - Chemistry											
UNIT – IV	Water and its Treatment							Periods:8			
Water: Sources and impurities, Water quality parameters: Definition and significance of-color, odour, turbidity, pH, hardness, alkalinity, TDS, COD and BOD. Desalination of brackish water: Reverse osmosis-disadvantages of using hard water in boiler - Treatment of boiler feed water: Internal treatment (phosphate, colloidal, sodium aluminate and Calgon conditioning) and External treatment–Ion exchange demineralization and zeolite process.										CO4	
UNIT – V	Electrochemical Cells and Storage Devices							Periods:8			
Galvanic cells, single electrode potential, standard electrode potential, electrochemical series. EMF of a cell and its measurement. Nernst equation. Electrolyte concentration cell. Reference electrodes-hydrogen, calomel and Ag/AgCl. Batteries and fuel cells: Types of batteries- alkaline battery-lead storage battery- nickel-cadmium battery- fuel cell H ₂ -O ₂ fuel cell-applications.										CO5	
UNIT – VI	Corrosion							Periods:7			
Corrosion – Introduction - factors – types – chemical, electrochemical corrosion (galvanic, differential aeration), corrosion control – material selection and design aspects – electrochemical protection – sacrificial anode method and impressed current cathodic method. Uses of inhibitors, metallic coating – anodic coating, cathodic coating. Metal cladding, Electroplating of Copper and electro less plating of nickel.										CO6	
Lecture Periods: 45		Tutorial Periods: -			Practical Periods: -			Total Periods: 45			
Text Books											
1. V Rajendran, "Engineering Physics", TMH, New Delhi, 2 nd Edition, 2017. 2. S.S Dara, "A text book of Engineering Chemistry", S.Chand Publications, 15 th Edition, 2021. 3. C.Jain, Monica Jain, "Engineering Chemistry", Dhanpat Rai Pub. Co., New Delhi, 17 th Edition, 2015.											

Reference Books

1. G. Balaji, "Matrices and Calculus (Engineering Mathematics – I)", Balaji Publications, 9th Edition, 2023.
2. A. Singaravelu, "Engineering Mathematics – I", Meenakshi Agency, Chennai, 23rd Edition, 2016.
3. Erwin Kreyszig, "Advanced Engineering Mathematics", Wiley, 10th Edition, 2019.
4. B.V. Ramana, "Higher Engineering Mathematics", Tata McGraw Hill, New Delhi, 6th Edition, 2018.
5. C.W. Evans, "Engineering Mathematics - A Programmed Approach", 3rd Edition, 2019.

Web References

1. https://www.sciencedaily.com/terms/materials_science.htm.
2. <https://www.acs.org/content/acs/en/careers/college-to-career/chemistry-careers/materials-science.html>.
3. <https://study.com/academy/lesson/semiconductors-superconductors-definition-properties.html>
4. <https://mechanicalc.com/reference/engineering-materials>
5. http://ndl.ethernet.edu.et/bitstream/123456789/89589/1/%5BPerez_N.%5D_Electrochemistry_and_corrosion%28BookZZ.org%29.pdf

COs/POs/PSOs Mapping

COs	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	3	2	2	2	-	-	-	-	-	-	-	-	2	2	2
2	3	2	3	2	-	-	-	-	-	-	-	-	2	2	2
3	3	2	3	2	-	-	-	-	-	-	-	-	2	2	2
4	3	1	-	-	-	-	-	-	-	-	-	-	2	2	2
5	3	1	-	-	-	-	-	-	-	-	-	-	2	2	2
6	3	1	-	-	-	-	-	-	-	-	-	-	2	2	2

Correlation Level: 1 – Low, 2 – Medium, 3 – High

Evaluation Methods

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment*	Attendance		
Marks	5	5	5	5	5	75	100

* Application oriented / Problem solving / Design / Analytical in content beyond the syllabus

Department	Mechanical Engineering				Programme: B. Tech.						
Semester	First / Second				Course Category: ES		End Semester Exam Type :TE				
Course Code	U23ESTC02				Periods/Week		Credit	Maximum Marks			
					L	T	P	C	CAM	ESE	TM
Course Name	ENGINEERING MECHANICS				2	1	0	3	25	75	100
(Common to EEE, ECE, MECH, CIVIL, Mechatronics Branches)											
Prerequisite	Engineering Physics										
Course Outcomes	On completion of the course, the students will be able to										BT Mapping (Highest Level)
	CO1	Recognize the basics of equilibrium of particles in 2D and 3D									K2
	CO2	Review the requirements of equilibrium of rigid bodies in 2D and 3D.									K2
	CO3	Solve problem related to friction force.									K3
	CO4	Compute the center of mass and moment of inertia of surfaces and solids.									K3
	CO5	Predict displacement, velocity and acceleration of dynamic particles.									K3
UNIT – I	BASICS AND STATICS OF PARTICLES							Periods: 09			
Introduction - Units and Dimensions - Vectorial representation of forces and moments – Coplanar Forces - Lami's theorem, Parallelogram and triangular Law of forces -Resolution of forces - Equilibrium of a particle - Principle of transmissibility - Equivalent system of force - Free body diagram											CO1
UNIT – II	EQUILIBRIUM OF RIGID BODIES							Periods: 09			
Types of supports and their reactions -requirements of stable equilibrium - Moments and Couples -Moment of a force about a point and about an axis -Vectorial representation of moments and couples - Scalar components of a moment - Varignon's theorem -Equilibrium of Rigid bodies in two dimensions – Forces in space -Equilibrium of a particle in space - Equivalent systems of forces - Equilibrium of Rigid bodies in three dimensions (Descriptive only).											CO2
UNIT – III	STRUCTURAL ANALYSIS OF TRUSSES AND FRICTION							Periods: 09			
Trusses - Definition of a truss - Simple Trusses - Analysis of Trusses - Method of joints - Method of sections - Friction force - Laws of sliding friction - equilibrium analysis of simple systems with sliding friction -wedge friction- Rolling resistance.											CO3
UNIT – IV	PROPERTIES OF SURFACES AND SOLIDS							Periods: 09			
Determination of centroid of areas, volumes and mass - Pappus and Guldinus theorems - moment of inertia of plane and areas- Parallel axis theorem and perpendicular axis theorem, radius of gyration of area- product of inertia- mass moment of inertia.											CO4
UNIT – V	DYNAMICS OF PARTICLES							Periods: 09			
Displacements, Velocity and acceleration, their relationship - Relative motion - Curvilinear motion - Newton's law - Work Energy Equation of particles -Impulse and Momentum -Impact of elastic bodies.											CO5
Lecture Periods: 30			Tutorial Periods: 15			Practical Periods: -			Total Periods: 45		
Text Books											
1. Beer and E.R.Johnston Jr., "Vector Mechanics for Engineers", McGraw-Hill Education India Pvt Ltd., 11 th Edition, 2016. 2. J.L. Meriam & L.G. Karidge, "Engineering Volume I and Engineering Mechanics: Dynamics", Wiley, 8 th Edition, 2016. 3. R.C. Hibbeler, "Engineering Mechanics", Prentice hall, 14 th edition, 2016.											
Reference Books											
1. Arthur P. Boresi and Richard J. Schmidt, "Engineering Mechanics: Statics and Dynamics", Thomson Asia Private Limited, Singapore, 2010. 2. D.P.Sharma "Engineering Mechanics", Dorling Kindersley India Pvt. Ltd, New Delhi, 2010 3. S.Rajasekaran, Sankarasubramanian, G., Fundamentals of Engineering Mechanics, Vikas Publishing House Pvt., Ltd., 2012. 4. S.S.Bhavikatti and K.G. Rajashekarappa, Engineering Mechanics, New Age International(P) Ltd, New Delhi, 7th Edition, 2019. 5. Dr.I.SGujral, "Engineering Mechanical" second edition, Lakshmi Publication (P), Ltd., 2011.											
Web References											
1. http://nptel.iitm.ac.in/video.php?subjectId=112103108 2. http://www.nptel.iitm.ac.in/courses/Webcourse-contents/IIT-KANPUR/Engineeringmechanics/Table of Contents.html 3. https://nptel.ac.in/courses/112/106/112106286/ 4. https://www.coursera.org/learn/engineering-mechanics-statics 5. https://nptel.ac.in/courses/122/104/122104014/											



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COs/POs/PSOs Mapping

COs	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	3	2	2	3	-	-	-	-	-	-	-	1	1	1	1
2	3	2	2	3	-	-	-	-	-	-	-	1	1	1	1
3	3	2	2	3	-	-	-	-	-	-	-	1	1	1	1
4	3	2	2	3	-	-	-	-	-	-	-	1	1	1	1
5	3	2	2	3	-	-	-	-	-	-	-	1	1	1	1

Correlation Level: 1 – Low, 2 – Medium, 3 – High

Evaluation Methods

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment*	Attendance		
Marks	5	5	5	5	5	75	100

* Application oriented / Problem solving / Design / Analytical in content beyond the syllabus

Department	Electrical and Electronics Engineering				Programme: B. Tech.						
Semester	First				Course Category: PC		End Semester Exam Type :TE				
Course Code	U23EET101				Periods/Week			Credit	Maximum Marks		
					L	T	P	C	CAM	ESE	TM
Course Name	ELECTRICAL ENGINEERING				3	0	0	3	25	75	100
EEE											
Prerequisite	Physics										
Course Outcomes	On completion of the course, the students will be able to										BT Mapping (Highest Level)
	CO1	Evaluate the current, voltage and power using different laws in DC circuits.									K3
	CO2	Familiarize different terms, laws and parameters governing the magnetic circuits.									K3
	CO3	Analyze the different AC circuits and impart the concepts of poly phase system.									K3
	CO4	Develop the various domestic wiring with the preventive safety measures.									K4
	CO5	Acquire skills about the factory wiring, estimation and protection methods for industries.									K4
UNIT – I	DC Circuits							Periods:09			
Concept of Potential difference, current, work, power, energy -Electrical networks and its types – active and passive elements - ideal and practical sources, concept of dependent and independent sources - Ohm's law, Kirchhoff's laws, Current and voltage division rule, Simplification of networks using series , parallel connection - Network solutions using Mesh and Nodal analysis, Star/Delta transformation.										CO1	
UNIT – II	Magnetic Circuits							Periods:09			
Definitions of magnetism – Magnetic effect of electric current – Important terms of magnetic circuits – Comparison of Magnetic and Electric circuits – Electromagnetic induction – Lenz law – Induced EMF – Self and Mutual Induction – Amperes law – Energy stored in magnetic circuits – Magnetic Hysteresis and Eddy current – Magnetic Material and B-H Curve.										CO2	
UNIT – III	AC Circuits							Periods:09			
AC waveform – terms and definitions, form factor, peak factor- R-L, R-C, RLC series and parallel circuits, phasor representation in Polar and Rectangular form, concept of impedance, admittance, active, reactive, apparent and complex power, power factor, 3 phase balanced AC Circuits (Y-Δ and Y-Y), relationship between line and phase values – Power measurement – Two Wattmeter method – AC filters and its types.										CO3	
UNIT – IV	Electrical Safety And Domestic Wiring							Periods:09			
Safety measures in electrical system – Electrical tools and accessories–Wiring Standards –Types of domestic wiring – Staircase, doctor's room, fluorescent lamp, LED lamp and corridor wiring– Residential wiring–Layout of electrical power system and its functions– Insulators, fuses, relays and circuit breakers- Electrical shock and rescue methods – Applications.										CO4	
UNIT – V	Industrial Wiring							Periods:09			
Single line diagram of industrial wiring – Three phase wiring connections – Factory wiring – Godown wiring – panel wiring – Commercial wiring – Indian Electricity rules - Types of Conductors, Cables, sizing and selection- Electrical Estimation and installation –Energy audit - Earthing – Types of earthing – Difference between neutral and earth wire – Introduction to Megger - Introduction to ECAD – Applications.										CO5	
Lecture Periods: 45			Tutorial Periods: -			Practical Periods: -			Total Periods: 45		
Text Books											
1. R. K. Rajput, "Basic Electrical and Electronics Engineering", University Science Press, 2 nd Edition, 2017. 2. Dr. R. Saravanakumar, Dr.V. Jegathesan, Dr. K. Vinoth Kumar, Dr. K. Kowsalya, "Basic Electrical and Electronics Engineering",Wiley Publisher, 2 nd Edition, 2022. 3. R. Muthusubramaniam, S. Salivahanan and K. A. Mureleedharan, "Basic Electrical Electronics and Computer Engineering", Tata McGraw Hill, 2018.											
Reference Books											
1. Thaddeus W. Fowler, "Electrical Safety", Diane Publishing Company, 5 th Edition, 2013. 2. A.Sudhakar and S. P.Shyam Mohan, "Circuits and Networks: Analysis and Synthesis", Tata McGraw Hill Publishing Company Ltd., New Delhi, 4 th Edition, 2017. 3. B. L. Theraja, A. K. Theraja, "A Textbook of Electrical Technology – Volume - I", S Chand & Co. Ltd., New Delhi, 23 rd Edition, 2009. 4. Stephen L. Herman, "Electrical Wiring", Cengage Learning India, 15 th Edition, 2014. 5. S. K. Bhattacharya, S. Chatterji, "Projects in Electrical, Electronics, Instrumentation and Computer Engineering", S. Chand & Co, 2 nd Edition, 2010.											



2.A.1.11b

Web References

1. <https://www.electrical4u.com/>
2. <https://www.allaboutcircuits.com/>
3. <https://nptel.ac.in/courses/108105112/>
4. <https://nptel.ac.in/courses/108108076/>
5. <https://demonstrations.wolfram.com/>

COs/POs/PSOs Mapping

COs	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	3	3	3	3	2	-	-	-	-	-	-	1	3	3	3
2	3	3	3	3	2	-	-	-	-	-	-	1	3	3	3
3	3	3	3	3	2	-	-	-	-	-	-	1	3	3	3
4	3	3	3	2	2	-	-	-	-	-	-	1	3	3	3
5	3	3	3	2	2	-	-	-	-	-	-	1	3	3	3

Correlation Level: 1 – Low, 2 – Medium, 3 – High

Evaluation Methods

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment*	Attendance		
Marks	5	5	5	5	5	75	100

* Application oriented / Problem solving / Design / Analytical in content beyond the syllabus

Department	Electrical and Electronics Engineering				Programme: B. Tech.						
Semester	First				Course Category: PC		End Semester Exam Type :TE				
Course Code	U23EET102				Periods/Week			Credit	Maximum Marks		
					L	T	P	C	CAM	ESE	TM
Course Name	ELECTRONICS – I				3	0	0	3	25	75	100
EEE											
Prerequisite	Mathematics, Physics										
Course Outcomes	On completion of the course, the students will be able to										BT Mapping (Highest Level)
	CO1	Acquire knowledge about semiconductor devices and their characteristics for applications like rectifiers, clippers, clippers and regulator circuits.									K3
	CO2	Gain knowledge of transistor biasing techniques and stability considerations for applications like amplifier and switching circuits.									K3
	CO3	Comprehend the physical structure, types and characteristics of FET.									K2
	CO4	Describe the behavior of special and optoelectronic devices.									K2
	CO5	Apply Boolean Algebra and Karnaugh map for designing combinational logic circuits.									K3
UNIT – I	PN Junction Diodes							Periods: 09			
Semiconductor – PN junction diode: Forward and Reverse bias – Effect of temperature – Static and Dynamic resistance – Equivalent models – Transition and diffusion capacitances – Reverse Recovery time. Diode applications: Rectifiers, Clippers and Clippers. Zener diode: VI Characteristics – Zener as regulator – Introduction to SiC diodes.											CO1
UNIT – II	Bipolar Junction Transistors							Periods: 09			
BJT: NPN and PNP transistors – Ebers - Moll Model – CB, CE and CC configurations – Transistor characteristics – Biasing – DC and AC load line – Operating point – Stabilization – Bias compensation techniques – Thermal stability and runaway – Amplification – Transistor switching times – Base width modulation – Breakdown voltage – Voltage in open emitter configuration and open base configuration – BJT ratings – Introduction to HBT and SGT.											CO2
UNIT – III	Field Effect Transistors							Periods: 09			
JFET: Construction – Drain and transfer characteristics – Shockley's equation – Comparison between JFET and BJT – Biasing – MOSFET: Construction, Types and characteristics – FET ratings – Introduction to SiC MOSFET – HFET.											CO3
UNIT – IV	Special Devices and Optoelectronic Devices							Periods: 09			
Special Devices: Varactor diode – PIN diode – Tunnel diode – Schottky diode – SCR – DIAC – TRIAC and UJT. Optoelectronic Devices: Photo diodes – Photo transistors – PV cells – Opto couplers – LED – LDR – LCD.											CO4
UNIT – V	Number system and Combinational Circuits							Periods: 09			
Number systems: Binary, Decimal, Octal and Hexa decimal –1s and 2s complement – Binary arithmetic – BCD addition and subtraction – Boolean theorems – Digital logic gates – Universal gates. Combinational Circuits: Design of combination circuits using NAND and NOR gates – POS, SOP simplification – Minterms and Maxterms – Karnaugh map – Don't care conditions – Design of adder and Subtractor – Multiplexers – Demultiplexers – Encoder and Decoders – Parity generator – Code converters and BCD to seven segment display driver.											CO5
Lecture Periods: 45			Tutorial Periods: -			Practical Periods: -			Total Periods: 45		
Text Books											
1. J.B.Gupta, "Electronic Devices and Circuits", S.K. Kataria and Sons, 6 th Edition, 2022. 2. Robert L. Boylestad and Louis Nashelsky, "Electronic Devices and Circuit Theory", Pearson Education, 9 th Edition, 2007. 3. Floyd and Jain, "Digital Fundamentals", Pearson Education, 11 th Edition, 2015.											
Reference Books											
1. Dr. R. S. Sedha, "A Textbook of Applied Electronics", S. Chand Publications, Multicolor Edition, 2019. 2. David A. Bell, "Electronic devices and circuits", Oxford University higher education, 5 th Edition, 2008. 3. Thomas L.Floyd, "Electronic Devices", Conventional current version, Pearson Prentice hall, 10 th Edition, 2017. 4. Morris. M. Mano and Michael. D. Ciletti, "Digital Design", Pearson Education, 5 th Edition, 2013. 5. A. Anand Kumar, "Fundamentals of Digital Circuits", PHI Learning Pvt. Ltd, 4 th Edition, 2022.											



2.A.1.118

Web References

1. <https://nptel.ac.in/courses/117107095>
2. <https://nptel.ac.in/courses/108107142>
3. <https://nptel.ac.in/courses/115102014>
4. https://onlinecourses.nptel.ac.in/noc21_ee80/preview
5. <https://nptel.ac.in/courses/106108099>

COs/POs/PSOs Mapping

COs	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	2	2	3	2	3	-	-	-	-	-	-	-	3	3	3
2	2	2	3	2	3	-	-	-	-	-	-	-	3	3	3
3	2	2	3	2	3	-	-	-	-	-	-	-	3	3	3
4	2	2	3	2	3	-	-	-	-	-	-	-	3	3	3
5	2	2	3	2	3	-	-	-	-	-	-	-	3	3	3

Correlation Level: 1 – Low, 2 – Medium, 3 – High

Evaluation Methods

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment*	Attendance		
Marks	5	5	5	5	5	75	100

* Application oriented / Problem solving / Design / Analytical in content beyond the syllabus



2.A.1.119

Department	English			Programme: B. Tech.							
Semester	First			Course Category: HS			End Semester Exam Type :TE				
Course Code	U23ENBC01			Periods/Week			Credit	Maximum Marks			
				L	T	P	C	CAM	ESE	TM	
Course Name	COMMUNICATIVE ENGLISH – I			2	0	2	3	50	50	100	
(Common to ALL Branches except CSBS)											
Prerequisite	Basics of English Language										
Course Outcomes	On completion of the course, the students will be able to								BT Mapping (Highest Level)		
	CO1	Understand the communication flow in organization and its objectives								K2	
	CO2	Write the technical contents with grammatically precise sentences								K2	
	CO3	Articulate with correct pronunciation and overcome vernacular impact in speaking								K3	
	CO4	Express opinions confidently in formal and informal communicative contexts								K2	
	CO5	Attend interview with assertiveness								K3	
UNIT – I	Workstead Communication						Periods:10				
Communication, Definition, Process, Channels, Barriers, Strategies for Effective Communication, Verbal and Nonverbal Communication - Listening, Types, Barriers, Enhancing Listening Skills - Bibliography: Book, Journal and Internet References.									CO1		
UNIT – II	Common Errors In Writing And Comprehension Strategies						Periods:10				
Subject Verb Agreement, Misplaced Modifiers, Squinting Modifiers, Dangling Modifier, Fused Sentence, Comma Splice, Sentence Fragment - Reading Comprehension: Technical passage, Strategies: Skimming, Scanning, Intensive and Extensive Reading, Prediction, and Contextual Meaning									CO2		
UNIT – III	Phonetics						Periods:10				
Pronunciation Guidelines to consonants and vowels, Sounds Mispronounced, Silent and Non-silent Letters, Intonation, Spelling Rules and Words often misspelled, Mother Tongue Influence (MTI), Various Techniques for Neutralization of Mother Tongue									CO3		
UNIT – IV	Communication Practice – I						Periods:15				
List of Exercises Listening: Self Introduction videos Speaking: Self-Introduction, Extempore, and Role Play Reading: Non-Technical Comprehension Passage Writing: Common Errors in Writing									CO4		
UNIT – V	Interpersonal Communication – I						Periods:15				
List of Exercises Listening: Speech Sounds, Interview Videos Speaking: Debate, Structured Group Discussion and Conversation Reading: Commonly Confused Words Writing: Transcription									CO5		
Lecture Periods: 30		Tutorial Periods: -		Practical Periods: 30			Total Periods: 60				
Text Books											
1. Richa Mishra, RatnaRao, "A textbook of English Language Communication Skills", Macmillan Publishers India Private Ltd., Revised Edition, 2021. 2. Rizvi M. Ashraf, "Effective Technical Communication", Tata-McGraw-Hill Publishing Company Limited, 4 th Edition, 2010. 3. T. Balasubramanian, "English Phonetics for Indian students workbook", Trinity Press, 2 nd Edition, 2016.											
Reference Books											
1. N.P.Sudharshana, C. Savitha, "English for Engineers", Cambridge University Press, 2018. 2. Raman, Meenakshi, and Sharma, Sangeetha, "Technical Communication - Principles and Practice", Oxford University Press, 3 rd Edition, 2017. 3. Comfort, Jeremy, Etal, "Speaking Effectively: Developing Speaking Skills for Business English", Cambridge University Press, Cambridge, Reprint, 2011. 4. Wren & Martin, "High School English Grammar and Composition", S Chandh & Co. Ltd, 2015. 5. Boove, Courtland L, "Business Communication Today", Pearson Education, New Delhi, 2002											



2.A.1.120

Web References

1. <https://lemongrad.com/subject-verb-agreement-rules/>
2. <https://opentextbc.ca/advancedenglish/chapter/misplaced-and-dangling-modifiers/>
3. <https://www.hitbullseye.com/Reading-Comprehension-Tricks.php>
4. <https://www.softwaretestinghelp.com/how-to-crack-the-gd/>
5. <https://worldscholarshipvault.com/neutralize-mother-tongue-interference/>

COs/POs/PSOs Mapping

COs	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	1	-	-	-	-	-	-	-	-	3	-	1	1	-	-
2	1	-	-	-	-	-	-	-	-	3	-	1	1	-	-
3	1	-	-	-	-	-	-	-	-	3	-	1	1	-	-
4	1	-	-	-	-	-	-	-	-	3	-	1	1	-	-
5	1	-	-	-	-	-	-	-	1	3	-	1	1	-	-

Correlation Level: 1 – Low, 2 – Medium, 3 – High

Evaluation Methods

Theory						
Assessment	Continuous Assessment Marks (CAM)				End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Attendance		
Marks	5	5	5	5	75	60
	20 (to be weighted for 10 marks)				(to be weighted for 50 marks)	

Practical					
Continuous Assessment Internal Evaluation			End Semester Internal Evaluation		Total Marks
30 (to be weighted for 10 marks)			30 marks		40
Listening (L)*	10		Listening (L)*	10	
Speaking(S)	5		Speaking(S)	5	
Reading(R)*	10		Reading(R)*	10	
Writing(W)*	5		Writing(W)*	5	

*LRW components of Practical can be evaluated through Language Lab Software

Department	Mechanical Engineering	Programme: B. Tech.						
Semester	First / Second	Course Category: ES		End Semester Exam Type : LE				
Course Code	U23ESPC02	Periods/Week			Credit	Maximum Marks		
		L	T	P	C	CAM	ESE	TM
Course Name	DESIGN THINKING AND IDEA LAB	0	0	2	1	50	50	100

(Common to all Branches)

Prerequisite	Basic Knowledge of Science							
Course Outcomes	On completion of the course, the students will be able to							BT Mapping (Highest Level)
	CO1	Demonstrate a comprehensive understanding of the tools and inventory associated with the IDEA Lab.						K2
	CO2	Develop proficiency in ideation techniques to generate creative and innovative solutions for various design challenges and problems						K3
	CO3	Acquire practical knowledge of mechanical and electronic fabrication processes, including hands-on experience with machinery, tools, and techniques used in the manufacturing and assembly of physical components.						K3
	CO4	Cultivate the skills necessary for developing innovative and desirable products, including the ability to integrate user needs, market trends, and technological advancements into the design process.						K4
	CO5	Apply iterative design methodologies to refine and improve solutions based on feedback, user testing, and evaluation of functional, aesthetic, and usability aspects						K4

List of Experiments:

Design process: Traditional design, Design thinking, Existing sample design projects, Study on designs around us, Compositions/structure of a design, Innovative design: Breaking of patterns, Reframe existing design problems, Principles of creativity Empathy: Customer Needs, Insight-leaving from the lives of others/standing on the shoes of others, Observation

Design team-Team formation, Conceptualization: Visual thinking, Drawing/sketching, New concept thinking, Patents and Intellectual Property, Concept Generation Methodologies, Concept Selection, Concept Testing, Opportunity identification Prototyping: Principles of prototyping, Prototyping technologies, Prototype using simple things, Wooden model, Clay model, 3D printing; Experimenting/testing.

Sustainable product design, Ergonomics, Semantics, Entrepreneurship/business ideas, Product Data Specification, Establishing target specifications, Setting the final specifications. Design projects for teams.

1. Schematic and PCB layout design of a suitable circuit, fabrication and testing of the circuit.
2. Machining of 3D geometry on soft material such as softwood or modelling wax.
3. 3D scanning of computer mouse geometry surface. 3D printing of scanned geometry using FDM or SLA printer.
4. 2D profile cutting of press fit box/casing in acrylic (3 or 6 mm thickness)/cardboard, MDF (2 mm) board using laser cutter & engraver.
5. 2D profile cutting on plywood /MDF (6-12 mm) for press fit designs.
6. Familiarity and use of welding equipment.
7. Familiarity and use of normal and wood lathe.
8. Embedded programming using Arduino and/or Raspberry Pi.
9. Design and implementation of a capstone project involving embedded hardware, software and machined or 3D printed enclosure.
10. Discussion and implementation of a mini project.
11. Documentation of the mini project (Report and video).

Lecture Periods: -	Tutorial Periods: -	Practical Periods: 30	Total Periods: 30
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Reference Books

1. Tim Brown, "Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation", HarperCollins Publishers Ltd.
2. "Workshop / Manufacturing Practices (with Lab Manual)", Khanna Book Publishing.
3. Ulrich and Eppinger, "Product Design and Development", McGraw Hill, 3rd Edition, 2004.
4. Chris Hackett, Weldon Owen, "The Big Book of Maker Skills: Tools & Techniques for Building Great Tech Projects", 2018.
5. Sean Michael Ragan, Weldon Owen, "The Total Inventors Manual (Popular Science): Transform Your Idea into a Top-Selling Product", 2017.
6. Paul Horowitz and Winfield Hill, "The Art of Electronics", Cambridge University Press, 3rd Edition.
7. Paul Sherz and Simon Monk, "Practical Electronics for Inventors", McGraw Hill, 4th Edition.
8. Simon Monk and Duncan Amos, "Make Your Own PCBs with EAGLE: From Schematic Designs to Finished Boards", McGraw Hill Education.
9. Simon Monk, "Programming Arduino: Getting Started with Sketches", McGraw Hill, 2nd Edition.
10. Venuvinod, PK, MA. W., "Rapid Prototyping – Laser Based and Other Technologies", Kluwer.
11. Chapman W.A.J, "Workshop Technology - Volume I, II, III", CBS Publishers and Distributors, 5th Edition, 2002.

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Web References

1. https://onlinecourses.nptel.ac.in/noc23_mg72

COs/POs/PSOs Mapping

COs	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	3	2	2	2	2	2	-	-	2	-	3	2	2	2	3
2	3	3	3	2	2	2	-	-	2	-	3	2	2	2	3
3	3	3	3	2	3	2	-	-	2	-	3	2	2	2	3
4	3	3	3	2	3	2	-	-	2	-	3	2	2	2	3
5	3	3	3	2	3	2	-	-	2	-	3	2	2	2	3

Correlation Level: 1 – Low, 2 – Medium, 3 – High

Evaluation Methods

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	Performance in practical classes			Model Practical Examination	Attendance		
	Conduction of practical	Record work	viva				
Marks	15	5	5	15	10	50	100

Department	Electrical and Electronics Engineering				Programme: B. Tech.							
Semester	First				Course Category: PC		End Semester Exam Type : LE					
Course Code	U23EEP101				Periods/Week		Credit	Maximum Marks				
					L	T	P	C	CAM	ESE	TM	
Course Name	ELECTRICAL ENGINEERING LABORATORY				0	0	2	1	50	50	100	
EEE												
Prerequisite	Physics											
Course Outcomes	On completion of the course, the students will be able to										BT Mapping (Highest Level)	
	CO1	Acquire knowledge on safety protocols and procedures for working with electricity.										K2
	CO2	Gain hands on experience in using various electrical tools and equipments.										K3
	CO3	Develop skills in designing line diagram and construct wiring for domestic and industrial applications.										K4
	CO4	Use protection circuits for electrical networks and measure insulation resistance using megger.										K3
	CO5	Analyze and troubleshoot the electrical circuits of various domestic appliances.										K4
List of Experiments:												
<div>1. Study of electrical tools, accessories, joints, symbols and safety precautions.</div> <div>2. Study of different types of Fuses, Circuits breakers, AC and DC meters.</div> <div>3. Testing of series and parallel lamp circuits.</div> <div>4. Domestic Wiring Practice<div>a. Staircase wiring</div><div>b. Doctor's room wiring</div><div>c. Bed room wiring</div><div>d. Godown wiring</div><div>e. Ceiling fan, LED Lamps and Iron box.</div></div> <div>5. Design of Domestic power distribution.</div> <div>6. Estimation of material requirement for Residential building/Flat wiring</div> <div>7. Estimation of material requirement for industrial wiring</div> <div>8. Measurement of Insulation resistance using Megger.</div> <div>9. Characteristics of Incandescent lamp and CFL.</div> <div>10. To study and measure the inductance of choke coil.</div> <div>11. Study of Electric shock phenomenon, precautions, preventions and earthing</div> <div>12. Study and Troubleshooting of electrical equipments (Fan, Iron box, Mixer)</div>												
Lecture Periods: -		Tutorial Periods: -		Practical Periods: 30			Total Periods: 30					
Reference Books												
<div>1. B. L. Thereja, A. K. Thereja, "A text book of Electrical Technology- Basic Electrical Engineering – Volume - I", S. Chand & Co. Ltd., 13th Edition, 2020.</div> <div>2. D. P. Kothari and I.J. Nagarath, "Basic Electrical and Electronics Engineering", McGraw Hill Education (India) Private Limited, 3rd Reprint, 2016.</div> <div>3. R. Muthusubramaniam, S. Salivahanan and K. A. Mureleedharan, "Basic Electrical Electronics and Computer Engineering", Tata McGraw Hill, 2018</div> <div>4. Del Toro, "Electrical Engineering Fundamentals", Pearson Education India, New Delhi, 2nd Edition, 2015.</div> <div>5. David Herres, "The Homeowner's DIY Guide to Electrical Wiring", McGraw Hill Professional, 7th Edition, 2015.</div> <div>6. Stephen L. Herman, "Electrical Wiring", Cengage Learning India, 15th Edition, 2014.</div>												
Web References												
<div>1. https://www.electrical4u.com/</div> <div>2. https://www.allaboutcircuits.com/</div> <div>3. https://nptel.ac.in/courses/108105112/</div> <div>4. https://nptel.ac.in/courses/108108076/</div> <div>5. https://demonstrations.wolfram.com/</div>												

COs/POs/PSOs Mapping

COs	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	3	3	3	2	2	-	-	-	2	-	-	2	3	2	2
2	3	3	3	3	2	-	-	-	2	-	-	2	3	2	2
3	3	3	3	3	2	-	-	-	2	-	-	2	3	2	2
4	3	3	3	3	2	-	-	-	2	-	-	2	3	2	2
5	3	3	3	3	2	-	-	-	2	-	-	2	3	2	2

Correlation Level: 1 – Low, 2 – Medium, 3 – High

Evaluation Methods

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	Performance in practical classes			Model Practical Examination	Attendance		
	Conduction of practical	Record work	viva				
Marks	15	5	5	15	10	50	100

Department	Electrical and Electronics Engineering				Programme: B. Tech.							
Semester	First				Course Category: PC		End Semester Exam Type : LE					
Course Code	U23EEP102				Periods/Week			Credit	Maximum Marks			
					L	T	P	C	CAM	ESE	TM	
Course Name	ELECTRONICS – I LABORATORY				0	0	2	1	50	50	100	
EEE												
Prerequisite	Physics											
Course Outcomes	On completion of the course, the students will be able to									BT Mapping (Highest Level)		
	CO1	Analyze the characteristics of diodes, current controlled and voltage controlled power switches.									K4	
	CO2	Design and implement clippers, clampers, rectifiers and regulator circuits using diodes.									K3	
	CO3	Analyze the characteristics of photodiodes, LEDs and able to investigate their behavior under different operating conditions.									K3	
	CO4	Gain knowledge in design and implementation of digital logic circuits in order to validate their functionality.									K3	
	CO5	Develop skills to simplify the hardware requirements of digital circuits for real time applications.									K4	
List of Experiments:												
1. V-I characteristics of PN junction diode. 2. Clipping and clamping circuits. 3. Half wave and full wave rectifier circuits with and without filters. 4. V-I characteristics of zener diode and design of voltage regulator circuits. 5. Input and output characteristics of BJT for CB, CC and CE configurations. 6. Design of biasing circuits for BJT. 7. Transfer and drain characteristics of JFET and MOSFET. 8. V - I characteristics of SCR and TRIAC. 9. V - I characteristics of Photodiode and LED. 10. Study and implementation of logic gates and verification of De Morgan laws using basic gates. 11. Design and verification of adder and Subtractor. 12. Design and verification of Encoder and Decoder. 13. Design of Multiplexer and Demultiplexer using gates and ICs. 14. Design of Parity generator and Checker using gates and ICs. 15. Design of Code Converters: BCD to Binary, Binary to BCD using logic gates. 16. Design of BCD to Seven Segment Display using ICs.												
Lecture Periods: -			Tutorial Periods: -			Practical Periods: 30			Total Periods: 30			
Reference Books												
1. Paul Scherz and Simon Monk, "Practical Electronics for Inventors", Mc Graw Hill Education, 4 th Edition, 2016. 2. Satya Sai Srikant, Prakash Kumar Chaturvedi, "Basic Electronics Engineering Including Laboratory Manual", Springer Nature Singapore Pvt Ltd., 2020. 3. J.B.Gupta, "Electronic Devices and Circuits", S.K. Kataria and Sons, 6 th Edition Reprint, 2022. 4. A. Anand Kumar, "Fundamentals of Digital Circuits", PHI Learning Pvt. Ltd, 4 th Edition, 2022. 5. L.K.Maheswari, M.M.S. Anand, "Laboratory Manual for Introductory Electronics Experiments", New Age International (p) Limited, 1980.												
Web References												
1. http://vlabs.iitkgp.ernet.in/be/ 2. https://be-iitkgp.vlabs.ac.in/ 3. https://electricvlab.com/ 4. https://iotdunia.com/basic-electronics-virtual-lab-for-teachers-and-students/												

COs/POs/PSOs Mapping

COs	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	3	3	2	3	2	-	-	-	-	-	-	-	3	2	2
2	3	3	2	3	2	-	-	-	-	-	-	-	3	2	2
3	3	3	2	3	2	-	-	-	-	-	-	-	3	2	2
4	3	3	2	3	2	-	-	-	-	-	-	-	3	2	2
5	3	3	2	3	2	-	-	-	-	-	-	-	3	2	2

Correlation Level: 1 – Low, 2 – Medium, 3 – High

Evaluation Methods

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	Performance in practical classes			Model Practical Examination	Attendance		
	Conduction of practical	Record work	viva				
Marks	15	5	5	15	10	50	100

Department	Electrical and Electronics Engineering					Programme: B. Tech.					
Semester	First					Course Category: MC		End Semester Exam Type :-			
Course Code	U23EEM101					Periods/Week			Credit	Maximum Marks	
						L	T	P	C	CAM	ESE
Course Name	INDUCTION PROGRAMME (UHV - I)					2 Weeks		Non-Credit	-	-	-
(Common to ALL Branches)											
Prerequisite	Basic Mathematics										
Course Outcomes	On completion of the course, the students will be able to										BT Mapping (Highest Level)
	CO1	Develop holistic attitude and harmony in the individual, family, and Society									K2
	CO2	Acquire grammar skills and capable to write and speak English confidently									K2
	CO3	Understand the basic concepts in Mathematics and Programming									K2
	CO4	Know about the art and culture, language and literature of this vast secular nation									K2
	CO5	Identify the inherent talent and develop it professionally									K3
UNIT – I	Universal Human Values							Periods:12			
Welcome and Introductions - Getting to know each other, Aspirations and Concerns - Individual Academic and Career, Expectations of Family, Peers, Society, Nation, Fixing one's Goals, Self-Management - Self-confidence, Peer Pressure, Time Management, Anger, Stress Personality Development, Self-improvement, Health - Health issues, Healthy diet, Healthy lifestyle, Hostel life, Relationships - Home sickness, Gratitude towards Parents, Teachers and others Ragging and interaction, Competition and Cooperation, Peer Pressure, Society - Participation in Society, Natural Environment - Participation in Nature, Sum Up - Role of Education, Need for a Holistic Perspective, Self-evaluation and Closure - Sharing and feedback.										CO1	
UNIT – II	Proficiency in English							Periods:12			
Communication skills -Prognostic test on Grammar -Synonyms, Antonyms, Tenses, Sentence Completion, Idioms and Phrases, One-word Substitution, Homophones, Homonyms, Use of Prepositions, Subject-verb Agreement -Writing - Paragraph writing, Letter writing, Essay writing, Story Development.										CO2	
UNIT – III	Bridge Course in Mathematics and C Programming							Periods:12			
Mathematics: Fundamentals of differential and integral calculus: Theory and Practice, Limit of function - Fundamental results on limits - Continuity of a function - Concept of differentiation - Concept of derivative - Slope of a curve - Differentiation Techniques - Derivatives of elementary functions from first principle - Derivatives of inverse functions - Logarithmic differentiation - Method of substitution - Differentiation of parametric functions -Differentiation of implicit functions - Higher order derivatives. Integrals of functions containing linear functions -Method of integration (Decomposition method, method of substitution, integration by parts) - Definite integrals. Simple definite integrals - Properties of Definite integrals - Reduction formulae - Area and volume - Length of curve - surface area of a solid.										CO3	
C Programming: Features of C and its basic Structure - Keywords - constants - variables - operators - Data types - Formatted input and output statements - Control and Looping statement - Arrays - Functions - Strings - writing simple C programs.											
UNIT – IV	Literary Activities							Periods:12			
Team building activities - Quiz - Oral Exercises - Group discussion, Debate, Extempore, Role play, சிறப்பு சொற்பொழிவு - தமிழர் மரபு மற்றும் தமிழர் தொழில்நுட்பம்.										CO4	
UNIT – V	Creative Arts							Periods:12			
Introduction to painting and renowned artworks -Documentary and Short films - Music -Vocal, Instrumental - Dance - Classical, Cinematic - Mimicry - Mime.										CO5	
Lecture Periods: 60		Tutorial Periods: -			Practical Periods: -			Total Periods: 60			



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Reference Books

1. R.R Gaur, R. Asthana, G.P. Bagaria, "A Foundation Course in Human Values and Professional Ethics", Excel Books, New Delhi, 2nd Revised Edition, 2019.
2. R. Kumar Mohan, "English Grammar for all (Functional and Applied Grammar)", Unicare Academy, 2022.
3. Seely, John, "Oxford A-Z of Grammar and Punctuation", Oxford Publication, 2013.
4. B.V. Ramana, "Higher Engineering Mathematics", Tata McGraw – Hill, New Delhi, 6th Edition, 2018.
5. Dr. A. Singaravelu, "Engineering Mathematics - I", Meenakshi Publications, 2019.
6. E. Balagurusamy, "Programming in ANSI C", McGraw Hill, 8th Edition, 2019.
7. Dr.K.K.Pillay, "Social Life of Tamils", A Joint Publication of TNTB and ESC and RMRL.
8. R.Balakrishnan, "Journey of Civilization", Roja muthiah Research Publishers, 1st Edition 2019.
9. கே. கே. பிள்ளை, "தமிழக வரலாறு - மக்களும் பண்பாடும்", சென்னை: உலகத் தமிழாராய்ச்சி நிறுவனம், 2002.
10. முனைவர் இல.சுந்தரம், "கணினித்தமிழ்", விகடன் பிரசுரம்.
11. கீழடி - வைகை நதிக்கரையில் சங்க கால நகர நாகரிகம், தமிழக தொல்லியல் துறை

Web References

1. <http://www.newsociety.com/Books/S/Slow-isBeautiful>
2. <https://www.aplustopper.com/formal-letter/>
3. <https://www.javatpoint.com/c-programming-language-tutorial>
4. <http://www.math.cum.edu/~wn0g/2ch6a.pdf>
5. <https://education.nsw.gov.au/teaching-and-learning/curriculum/creative-arts>

COs/POs/PSOs Mapping

COs	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	1	-	-	-	-	2	1	-	1	2	-	1	1	-	-
2	1	-	-	-	-	2	1	-	1	3	-	1	1	-	-
3	1	-	-	-	-	2	1	-	1	1	-	1	1	-	-
4	1	-	-	-	-	2	1	-	3	3	-	1	1	-	-
5	1	-	-	-	-	2	1	-	3	1	-	1	1	-	-

Correlation Level: 1 – Low, 2 – Medium, 3 – High

Department	Mathematics				Programme: B. Tech.						
Semester	Second				Course Category: BS		End Semester Exam Type :TE				
Course Code	U23MATC02				Periods/Week		Credit	Maximum Marks			
					L	T	P	C	CAM	ESE	TM
Course Name	ENGINEERING MATHEMATICS – II				3	1	0	4	25	75	100
(Common to ALL Branches Except CSBS, FT)											
Prerequisite	Basic Mathematics										
Course Outcomes	On completion of the course, the students will be able to										BT Mapping (Highest Level)
	CO1	Convert a periodic function into series form.									K2
	CO2	Compute Fourier transforms of various functions.									K3
	CO3	Solve Differential Equations using Laplace transforms.									K3
	CO4	Apply inverse Laplace transform of simple functions.									K3
	CO5	Solve difference equations using Z – transforms.									K3
UNIT – I	Fourier Series							Periods:12			
Dirichlet's conditions – General Fourier series – Odd and Even functions – Half-Range sine series and cosine series – Change of intervals – Parseval's Identity.										CO1	
UNIT – II	Fourier Transforms							Periods:12			
Fourier Transforms and its inverse – Properties of Fourier Transform (without proof) – Fourier sine and cosine Transforms and their properties (excluding proof).										CO2	
UNIT – III	Laplace Transforms							Periods:12			
Laplace transforms of elementary functions and Periodic functions – Basic properties (excluding proof) – Laplace transforms of derivatives and integrals – Initial and final value theorems.										CO3	
UNIT – IV	Inverse Laplace Transforms							Periods:12			
Definition of inverse Laplace Transforms – Convolution theorem (excluding proof) – Solutions of Linear Ordinary Differential Equations of second order with constant coefficients.										CO4	
UNIT – V	Z – Transforms							Periods:12			
Z-transforms – Elementary Properties – Inverse Z-transforms (using partial fraction and Residues) – Solution of difference equations using Z - transform.										CO5	
Lecture Periods: 45		Tutorial Periods: 15			Practical Periods: -			Total Periods: 60			
Text Books											
1. T. Veerarajan, "Engineering Mathematics", Tata McGraw Hill, New Delhi, 3 rd Edition, 2011. 2. C. P. Gupta, Shree Ram Singh. M. Kumar, "Engineering Mathematics for semester I & II", Tata McGraw Hill, New Delhi, 2 nd Edition, 2016. 3. H.K. Dass, "Advanced Engineering Mathematics", S. Chand, New Delhi, 22 nd Edition, 2019.											
Reference Books											
1. N.P. Bali and Dr. Manish Goyal, "A Textbook of Engineering Mathematics", University Science Press, India, 8 th Edition, 2016. 2. P. Sivaramakrishna Das and C. Vijayakumari, "Engineering Mathematics", Pearson India Education services Pvt. Ltd, India, 1 st Edition, 2017. 3. Erwin Kreyszig, "Advanced Engineering Mathematics", John Wiley & Sons, New Delhi, 10 th Edition, 2019. 4. G. Balaji, "Engineering Mathematics - Transforms and Partial Differential Equations", G. Balaji Publishers, 18 th Edition, 2022. 5. B.V. Ramana, "Higher Engineering Mathematics", Tata McGraw Hill, New Delhi, 2017.											



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1. <https://nptel.ac.in/courses/111105121/>
2. <https://nptel.ac.in/courses/111105035/>
3. <https://nptel.ac.in/courses/11110711>
4. https://swayam.gov.in/nd1_noc20_ma17/preview
5. <https://nptel.ac.in/courses/111/103/111103021/>

COs/POs/PSOs Mapping

COs	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	3	2	2	-	-	1	-	-	-	-	-	1	3	1	1
2	3	2	1	1	-	1	-	-	-	-	-	1	3	1	1
3	3	2	1	1	-	1	-	-	-	-	-	1	3	1	1
4	3	2	1	1	-	1	-	-	-	-	-	1	3	1	1
5	3	2	1	1	-	1	-	-	-	-	-	1	3	1	1

Correlation Level: 1 – Low, 2 – Medium, 3 – High

Evaluation Methods

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment*	Attendance		
Marks	5	5	5	5	5	75	100

* Application oriented / Problem solving / Design / Analytical in content beyond the syllabus

Department	Computer Science and Engineering				Programme: B. Tech.						
Semester	First / Second				Course Category: ES		End Semester Exam Type :TE				
Course Code	U23CSTC01				Periods/Week		Credit	Maximum Marks			
					L	T	P	C	CAM	ESE	TM
Course Name	PROGRAMMING IN C				3	0	0	3	25	75	100
(Common to ALL Branches)											
Prerequisite	Nil										
Course Outcomes	On completion of the course, the students will be able to										BT Mapping (Highest Level)
	CO1	Comprehend the basics of Computers.									K2
	CO2	Illustrate the concepts of control structures and looping.									K2
	CO3	Implement programs using arrays and functions.									K3
	CO4	Demonstrate programs using Structure and Pointers.									K3
	CO5	Build the programs using Union and File management Operations.									K3
UNIT – I	Introduction							Periods:09			
Generation and Classification of Computers - Block Diagram of a Computer –Categories of Software – Network Structure - Number System – Binary – Decimal – Conversion – Algorithm – Pseudo code – Flow Chart											CO1
UNIT – II	C Programming Basics							Periods:09			
Introduction to ‘ C’ Programming – Basic structure of a ‘C’ program – compilation and linking processes – Constants, Variables – Data Types – Expressions using operators in ‘C’ – Managing Input and Output operations – Decision Making and Branching – Looping statements.											CO2
UNIT – III	Arrays and Functions							Periods:09			
Arrays – Initialization – Declaration – One dimensional and Two dimensional arrays. String- String operations – String Arrays. Simple programs- sorting- searching – matrix operations- Function – definition of function – Declaration of function – Pass by value – Pass by reference – Recursion											CO3
UNIT – IV	Structure and Pointers							Periods:09			
Structure Introduction – Structure definition – Structure declaration – Structure within a structure –Self Referential Structure. Pointers - Definition – Initialization – Pointers arithmetic – Pointers and arrays -Pointer to Function –Pointer and Structure- Simple programs											CO4
UNIT – V	Unions and Files							Periods:09			
Union Introduction - Programs Using Structures and Unions – Introduction to File - File Operations - File Input and Output Functions - Random Access to Files - File System Functions - Command Line Arguments- Storage Classes - Pre-Processor Directives- Dynamic Memory Functions.											CO5
Lecture Periods: 45		Tutorial Periods: -			Practical Periods: -			Total Periods: 45			
Text Books											
1. E. Balagurusamy, "Programming in ANSI C", Tata McGraw Hill, 8 th Edition, 2019. 2. Yashvant Kanetkar, "Let us C", BPB Publications, 16 th Edition, 2017. 3. Herbert Schildt, "C: The Complete Reference", McGraw Hill, 4 th Edition, 2014.											
Reference Books											
1. Vikas B. Agarwal, Jyoti P. Mirani, "Computer Fundamentals", Nirali Prakashan, 2019. 2. Ashok N Kamthane, "Computer Programming", Pearson education, 2 nd Edition, 2012. 3. Vikas Verma, "A Workbook on C", Cengage Learning, 2 nd Edition, 2012. 4. P.Visu, R.Srinivasan, S.Koteeswaran, "Fundamentals of Computing and Programming", Sri Krishna Publications, 4 th Edition, 2012. 5. Pradip Dev, Manas Ghoush, "Programming in C", Oxford University Press, 2 nd Edition, 2011.											
Web References											
1. https://www.programiz.com/c-programming 2. https://www.geeksforgeeks.org/c-language-set-1-introduction/ 3. https://www.tutorialspoint.com/cprogramming 4. https://www.assignment2do.wordpress.com/.../solution-programming-in-ansi-c 5. https://nptel.ac.in/courses/106/104/106104128/											



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COs/POs/PSOs Mapping

COs	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	2	1	-	-	3	-	-	-	-	-	-	-	1	2	2
2	2	1	-	-	3	-	-	-	-	-	-	-	1	2	2
3	3	2	1	1	3	-	-	-	-	-	-	-	1	2	2
4	3	2	1	1	3	-	-	-	-	-	-	-	1	2	2
5	3	2	1	1	3	-	-	-	-	-	-	-	1	2	2

Correlation Level: 1 – Low, 2 – Medium, 3 – High

Evaluation Methods

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment*	Attendance		
Marks	5	5	5	5	5	75	100

* Application oriented / Problem solving / Design / Analytical in content beyond the syllabus

Department	Civil / Mechanical				Programme: B. Tech.						
Semester	First / Second				Course Category: ES		End Semester Exam Type :TE				
Course Code	U23ESTC01				Periods/Week		Credit	Maximum Marks			
					L	T	P	C	CAM	ESE	TM
Course Name	BASICS OF CIVIL AND MECHANICAL ENGINEERING				3	0	0	3	25	75	100
(Common to EEE, ECE, ICE, MECH, Civil, Mechatronics Branches)											
Prerequisite	Basic Science										
Course Outcomes	On completion of the course, the students will be able to										BT Mapping (Highest Level)
	CO1	Understand the types of buildings and materials.									K2
	CO2	Summarize on the various components of buildings and surveying concepts									K2
	CO3	Identify the various infrastructure facilities									K2
	CO4	Familiarize the working principles of IC engines and automobile systems									K2
	CO5	Understand about the power generation systems and its components									K2
	CO6	Acquire knowledge about the various machining process.									K2
SECTION A - CIVIL ENGINEERING											
UNIT – I	Buildings and Buildings Materials							Periods:08			
Buildings – Definition – Classification according to NBC-plinth area, Floor area, carpet area, floor space index - Development of Smart cities - Green building, Benefits from green building. Building Materials - stone, brick, cement, cement mortar, concrete, steel, Timber - their properties and uses											CO1
UNIT – II	Buildings Components and Surveying							Periods:08			
Various Buildings Components and their functions. Foundation: function and types - Brick masonry, Stone Masonry and its types – Floors, Roofs and its types. Surveying: Objects – Classification – Principles – Measurements of Distances and areas – Leveling											CO2
UNIT – III	Basic Infrastructure							Periods:07			
Roads and Bridges – types, components advantage and disadvantages. Railways - Permanent way and its elements. Sources of Water - Quality of Water – Domestic sewage Treatment – Rain Water harvesting – Dams - site selection for dam construction, types of dams.											CO3
SECTION B – MECHANICAL ENGINEERING											
UNIT – IV	Internal and External Combustion Systems							Periods:08			
IC engines – Classification – Working principles – Diesel and Petrol Engines: Two stroke and four stroke engines – merits and demerits. Steam generators (Boilers) – Classification – Constructional features (of only low-pressure boilers) – Boiler mountings and accessories – Merits and demerits – Applications.											CO4
UNIT – V	Power Generation Systems, Refrigeration and Air Conditioning System							Periods:07			
Power plants: Thermal – Nuclear, Hydraulic, Solar, Wind, Geothermal, Wave, Tidal and Ocean Thermal Energy Conversion systems - Functions, Applications - Schemes and layouts (Description only) Refrigeration and Air Conditioning System: Terminology of Refrigeration and Air Conditioning. Principle of vapour compression and absorption system – Layout of typical domestic refrigerator – Window and Split type room Air conditioner.											CO5
UNIT – VI	Manufacturing Process							Periods:07			
Lathe - types, Specifications, Operations of a centre lathe. Casting - Pattern making, Allowances, Green sand and dry sand moulding, casting defects. Welding - Arc and Gas welding process, brazing and soldering (process description only).											CO6
Lecture Periods: 45			Tutorial Periods: -			Practical Periods: -			Total Periods: 45		
Text Books											
1. G. Shanmugam, M.S. Palanichamy, "Basic Civil and Mechanical Engineering", McGraw Hill Education, 1 st Edition, 2018. 2. S.C. Sharma, M.P Poonia, "Basic Mechanical Engineering", Khanna Books Publication, 2019. 3. Dr. S. Jayakumar, "Basic Civil Engineering", Aagash Nekaa Publications, 2011											



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Reference Books

1. Sen Mohan, "Basic Mechanical Engineering", Khanna Books Publication, 2019
2. S.S.Bhavikatti, "Basic Civil Engineering", New Age International Ltd., 2018.
3. V. Rameshbabu, "Basic Civil & Mechanical Engineering", VRB Publishers Private Limited, 2017.
4. Serope Kalpakjian, Steven Schmid, "Manufacturing Engineering and Technology", Pearson Publication, 7th Edition, 2014.
5. Gopi Satheesh, "Basic Civil Engineering", Pearson Publications, 3rd Edition, 2015.

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1. <https://nptel.ac.in/courses/112107291/>
2. <https://nptel.ac.in/courses/112/103/112103262/>
3. <https://ocw.mit.edu/courses/mechanical-engineering/2-61-internal-combustion-engines-spring-2017/lecture-notes/>
4. <https://nptel.ac.in/courses/105102088/>
5. <https://nptel.ac.in/courses/105104101/>

COs/POs/PSOs Mapping

COs	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	3	1	1	-	1	-	-	-	-	-	-	1	2	-	1
2	3	1	1	-	1	-	-	-	-	-	-	1	2	-	1
3	3	1	1	-	1	-	-	-	-	-	-	1	2	-	1
4	3	1	-	-	-	-	-	-	-	-	-	1	2	3	1
5	3	1	-	-	-	-	-	-	-	-	-	1	2	3	1
6	3	1	-	-	-	-	-	-	-	-	-	1	2	2	1

Correlation Level: 1 – Low, 2 – Medium, 3 – High

Evaluation Methods

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment*	Attendance		
Marks	5	5	5	5	5	75	100

* Application oriented / Problem solving / Design / Analytical in content beyond the syllabus

Department	Electrical and Electronics Engineering			Programme: B. Tech.							
Semester	Second			Course Category: PC		End Semester Exam Type :TE					
Course Code	U23EET203			Periods/Week			Credit	Maximum Marks			
				L	T	P	C	CAM	ESE	TM	
Course Name	ELECTRONICS II			3	0	0	3	25	75	100	
EEE											
Prerequisite	Electronics I										
Course Outcomes	On completion of the course, the students will be able to								BT Mapping (Highest Level)		
	CO1	Gain knowledge about small signal and large signal amplifier circuits for audio and radio frerquency applications.								K4	
	CO2	Comprehend the operation of tuned amplifiers in frequency selective circuits and analyze time base circuits for oscillator applications.								K2	
	CO3	Analyze the performance of oscillators and feedaback amplifiers for signal generation and processing.								K4	
	CO4	Develop the ability to use flip-flops in counters and shift registers to build complex digital circuits.								K3	
	CO5	Apply state reduction techniques to simplify and design synchronous and asynchronous sequential circuits.								K3	
UNIT – I	Small Signal And Large Signal Amplifiers						Periods:09				
Small Signal Amplifiers: Transistor hybrid model and H-parameters – Graphical determination of h-parameters – Analysis and comparison of CB, CE and CC amplifier using h-parameter model – CE amplifier with unbiased emitter resistance – Transistor Re model. Large Signal Amplifiers: High frequency transistor model – Class A amplifier – Direct coupled and transformer coupled – Class B amplifier – Push-pull arrangement and complementary symmetry amplifier – Conversion efficiency calculations – Distortion in Power amplifier – Class AB amplifier – Class C amplifier.										CO1	
UNIT – II	Multistage Amplifiers And Time Base Circuits						Periods:09				
Multistage Amplifiers: Cascade amplifier – Direct and RC coupled two stage CE amplifiers – Darlington pair – Cascode amplifier. Tuned amplifier: Single tuned – Double tuned – Stagger tuned amplifiers. Time Base Circuits: UJT sweep circuits – Voltage and current saw tooth sweeps – Fixed amplitude sweep – Miller and bootstrap time base. Schmitt trigger and Multi-vibrators circuits using BJT – Multivibrators using negative resistance devices (UJT and Tunnel diodes).										CO2	
UNIT – III	Feedback Amplifiers And Oscillators						Periods:09				
Feedback Amplifiers: Feedback concept – Gain with feedback – General characteristics of negative feedback amplifiers – Four basic types of feedback and the effect on gain, input and output resistances. Oscillators: Conditions for sustained oscillations – Barkhausen criterion. Tuned oscillators: Hartley, Colpitt, Armstrong and Crystal Oscillators. RC Oscillators: Phase shift and Wien-bridge. UJT relaxation oscillator – Frequency stability.										CO3	
UNIT – IV	Counters And Shift Registers						Periods:09				
Flip flops: SR, D, JK, T and Master Slave – Edge and level triggered. Counters: Design of Synchronous counters – Design Asynchronous counter – UP/Down counter – Decade counter – Modulo - n counter – Ring counter – Johnson counter – BCD counters. Registers: Registers – Shift register – Types – Parallel/serial converter – Bi directional shift registers.										CO4	
UNIT – V	Design of Sequential Circuits						Periods:09				
Synchronous sequential circuits: Model Selection – State transition diagram – State synthesis table – Design equations and circuit diagram – State reduction technique. Asynchronous sequential circuits: Design and analysis of asynchronous sequential circuits – State transition diagram, Primitive table, State reduction, state assignment and design equations – Transition stability – Flow stability – race conditions, hazards and errors in digital circuits.										CO5	
Lecture Periods: 45		Tutorial Periods: -		Practical Periods: -			Total Periods: 45				
Text Books											
1. J. B. Gupta, "Electronic Devices and Circuits", S.K. Kataria and Sons, 6 th Edition Reprint 2022. 2. Robert L. Boylestad and Louis Nashelsky, "Electronic Devices and Circuit theory", Pearson Education, 9 th Edition, 2007. 3. Floyd and Jain, "Digital Fundamentals", Pearson Education, 11 th Edition, 2015.											
Reference Books											
1. Dr. R. S. Sedha, "A textbook of Applied Electronics", S. Chand Publications, Multicolor Edition, 2019. 2. David A. Bell, "Electronic devices and circuits", Oxford University higher education, 5th Edition, 2008. 3. G.S. Tomar, Ashish Bagwari, "Fundamentals of Electronic Devices and Circuits", Springer Nature, 2019. 4. A. Anand Kumar, "Fundamentals of Digital Circuits, PHI Learning Pvt. Ltd, 4 th Edition, 2022. 5. Morris. M. Mano and Michael. D. Ciletti, "Digital Design", Pearson Education, 5 th Edition, 2013.											



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1. <https://www.allaboutcircuits.com/textbook/semiconductors/chpt-4/the-h-parameter-model/>
2. <https://nptel.ac.in/courses/108102097>
3. <https://nptel.ac.in/courses/108106188>
4. <https://nptel.ac.in/courses/108105158>
5. <https://archive.nptel.ac.in/courses/106/105/106105185/>

COs/POs/PSOs Mapping

COs	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	3	3	3	2	3	-	-	-	-	-	-	-	2	2	2
2	3	3	3	2	3	-	-	-	-	-	-	-	2	2	2
3	3	3	3	2	3	-	-	-	-	-	-	-	2	2	2
4	3	3	3	2	3	-	-	-	-	-	-	-	2	2	2
5	3	3	3	2	3	-	-	-	-	-	-	-	2	2	2

Correlation Level: 1 – Low, 2 – Medium, 3 – High

Evaluation Methods

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment*	Attendance		
Marks	5	5	5	5	5	75	100

* Application oriented / Problem solving / Design / Analytical in content beyond the syllabus

Department	Electrical and Electronics Engineering					Programme: B. Tech.							
Semester	Second					Course Category : HS		End Semester Exam Type: TE					
Course Code	U23HSTC01					Periods / Week		Credit	Maximum Marks				
						L	T	P	C	CAM	ESE	TM	
Course Name	UNIVERSAL HUMAN VALUES - II					2	0	0	2	25	75	100	
(Common to all Branch)													
Prerequisite	UHV - I												
Course Outcomes	On completion of the course, the students will be able to										BT Mapping (Highest Level)		
	CO1	Evaluate the significance of value inputs in formal education and start applying them in their life and profession										K2	
	CO2	Distinguish between values and skills, happiness and accumulation of physical facilities, the Self and the Body, Intention and Competence of an individual, etc.										K2	
	CO3	Analyze the value of harmonious relationship based on trust and respect in their life and profession										K2	
	CO4	Examine the role of a human being in ensuring harmony in society and nature.										K2	
	CO5	Apply the understanding of ethical conduct to formulate the strategy for ethical life and profession.										K2	
UNIT - I	Introduction to Value Education							Periods: 06					
Right Understanding, Relationship and Physical Facility (Holistic Development and the Role of Education) - Understanding Value Education - Self-exploration as the Process for Value Education - Basic Human Aspirations - Happiness and Prosperity - Current Scenario- Method to Fulfil the Basic Human Aspirations.											CO1		
UNIT - II	Harmony in the Human Being							Periods: 06					
Understanding Human being as the Co-existence of the Self and the Body-Distinguishing between the Needs of the Self and the Body-The Body as an Instrument of the Self-Understanding Harmony in the Self-Harmony of the Self with the Body- Programme to ensure self-regulation and Health.											CO2		
UNIT - III	Harmony in the Family and Society							Periods: 06					
Harmony in the Family - Basic Unit of Human Interaction- 'Trust' - Foundational Value in Relationship - 'Respect' - as the Right Evaluation - Other Feelings, Justice in Human-to-Human Relationship - Understanding Harmony in the Society-Vision for the Universal Human Order.											CO3		
UNIT - IV	Harmony in the Nature / Existence							Periods: 06					
Understanding Harmony in the Nature-Interconnectedness, Self-regulation and Mutual Fulfilment among the Four Orders of Nature - Realizing Existence as Co-existence at All Levels - Holistic Perception of Harmony in Existence.											CO4		
UNIT - V	Implications of the Holistic Understanding - A Look at Professional Ethics							Periods: 06					
Natural Acceptance of Human Values - Definitiveness of (Ethical) Human Conduct - Basis for Humanistic Education, Humanistic Constitution and Universal Human Order-Competence in Professional Ethics-Holistic Technologies, Production Systems and Management Models-Typical Case Studies-Strategies for Transition towards Value - Based Life and Profession											CO5		
Lecture Periods: 30			Tutorial Periods: -			Practical Periods: -			Total Periods: 30				
Text Book													
1. R. R. Gaur, R. Asthana, G. P. Bagaria, "A Foundation Course in Human Values and Professional Ethics", Excel Books, 2 nd Revised Edition, New Delhi, 2019.													
Reference Books													
1. A Nagraj, Jeevan Vidya Prakashan, Amarkantak, "Jeevan Vidya: EkParichaya", 2013. 2. A.N. Tripathi, "Human Values", New Age International Publishers, New Delhi, 3 rd Edition, 2019. 3. Annie Leonard, "The Story of Stuff", Free Press, Reprint Edition, 2011. 4. Mohandas Karam chand Gandhi, "The Story of My Experiments with Truth – Mahatma Gandhi Autobiography", Finger print Publisher, 2009. 5. E. F Schumacher, "Small is Beautiful", Vintage Publisher, 1993. 6. Cecile Andrews, "Slow is Beautiful", New Society Publishers, 2006. 7. J C Kumarappa, "Economy of Permanence", Sarva Seva Sangh Prakashan, 2017. 8. Pandit Sunderlal, "Bharat Mein Angreji Raj", Prabhat Prakashan Publisher, 2021. 9. Dharampal, "Rediscovering India", Stosius Inc/Advent Books Division Publisher, 1983. 10. Mohandas K. Gandhi, "Hind Swaraj or Indian Home Rule", Gyan Publishing House, 2023. 11. Maulana Abdul Kalam Azad, "India Wins Freedom", Orient Black Swan Publisher, 1 st Edition, 1988. 12. Life of Vivekananda, "Romain Rolland (English)", Advaita Ashrama Publisher, India, 4 th Edition, 2010. 13. Mahatma Gandhi, "Romain Rolland (English)", Srishti Publishers & Distributors, 2020.													



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Web References

1. <https://www.uhv.org.in/uhv-ii>
2. <http://www.storyofstuff.com>
3. https://www.youtube.com/channel/UCQxWr5QB_eZUnwxSwxXEkQw
4. https://fdp-si.aicte-india.org/8dayUHV_download.php
5. <https://www.youtube.com/watch?v=8ovkLRYXijE>

COs/POs/PSOs Mapping

COs	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	-	-	-	-	-	2	3	2	2	-	-	3	1	-	-
2	-	-	-	-	-	2	3	2	2	-	-	3	1	-	-
3	-	-	-	-	-	3	3	2	2	-	-	3	1	-	-
4	-	-	-	-	-	2	3	2	2	-	-	3	1	-	-
5	-	-	-	-	-	2	3	2	2	-	-	3	1	-	-

Correlation Level: 1 – Low, 2 – Medium, 3 – High

Evaluation Methods

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment*	Attendance		
Marks	5	5	5	5	5	75	100

* Application oriented / Problem solving / Design / Analytical in content beyond the syllabus



Department	English	Programme: B. Tech.						
Semester	Second	Course Category : CC			End Semester Exam Type: TE			
Course Code	U23ENBC02	Periods / Week			Credit	Maximum Marks		
		L	T	P	C	CAM	ESE	TM
Course Name	COMMUNICATIVE ENGLISH - II	2	0	2	3	50	50	100

(Common to all Branch except CSBS)

Prerequisite	Basics of English Language , Communicative English - I							
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Course Outcomes	On completion of the course, the students will be able to							BT Mapping (Highest Level)
	CO1	Draft effective written communication in professional environment						K2
	CO2	Apply the mechanics of creative writing with precision and clarity						K3
	CO3	Acquire language skills professionally to groom the overall personality through sensitizing various etiquettes in real time situation						K2
	CO4	Develop language fluency and gain self-confidence						K3
	CO5	Express thoughts and ideas with clarity and focus						K2

UNIT – I	Business Correspondence	Periods: 10
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Business Writing: Circular, Agenda, Memoranda, Notice, Instruction, Minutes, Email Writing ,Report Writing- Official and Demi Official Letters : Applying for Educational / Car / Home Loans / Joining Report, Leave Letter, Industrial Visit, In plant Training, Letter to the Editor, Calling for a quotation, Placing Order, Letter of Complaints, Letter seeking Clarification, Resume', Job Application Letter, Bio-data, CV								CO1
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UNIT – II	Functional Writing Skills	Periods: 10
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Four Modes of Writing, Sentence Structure, Art of condensation: Summary Writing and Note Making, Use of phrase and clause in sentence, Principles of paragraph writing, Techniques of Essay Writing, Jumbled Sentence, Paraphrasing								CO2
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UNIT – III	Etiquettes	Periods: 10
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Etiquette: Meaning, Kinds: Corporate Etiquette, Meeting Etiquette, Telephone Etiquette, Email Etiquette, Social Media Etiquette, Dining Etiquette, Communication Etiquette								CO3
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UNIT – IV	Communication Practice – II	Periods: 15
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List of Exercises Listening: Letter writing tips Speaking: Just a Minute, Impromptu Speech, Contemporary Issues Reading: Variety of examples for Modes of Writing Writing: Different types of letters								CO4
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UNIT – V	Interpersonal Communication – II	Periods: 15
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List of Exercises Listening: Videos on different types of Etiquettes Speaking: Team Presentation, Negotiation Skills Reading: Phrases and Clauses Writing: Free writing on any given topic, Paraphrasing Practice								CO5
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Lecture Periods: 30	Tutorial Periods: -	Practical Periods: 30	Total Periods: 60
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Text Book

1. PC Das, "Letter Writing including Official and Business Letters", New Central Book Agency, 2020. 2. Kumar, Sanjay, Pushpalatha, "Communication Skills", Oxford University Press, 2018. 3. Raman, Meenakshi & Sangeetha Sharma, "Communication Skills", Oxford University Press, 1 st Edition, 2019.							
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Reference Books

1. Sahukar, Nimeran, Bhalla, Prem, "The book of Etiquettes and Manners", Pustak Mahal Publisher, 1 st Edition, 2009. 2. Gerson Sharon J, Steven M. Gerson, "Technical Writing Process and Product", Pearson Education Pvt. Ltd. 3 rd Edition, 2009. 3. Grussendorf, Marion, "English for Presentations". Oxford University Press, 2007. 4. Seely John, "The Oxford Guide to Writing and Speaking", Oxford University Press, 2006. 5. R.C. Sharma, Krishna Mohan, "Business Correspondence and Report Writing", Tata McGraw Hill &Co. Ltd., 2001.							
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Web References

1. <https://www.indeed.com/career-advice/finding-a-job/how-to-write-an-application-letter>
2. <https://owlcation.com/humanities/Four-Types-of-Writing>
3. <https://targetstudy.com/languages/english/paragraph-writing.html>
4. <https://www.businessnewsdaily.com/8262-email-etiquette-tips.html>
5. <https://www.youtube.com/watch?v=UOceysteljo>

COs/POs/PSOs Mapping

COs	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	1	-	-	-	-	-	-	-	-	3	-	1	1	-	-
2	1	-	-	-	-	-	-	-	-	3	-	1	1	-	-
3	1	-	-	-	-	-	-	-	-	3	-	1	1	-	-
4	1	-	-	-	-	-	-	-	-	3	-	1	1	-	-
5	1	-	-	-	-	-	-	-	-	3	-	1	1	-	-

Correlation Level: 1 – Low, 2 – Medium, 3 – High

Evaluation Methods

Theory						
Assessment	Continuous Assessment Marks (CAM)				End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Attendance		
Marks	5	5	5	5	75	60
	20(to be weighted for 10 marks)				(to be weighted for 50 marks)	

Practical					
Continuous Assessment Internal Evaluation			End Semester Internal Evaluation		Total Marks
30 (to be weighted for 10 marks)			30 marks		40
Listening (L)*	10		Listening (L)*	10	
Speaking(S)	5		Speaking(S)	5	
Reading(R)*	10		Reading(R)*	10	
Writing(W)*	5		Writing(W)*	5	

*LRW components of Practical can be evaluated through Language Lab Software

Signature

Department	Mechanical				Programme: B. Tech.						
Semester	First / Second				Course Category: ES		End Semester Exam Type : LE				
Course Code	U23ESPC03				Periods/Week		Credit	Maximum Marks			
					L	T	P	C	CAM	ESE	TM
Course Name	ENGINEERING GRAPHICS USING AUTOCAD				0	0	2	1	50	50	100
(Common to all Branches)											
Prerequisite	Nil										
Course Outcomes	On completion of the course, the students will be able to										BT Mapping (Highest Level)
	CO1	Familiarize with the fundamentals and standards of engineering graphics.									K3
	CO2	Perform drawing of basic geometrical constructions and multiple views of objects.									K2
	CO3	Visualize the isometric and perspective sections of simple solids.									K3
	CO4	Connect side view associate on front view.									K4
	CO5	Correlate sectional views and lateral surface developments of various solids.									K4
List of Experiments:											
<div>1. Study of capabilities of software for Drafting and Modeling – Coordinate systems (absolute, relative, polar, etc.) – Creation of simple figures like polygon and general multi-line figures.</div> <div>2. Drawing a Title Block with necessary text and projection symbol.</div> <div>3. Drawing 2D sketch by applying modify tools like fillet, mirror, array, etc.,</div> <div>4. Drawing front view and top view of simple solids like prism, pyramid, cylinder, cone, etc., and Dimensioning.</div> <div>5. Drawing front view, top view and side view of objects from the given pictorial views (eg. Simple stool, V-block, Mixie Base).</div> <div>6. Drawing a plan of residential building (Two bed rooms, kitchen, hall, etc.)</div> <div>7. Drawing sectional views of prism, pyramid, cylinder, cone, etc,</div> <div>8. Drawing lateral surface development of prism, pyramid, cylinder, cone, etc,</div> <div>9. Drawing isometric projection of simple objects.</div> <div>10. Creating 3D model of simple object and obtaining 2D multi-view drawings.</div>											
Note: Plotting of drawings must be made for each exercise and attached to the records written by Students.											
Lecture Periods: -			Tutorial Periods: -			Practical Periods: 30			Total Periods: 30		
Reference Books											
<div>1. James D. Bethune, "Engineering Graphics with AutoCAD - A Spectrum book", Macromedia Press, Pearson, 1st Edition, 2020.</div> <div>2. NS Parthasarathy and Vela Murali, "Engineering Drawing", Oxford university press, 2015.</div> <div>3. M.B Shah, "Engineering Graphics", ITL Education Solutions Limited, Pearson Education Publication, 2011.</div> <div>4. N.D. Bhatt and V.M. Panchal, "Engineering Drawing: Plane and Solid Geometry", Charotar Publishing House, 2017.</div> <div>5. T. Jeyapoovan, "Engineering Drawing and Graphics Using AutoCAD", Vikas Publishing House Pvt. Ltd., 7th Edition, 2016.</div> <div>6. C M Agrawal, Basant Agrawal, "Engineering Graphics", McGraw Hill, 2017.</div> <div>7. Dhananjay A. Jolhe, "Engineering Drawing: With An Introduction To CAD", McGraw Hill, 1st Edition, 2016.</div> <div>8. James Leach, "AutoCAD 2017 Instructor", SDC Publications, 2016.</div>											
Web References											
<div>1. http://vlabs.iitb.ac.in/vlabs-dev/labs/mit_bootcamp/egraphics_lab/labs/index.php</div> <div>2. http://www.nptelvideos.in/2012/12/computer-aided-design.html</div> <div>3. https://mech.iitm.ac.in/meiitm/course/cad-in-manufacturing/</div> <div>4. https://autocadtutorials.com</div> <div>5. https://dwgmodels.com</div>											

COs/POs/PSOs Mapping

COs	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	3	1	-	-	3	-	-	-	3	-	-	2	1	1	1
2	3	1	-	-	3	-	-	-	3	-	-	3	1	1	1
3	3	1	-	-	3	-	-	-	3	-	-	3	1	1	1
4	3	1	-	-	3	-	-	-	3	-	-	3	1	1	1
5	3	1	-	-	3	-	-	-	3	-	-	3	1	1	1

Correlation Level: 1 – Low, 2 – Medium, 3 – High

Evaluation Methods

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	Performance in practical classes			Model Practical Examination	Attendance		
	Conduction of practical	Record work	viva				
Marks	15	5	5	15	10	50	100

Department	Computer Science and Engineering		Programme: B. Tech.							
Semester	First / Second		Course Category: ES			End Semester Exam Type : LE				
Course Code	U23CSPC01		Periods/Week			Credit	Maximum Marks			
			L	T	P	C	CAM	ESE	TM	
Course Name	PROGRAMMING IN C LABORATORY		0	0	2	1	50	50	100	
(Common to all Branches)										
Prerequisite	Nil									
Course Outcomes	On completion of the course, the students will be able to							BT Mapping (Highest Level)		
	CO1	Implement logical formulations to solve simple problems leading to specific applications.							K3	
	CO2	Execute C programs for simple applications making use of basic constructs, arrays and strings.							K3	
	CO3	Experiment C programs involving functions, recursion, pointers, and structures.							K3	
	CO4	Demonstrate applications using sequential and random access file processing.							K3	
	CO5	Build solutions for online coding challenges.							K3	
List of Experiments:										
<div>1. Write a C program to find the Area of the triangle.</div> <div>2. Develop a C program to read a three digit number and produce output like 1 hundreds 7 tens 2 units For an input of 172.</div> <div>3. Write a C program to check whether a given character is vowel or not using Switch – Case statement.</div> <div>4. Write a C program to print the numbers from 1 to 10 along with their squares.</div> <div>5. Demonstrate do—While loop in C to find the sum of 'n' numbers.</div> <div>6. Find the factorial of a given number using Functions in C.</div> <div>7. Write a C program to check whether a given string is palindrome or not?</div> <div>8. Write a C program to check whether a value is prime or not?</div> <div>9. Develop a C program to swap two numbers using call by value and call by reference.</div> <div>10. Construct a C program to find the smallest and largest element in an array.</div> <div>11. Implement matrix multiplication using C program.</div> <div>12. Write a C program to perform various string handling functions like strlen, strcpy, strcat, strcmp.</div> <div>13. Develop a C program to remove all characters in a string except alphabets.</div> <div>14. Write a C program to find the sum of an integer array using pointers.</div> <div>15. Write a C program to find the Maximum element in an integer array using pointers.</div> <div>16. Construct a C program to display Employee details using Structures</div> <div>17. Write a C program to display the contents of a file on the monitor screen.</div> <div>18. Write a File by getting the input from the keyboard and retrieve the contents of the file using file operation commands.</div> <div>19. Write a C program to create two files with a set of values. Merge the two file contents to form a single file</div> <div>20. Write a C program to pass the parameter using command line arguments.</div>										
Lecture Periods: -		Tutorial Periods: -		Practical Periods: 30			Total Periods: 30			
Reference Books										
<div>1. Zed A Shaw, "Learn C the Hard Way: Practical Exercises on the Computational Subjects You Keep Avoiding (Like C)", Addison Wesley, 2016.</div> <div>2. Anita Goel and Ajay Mittal, "Computer Fundamentals and programming in C", Pearson Education, 1st Edition, 2011.</div> <div>3. Maureen Sprankle, Jim Hubbard, "Problem Solving and Programming Concepts", Pearson, 9th Edition, 2011.</div> <div>4. Yashwanth Kanethkar, "Let us C", BPB Publications, 13th Edition, 2008.</div> <div>5. B.W.Kernighan and D.M. Ritchie, "The C Programming Language", Pearson Education, 2nd Edition, 2006.</div>										
Web References										
<div>1. https://alison.com/course/introduction-to-c-programming</div> <div>2. https://www.geeksforgeeks.org/c-programming-language/</div> <div>3. http://cad-lab.github.io/cadlab_data/files/1993_prog_in_c.pdf</div> <div>4. https://www.tenouk.com/clabworksheet/clabworksheet.html</div> <div>5. https://fresh2refresh.com/c-programming/</div>										



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COs/POs/PSOs Mapping

COs	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	2	1	-	-	3	-	-	-	-	-	-	-	1	-	1
2	2	1	-	-	3	-	-	-	-	-	-	-	1	-	1
3	3	2	1	1	3	-	-	-	-	-	-	-	1	-	1
4	3	2	1	1	3	-	-	-	-	-	-	-	1	-	1
5	3	2	1	1	3	-	-	-	-	-	-	-	1	-	1

Correlation Level: 1 – Low, 2 – Medium, 3 – High

Evaluation Methods

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	Performance in practical classes			Model Practical Examination	Attendance		
	Conduction of practical	Record work	viva				
Marks	15	5	5	15	10	50	100

Department	Electrical and Electronics Engineering			Programme: B. Tech.						
Semester	Second			Course Category: PC		End Semester Exam Type : LE				
Course Code	U23EEP203			Periods/Week			Credit	Maximum Marks		
				L	T	P	C	CAM	ESE	TM
Course Name	ELECTRONICS II LABORATORY			0	0	2	1	50	50	100
EEE										
Prerequisite	Electronics I Laboratory									
Course Outcomes	On completion of the course, the students will be able to								BT Mapping (Highest Level)	
	CO1	Analyze frequency response of the transistor amplifiers and the concept of bandwidth.							K4	
	CO2	Design and implement multivibrator circuits for PWM and clock generation.							K3	
	CO3	Implement oscillator circuits for signal generation and sweep circuits for testing electronic components.							K3	
	CO4	Develop proficiency in utilizing flip flops for effective design and implementation of sequential logic circuits for various digital applications.							K4	
	CO5	Acquire the skills to construct shift registers for efficient storage and shifting of datas in digital circuits.							K4	
List of Experiments:										
<div>1. Design and analysis of frequency response characteristics of common emitter BJT amplifier.</div> <div>2. Implementation of two stage RC coupled CE amplifier.</div> <div>3. Design and implementation of Schmitt trigger.</div> <div>4. Design and implementation of Astable Multivibrator.</div> <div>5. Design and implementation of Monostable Multivibrator.</div> <div>6. Implementation of a Sweep Circuit.</div> <div>7. Design and implementation of RC phase shift oscillator.</div> <div>8. Design and implementation of Wien bridge oscillator.</div> <div>9. Implementation of SR, D, JK and T flip-flops using universal gates.</div> <div>10. Design and implementation of 4-bit shift registers in SISO, SIPO, PISO and PIPO modes using ICs.</div> <div>11. Design and implementation of synchronous Counters using ICs.</div> <div>12. Design and implementation of Asynchronous Counters using ICs.</div> <div>13. Implementation of Ring and Johnson counters using ICs.</div>										
Lecture Periods: -		Tutorial Periods: -		Practical Periods: 30			Total Periods: 30			
Reference Books										
<div>1. Paul Scherz and Simon Monk, "Practical Electronics for Inventors", Mc Graw Hill Education, 4th Edition, 2016.</div> <div>2. Satya Sai Srikant, Prakash Kumar Chaturvedi, "Basic Electronics Engineering Including Laboratory Manual", Springer Nature Singapore Pvt. Ltd., 2020.</div> <div>3. L. K. Maheswari, M.M.S. Anand, "Laboratory Manual for Introductory Electronics Experiments", New Age international (p) Limited, 1980.</div>										
Web References										
<div>1. http://vlabs.iitkgp.ernet.in/be/</div> <div>2. https://be-iitkgp.vlabs.ac.in/</div> <div>3. https://electricvlab.com/</div> <div>4. https://www.circuitlab.com/editor/#?id=7pq5wm&from=homepage</div>										

COs/POs/PSOs Mapping

COs	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	3	3	2	3	2	-	-	-	-	-	-	-	2	2	2
2	3	3	2	3	2	-	-	-	-	-	-	-	2	2	2
3	3	3	2	3	2	-	-	-	-	-	-	-	2	2	2
4	3	3	2	3	2	-	-	-	-	-	-	-	2	2	2
5	3	3	2	3	2	-	-	-	-	-	-	-	2	2	2

Correlation Level: 1 – Low, 2 – Medium, 3 – High

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Evaluation Methods

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	Performance in practical classes			Model Practical Examination	Attendance		
	Conduction of practical	Record work	viva				
Marks	15	5	5	15	10	50	100



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Department	Electrical and Electronics Engineering				Programme: B. Tech.							
Semester	Second				Course Category: MC		End Semester Exam Type: -					
Course Code	U23EEM202				Periods / Week		Credit	Maximum Marks				
					L	T	P	C	CAM	ESE	TM	
Course Name	SPORTS YOGA AND NSS				0	0	2	Non-Credit	100	-	100	
Prerequisite	-											
Course Outcomes	On completion of the course, the students will be able to									BT Mapping (Highest Level)		
	CO1	Practice Physical activities and Hatha Yoga focusing on yoga for strength, flexibility and relaxation.									K2	
	CO2	Understand basic skills associated with yoga and physical activities including strength and flexibility, balance and coordination.									K2	
	CO3	Develop understanding of psychological problems associated with age and lifestyle.									K2	
	CO4	Recognize the importance of national service in community development.									K2	
	CO5	Convert existing skills into socially relevant life skills.									K2	
UNIT - I	Introduction to Physical Education						Periods: 06					
Definition, Aims and Objectives of Physical Education - Changing trends in Physical Education Physical Fitness, Wellness and Lifestyle: Importance of Physical Fitness and Wellness - Components of Physical fitness - Components of Health related fitness - Components of wellness - Preventing Health Threats through Lifestyle Change - Concept of Positive Lifestyle.												CO1
UNIT - II	Yoga and Lifestyle						Periods: 06					
Importance of Yoga - Elements of Yoga - Introduction - Asanas, Pranayama, Meditation and Yogic Kriyas - Yoga for concentration and related Asanas (Sukhasana, Tadasana, Padmasana and Shashankasana) - Relaxation Techniques for improving concentration - Yog-nidra. Asanas as preventive measures – Hypertension – Obesity - Back Pain-Diabetes - Asthema.												CO2
UNIT - III	Training and Planning in Sports						Periods: 06					
Training - Warming up and limbering down-Skill, Technique and Style - Objectives of Planning – Tournament - Knock-Out, League/Round Robin and Combination. Psychology and Sports: Important of Psychology in Physical Education and Sports - Differentiate Between Growth and Development - Adolescent problems and their Management - Emotion: Concept, Type and Controlling of emotions - Concepts and Types of Aggressions in Sports - Psychological benefits of exercise - Anxiety and Fear and its effects on Sports Performance - Motivation, its type and techniques - Understanding Stress and Coping strategies.												CO3
UNIT - IV	Introduction to National Service Scheme						Periods: 06					
Orientation of NSS volunteers: History, motto, symbol, awards, structure and activities of NSS - Days of National and International Importance - Sensitizing about the thrust areas and awareness activities - Importance of tree plantation and voluntary blood donation - The role of SHGs and NGOs in community development – CSR - Life skills and youth development-extension activities in HEIs - various clubs and schemes like RRC, ELC, YRC, UBA, SBA, etc.,												CO4
UNIT - V	Community Issues and the Use of Technology						Periods: 06					
Common Problems of rural India - Technology development and its suitability – Sustainability - Value addition to agricultural products - Service learning and youth volunteering – Shramdaan - Campus cleaning - Field visit to nearby communities - village survey - Initiatives to clean and green environment - preservation of water bodies in adopted villages.												CO5
Lecture Periods: -			Tutorial Periods: -			Practical Periods: 30			Total Periods: 30			
Reference Books												
1. Brar Ajmer Singh, Gill Jagtar Singh, Bains Jagdish, "Modern Textbook of Physical Education Health and Sports- I", Kalyani Publishers, 6 th Edition, 2014. 2. B.K.S. Iyengar, "Light on Yoga: The Definitive Guide to Yoga Practice", Thorsons Publishers, Thorsons Classics Edition, 2015. 3. Joseph, Siby K, Mahodaya, "Bharat Essays on Conflict Resolution", Institute of Gandhian Studies Publishers, 2007. 4. Barman Prateeti, Goswami, "Document on Peace Education", Triveni Akansha Publishing House, New Delhi, 2009. 5. Prof R.B.S. Verma, "Field Work Practicum in Social Work-Emerging Concerns", Rapid Publisher, Lucknow, 2020. 6. Sibereisen, K, Richard M, "Lerner Approaches to Positive Youth Development", Sage Publications, New Delhi, 2007. 7. Hoshiar Singh, "Administration of Rural Development in India", Sterling Publisher, 2009.												
Web References												
1. http://www.thebetterindia.com/140/national-service-scheme-nss 2. http://en.wikipedia.org/wiki/national-service-scheme 19= http://nss.nic.in/adminstruct 3. http://nss.nic.in 4. http://socialworknss.org/about.html 5. http://you.sagepub.com												



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COs/POs/PSOs Mapping

COs	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	-	-	-	-	-	-	-	2	3	-	-	2	1	-	-
2	-	-	-	-	-	-	-	2	3	-	-	2	1	-	-
3	-	-	-	-	-	-	-	2	3	-	-	2	1	-	-
4	-	-	-	-	-	-	-	2	3	-	-	2	1	-	-
5	-	-	-	-	-	-	-	2	3	-	-	2	1	-	-

Correlation Level: 1 – Low, 2 – Medium, 3 – High

Evaluation methods

Assessment	Continuous Assessment Marks (CAM)			Total Marks
	Attendance	MCQ Test	Presentation / Activity / Assignment	
Marks	10	30	60	100

2. A. 1. 150

Syllabi for other department courses

Department	Electrical and Electronics Engineering	Programme: B.Tech.						
Semester	First / Second	Course Category Code: ES				End Semester Exam Type: TE		
Course Code	U23ESTC03	Periods/Week			Credit	Maximum Marks		
		L	T	P	C	CAM	ESE	TM
Course Name	BASICS OF ELECTRICAL AND ELECTRONICS ENGINEERING	3	-	-	3	25	75	100
(Common to CSE, IT, MECH, CIVIL, MCTR, CCE, AI&DS, FT, CSBS Branches)								
Prerequisite	Mathematics and Physics							
Course Outcome	On completion of the course, the students will be able to							BT Mapping (Highest Level)
	CO1	Apply the basic concepts and various laws in DC circuits.						K3
	CO2	Analyze the AC circuits and develop resonance conditions for transmitter and receiver circuits.						K3
	CO3	Gain the knowledge of power system components, importance of electrical safety measures and real time applications of transformer and motor.						K2
	CO4	Understand the operation of semiconductor diode and its applications.						K2
	CO5	Explain the characteristics and operation of BJT and FET.						K2
	CO6	Relate and Explain Different Communication Systems.						K2
SECTION A - ELECTRICAL ENGINEERING								
UNIT-I	DC CIRCUITS				Periods: 8			
Concept of Potential Difference, Current, Resistance, Inductance and Capacitance, Work, Power, Energy, Current and Voltage sources - ideal and practical sources - concept of dependent and independent sources, Ohm's law, Kirchhoff's law, Series parallel combination of R, L, C components, Voltage Divider and Current Divider Rules, mesh and nodal analysis, Star/Delta transformation, Network Theorems - Superposition, Thevenin, Norton and Maximum Power Transfer.							CO1	
UNIT-II	AC CIRCUITS				Periods:8			
AC waveform definitions - form factor, peak factor, R-L, R-C, RLC series circuit, R-L-C parallel circuit, phasor representation in polar and rectangular form, concept of impedance, admittance, active, reactive, apparent and complex power, power factor, Resonance in series and parallel circuits, band-width and quality factor, Three Phase balanced AC Circuits (Y-Δ and Y-Y) - Power Measurement – Two Wattmeter method.							CO2	
UNIT-III	ELECTRICAL SAFETY AND ELECTRICAL MACHINES				Periods:7			
Layout of electrical power system and its functions, Wiring Accessories, Types of domestic wiring, Necessity of earthing, Insulators and cables, Safety devices - fuse, relay and circuit breaker - Sensors and its types.							CO3	
Faraday's Law of electromagnetic induction, Fleming's Right and Left hand rule - DC Generator and DC Motor - construction, principle, load test and performance characteristics - Auto transformer, Single phase transformer- construction, principle, load test - Single phase capacitor start and run induction motor – Load test.								
SECTION B – ELECTRONICS ENGINEERING								
UNIT-IV	SEMICONDUCTOR DIODES AND APPLICATIONS				Periods:7			
Introduction semiconductor materials-Doping-Intrinsic and Extrinsic Semiconductor –PN junction diode, structure, characteristics-diffusion and depletion capacitance-Rectifier, Half wave and Full wave rectifier-zener diode characteristics-zener diode as regulator –Light Emitting Diode (LED)-Solar Cell							CO4	
UNIT-V	TRANSISTORS				Periods:7			
Bipolar Junction Transistor-construction-operation-Common Base, Common Emitter, Common collector Configuration- characteristics- Biasing- numerical application-Junction Field Effect Transistor (JFET), Metal oxide semiconductor Field Effect Transistor, EMOSFET-DMOSFET operation characteristics-Numerical application							CO5	
UNIT-VI	COMMUNICATION SYSTEMS				Periods:8			
Need for Modulation – Block diagram of analog communication System - AM, FM, PM Definitions and Waveforms – Comparison of digital and analog communication system- Block diagram of digital communication system – Electromagnetic spectrum. Wired and wireless Channel – Block diagram of communication systems – satellite communication – Cellular Mobile communication – Fibre Optical Communication System.							CO6	
Lecture Periods:45		Tutorial Periods:-		Practical Periods:-		TotalPeriods:45		

[Signature]

2. A. 1. 151

Text Books

1. R.K. Rajput, "Basic Electrical and Electronics Engineering", Second Edition, University Science Press, 2012
2. R. Saravanakumar V. Jegathesan, K. Vinoth Kumar, "Basic Electrical and Electronics Engineering" Wiley, 2022
3. R.Muthusubramaniam, S.Salivahanan and K.A. Mureleedharan, Basic Electrical Electronics and Computer Engineering, Tata McGraw Hill, 2018

Reference Books

1. Sudhakar.A and ShyamMohan.S.P, "Circuits and Networks Analysis and Synthesis", Tata McGraw Hill Publishing Company Ltd., New Delhi, 4th edition, 2017.
2. D.P.Kothari and I.J. Nagrath, "Electric Machines", Tata McGraw Hill, New Delhi, 5th Edition, 2017.
3. Theraja B. L and Theraja A. K., "A Textbook of Electrical Technology", Vol. II, S Chand & Co. Ltd., New Delhi, 2009.
4. David. A. Bell, "Electronic Devices and Circuits", PHI Learning Private Ltd, India, Fourth Edition, 2020
5. Wayne Tomasi, "Electronic Communication Systems- Fundamentals Theory Advanced", Sixth Edition, Pearson Education, 2018.

Web References

1. <https://nptel.ac.in/courses/108/108/108108076/>
2. <https://www.electrical4u.com/>
3. <https://nptel.ac.in/courses/108/102/108102146/>
4. https://onlinecourses.nptel.ac.in/noc21_ee55/
5. <https://nptel.ac.in/courses/117/102/117102059>

COs/POs/PSOs Mapping

COs	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	3	3	3	-	2	-	-	-	-	-	-	1	3	2	-
2	3	3	3	-	2	-	-	-	-	-	-	1	3	2	-
3	3	3	3	-	2	-	-	-	-	-	-	1	3	2	-
4	3	3	3	-	2	-	-	-	-	-	-	1	3	2	-
5	3	3	3	-	2	-	-	-	-	-	-	1	3	2	-
6	3	3	3	-	2	-	-	-	-	-	-	1	3	2	-

Correlation Level: 1 - Low, 2 - Medium, 3 – High

Evaluation Methods

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment*	Attendance		
Marks	5	5	5	5	5	75	100

* Application oriented / Problem solving / Design / Analytical in content beyond the syllabus



Department	Electrical and Electronics Engineering	Programme: B.Tech.					
Semester	First / Second	Course Category Code: ES			End Semester Exam Type: LE		
Course Code	U23ESPC01	Periods / Week			Credit	Maximum Marks	
		L	T	P	C	CAM	ESE
Course Name	BASICS OF ELECTRICAL AND ELECTRONICS ENGINEERING LABORATORY	0	0	2	1	50	50
(Common to CSE, IT, MECH, CIVIL, MCTR, CCE, AI&DS, FT, CSBS Branches)							
Prerequisite	Mathematics and Physics						
Course Outcome	On completion of the course, the students will be able to						BT Mapping (Highest Level)
	CO1	Build the different wiring for domestic and commercial applications.					K3
	CO2	Design and analyze the domestic power distribution.					K3
	CO3	Estimate the performance of transformer and motors by conducting load test.					K3
	CO4	Describe characteristics of semiconductor diode and utilize it for different applications					K5
	CO5	Relate the characteristics of various transistor					K2
	CO6	Understand Rectifiers and Regulators					K2

List of Experiments

SECTION– A ELECTRICAL EXPERIMENTS

Demonstration on Power Sources, Ammeter, Voltmeter, Wattmeter and Energy meter are Pre-requisite for conducting this Electrical Engineering Lab.

1. Electrical safety precautions and study of tools, accessories, electrical joints and electrical symbols.
2. Domestic Wiring Practice
 - Staircase wiring
 - Doctor's room wiring
 - Godown wiring
 - Wiring of Ceiling fan, LED lamps and Iron Box.
3. Design of Domestic power distribution.
4. Measurement of 3-phase power using two wattmeter method.
5. Load test on DC shunt motor.
6. Load test on single phase transformer.
7. Load test on single phase Induction Motor.

SECTION – B ELECTRONICS EXPERIMENTS

1. Study of Electronic components and equipment: Resistor, Capacitor
2. Measurement of AC signal parameter (Peak-Peak, rms period, frequency) using CRO.
3. VI Characteristics of PN junction diode, Zener diode
4. Input and output characteristics of Common Emitter configuration of BJT
5. Characteristics of JFET
6. Measurement of Ripple factor of HWR, FWR
7. Voltage Regulator using Zener Diode

Lecture Periods:	Tutorial Periods:	Practical Periods: 30	Total Periods: 30
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Signature

2.A.1.153

Reference Books

1. T.Jeyapoovan Nadar, "Engineering Practices Lab Manual", Vikas Publishing House Private Limited, New Delhi, 5th edition, 2014.
2. A.Sudhakar and Shyam Mohan.S.P, "Circuits and Networks Analysis and Synthesis", Tata McGraw Hill Publishing Company Ltd., New Delhi, 4th edition, 2017.
3. D.P.Kothari and I.J. Nagrath, "Electric Machines", Tata McGraw Hill, New Delhi, 5th Edition, 2017.
4. Edward Hughes, John Hiley, Keith Brown, Ian McKenzie Smith, Electrical and Electronics Technology, Pearson Education Limited, New Delhi, 10th edition 2010.
5. S.K. Sahdev, "Fundamentals of Electrical Engineering and Electronics", DhanpatRai and Co, 2017.

Web References

1. <http://eie.sliet.ac.in/laboratories/basic-electrical-engineering-lab/>
2. <https://www.electronics-tutorials.ws/ac/circuits/series-circuit.html>
3. <https://www.allaboutcircuits.com/textbook/experiments/>
4. <https://www.electronicshub.org/measurements-of-ac-current/>
5. <http://www.electronics-tutorials.ws>

COs/POs/PSOs Mapping

COs	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	3	2	3	-	-	1	-	-	3	-	-	1	3	2	-
2	3	2	3	-	-	1	-	-	3	-	-	1	3	2	-
3	3	2	3	-	-	1	-	-	3	-	-	1	3	2	-
4	3	2	3	-	-	1	-	-	3	-	-	1	3	2	-
5	3	2	3	-	-	1	-	-	3	-	-	1	3	2	-
6	3	2	3	-	-	1	-	-	3	-	-	1	3	2	-

Correlation Level: 1 - Low, 2 - Medium, 3 – High

Evaluation Methods

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	Performance in practical classes			Model Practical Examination	Attendance		
	Conduction of practical	Record work	viva				
Marks	15	5	5	15	10	50	100



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Department	Electronics and Communication Engineering				Programme: B.Tech.				
Semester	First				Course Category Code: CC		*End Semester Exam Type: TE		
Course Code	U23EETC01				Periods/Week		Credit	Maximum Marks	
Course Name	ELECTRICAL TECHNOLOGY				L	T	P	CAM	
	ECE				3	-	-	ESE	
								TM	
Prerequisite	Mathematics and Physics								
Course Outcome	On completion of the course, the students will be able to							BT Mapping (Highest Level)	
	CO1	Demonstrate the basics of domestic wiring, including the factors that influence the choice of wiring systems in residential buildings.						K3	
	CO2	Understand the operation of transformers and their applications.						K2	
	CO3	Explain the DC generators and motors, including their construction, principles of operation, and its characteristics.						K2	
	CO4	Interpret the construction and working of AC machines for various applications.						K2	
	CO5	Describe and compare the operation of special machines.						K2	
UNIT-I	BASICS OF ELECTRICAL ENERGY				Periods:09				
Introduction, conventional and non- conventional sources of Electrical Energy, Domestic wiring, Factors affecting the choice of wiring system, Types of Wires and cables, Types of Wiring, Typical House Wiring Circuits, Basics of Utility Supply, Knowledge about distribution box, MCB, plug types, fuses, insulators, live wire, neutral wire, Earthing and it types, construction and working of incandescent lamp, CFL and LED lamps.									CO1
UNIT-II	TRANSFORMERS				Periods:09				
Single phase transformer: construction, principle of operation, EMF equation, Types, Phasor diagram, Equivalent circuit, Voltage Regulation, losses and efficiency. Load test. Auto transformers: construction, copper saving. Introduction to three phase transformer-Power Measurement using two Wattmeter methods.									CO2
UNIT-III	DC MACHINES				Periods:09				
DC Generator: Construction, Principles of operation, Types, EMF equation, OCC and Load characteristics of series and shunt generator. DC motor: Principle of operation, Types, Torque Equation, electrical and mechanical characteristics of series and shunt motor, Speed control methods and applications, Need for starters and its types.									CO3
UNIT-IV	AC MACHINES				Periods:09				
Three phase Induction Motor: Construction, principle of operation, Types, torque equation, Slip-torque characteristics. Single Phase Induction Motor: construction, principle of operation and starting methods. Alternator: Construction, Principles of operation, Types, EMF equation, Voltage regulation. Synchronous motor: Construction, Methods of starting, V and inverted V curves.									CO4
UNIT-V	SPECIAL MACHINES				Periods:09				
Servo motor: DC and AC servomotors. Stepper motors: variable reluctance and permanent magnet stepper motors. Reluctance motor, Hysteresis motor, Universal motor, Repulsion motor and BLDC motor -Applications									CO5
LecturePeriods:45		TutorialPeriods:-		PracticalPeriods:-		TotalPeriods:45			
TextBooks									
1. B.L. Theraja, "Electrical Technology Vol.- II AC/DC Machines", S. Chand, 2008 2. D. C. Kulshreshtha, "Basic Electrical Engineering", Tata McGraw Hill Education Private Limited, 2 nd Edition, 2019. 3. D. P. Kothari and I. J. Nagrath, "Electric Machines", Tata McGraw Hill Publishing Company Ltd, 5 th Edition, 2017.									
ReferenceBooks									
1. V. K. Mehta & Rohit Mehta, "Principle of Electrical Machines", S. Chand Publishers, 2014. 2. D Kothari, I Nagrath, "Basic Electrical Engineering", Tata McGraw Hill Education, 4 th Edition, 2019. 3. M. S. Sukhija, T. K Nagsarkar, "Basic Electrical Engineering", Oxford University Press, 2011. 4. S. K. Sahdev, "Fundamentals of Electrical Engineering and Electronics", Dhanpat Rai and Co, 2017. 5. E.G. Janardanan, "Special Electrical Machines", Prentice Hall India Learning Private Limited, 2014									
Veb References									
. https://www.coursera.org/lecture/linear-circuits-ac-analysis/5-1-transformers-dB0z9 . https://www.elprocus.com/alternating-current-and-direct-current-and-its-applications/ . https://www.electronicshub.org/electrical-systems-and-methods-of-electrical-wiring/ . https://nptel.ac.in/courses/108/105/108105017/ . https://lecturenotes.in/course/all/btech/electrical-engineering									

* TE – Theory Exam, LE – Lab Exam

Signature

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COs/POs/PSOs Mapping

COs	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	3	3	3	1	2	-	1	-	-	-	1	1	3	2	-
2	3	3	3	1	2	-	1	-	-	-	1	1	3	2	-
3	3	3	3	1	2	-	1	-	-	-	1	1	3	2	-
4	3	3	3	1	2	-	1	-	-	-	1	1	3	2	-
5	3	3	3	1	2	-	1	-	-	-	1	1	3	2	-

Correlation Level: 1 - Low, 2 - Medium, 3 – High

Evaluation Methods

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	CAT 1	CAT 2	Model Exam	Assignment*	Attendance		
Marks	5	5	5	5	5	75	100

* Application oriented / Problem solving / Design / Analytical in content beyond the syllabus

Department	Electronics and Communication Engineering	Programme: B.Tech.						
Semester	First	Course Category Code: CC		*End Semester Exam Type: LE				
Course Code	U23EEPC01	Periods/Week			Credit	Maximum Marks		
Course Name	ELECTRICAL TECHNOLOGY LABORATORY	L	T	P	C	CAM	ESE	TM
	ECE	-	-	2	1	50	50	100

Prerequisite: Mathematics and Physics

Course Outcome	On completion of the course, the students will be able to							BT Mapping (Highest Level)
	CO1	Understand the practical aspects of domestic wiring.						K3
	CO2	Demonstrate the operations of various Transformers.						K3
	CO3	Illustrate the operational details of the DC machines by conducting various tests.						K3
	CO4	Compare the various speed control techniques of DC motors.						K3
	CO5	Infer the performance of AC machines by conducting suitable experiments.						K3

List of Experiments:

- Domestic Wiring Practice (Staircase Wiring, Doctor's Room Wiring, Godown Wiring)
- Load test on single phase transformer.
- Load test on 3 phase transformers
- Measurement of three phase power using two wattmeter method
- OCC and Load test on DC shunt Generator.
- Load test on DC shunt motor.
- Load test on DC series motor
- Speed control methods of DC motor.
- Load test on single phase Induction Motor.
- Load test on 3 phase induction motor.

Lecture Periods:-	Tutorial Periods:-	Practical Periods: 30	Total Periods: 30
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Reference Books

- B. L. Theraja, "Electrical Technology Vol.- II AC/DC Machines", S. Chand, 2008
- D. C. Kulshreshtha, "Basic Electrical Engineering", Tata McGraw Hill Education Private Limited, 2nd Edition, 2019.
- D. P. Kothari and I. J. Nagrath, "Electric Machines", Tata McGraw Hill Publishing Company Ltd, 5th Edition, 2017.
- V. K. Mehta & Rohit Mehta, "Principle of Electrical Machines", S. Chand Publishers, 2014.
- D Kothari, I Nagrath, "Basic Electrical Engineering", Tata McGraw Hill Education, 4th Edition, 2019.
- M. S. Sukhija, T. K Nagsarkar, "Basic Electrical Engineering", Oxford University Press, 2011.

Web References

- <https://www.electrical4u.com/electric-machines/>
- <https://www.javatpoint.com/electrical-machines-tutorial>
- <https://www.coursera.org/lecture/linear-circuits-ac-analysis/5-1-transformers-dB0z9>
- <https://www.elprocus.com/alternating-current-and-direct-current-and-its-applications/>
- <https://www.electronicshub.org/electrical-systems-and-methods-of-electrical-wiring/>

* TE – Theory Exam, LE – Lab Exam

COs/POs/PSOs Mapping

COs	Program Outcomes (POs)												Program Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	3	2	1	-	2	-	-	-	3	-	-	1	3	1	-
2	3	2	1	-	2	-	-	-	3	-	-	1	3	1	-
3	3	2	1	-	2	-	-	-	3	-	-	1	3	1	-
4	3	2	1	-	2	-	-	-	3	-	-	1	3	1	-
5	3	2	1	-	2	-	-	-	3	-	-	1	3	1	-

Correlation Level: 1 - Low, 2 - Medium, 3 – High

Signature

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Evaluation Method

Assessment	Continuous Assessment Marks (CAM)					End Semester Examination (ESE) Marks	Total Marks
	Performance in practical classes			Model Practical Examination	Attendance		
	Conduction of practical	Record work	viva				
Marks	15	5	5	15	10	50	100



2. A. 1. 158

Annexure – VII

Implementation of AICTE-MODROB during the period 2021-2023

Accounts Officer / DDO
AICTE, New Delhi

All India Council for Technical Education
(A Statutory Body under Ministry of HRD, Govt. of India)
Nelson Mandela Marg, Vasant Kunj, New Delhi-110070 Website: www.aicte-india.org



MODROB - Sanction Letter

F.No.9-277/ RIFD/MOD/Policy-1/2018-19

To,
The Drawing and Disbursing Officer,
All India Council for Technical Education,
Nelson Mandela Marg, Vasant Kunj,
New Delhi- 110070.

Sub: Release of a sum of Rs. 880000/- (Rupees Eight Lakh Eighty Thousand Only) being the Grant-in-Aid under the scheme Modernization and Removal of Obsolescence (MODROB) for the year 2018-19 payable during the current financial year 2021-22- reg.

Sir,

With reference to the proposal submitted by the institute, this is to convey that the sanction of the Council for payment of Rs. 1100000/- (Rupees Eleven Lakh Only) as Grant-in-Aid under the **Modernization and Removal of Obsolescence (MODROB)** scheme, as per details given below:

1.	Name and address of the Beneficiary Institution:	Director/ Principal/ Registrar, SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE, NO.24 MARIAMMAN KOIL STREET MADAGADIPET PUDUCHERRY Puducherry - 605107PuducherryPUDUCHERRY PUDUCHERRY		
2.	Title of Project:	Modernizations of Power Electronics & Drives Laboratory		
3.	Name of Coordinator:	Mrs. ANBUMALAR SARAVANAN		
4.	Duration of the project:	2 Years		
4.	Total Grant-in-aid Sanctioned:	Total: Rs.1100000/-	Non-Recurring (85%): Rs.935000/-	Recurring (15%): Rs.165000/-
5.	Amount to be released during the year 2021-22:	1st Installment Rs. 880000/-	Non-Recurring (85%): Rs.748000/-	Recurring (15%): Rs.132000/-
6.	Sanctioned grant-in-aid is debitable to:	Major Head 601.18(a) Gen. (Plan Head)		

- The amount of the Grant shall be drawn by the Drawing and Disbursing Officer, All India Council for Technical Education on the Grant-in-Aid bill and shall be disbursed to and credited to the account of Director/Principal/ Registrar of the Institute through RTGS/PFMS.

2. This Grant-in-Aid is being released in conformity with the terms & conditions as well as norms of the scheme as already communicated, and also being communicated in this letter.

THE INSTRUCTIONS/GUIDELINES TO BE FOLLOWED BY UNIVERSITY/INSTITUTION

I. Release of funds:

- a. The Principal/ Director of the institute and the Coordinator of the project are hereby requested to verify the correctness of the under mentioned bank account/ RTGS details submitted by them along with the Proposal, in which the grant is being released:

Institute PAN No.	Bank Name	Bank Branch Name	Branch Address	Account Holder Name	Account Type	Account Number	IFSC
AAATM9599A	INDIAN BANK	PUDUCHERRY MAIN BRANCH	NO. 288, M.G ROAD, PU NO. 288, M.G ROAD, PUDUCHERRY - 605 001. PHONE NO : 2336403.	SRI MANAKUL A VINAYAGA EDUCATIONAL TRUST	Current Account	6207986448	IDIB000 M203

In case of any omission the same should be reported to AICTE immediately.

- b. The sanction is issued in exercise of the powers delegated to the council and other terms & conditions laid down in the guidelines of the scheme.
- c. 100% grant of the sanctioned amount is being released to Government/Govt. Aided institutions. Utilization Certificate (UC) and other requisite documents are to be submitted within one month of the completion of the project.
- d. To self-financed/Pvt. Institutions 80% of the sanctioned amount is being released as first installment followed by 20% as reimbursement after receipt of UC and other requisite documents as specified in terms & Conditions of MODROB Scheme.

II. Maintenance of accounts:

- a. The Institute shall strictly follow the provisions laid down in the scheme document and sanction order No. F.No.9-277/RIFD/MOD/Policy-1/2018-19 Dated 15.11.19 issued by this office. All correspondences related to the project must contain this number along with year of sanction of the project; failing which correspondence will not be entertained.
- b. Funds covered by this grant shall be kept separately and would not be mixed up with other funds, so as to know the amount of interest accrued on the grant AICTE.
- c. The University/College/Institute shall maintain proper accounts of the expenditure out of the grants, which shall be utilized only on approved items of expenditure (list enclosed).
- d. The Council or its nominee shall have the right to check /verify the account to satisfy that the fund has been utilized for the purpose for it was sanctioned.
- e. The date of release of the grant by AICTE shall be taken as the date of commencement of the project. The Principal / Director / Registrar shall intimate about the receipt of the grant to AICTE. Any expenditure incurred prior to the issuance of the approval letter will not be allowed to be adjusted in the grant and if the Institution / University do not take the project work within one month of the receipt of the grant, the approval shall ipso facto lapse.
- f. After receipt of the grant from AICTE, the Institute shall send a confirmation to AICTE within 2 months of receipt of grant that the sanctioned project has been started/is in progress.

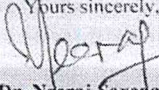
III. Refund of grant by way of a demand draft in favour of Member Secretary, AICTE, New Delhi:

- a. If the college/institute does not have the Letter of Approval (LOA) or Extension of Approval issued by AICTE for the academic year 2018-19, the fund released should be immediately refunded to AICTE with interest accrued thereon.
- b. If project is not started within six months of the issuance of this Offer Letter, the released amount, along with interest accrued thereon, has to be necessarily returned to AICTE.

- e. The assets acquired wholly or substantially out of grant shall not be disposed or encumbered or utilized for the purpose other than those for which the Grant was given without proper sanction of the AICTE and should at any time the institution cease to function, such assets shall revert to the AICTE.
- f. The grantee Institution shall observe all financial norms and guidelines as prescribed by the AICTE/ Government of India from time to time. GOI GFR rules (@<https://doe.gov.in/order-circular/general-financial-rules> 2017) should be followed during utilization of grant.

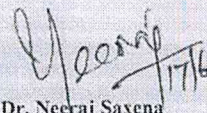
List of Equipment's approved :

List of Equipment
Performance validation of electrical machine setup
ANSYS Academic Multiphysics Campus Solution (all versions)
PLC Training equipment with motor Setup for industrial purpose learning
Internet of things Development laboratory
DSP based speed control of BLDC motor.

Yours sincerely,

Dr. Neeraj Saxena
Advisor-1 (IDC)

Copy forwarded for information and necessary action to:

1. Name and Address of the Coordinator,
Mrs. ANBUMALAR SARAVANAN
SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE
PuducherryPUDUCHERRY PUDUCHERRY
2. The Registrar / Director / Principal,
Dr..V.S.K. Venkatachalapathy
SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE,
NO.24 MARIAMMAN KOIL STREET MADAGADIPET PUDUCHERRY Puducherry -
605107PuducherryPUDUCHERRY PUDUCHERRY
3. Guard File


Dr. Neeraj Saxena
Advisor-1 (IDC)

INDIAN BANK

MADAGADIPET

IFSC CODE:IDIB000M203

2/3B PUDUCHERRY-VILLUPURAM MAIN ROAD , KALITHEERTHALKUPPAM , MADAGADIPET, PUDUCHERRY

Branch Code :01890

Account Number : 6207986448

Product type : CA-GEN-PUB-SEMIURBAN/RURAL-INR

SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE,
KARIAMANICKAM ROAD, MADAGADIPET,

PUDUCHERRY - 605107

Nominee Name :No

Email : mdhanasekaran@rediffmail.com

Statement Date :Tue Nov 02 10:05:06 IST 2021

Cleared Balance :2670897.44

Uncleared Amount :0.00

Drawing Power :0.00

Interest Rate : 14.750

Value Date	Post Date	Remitter Branch	Description	Cheque No	DR	CR	Balance
			BALANCE B/F				1885171.44C R
06/10/2021	06/10/2021	MADRAS HIGH COURT	/Online Direc TRANSFER TO 758847217 E PAYMENT OLTAS PARKING ACCIN 78756		468523.00		1416648.44C R
06/10/2021	06/10/2021	MADRAS HIGH COURT	/Online Direc TRANSFER TO 758847217 E PAYMENT OLTAS PARKING ACCIN 78788		231220.00		1185428.44C R
06/10/2021	06/10/2021	MADRAS HIGH COURT	/Online Direc TRANSFER TO 758847217 E PAYMENT OLTAS PARKING ACCIN 78800		173000.00		1012428.44C R
06/10/2021	06/10/2021	MADRAS HIGH COURT	/Online Direc TRANSFER TO 758847217 E PAYMENT OLTAS PARKING ACCIN 78811		4500.00		1007928.44C R
06/10/2021	06/10/2021	SERVICE BRANCH (CHENNAI)	BY TRANSFER ACH CR Credit Through PFMS C10210830045 TRANSFER FROM 94103011643			880000.00	1887928.44C R
06/10/2021	06/10/2021	SERVICE BRANCH (CHENNAI)	BY TRANSFER ACH CR Credit Through PFMS C10210836408 TRANSFER FROM 94103011643			880000.00	2767928.44C R



SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE

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MADAGADIPET, PUDUCHERRY - 605 107



01.12.2021

To

Dr. Neeraj Saxena
Advisor-I
All India Council for Technical Education,
Nelson Mandela Marg, Vasant Kunj,
New Delhi -110070

Dear Sir,

Sub: Intimation of progress of the project work under AICTE-MODROB for Power Electronics and Drives Laboratory –Reg.

Ref: 1. F.No.9-277/RIFD/MOD/Policy-1/2018-19, dated 9th January, 2020.

2. Mail intimation from AICTE for amount release dated 18.10.2021.

We wish to express our sincere thanks for the sanction of total grant of Rs.11,00,000/- as a grant-in-Aid under the scheme of Modernization and Removal of Obsolescence (MODROB), for the modernisation of our Power Electronics and Drives Laboratory in Electrical and Electronics Engineering, Sri Manakula Vinayagar Engineering College for the year 2018-19 payable during the financial year 2021-22.

We humbly wish to communicate that, we have initiated the project work by Constituting Program Evaluation Committee and the minutes of 1st meeting of Program Evaluation Committee is attached for your kind reference.

Thanking you

Yours sincerely

Director cum Principal

(Dr. V.S.K. Venkatachalapathy)

Director cum Principal

SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE
Madagadipet, Puducherry - 605 107.

Phone: 0413 - 2642000, 2641151, 2640040 Tele Fax: 0413 - 2641136

Email: smvec@smvec.ac.in Website: www.smvec.ac.in



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Madagadipet, Puducherry - 605 107



03.11.2021

Dear Sir /Madam,

Sub: Constitution of Program Evaluation Committee for AICTE-MODROB - Power Electronics and Drives Laboratory - Reg.

This is for your kind notice that, the Program Evaluation Committee (PEC) is constituted for monitoring and guiding the project work granted by AICTE under "MODROB - Power Electronics and Drives Laboratory" for the sanctioned year 2018-19 and the project started on 06.10.2021. The constitution of PEC is as given below as per AICTE MODROB scheme. The committee will provide directions for the implementation of the project.

Sl.No.	Name of the committee member	Designation	Position
1.	Dr. V. S. K. Venkatachalapathy	Director cum Principal	Chairperson
2.	Dr. S. Anbumalar	Dean Academics and Professor & Head/ EEE	Coordinator of the project (Member Secretary)
3.	Dr. K. Velmurugan	Dean R&D and Professor & Head/ Mechanical Engineering	Member
4.	Dr. L.M.Varalakshmi	Professor & Head/ Instrumentation & control Engineering	Member
5.	Dr. D. Raja	Associate Professor / Electrical and Electronics Engineering	Member

Director cum Principal
Dr. V. S. K. Venkatachalapathy

Director cum Principal
SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE
Madagadipet, Puducherry - 605 107.

Copy to:

1. Dr. S. Anbumalar, Dean Academics and Professor & Head/ EEE
2. Dr. K. Velmurugan, Dean R&D and HoD / Mechanical Engineering
3. Dr. L.M.Varalakshmi, HoD / Instrumentation and Control Engineering
4. Dr. D. Raja, Associate Professor / Electrical and Electronics Engineering



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Madagadipet, Puducherry - 605 107



Department of Electrical and Electronics Engineering

Minutes of 1st meeting of Program Evaluation Committee

Date: 15.11.2021

Venue: AV Hall

Time: 09.30 AM

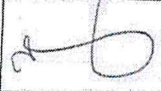
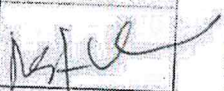
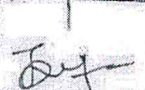

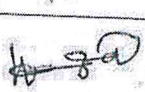
Chair: Dr. V.S.K.Venkatachalapathy, Director cum Principal

Members Present: Given in Annexure I

A meeting of the **Program Evaluation Committee** constituted under the Scheme Modernization and Removal of Obsolescence (**MODROB**) for **Power Electronics and Drives Laboratory**, Department of Electrical and Electronics Engineering, was held under the Chairmanship of Director cum Principal on 15th November, 2021 at 9.30 a.m in AV Hall.

- Dr. V.S.K.Venkatachalapathy, Director cum Principal extended a cordial welcome to the members of **Program Evaluation Committee**.
- Dr. S. Anbumalar, Coordinator of the project presented the project work granted by AICTE under "MODROB for Power Electronics and Drives Laboratory"
- The request for the quotation sent to various vendors for the following items as per the AICTE - MODROB approved list.
 - Performance validation of electrical machine setup
 - ANSYS Academic Multiphysics Campus Solution
 - PLC Training equipment with motor Setup for industrial purpose learning
 - Internet of things Development laboratory
 - DSP based speed control of BLDC motor.
- The committee noted the details and also it was decided to discuss further in the next meeting for the project implementation after receiving quotation from various vendors.
- The meeting ended with the Vote of thanks.

Annexure I
Members of Program Evaluation Committee

Sl.No.	Name of the committee member	Designation	Position	Signature
1.	Dr. V. S. K. Venkatachalapathy	Director cum Principal	Chairperson	
2.	Dr. S. Anbumalar	Dean Academics and Professor & Head/ EEE	Coordinator of the project (Member Secretary)	
3.	Dr. K. Velmurugan	Dean R&D and Professor & Head/ Mechanical Engineering	Member	
4.	Dr. L.M.Varalakshmi	Professor & Head/ Instrumentation & control Engineering	Member	
5.	Dr. D. Raja	Associate Professor / Electrical and Electronics Engineering	Member	



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MADAGADIPET, PUDUCHERRY - 605 107



31.03.2022

To

Dr. Neeraj Saxena
Advisor-I
All India Council for Technical Education,
Nelson Mandela Marg, Vasant Kunj,
New Delhi -110070

Dear Sir,

Sub: Intimation of progress of the project work - AICTE-MODROB for Power
Electronics and Drives Laboratory –Reg.

Ref: 1. F.No.9-277/RIFD/MOD/Policy-1/2018-19, dated 9th January, 2020.

2. Mail intimation from AICTE for amount release dated 18.10.2021.

We wish to express our sincere thanks for the sanction of total grant of Rs.11,00,000/- as a grant-in-Aid under the scheme of Modernization and Removal of Obsolescence (MODROB), for the modernisation of our Power Electronics and Drives Laboratory in Electrical and Electronics Engineering, Sri Manakula Vinayagar Engineering College for the year 2018-19 payable during the financial year 2021-22.

We humbly wish to communicate that, we have received quotations for the AICTE – MODROB approved items from different vendors and it is in the analyzing stage to finalize the items to be purchased. In this regard, the 2nd meeting of Program Evaluation Committee was conducted on 30.03.2022 to discuss about the items to be purchased based on the specifications and amount quoted by different vendors. The minutes of the meeting is attached for your kind reference.

Thanking you

Yours sincerely

Director cum Principal

(Dr. V.S.K. Venkatachalapathy)

DIRECTOR CUM PRINCIPAL

SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE
(An Autonomous Institution)
Madagadipet, Puducherry-605 107.

Phone: 0413 - 2642000, 2641151, 2640040 Tele Fax: 0413 - 2641136

Email: smvec@smvec.ac.in Website: www.smvec.ac.in



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MADAGADIPET, PUDUCHERRY - 605 107



Department of Electrical and Electronics Engineering

Minutes of 2nd meeting of Project Evaluation Committee

Date: 30.03.2022

Venue: AV Hall

Time: 09.30 AM

Chair: Dr. V.S.K.Venkatachalapathy, Director cum Principal

The 2nd meeting of the Project Evaluation Committee constituted for the Scheme AICTE- for Modernization and Removal of Obsolescence (MODROB) for Power Electronics and Drives Laboratory, Department of Electrical and Electronics Engineering, was held under the Chairmanship of Director cum Principal on 30th March, 2022 at 9.30 a.m in AV Hall.

- Dr. V.S.K.Venkatachalapathy, Director cum Principal extended a cordial welcome to the members of Project Evaluation Committee.
- Dr. S. Anbumalar, Coordinator of the project presented the project work granted by AICTE under "MODROB for Power Electronics and Drives Laboratory" and also briefed the steps taken for the procurement of approved items.
- The quotations were received from different vendors for the items as per the AICTE - MODROB approved list and the details are given below.

S.No	Item	Vi Microsystem	Advantech Instruments and services	ARK Info solutions Pvt Ltd	Pantech
	Quotations Received Date	22.10.2021	28.03.2022	30.10.2021	28.03.2022
1	Performance validation of electrical machine setup	Quoted (Rs.7,63,401)*	Quoted (Rs.3,88,810)*	-	-
2	ANSYS Academic Multiphysics Campus Solution	-	-	Quoted** (Rs.16,70,880)	-
3	PLC Training equipment with motor Setup for industrial purpose learning	Quoted (Rs.1,72,840)	Quoted (Rs.2,40,130)	-	-

Phone: 0413 - 2642000, 2641151, 2640040 Tele Fax: 0413 - 2641136
Email: smvec@smvec.ac.in Website: www.smvec.ac.in

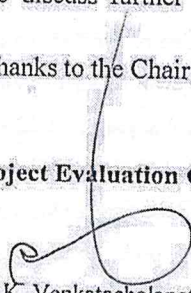
4	Internet of things Development laboratory	Quoted (Rs.3,36,500)*	Quoted (Rs.38,350)*	-	-
5	DSP based speed control of BLDC motor.	Quoted (Rs.2,15,184)	Quoted (Rs.1,71,100)	-	Quoted (Rs.1,49,270)
Total		Rs.14,87,925	Rs.8,38,390	Rs.16,70,880	Rs.1,49,270

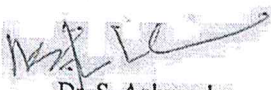
* There are large differences in the amount quoted by the vendors for the items indicated (*) due to variations in the features and specifications of the items. Hence, the **Project Evaluation Committee** is analyzing those items.


** The cost of ANSYS academic multiphysics campus solution itself Rs.16,70,880, which is higher than the MODROB sanctioned amount of Rs.11,00,000. So, we are not in a position to purchase the ANSYS software and hence decided to concentrate on other hardware procurement.

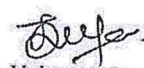
- In order to finalize the items to be purchased, awaiting to receive the quotations from few more vendors and it was decided to discuss further in the next meeting after receiving quotation from all the vendors.
- The meeting ended with the Vote of thanks to the Chair.

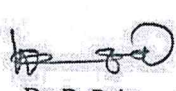
Members of Project Evaluation Committee


Dr. V. S. K. Venkatachalapathy
Director cum Principal
Chairperson


Dr. S. Anbumalar
Dean Academics and Professor & Head/ EEE
Coordinator of the project
(Member Secretary)


Dr. L.M. Varalakshmi
Professor & Head/ Instrumentation &
control Engineering
Member


Dr. K. Velmurugan
Dean R&D and Professor & Head/
Mechanical Engineering
Member


Dr. D. Raja
Professor / Electrical and Electronics
Engineering
Member



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MADAGADIPET, PUDUCHERRY - 605 107



06.10.2022

To

Dr. Neeraj Saxena
Advisor-I
All India Council for Technical Education,
Nelson Mandela Marg, Vasant Kunj,
New Delhi -110070

Dear Sir,

Sub: Intimation of progress of the project work - AICTE-MODROB for Power
Electronics and Drives Laboratory -Reg.

Ref: 1. F.No.9-277/RIFD/MOD/Policy-1/2018-19, dated 9th January, 2020.

2. Mail intimation from AICTE for amount release dated 18.10.2021.

We wish to express our sincere thanks for the sanction of total grant of Rs.11,00,000/- as a grant-in-Aid under the scheme of Modernization and Removal of Obsolescence (MODROB) - Ref.1, for the modernisation of our Power Electronics and Drives Laboratory in Electrical and Electronics Engineering, Sri Manakula Vinayagar Engineering College for the year 2018-19 payable during the financial year 2021-22 - Ref.2.

We humbly wish to communicate that, the 3rd meeting of Program Evaluation Committee was conducted on 17.09.2022 to finalize the supplier for the AICTE-MODROB approved items and to place the purchase order. In this regards, the quotations received for AICTE - MODROB approved items from different vendors were analysed by considering the factors like product features, specifications, cost and its reliability. So, the minutes of the meeting is attached for your kind reference.

Thanking you

Yours sincerely

Director cum Principal

(Dr. V.S.K. Venkatachalapathy)

DIRECTOR CUM PRINCIPAL

SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE
(An Autonomous Institution)
Madagadipet, Puducherry-605 107.

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Madagadipet, Puducherry - 605 107



Department of Electrical and Electronics Engineering

Minutes of 3rd meeting of Program Evaluation Committee

Date: 17.09.2022

Venue: AV Hall

Time: 10.30 AM

Chair: Dr. V.S.K.Venkatachalapathy, Director cum Principal

The 3rd meeting of the Program Evaluation Committee constituted for the Scheme of AICTE for Modernization and Removal of Obsolescence (MODROB) for Power Electronics and Drives Laboratory, Department of Electrical and Electronics Engineering, was held under the Chairmanship of Director cum Principal on 17th September, 2022 at 10.30 a.m in AV Hall.

- Dr. V.S.K.Venkatachalapathy, Director cum Principal extended a cordial welcome to the members of Program Evaluation Committee.
- Dr. S. Anbumalar, Coordinator of the project presented steps taken for the procurement of approved items.
- The quotations were received from different vendors for the items as per the AICTE - MODROB approved list and the details are given below.
 - o We have submitted our MODROB proposal to AICTE with a request for grant of around 19 Lakhs. But the amount sanctioned by AICTE is only 11 Lakhs but with the same equipments listed in our proposal. The Number of items were not reduced according to the sanctioned amount. The cost of ANSYS academic multiphysics campus solution that we have listed in our proposal alone cost around Rs.16,70,880, which is higher than the MODROB sanctioned amount of Rs.11,00,000. So, we are not in a position to purchase the ANSYS software and hence decided to concentrate on other items.
 - o The quotations of different vendors are discussed with respect to the product features, specifications, cost and its reliability. Based on this analysis the Program Evaluation Committee recommended to purchase the items from silicon system which can be covered within the sanctioned amount. Hence we have placed the purchase order to the silicon systems. The comparison analysis of the quotations collected is enclosed for your reference.

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Department of Electrical and Electronics Engineering

Date: 16.09.2022

SMVEC/EEE/MODROB-Power Electronics and Drives Lab/September/2022

Purchase of Equipments for Power Electronics and Drives Lab – AICTE - MODROB scheme

S. No.	List of equipment to be purchased	Comparison of rate – Unit price					Preferred Company details	Remarks for finalizing	No. of quantity	Total Price (including GST)	Negotiation for further discount	Final price
		VI Microsystems Pvt. Ltd.	i square systems	Advantech Instruments and services	Silicon Systems	Power Lab Instruments						
1	Performance validation of electrical machine setup	Rs.6,11,180.00	Rs.3,98,000 (without torque sensor)	Rs.3,99,500 (without torque sensor)	Rs.5,80,000	Rs.4,12,900 (without torque sensor)	Silicon Systems	1. Products are reliable 2. Services are prompt	1 setup	Rs.5,80,000 + 18% GST (Rs.1,04,400) = Rs.6,84,400	15%	Rs.5,81,740
2	PLC Training equipment with motor Setup for industrial purpose learning and IoT	Rs.1,46,475	Rs.2,30,000	Rs.1,80,500 (without IoT)	Rs.2,25,000	Rs.2,38,900	Silicon Systems	1. Products are reliable 2. Services are prompt 3. Product is provided with IoT enabled	1 setup	Rs.2,25,000 + 18% GST (Rs.40,500) = Rs.2,65,500	15%	Rs.2,25,675
3	Internet of things (IoT) development Kit	Rs.2,85,170 (with software)	Rs.93,000	Partial items Quoted	Rs.90,000	Rs.98,000	Silicon Systems	1. Products are reliable 2. Services are prompt	1 setup	Rs.90,000 + 18% GST (Rs.16,200) = Rs.1,06,200	15%	Rs.90,270
4	DSP / FPGA based speed control of BLDC motor.	Rs.2,47,100	Rs.2,50,000	Rs.1,75,000 (DSP based)	Rs.2,30,000	Rs.2,42,900	Silicon Systems	1. Products are reliable 2. Services are prompt	1 setup	Rs.2,30,000 + 18% GST (Rs.41,400) = Rs.2,71,400	15%	Rs.2,30,690
Total												Rs.11,28,375


Note: Silicon Systems – 50 % advance along with PO & 50% against delivery

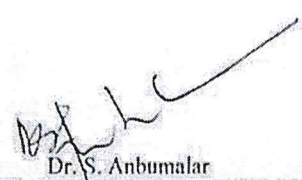
Preferred Company details	Total cost (including TAX and Discount)
Silicon Systems	Rs.11,28,375

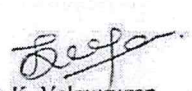
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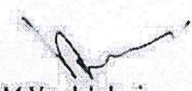
- The meeting ended with the Vote of thanks to the Chair.

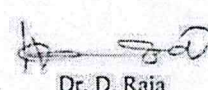
Members of Program Evaluation Committee


Dr. V. S. K. Venkatachalapathy
Director cum Principal
Chairperson


Dr. S. Anbumalar
Dean Academics and Professor & Head/ EEE
Coordinator of the project
(Member Secretary)


Dr. K. Velmurugan
Dean R&D and Professor & Head/
Mechanical Engineering
Member


Dr. L.M. Varalakshmi
Professor & Head/ Instrumentation &
control Engineering
Member


Dr. D. Raja
Professor / Electrical and Electronics
Engineering
Member



SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE

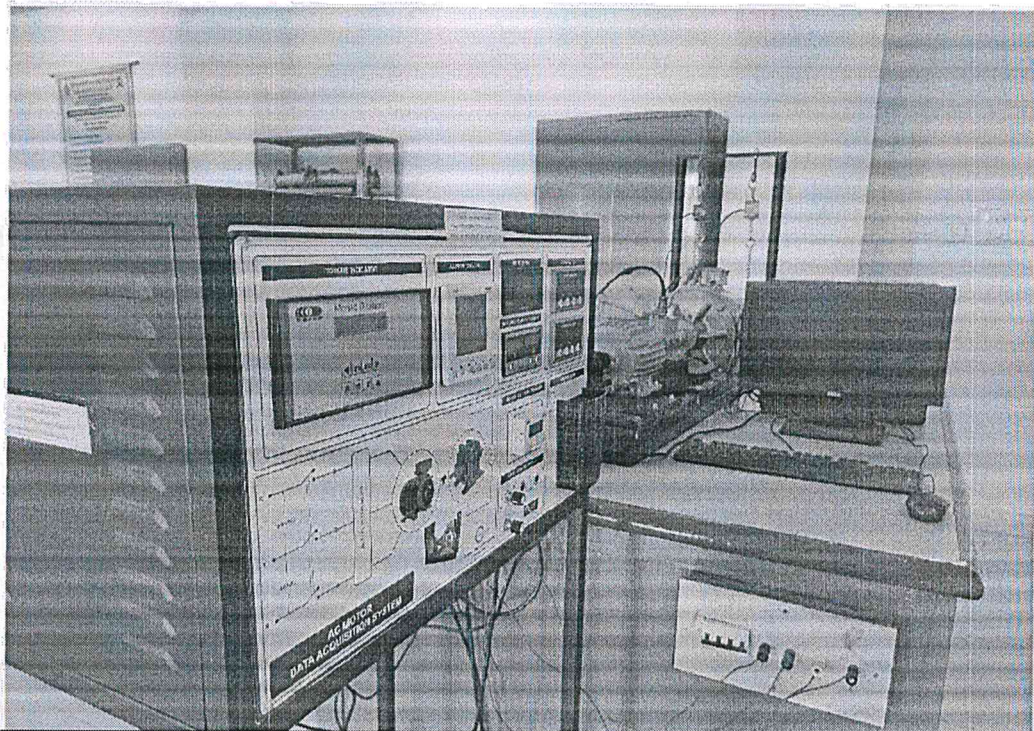
(An Autonomous Institution)
(Approved by AICTE, New Delhi & Affiliated to Pondicherry University)
(Accredited by NBA-AICTE, New Delhi, Accredited by NAAC with 'A' Grade)
Madagadipet, Puducherry - 605 107



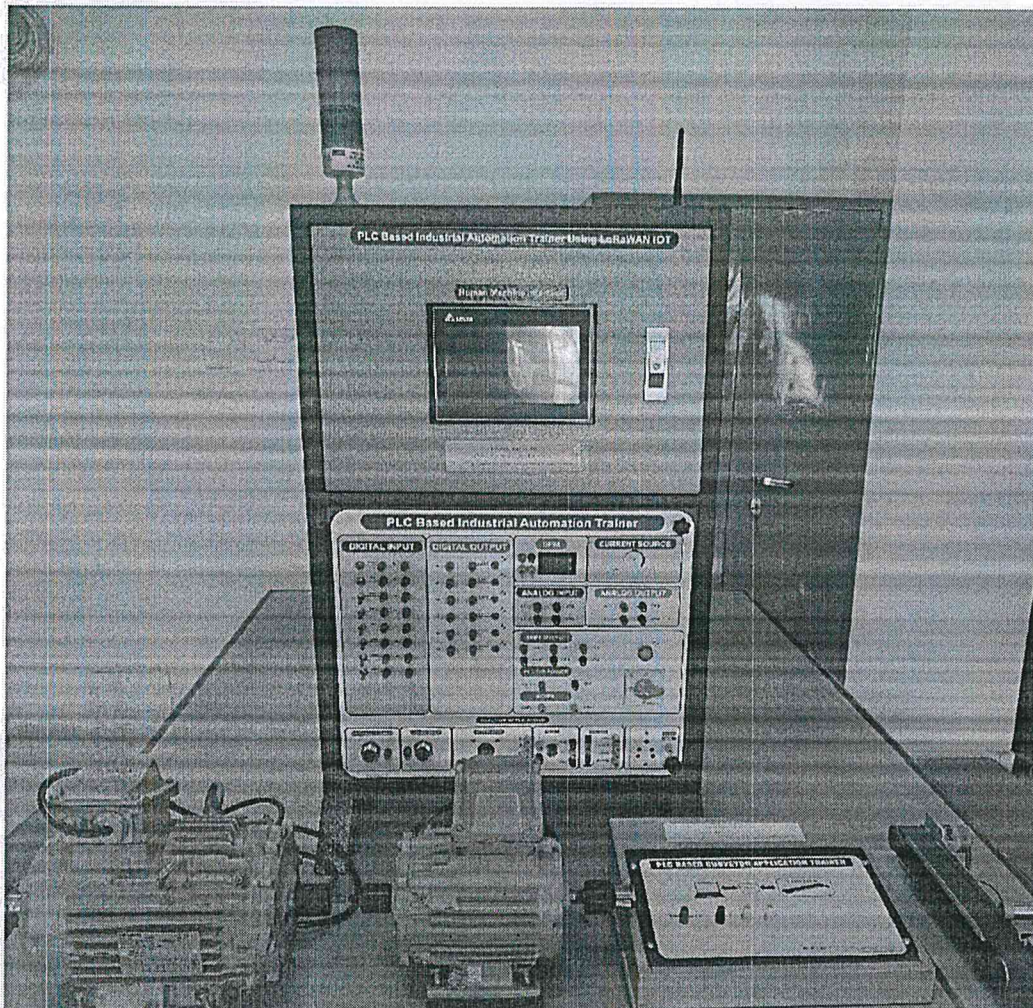
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

AICTE MODROB FUNDING EQUIPMENTS

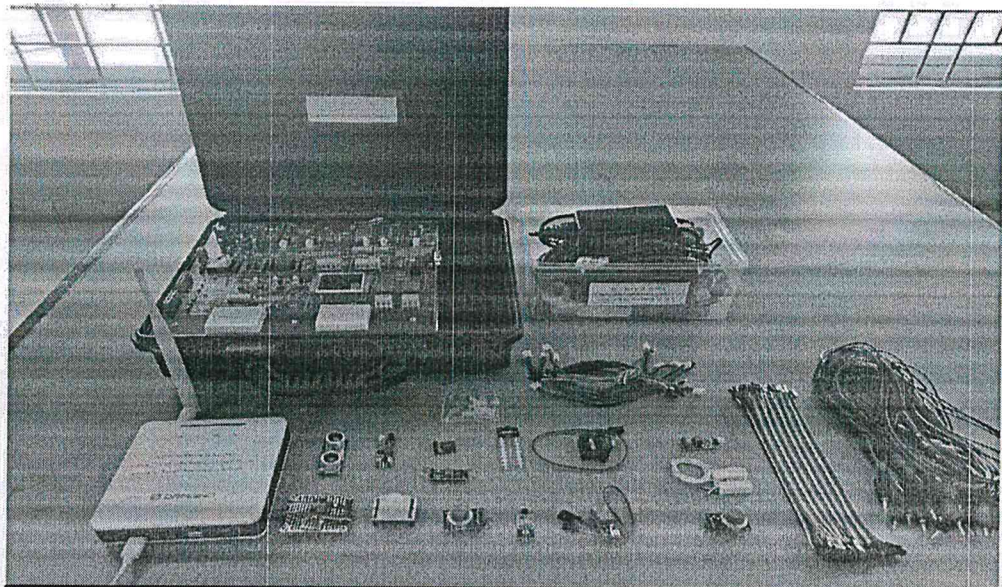
File no. : 9-277/RIFD/MOD/Policy-1/2018-19
Date of Sanction : 09.01.2020
Name of the Co-ordinator : Dr. S. Anbumalar
Details of the Programme : AICTE-MODROB for Power Electronics and Drives Laboratory



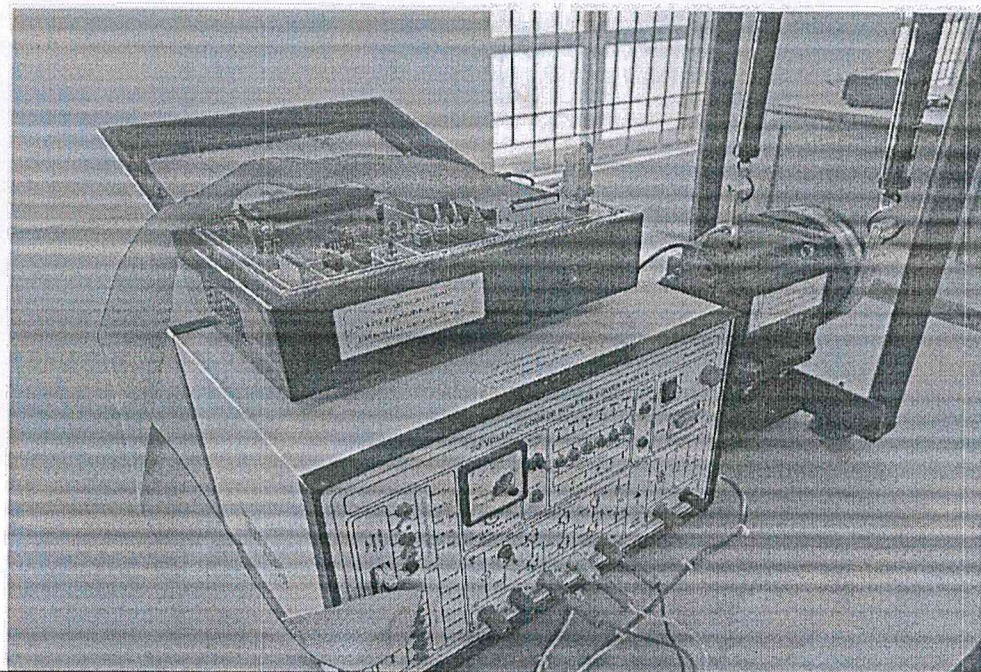
Performance validation of electrical machine setup



PLC Training equipment with motor Setup for industrial purpose learning



Internet of Things Development kit



DSP/FPGA based speed control of BLDC motor



Silicon Systems

15/29 Mahaliamman Nagar,
Kalapatti,
Coimbatore. 641048
Tamil Nadu India
GSTIN 33BKCPM6537P1ZP
Phone 99526 59144 , 72000 59144
siliconsystemsbe@gmail.com
www.siliconsystems.online

TAX INVOICE

Invoice No: : 55/22-23/92
Date : 28-12-2022
PO Reference# : PO2209088

Place Of Supply : Puducherry (34)
Kind Attn: : HOD,EEE Dept.,
PO DATE : 17-09-2022

BILL To

The Chairman

Sri Manakula Vinayagar Engineering College
Madagadipet
Pondicherry
605107 Puducherry
India

Ship To

The Chairman

Sri Manakula Vinayagar Engineering College
Madagadipet
Pondicherry
605107 Puducherry
India

#	Item & Description	HSN/SAC	Qty	Rate	IGST %	Amt	Amount
1	NON-RECURRING ITEMS: DSP/FPGA Based Speed Control of BLDC Motor Setup-1 No	9023	1.00	1,75,432.00	18%	31,577.76	1,75,432.00
2	IOT Development Kit STM 32 Based - 1 No	8517	1.00	75,900.00	18%	13,662.00	75,900.00
3	Performance Validation of Electrical machine setup. -1 No	9023	1.00	4,78,550.00	18%	86,139.00	4,78,550.00
4	PLC Training Equipment with Motor setup for industrial purpose Learning and IOT. - 1 No	9030	1.00	86,220.00	18%	15,519.60	86,220.00
5	Recurring Items: 1. Motor Terminal Connector for 0.5 HP, 1HP & 2HP-Each 5Nos 2. JTAG FPGA Downloading Cable -01 No 3. DELTA Original PLC Downloading Cables - 01 No 4. PLC HMI Interface cable- 01 No 5. LoRaWAN Gateway - 01 No 6. RS485-LoRaWAN MODBUS Converter- 01 No 7. Power Adapters - 05 Nos 8. Patch cards-50 Nos 9. Conveyor Belt and motor- 01 Each 10. DIN Rail - 1 meter 11. PVC Channel for Control panel- 1 meter 12. Single & Double Press Sleeves - Each 5 Pockets	8536	1.00	1,40,148.00	18%	25,226.64	1,40,148.00

Total In Words
Indian Rupee Eleven Lakh Twenty-Eight Thousand Three Hundred
Seventy-Five Only

Sub Total 9,56,250.00
IGST18 (18%) 1,72,125.00
Total ₹11,28,375.00

Bank Details:

BANK : INDIAN BANK
BRANCH : KALAPATTI
A/C NO : 6549401303
IFSC CODE : IDIB000K173
MICR CODE : 641019031

SILICON SYSTEMS



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Details of Patents



SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE

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Accredited by MAAC with "A" Grade)
Madagadipet, Puducherry - 605 107



Department of Electrical and Electronics Engineering

Details of Patents

DETAILS OF DESIGN PATENTS

2021-2022

S.No	Design number	Publication Date	Title of the invention	Name of Inventor	The Patent Office Journal No
1.	350541-003	12.11.2021	SMART AGRO WEEDING MACHINE	1. SMVEC 2. Dr.S.ANBUMALAR 3. Dr.P.JAMUNA 4. Dr.D.RAJA 5. Dr. S. GANESH KUMARAN	46/2021
2.	354167-001	28.01.2022	STRETCHER CUM WHEEL CHAIR	1. SMVEC 2. Dr.S.ANBUMALAR 3. Dr.K.GOWRISHANKAR 4. Mr.V.GOVINDAN 5. Mr. R. NAKKEERAN	04/2022
3.	354164-001	04.02.2022	SMART COOKING APPLIANCE	1. SMVEC 2. Dr.S.ANBUMALAR 3. Dr.D.RAJA 4. Mr.C.ADRIEN PERIYANAYAGAM 5. Mr. U. SURENDRAKUMARAN	05/2022
4.	354168-001	04.02.2022	AIR CONDITIONER DUCT CLEANING ROBOT	1. SMVEC 2. Dr.S.ANBUMALAR 3. Dr.S.GANESH KUMARAN 4. Mr.R.RAGUPATHY 5. Mr. I. SHIVASANKKAR	05/2022
5.	354943-001	04.02.2022	AUTOMATIC BATTER MAKING GRINDER	1. SMVEC 2. Dr.S.ANBUMALAR 3. Dr.P.JAMUNA 4. Mr.J.MURUGANANDHAM 5. Mr. A. JANAGIRAMAN	05/2022
6.	354938-001	11.02.2022	PORTABLE SMART COOKING DEVICE	1. SMVEC 2. Dr.S.ANBUMALAR 3. Dr.D.RAJA 4. Mr.ADRIEN PERIYANAGAM 5. Mr. U. SURENDRAKUMARAN	06/2022
7.	354941-001	11.02.2022	STRETCHER CUM WHEEL CHAIR WITH SIDE SUPPORTING FRAME	1. SMVEC 2. Dr.S.ANBUMALAR 3. Dr.K.GOWRISHANKAR 4. Mr.V.GOVINDAN 5. Mr. R. NAKKEERAN	06/2022
8.	354942-001	11.02.2022	ROBOTIC AIR CONDITIONER DUCT CLEANING DEVICE	1. SMVEC 2. Dr.S.ANBUMALAR 3. Dr.S.GANESH KUMARAN 4. Mr.R.RAGUPATHY 5. Mr. I. SHIVASANKKAR	06/2022

9.	354943-004	11.02.2022	PORTABLE CHAPATI MAKING MACHINE	1.SMVEC 2.Dr.S.ANBUMALAR 3.Mr.K.THANGARAJ 4.Ms.N.SWARNALAKSHMI 5.Mr. D. SIVARAJ	06/2022
10.	354169-003	11.02.2022	CHAPATHI MAKING MACHINE	1.SMVEC 2.Dr.S.ANBUMALAR 3.Mr.K.THANGARAJ 4.Ms.N.SWARNALAKSHMI 5.Mr. D. SIVARAJ	06/2022
11.	354169-001	04.03.2022	BATTER MAKING MACHINE	1.SMVEC 2.Dr.S.ANBUMALAR 3.Dr.P.JAMUNA 4.Mr.J.MURUGANANDHAM 5.Mr. A. JANAGIRAMAN	09/2022

2022-2023

S.No	Design number	Publication Date	Title of the invention	Name of Inventor	The Patent Office Journal No
1.	-	-	Wireless charging system on parking areas in E-Vehicle with positioning of transmitter coil	Dr. S. ANBUMALAR Dr. P. JAMUNA Dr. D. RAJA Dr. K. GOWRISHANKAR	-
2.	-	-	Automatic ethylene detection using gas sensors	Dr. S. ANBUMALAR Dr. S. GANESH KUMARAN Mr. K. THANGARAJ Mr. R. RAGUPATHY	-
3.	-	-	Conventional neural network based helmet detection on electric bike	Dr. S. ANBUMALAR Dr. M. JAYACHANDRAN Dr. P. JAMUNA Mr. J. MURUGANANDHAM	-
4.	-	-	Automated Headlight intensity control	Dr. S. ANBUMALAR Mr. C. ADRIEN PERIYANAYAGAM Dr. D. SIVARAJ Mr. I. SHIVASANKKAR	-
5.	-	-	Mustard Seed cultivator	Dr. S. ANBUMALAR Mr. J. MURUGANANDHAM Mr. K. THANGARAJ Mr. R. RAGUPATHY	-
6.	-	-	Automated Billing Trolley	Dr. S. ANBUMALAR Dr. D. RAJA Dr. K. GOWRISHANKAR Dr. S. GANESH KUMARAN	-
7.	-	-	Design and implementation of hybrid wind turbine with permanent magnet generator	Dr. S. ANBUMALAR Mr. C. ADRIEN PERIYANAYAGAM Mr. I. SHIVASANKKAR Dr. D. SIVARAJ	-

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Product Patent

2021-2022

Sl.No	Patent Number	Title	Inventors	Filing Date	Complete patent filed on	Published Date
1.	202141043814 A	A connector module for a VLSI circuit with a battery pack	1)Dr.Suresh Kumar Pittala 2)Ms.B. Rama Sulochana 3)Dr.B.Rajani 4)Dr.Rajender Udutha 5)Dr.K.Gowrishankar 6)Mr.Rayudu Srinivas 7)Dr.Sushma Jaiswal 8)Mr.Tarun Jaiswal 9)Dr. Harish Chandra Mohanta 10)Mr.Syed Javeed Basha	27/09/2021		05/11/2021

Product Patent

2022-2023

S.No	Title of the project	Project Mentors
1	Coordinative Robots for garment industry	Dr. S. ANBUMALAR Dr.P.JAMUNA DINESH KUMAR M HARIHARAN S HEMAMAALAN C KISHORE D
2	AI Based Shoe Polishing Machine	Dr. D. RAJA Dr. S. ANBUMALAR DELLI BABU.S ARULEESWARAN.P ATHMAJAN.S SHARAN.S
3	Design and fabrication of weight scaled oil expelling machine	Dr. S. GANESH KUMARAN Mr.S.JOHNPOWL AL ASHFAK.M VIGNESH.K SETHURAM.S THAHAADHAMSHARIF.N
4	ML based mechanism using RASPBERRY PI for mother board cleaning application	Mr. K. THANGARAJ Mr. R. RAGUPATHY ANNAMALAI. E DINESH BABU. A MUTHUKUMARAN. R SATHYANARAYANAN. V

5	Novel Air compressor for oxygen concentrator	Mr. C. ADRIEN PERIANAYAGAM Dr. S. ANBUMALAR ANAND.M.V DHILIPKUMAR.S RASIN.A THAMARAI SELVAN.S
6	IoT based medical ATM system	Dr.P.JAMUNA Mr. C. ADRIEN PERIANAYAGAM Dr. D. SIVARAJ GOKUL S ABDUL RAZAAK A GANESA MURTHY S
7	RFID based smart trolley for automated billing system	Mr R.VIGNESH Mr. J. MURUGANANDHAM ARAVINDHAN.A PALEPU SHIVA PRIYADHARSAN.S VASANTHAKUMAR.R

List of Journal Copyright Patent

2022-2023

S.No	Title of the project	Project Mentors
1	Developing a Virtual examination PAD for making the examination simplified	Dr. S. ANBUMALAR Dr. S. GANESHKUMARAN Dr.P.JAMUNA Dr. D. RAJA Mr.A. JANAGIRAMAN LOGESHWARAN V


HOD/EEE

Details of Publications



SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE

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Madagadipet, Puducherry - 605 107



Department of Electrical and Electronics Engineering

Details of Publications

(International Journal and International Conference)

2022-2023

International Conference

Sl.No	Title of the Paper	Name of the Authors	Name of the Conference	ISBN / ISSN	Publisher
1.	Design And Analysis Of Asymmetrical Multilevel Inverter	Dr.P.Jamuna, Dr.S.Anbumalar, Sowmya.S, Asmabegam.M	AICTE sponsored International conference on emerging innovative technologies In engineering (ICEITE'22), 13 th – 15 th July, 2022.	-	SMVEC
2.	Design And Analysis Of Asymmetrical Multilevel Inverter	Dr.P.Jamuna, Dr.S.Anbumalar, Sowmya.S, Asmabegam.M	AICTE sponsored International conference on emerging innovative technologies In engineering (ICEITE'22), 13 th – 15 th July, 2022.	-	SMVEC
3.	Mobile Application for the detection of tuberculosis using Artificial Intelligence	Dr.K. Gowrishankar, K. Aurtiselvi, R. Ganesh, K.Padmanaban, B. Suvathi	AICTE sponsored International conference on emerging innovative technologies In engineering (ICEITE'22), 13 th – 15 th July, 2022.	-	SMVEC
4.	Real time Implementation of fuzzy expert system based multi variable control in a MIMO climatic chamber	S.N.Sivaraj, Dr.K. Gowrishankar, M.Vijayakarthish, S.Sathishbabu	AICTE sponsored International conference on emerging innovative technologies In engineering (ICEITE'22), 13 th – 15 th July, 2022.	-	SMVEC
5.	Automated trolley using MEMS Sensor	S.N.Sivaraj, Dr.K. Gowrishankar, A.Ganesh Ram, M.Vijayakarthish, S.Sathishbabu	AICTE sponsored International conference on emerging innovative technologies In engineering (ICEITE'22), 13 th – 15 th July, 2022.	-	SMVEC
6.	Development of power electronic distribution	Dr.P.Kathiravan, Mr.K.Thangaraj, Logeshwaran, Sathayanarayanan	AICTE sponsored International conference on emerging innovative	-	SMVEC

	transformer based on ANFIS controller		technologies In engineering (ICEITE'22), 13 th – 15 th July, 2022.		
7.	Design of double stage savonius rotor for Wind power generation	Mr.K Thangaraj, P.Sivaprakasam, B.Chandru, M.Jaffarudeen	AICTE sponsored International conference on emerging innovative technologies In engineering (ICEITE'22), 13 th – 15 th July, 2022.	-	SMVEC
8.	AI based Shoe Polishing Machine	Aruleeswaran.P, Athmajan.S, Sharan.S, Dr.D.Raja	First International Conference and Awards on Arts, Management, Medical, Technology, Engineering and Science, 2 nd April 2023	978-81-963010-0-2	Inspire Softech Solutions, Chennai
9.	Investigation on the efficacy of dula-axis solar tracker coupled with passive cooling system	Mr.Shivasankkar I	Intelligent Systems and Controls (ISCO-2023) 10 th – 11 th March 2023	-	Karpagam College of Engineering, Coimbatore
10.	Control Strategy For Renewable Energy System Using Transformerless HERIC Bridge Inverter	Mr. Janagiraman. A	2 nd International Conference on Innovation in Technology (INOCON 2023) 3 rd --5 th March, 2023	-	Sai Vidya Institute of Technology, Bengaluru
11.	Industrial Logistics Robot	Mr. K. Thangaraj, Dinesh Kumar .M, Hariharan. S, Hemamaalan. C, Kishore. D	Intelligent Systems and Controls (ISCO-2023) 10 th – 11 th -March 2023	-	Karpagam College of Engineering, Coimbatore
12.	ML based mechanism using raspberry pi for motherboard cleaning	Thangaraj.K, Sathyanarayanan.V, Annamalai.E, Dinesh Babu.A, Muthukumaran.R	Intelligent Systems and Controls (ISCO-2023) 10 th – 11 th March 2023	-	Karpagam College of Engineering, Coimbatore
13.	Internet of Things based HT/LT Transformer Control and Monitoring Device	Mr.K.Thangaraj Dileepprasath.k Jeevajothi.K Karthik.R Rajmugilan.R	Intelligent Systems and Controls (ISCO-2023) 10 th – 11 th March 2023	-	Karpagam College of Engineering, Coimbatore
14.	Developing an electronic exam pad for making the examination simplified	Dr.S.Ganesh Kumaran	Intelligent Systems and Controls (ISCO-2023) 10 th – 11 th March 2023	-	Karpagam College of Engineering, Coimbatore

15.	Spot welding using PWM controller for battery pack assembly	Aripasath.N, Kumaran.S, Yogeshwar.S, Deepa Pragasan.V, Dr.D.Sivaraj	First International Conference and Awards on Arts, Management, Medical, Technology, Engineering and Science, 2 nd April 2023	978-81-963010-0-2	Inspire Softtech Solutions, Chennai
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**2022-2023
International Journal**

Sl.No	Title of the Paper	Name of the Authors	Name of the Journal	Vol, Issue, pp, Year /ISSN	Indexing / UGC /Scopus/ SCI	Impact Factor
1.	Coal Mine Monitoring Robot	Dr. Anbumalar, Akshaya. S, Hemalatha.V, Nivethithaa Sri.P.R, Sanchuna. S	International Journal of Scientific Research in Science, Engineering and Technology	Volume(10), Issue(2), PP-346-352, March - April 2023 DOI : https://doi.org/10.32628/IJSRSET	UGC	-
2.	Design of Intelligent Energy Meter	Dr. Jamuna.P, Dhivyadarshni.V Abiraami.V, Anjana.V, Kiruthiga.C	International Journal of Scientific Research in Science, Engineering and Technology	Volume(10), Issue(2), PP-250-254, March - April 2023 DOI : https://doi.org/10.32628/IJSRSET	UGC	-
3.	Implementation of A 3 Stage Dc-Dc Multiport Converter for Energy Storage System	Dr. P. Jamuna, K. Sindhuja, E. Priyanga, S.K. Thanyasri, C. Nandhini	International Journal of Scientific Research in Science, Engineering and Technology	Volume(10), Issue(2), PP-423-428, March - April 2023 DOI : https://doi.org/10.32628/IJSRSET	UGC	-
4.	PLC Based Automatic Control of Hydraulic Press Machine Using LVDT in	Dr. D. Raja, V. Deepika, R. Nivethitha, A. Hemalatha, A. Arthi	International Journal of Scientific Research in Science, Engineering and Technology (IJSRSET)	Volume(10), Issue(2), PP-363-368, March - April 2023 DOI : https://doi.org/10.32628/IJSRSET	UGC	-
5.	IoT-Based Rural Medical ATM System	Adrien Periyannayagam. C, Gokul. S, Abdul Razaak. A, Ganesa Murthy. S	International Journal of Scientific Research in Science, Engineering and Technology	Volume(10), Issue(2), PP-237-243, March - April 2023 DOI : https://doi.org/10.32628/IJSRSET	UGC	-
6.	Automated Fertigation System with Internet of Things Capabilities	Adrien Periyannayagam. C, Mohamed Fawaz. Y, Sanjay. M, Jagan. P, Kishor. G	International Journal of Scientific Research in Science, Engineering and Technology	Volume(10), Issue(2), PP-301-312, March - April 2023 DOI : https://doi.org/10.32628/IJSRSET	UGC	-
7.	Greenhouse	Deivaprasath.A,	International	Volume(7),	-	-

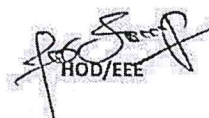
	monitoring and control using IOT	Arvind.D, Sanjay.M, Sunil Kumar.M, Muruganandham. J	Journal of Engineering Technology and Management Sciences	Issue(2), PP-9-14, March - April 2023 DOI:10.46647/ijetms.2023.v07i02.002		
8.	Simplified Integrated Microcontroller Based Assistant	Muruganandham. J Sakthi Esvaaran.S Dhineshe. S Devanathan. J Gugan. M	International Journal of Scientific Research in Science, Engineering and Technology	Volume(10), Issue(2), PP-418-422, March - April 2023 DOI : https://doi.org/10.32628/IJSRSET	UGC	-
9.	Automatic Power Transformer Tester	Dr.D.Sivaraaj Akash. S Gokulraj. N Khaja moideen. S Loganathan. S	International Journal for Multidisciplinary Research	Volume(5), Issue(2), PP-1-8, March - April 2023 DOI: 10.36948/ijfmr.2023.v05i02.2085	-	-
10.	Offline UPS for Regenerative Loads	Mr.A.Janagirama nAsmabegam.M Gunavathi.S Sowmya.S Vidhyalakshmi.E	International Journal for Multidisciplinary Research	Volume(5), Issue(2), PP-1-8, March - April 2023 https://www.ijfmr.com/papers/2023/2/2377.pdf	-	-
11.	Implementation of E-Bicycle Using Old Alternator	Mr.Ragupathi. R Jawahar. G Narendiran .A Surya Prakash. P Javith Ahamed. J	International Journal of Scientific Research in Science, Engineering and Technology	Volume(10), Issue(2), PP-435-439, March - April 2023 DOI : https://doi.org/10.32628/IJSRSET	UGC	-
12.	Design of onboard EV charger using boost converter with reduced harmonics	Shivasankkar. I Thirumani Raj, Thirumaran. D, Vetrivel. V, Vigneshwaran. V	International Research Journal of Modernization in Engineering Technology and Science	Volume(05), Issue(4), PP-1414-1417, April 2023	-	-
13.	Developing an electronic exam pad for making the examination simplified	Dr. S. Ganeshi Kumaran V. Logeshwaran T. Arunachalam M. Iyappan O. Oumar Gauru	Engineering Innovations (EI), Scientific.Net	Applied	Applied	Applied

2021-2022
International Journal

Sl. No	Title of the Paper	Name of the Authors	Name of the Journal	Vol, Issue, pp, Year /ISSN/ DOI	Indexing / UGC /Scopus/SCI	Citation	Impact Factor
1.	Operational concerns and solutions in smart electricity distribution systems	Dr. M.Jayachandran, K.Prasada Rao, Ranjith Kumar Gatla, C.Kalaivani,	Utilities Policy (Elsevier)	Vol. 74, pp.1-15, 2022/ ISSN 9571787 https://doi.org/10.1016/j.jup.2021.10132	ESCI / Scopus	01	-

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		C.Kalainrasy		9			
2.	Operational planning steps in smart electric power delivery system	Dr. M. Jayachandran, C. Reddy, S. Padmanaban, and A. Milyani	Nature - Scientific Reports (Springer)	Vol. 11(1), pp. 1-21, 2021, ISSN: 2045-2322, https://www.nature.com/articles/s41598-021-96769-8	Scopus	08	-
3.	A Unique Interlinking Converter Control for Hybrid AC/DC Islanded Microgrids	Dr. Jayachandran, M., Gundala Srinivasa Rao, Ch Reddy	Sustainable Communication Networks and Application. (Springer)	pp. 177-186, 2022 / ISBN: 978-981-16-6604-9/ https://doi.org/10.1109/ACCESS.2017.2705914	Scopus	-	-
4.	power-domain NOMA for massive connectivity in smart grid communication networks	Dr. M. Jayachandran, C. Kalaiarasy	Power Electronics and Renewable Energy Systems. (Springer)	pp. 205-212, 2022/ ISBN: 978-981-16-4943-1.	Scopus	01	-
5.	MPC-based power quality solution using energy storage technology for PV based islanded microgrids	Dr. M. Jayachandran, G. Ravi	Recent Advances in Manufacturing, Automation, Design and Energy Technologies. (Springer)	pp. 843-851, 2022/ ISBN: 978-981-16-4221-0/ http://dx.doi.org/10.1007/978-981-16-4222-7_92	Scopus	01	-
6.	Extended Over Modulation Zone Three-Dimensional SVPWM for Three-Level Neutral-Point-Clamped	Dr.K.Gowri shankar	Materials Today: Proceedings (Elsevier)	Volume 52(03), pp. 1756-1762, 2022/ ISSN 2214-7853/ https://doi.org/10.1016/j.matpr.2021.11.424	Scopus	-	-
7.	Wireless power transmission for E-Vehicle by mutual coupling	N.Swarnalakshmi V.Priyadharshini S.Sakthipriya J.Sowntharya M.Shalika	Strad Research	Vol 8 (08), PP. 486 - 49, Aug 2021 / ISSN: 0039-2049/ https://doi.org/10.37896/sr8.8/045	UGC	-	-
8.	A survey on photovoltaic grid system under voltage stability of power grid	Dr.S.Anbumalar, J.Narmatha	International Journal of advances in engineering and management	Vol. 03(05), pp.1044-1050, 2021, ISSN: 2395-5252/ DOI : 10.35629/5252-030510441050	UGC	-	-
9.	Microgrid based wind-solar cogeneration using bi-directional voltage source converters	Dr.S.Anbumalar, J.Narmatha	International Journal of advances in engineering and management	Vol. 03(07), pp.881-895, 2021, ISSN: 2395-5252 / DOI : 10.35629/5252-0307881895	UGC	-	-


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Annexure – VIII



SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE

(An Autonomous Institution)

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Madagadipet, Puducherry



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Institutional credentials, Students and Faculty Achievements

INSTITUTIONAL CREDENTIALS

Dataquest : T – School

- Sri Manakula Vinayagar Engineering College ranked as 40th position in Top T-Schools in India 2023 Rankings– National level under the overall category
- Sri Manakula Vinayagar Engineering College ranked as 32nd position in Top T-Schools in India 2023 Rankings–Private

STUDENTS ACHIEVEMENTS



The students have designed a first aid kit model with unique features. The winner team was honored with a memento and a first prize amount of Rs 1 lakh from Smart India Hackathon (SIH) 2022.



Two teams had been shortlisted for a three-day boot camp training organized by CII Innovation Contest 2022 from 17th – 19th October in Atal Incubation Centre Pondicherry Engineering College (AIC-PECF).



The final year students of EEE were the Runners up in the EPL cricket event, conducted on the 4th July 2022 and were rewarded by our chairman and Managing Director.



Our management has conducted "ULTRAMATE KABADDI CHAMPIONSHIP" which was organized by the department of Electrical and Electronics Engineering. The finals were conducted on 10th August 2022. Our First and second year students were the winners and rewarded by our Chairman and Managing Director on Independence Day.



Our management has conducted "KABADDI TOURNAMENT" which was organized by the Hostel Boys. The finals were conducted on 24th June 2023. Our second and third year students were the winners and rewarded by our Chairman and Managing Director.

FACULTY ACHIEVEMENT



Dr.D.Raja, Professor, Department of EEE received Best Teacher Award and honored with a memento for the Academic year 2022-23 on 23rd February 2023 in the SPARK 2023 college day function.

Annexure – IX



SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE

(An Autonomous Institution)

(Approved by AICTE, New Delhi and Affiliated to Pondicherry University)

(Accredited by NAAC with 'A' Grade and Accredited by NBA-AICTE, New Delhi)

Madagadipet, Puducherry



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

DETAILS OF EXAMINER

Specialization		Power Electronics and Drives		
S.No	Name of the Examiner	Designation & Institution Name	Mobile No	Mail ID
1.	Dr.J.Ramesh Rahul	Assistant Professor / EEE, National institute of Technology, Andhra Pradesh	7989923036	rahuljammy1925@gmail.com
2.	Dr.K.K.Saravanan	Assistant Professor / EEE, University College of Engineering, Thirukuvalai campus, Nagapattinam	9789695832	saravanan.santi@gmail.com
3.	Dr. S. Jeyasudha	Professor / EEE, K.Ramakrishnan College of Technology, Trichy,	9629054969	jeayasudhas.eee@krct.ac.in
4.	Dr.S.A.Elankurisil	Professor & Head / EEE, Adhiparasakthi Engineering College, Melmaruvathur.	9442936797	saelankurisil@gmail.com
5.	Dr.V.Vasan Prabhu	Assistant Professor / Department of Automotive Electronics, SRM Institute of Science and Technology, Chennai.	7358682007	vasanprv@srmist.edu.in
6.	Dr.V.Krishna kumar	Associate Professor / EEE, St.Joseph's college of Engineering, Chennai	9944235196	v.krishnakumarsjce@gmail.com
7.	Dr.R.Raja Singh	Associate Professor / Department of Energy and Power Electronics, VIT, Vellore.	9894250650	rrajasingh@vit.ac.in
8.	Dr.C. Kumar	Professor and Head / EEE M Kumarasamy College of Engineering Thalavapalayam Post, Karur Tk,	9994942022	kumarc@bitsathy.ac.in

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9.	Dr.Srinivasan Pradabane	Assistant Professor / EEE, National institute of Technology, Warangal, Telengana	8639352033	spradabane@nitw.ac.in
10.	Dr.P.Velmurugan	Associate Professor / EEE, St.Joseph's College of Engineering, Chennai	9976949243	velupriya10@gmail.com
11.	Dr.N.Shobanadevi	Professor , University College of Engineering, Ariyalur.	8778149535	shobanadevi1975@gmail.com
12.	Dr.D.Zamrooth	Asst.Professor, Department of EEE, University college of Engineering, Kanchipuram	9176773605	zam.shireen@gmail.com
13.	Dr.A.Saraswathi	Asst.Professor, Department of EEE, University college of Engineering - Villupuram	9994549910	saraswathiask@gmail.com
14.	Dr.S.Prabhu	Associate Professor, Department of EEE, SreeVidyanikethan Engineering College, SreeSainath Nagar, Tirupati.	9600646211	prabhutajmahal6@gmail.com
15.	Dr.R.Natarajan	Associate Professor / EEE Fatima Michael College of Engineering and Technology, Madurai	9655986026	natarajanrajavel369@gmail.com
16.	Mr.C.Nandakumar	Assistant Professor / EEE Arunai Engineering College, Velu Nagar, Mathur, Tiruvannamalai	9865714571	nandha30electra@gmail.com
17.	Dr.PadmajaSankala	Asst. Professor / EEE, All India Shri Shivaji memorial Society's College of Engineeirng,Pune	9923669024	pkssankala@aissmscoe.com
18.	Dr.S.Priyadharashni,	Assistant Professor / EEE, Arunai Engineering College, Velu Nagar, Mathur, Tiruvannamalai, Tamilnadu.	9994576791	priyamshanmugam@gmail.com

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19.	Dr.R.Thamaraiselvi	Assistant Professor/EEE, University College of Engineering, Villupuram	9487363388	r.thamaraiselvi1@gmail.com
20.	Dr.R.Murugesan	Asst. Professor, Department of EEE, Annamacharya Institute of Technology and Sciences Thirupati	9944228455	rmurugesandr@gmail.com
21.	Dr.T.S.BalajiDamodhar	Associate Professor / EEE, Ranipettai Engineering College, Walajah, Vellore	9944665102	balajidamodhar@gmail.com
22.	Dr.C.Kannan	Associate Professor / EEE, Arunai Engineering College, Thiruvannamalai.	9841005438	kannanc305@gmail.com
23.	Dr.K.Sedhuraman	Associate Professor / EEE, Manakula Vinayagar Institute of Technology, Kalitheerthalkuppam, Puducherry.	9092882883	sedhuramaneeee@mvit.edu.in
24.	Mr.S.Rajkumar	Assistant Professor / EEE, Manakula Vinayagar Institute of Technology, Kalitheerthalkuppam, Puducherry.	9952628247	rajkumareeee@mvit.edu.in
25.	Mr.M.Saravanakumar	Assistant Professor / EEE, Mailam Engineering College, Mailam	9786863566	saravanakumareeee@mailamengg.com
26.	Mr.G.G.Muthukumar	Assistant Professor / EEE, Mailam Engineering College, Mailam	9894762505	muthukumareeee@mailamengg.com
27.	Dr.S.Satthiyaraj	Associate Professor / EEE, University College of Engineering, Panruti	9500405949	satthiya@gmail.com
28.	Dr. N. Arunkumar	Associate Professor / EEE, DhanalakshmiSrinivasanEngineeringCollege, Perambalur	9894949670	narunme26@gmail.com

29.	Mr.A.Vinothkumar	Assistant Professor / EEE, SRI College of Engineering and Technology, Vandavasi.	6379224893	vinothkumareee91@gmail.com
30.	Dr.G.Madhusudanan	Professor / EEE, SRM Nagar, Kattankulathur, Chengalpattu.	9884413903	madhusudanang.eee@valliamm ai.co.in
31.	Dr.G.Haridoss	Associate Professor/EEE, M. A. M College of Engineering and Technology, Siruganur, Trichy	9865481065	haridoss@gmail.com
32.	Dr.S.Albert Alexander	Associate Professor / EEE, Kongu Engineering College, Perundurai, Erode.	9865931597	ootyalex@gmail.com
33.	Dr.K.Arul Kumar	Assistant Professor / EEE, Madanapalle Institute of Technology & Science, Madanapalle- Chittoor District, Andhra Pradesh	9994822651	karuleee@gmail.com
34.	Dr.Mahendran Nagalingam	Professor / HOD, SAINTGITS College of Engineering Kottayam, Kerala	9894243719	drnmpower@gmail.com
35.	Dr.R.Natarajan	Associate Professor /EEE Fatima Michael College of Engineering and Technology, Madurai	9655986026	natarajanrajavel369@gmail.com
36.	Dr.T Suresh Padmanabhan	Associate Professor, Department of ECE, E.G.S Pillay Engineering College, Nagapattinam.	9444025552	drtsp@egspec.org
37.	Dr.Ra.Selvaganapat hy	Assistant Professor / EEE, AVC College of Engineering Mayiladuthurai.	9940621275	selvaganapathyeee@avccengg. net
38.	Dr.S.S.Kumaresh	Asst.Prof / EEE, University college of Engineering, Kanchipuram.	9940545961	kumareshlive@gmail.com
39.	Dr.R.Murugesan	Assistant Professor / EEE, Annamacharya Institute of Technology and Sciences, Tirupati	9944228455	rmurugesandr@gmail.com

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40.	Dr.S.Arockiaraj	Assistant Professor / EEE, Mepco Schlenk Engineering College, Sivakasi. Sivakasi.	9626044699	arockiaraj.s@mepcoeng.ac.in
41.	Dr.C.Kamal	Assistant Professor, Department of EEE, Sri Venkateswara College of Engineering, Sriperumbudur – 602117.	9791121025	kamalc@svce.ac.in
42.	Dr.K.Kirubananthan	Professor and Head, Department of EEE, Surya Group of Institutions, Vikravandi	9677062845	kirubananthan81@gmail.com
43.	Dr.A.George Ansfer	Assistant Professor / EEE, St. Xavier's Catholic College of Engineering, Nagercoil.	9488926063	georgeansfer@gmail.com
44.	Dr J Leon Bosco Raj	Assistant Professor / EEE, St. Xavier's Catholic College of Engineering, Nagercoil.	9488218404	sanbosco2006@gmail.com

Specialization		Power systems		
S.N o	Name of the Examiner	Designation & Institution Name	Mobile No	Mail ID
1.	Dr.N.Chidambar araj	Associate Professor / EEE, St.Joseph's College of Engineering, OMR, Chennai	9840826431	chidambararajn@stjosephs .ac.in
2.	Dr.A.Ragavendi ran	Asst.Professor / EEE, AVC College of Engineering, Mannampandal Mayiladudurai	8248781797	ragavendiran.as@gmail.co m
3.	Dr. V. Subha Seethalakshmi	Associate Professor / EEE, Dhanalakshmi Srinivasan Engineering College, Perambalur	9865724662	vsubha05@gmail.com
4.	Dr.S.P.Mangaiy arkarasi	Asst.Professor , Department of EEE, University college of Engineering, Panruti.	8903678363	mangaisowmeya@gmail.c om
5.	Dr.R.Karthikeya n	Asst.Professor, Department of EEE, University college of Engineering, Pattukottai.	9047656765	kar_thamarai82@yahoo.co m

6.	Dr.Arul Murugan	Professor & Head / EEE Excel Group of Institutions Erode, TamilNadu	9842909393	arulpvp@gmail.com
7.	Dr.P.Sathish Babu	Asst.Professor, Department of EEE, University college of Engineering, Panruti	8667313405	psathishbabu@yahoo.co.in
8.	Dr.V.Arun	Associate Professor, Department of EEE, Sree Vidyanikethan Engineering College, SreeSainath Nagar, Tirupati.	8667244175	arunphd1986@gmail.com
9.	Dr.S.Durai	Assistant Professor, Department of EEE, Annamalai University	8667264066	ab addedurai@gmail.com
10.	Dr.S.Karthikeyan	Assistant Professor Department of EEE, Annamalai University	8825793371	karthikaueee79@gmail.com
11.	Dr.M.Sathya	Assistant Professor, Department of EEE, Government college of Engineering,Srirangam,Tiruchirappalli	7010271378	mrsathyaa@gces.edu.in
12.	Dr. R. Suresh	Associate Professor / EEE, SKP Engineering College , Thiruvannamalai	9943863622	rsureshskp@gmail.com
13.	Dr.P.Ajay.D.Vimal Raj	Associate Professor Department of EEE, Pondicherry Engineering College.	9486142839	ajayvimal@pec.edu
14.	Ms.V.Logeshwari	Assistant Professor Department of EEE, Government College of Engineering, Srirangam.	8778727201	logulagam@gmail.com
15.	Dr. S. A.Elankurisil	Professor and Head/ EEE Adhiprasakthi Engineering College, Melmaruvathur,	9442936797	sa elankurisil@gmail.com
16.	Dr.S.Srinivasan	Associate Professor / EEE, K.S.Rangasamy College of Technology, Tiruchengode - 637215	9994143687	srinivasan@ksrct.ac.in
17.	Dr.M.Suman	Associate Professor / EEE, Maha Barathi Engineering College, Chinnasalem – 606201	8248407486	suman.auvdl@gmail.com

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Specialization		Electrical Drives and Control		
S.No	Name of the Examiner	Designation & Institution Name	Mobile No	Mail ID
1	Dr.A.Venkadesan,	Assistant Professor / EEE, National Institute of Technology , NH32, Karaikal, Puducherry.	7598566739	venkadesan@nitpy.ac .in
2	Dr. R .Gunabalan	Associate Professor, School of Electrical Engineering, VIT,Vandalur- Kelambakkam Road, Chennai.	9894919269	gunabalan.r@vit.ac.in
3	Dr.V.Krishnakumar	Associate Professor / EEE St.Joseph college of Engineering Chennai.	9944235136	v.krishnakumarjce@g mail.com
4	Dr.D.Lenine	Professor/EEE R.G.M College of Engg. & Tech. Nandyal, Andhra Pradesh.	9866723784	lenine.eee@gmail.co m
5.	Dr.C.Carunaiselvan	Assistant Professor, Department of Automobile Engineering SRM Institute of Science and Technology, KTR Campus, Chennai	8265804594	carunaic@srmist.edu.i n
6.	Dr.V.Venkatachalam	Assistant Professor / EEE, Surya Group of Institutions, Vikravandi Villupuram.	9500999251	venkatsgieee@gmail.c om

Specialization		Electrical Engineering		
S.No	Name of the Examiner	Designation & Institution Name	Mobile No	Mail ID
1	Dr.S.Senthikumar	Associate Professor / EEE University College of Engineering, Ariyalur.	7810062427	senthil21575@gmail.co m
2	Dr.S.R.Sivarasu,	Professor / EEE, Sri Eshwar College of Engineering (Autonomous) Coimbatore.	8056719372 / 9942029372	sivarasu.s.r@sece.ac.i n

2. A. 1. 199

Specialization		Image Processing		
S.No	Name of the Examiner	Designation & Institution Name	Mobile No	Mail ID
1	Dr. S. Karthick	Associate Professor / EEE, Sengunthar Engineering College, Thudupathi Post, Perundurai, Erode	948693725 3	resumekarthick@gmail.com

Specialization		Very Large Scale Integration		
S.No	Name of the Examiner	Designation & Institution Name	Mobile No	Mail ID
1	Dr.T.Venishkumar	Associate Professor / EEE, Sethu Institute of Technology, Pulloor, Kariapatti – Virudhunagar, Tamilnadu	9095577477	tvenishkumar@gmail.com

Specialization		Control System and Instrumentation		
S.No	Name of the Examiner	Designation & Institution Name	Mobile No	Mail ID
1	Dr.S.N.Sivaraj	Associate Professor/ EEE Velammal Engineering College, Chennai	994423813 3/ 908080126 8	sivarajsn@gmail.com
2	Dr. P. Manikannan	Professor / EEE, AKT Memorial College of Engineering and Technology, Kallakurichi	978665857 1	p.manikannan@gmail.com
3	Mr.P.Jekan	Assistant Professor / EEE, SRM University, Kattankulathur, Chengalpattu.	988493773 4	jeganp@srmist.edu.in

Specialization		Applied Electronics		
S.No	Name of the Examiner	Designation & Institution Name	Mobile No	Mail ID
1	Dr. J.P.Srividhya	Associate Professor / EEE, Arunai Engineering College, Tiruvannamalai	9486985422	sriviprakash2007@gmail.com
Specialization		Automotive Technology, Material Science		
S.No	Name of the Examiner	Designation & Institution Name	Mobile No	Mail ID
1	Dr. S. Roseline	Professor / EEE, M. A. M College of Engineering and Technology, Siruganur, Trichy	9443435493	roselines1969@gmail.com



SRI MANAKULA VINAYAGAR
ENGINEERING COLLEGE
(An Autonomous Institution)

Department of Electrical and Electronics Engineering

Minutes of 6th Meeting of BoS (PG & Ph.D)

Venue : Seminar Hall,
Department of EEE,
Sri Manakula Vinayagar Engineering College

Date & Time : 19th July, 2023 at 12.00 P.M

14.2.2023

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SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE

(An Autonomous Institution)

(Approved by AICTE, New Delhi and Affiliated to Pondicherry University)
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Madagadipet, Puducherry



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

Minutes 6th of Meeting BoS

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SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE

(An Autonomous Institution)

(Approved by AICTE, New Delhi and Affiliated to Pondicherry University)
(Accredited by NAAC with 'A' Grade and Accredited by NBA-AICTE, New Delhi)
Madagadipet, Puducherry



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

M.Tech – Power Electronics and Drives

Ph.D – Electrical and Electronics Engineering

Minutes of 6th Meeting of Board of Studies (PG and Ph.D)

The Sixth meeting of Board of Studies in Electrical and Electronics Engineering Department was held on **19th July 2023 at 12.00 P.M** in the Seminar Hall, Department of EEE, Sri Manakula Vinayagar Engineering College, with Head of Department in the Chair.

The following members were present for the BoS meeting

Sl. No.	Name of the Member	Designation
Head of the Department (Chairman)		
1	Dr. S. Anbumalar, M.E., Ph.D., Professor and Head Specialization: Control System Years of Experience: 33 years Sri Manakula Vinayagar Engineering College saravanan.anbumalar@gmail.com 9443179533	Chairman
The entire faculty of each specialization		
2	Dr. P. Jamuna, M.E., Ph.D., Professor Specialization: Power Electronics and Drives Years of Experience: 17 years Sri Manakula Vinayagar Engineering College jamuna1981@gmail.com 9789544379	Member
3	Dr. D. Raja, M.Tech., Ph.D., Professor Specialization: Electrical Drives and Control Years of Experience: 16 years Sri Manakula Vinayagar Engineering College rajaapeee@gmail.com 9944337970	Member
4	Dr. S. Ganesh Kumaran, M.E., Ph.D., Associate Professor Specialization: Electrical Machines Years of Experience: 13 years Sri Manakula Vinayagar Engineering College ganeshphd4u@gmail.com 9677624378	Member
5	Dr.D.Sivaraj , M.Tech., Ph.D., Associate Professor Specialization: Electric Drives and Control Years of Experience: 13 years Sri Manakula Vinayagar Engineering College	Member

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	sivarajdeee@smvec.ac.in 9043117533	
6	Mr.A.Janagiraman, M.E., Assistant Professor Specialization: Power Electronics and Drives Years of Experience:15 years Sri Manakula Vinayagar Engineering College janagiraman16@smvec.ac.in 9965597940	Member
S&H Faculty		
7	Dr.T. Gayathri Professor, Dept of Mathematics, SMVEC	Member
8	Dr.K.Kathikeyan Associate Professor, Dept. of Chemistry, SMVEC	Member
9	Mrs.G.Namita Associate Professor, Dept. of English, SMVEC	Member
10	Dr. P. Jayavardhan Associate Professor Dept. of Physics, SMVEC, Madagadipet-605107	Member
Two subject experts from outside the Parent University nominated by the Academic Council		
11	Dr. J. Kanagaraj, M.E., Ph.D., Professor & Head (In charge) Specialization: Control System Years of Experience:25 years PSG College of Technology (Autonomous) Coimbatore – 641 004. jkr.eee@psgtech.ac.in 94436 54496	Subject Expert
12	Dr. P. Lakshmi,M.E., Ph.D., Professor Specialization: Electrical Engineering Years of Experience:23 years College of Engineering Guindy, Anna University, Chennai. 600 025. p_lakshmi@annauniv.edu 9444266117	Subject Expert
One expert nominated by the Vice-Chancellor from a panel of six recommended by the college principal.		
13	Dr. A. Kavitha, M.Tech., Ph.D Professor Specialization: Electrical Engineering Years of Experience: 25 years College of Engineering Guindy, Anna University, Chennai-600025 akavitha@annauniv.edu, 9444388778	Subject Expert

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One representative from industry/corporate sector/allied area relating to placement.		
14	Er.S. Selva Kumar, B.Tech. Senior Engineer Qualcomm India Private Limited Bengaluru, Karnataka - 560001 selvakumarsam95@gmail.com, 7358850881	Member
One postgraduate meritorious alumnus nominated by the Chairman, Board of Studies, with the approval of the principal of the college		
15	Er.K.Ramraj, M.Tech Senior Engineer Lucas TVS Puducherry – 605 107. ramrajeer@gmail.com, 9786714116	Member

Agenda of the Meeting

Agenda 1 / BoS / 6 / 2023 / EEE / PG & Ph.D	Confirmation of minutes of 5 th BoS meeting.
Agenda 2 / BoS / 6 / 2023 / EEE / PG & Ph.D	To discuss and approve Academic Calendar for the Even Semester of Academic year 2022-23.
Agenda 3 / BoS / 6 / 2023 / EEE / PG & Ph.D	To discuss and recommend the panel of examiners to the Academic Council.
Agenda 4 / BoS / 6 / 2023 / EEE / PG & Ph.D	To discuss the list of faculties registered for the doctorate programme in the Academic year 2022-23.
Agenda 5 / BoS / 6 / 2023 / EEE / PG & Ph.D	To approve the course work for the Research scholar admitted in the academic year 2022-2023.
Agenda 6 / BoS / 6 / 2023 / EEE / PG & Ph.D	To approve the Evaluation procedure adopted for the course work for the Research scholar admitted in the academic year 2022-2023.
Agenda 7 / BoS / 6 / 2023 / EEE / PG & Ph.D	Any other item with the permission of chair

Minutes of the Meeting

Dr. S. Anbumalar, Chairman, BoS opened the meeting by welcoming the external members, the internal members and the meeting thereafter deliberated on agenda items that had been approved by the Chairman.

Agenda 1 / BoS / 6 / 2023 / EEE / PG & Ph.D

Confirmation of minutes of 5th BoS meeting.

Chairman, BoS, apprised the minutes of 5th BoS.

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Agenda 2 / BoS / 6 / 2023 / EEE / PG & Ph.D

To discuss and approve Academic Calendar for the Even Semester of Academic year 2022-23.

The Academic Calendar are prepared for Even Semester of Academic year 2022-23 and it includes the schedule for CAT, Model Exam, QCM, Project review and Internal Marks distributions were discussed and approved (**given in Annexure-I**)

Agenda 3/ BoS /6 /2022 /EEE / PG & Ph.D

To discuss and recommend the panel of examiners to the Academic Council.

The list of Question Paper Setters and Evaluators (**given in Annexure-II**) was presented and recommended by the BoS members to the academic council.

Agenda 4/ BoS /6 /2022 /EEE / PG & Ph.D

To discuss the list of faculties registered for the doctorate programme in the Academic year 2022-23.

The list of faculties (**given in Annexure- III**) registered for the doctorate programme in the Academic year 2022-23 was presented and approved by the BoS members.

Agenda 5/ BoS /6 /2022 /EEE / PG & Ph.D

To approve the course work for the Research scholar admitted in the academic year 2022-2023.

List of Course work papers are presented and approved by the BoS members. The details of Course work papers are given in **Annexure-IV**.

Course Work Papers:


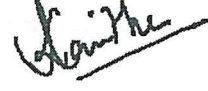
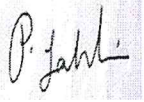


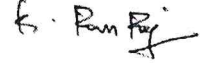
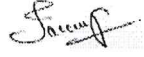
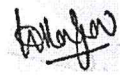


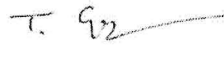

Sl. No	Course	Title of the Course	Credits	Max.Marks		
				CAM	ESM	Total
1	I	Research Methodology	4	-	100	100
2	II	Research and Publication Ethics	4	-	100	100
3	III	Advanced Course	4	40	60	100
4	IV	Advanced Course	4	40	60	100


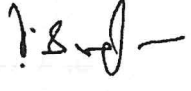
Agenda 6/ BoS /6 /2022 /EEE / PG & Ph.D

To approve the Evaluation procedure adopted for the course work for the Research scholar admitted in the academic year 2022-2023.

Evaluation procedure adopted for the course work to Ph.D research scholar was presented and approved by the BoS members. The details are given in **Annexure-V**.

The meeting for Sixth BoS approval was concluded at 12.45 P.M by Dr. S. Anbumalar, Chairman, Board of Studies, Department of Electrical and Electronics Engineering, Sri Manakula Vinayagar Engineering College.

Sl.No	Name of the Member with Designation and official Address	MEMBERS AS PER UGC NORMS	Signature
1	Dr.S.Anbumalar Professor and Head Department of EEE SMVEC, Madagadipet-605107	Chairman	
2	Dr.A.Kavitha Professor, Department of EEE College of Engineering Guindy Anna University Chennai. 600 025.	Subject Expert (University Nominee)	
3	Dr. P. Lakshmi Professor, Department of EEE College of Engineering Guindy Anna University Chennai. 600 025.	Subject Expert (Academic Council Nominee)	
4	Dr. J. Kanakaraj Professor & Head Department of EEE PSG College of Technology (Autonomous), Coimbatore – 641 004.	Subject Expert (Academic Council Nominee)	
5	Er.S. Selva Kumar Senior Engineer Qualcomm India Private Limited Bengaluru, Karnataka – 560001	Representative from Industry	
6	Er.K.Ramraj Senior Engineer Lucas TVS Puducherry – 605 107.	Postgraduate Alumnus (nominated by the Principal)	
7	Dr. P. Jamuna Professor Department of EEE, SMVEC	Internal Member	
8	Dr.D.Raja Professor Department of EEE, SMVEC, Madagadipet-605107	Internal Member	
10	Dr.S.Ganesh Kumaran Associate Professor Department of EEE, SMVEC, Madagadipet-605107	Internal Member	
11	Mr.A.Janagiraman, M.E., Assistant Professor Department of EEE, SMVEC, Madagadipet-605107	Internal Member	
12	Dr.T.Gayathri Professor and Head Dept of Mathematics, SMVEC, Madagadipet-605107	Internal Member	
13	Dr.K.Kathikeyan Associate Professor Dept. of Chemistry, SMVEC, Madagadipet-605107	Internal Member	

14	Mrs.G.Namita Associate Professor Dept. of English, SMVEC Madagadipet-605107	Internal Member	
15	Dr. T. Jayavarthanan Professor and Head Dept. of Physics, SMVEC, Madagadipet-605107	Internal Member (Science & Humanity)	

July 2023			
Date	Day	Schedule	Working day/ Holiday
1	Sat		
2	Sun		Holiday
3	Mon		56
4	Tue		57
5	Wed		58
6	Thu		59
7	Fri		
8	Sat		
9	Sun		Holiday
10	Mon		60
11	Tue		61
12	Wed		62
13	Thu		63
14	Fri		
15	Sat		Holiday
16	Sun		Holiday
17	Mon		64
18	Tue		65
19	Wed		66
20	Thu	Tentative End Semester Practical Exam	67
21	Fri		
22	Sat		
23	Sun		Holiday
24	Mon		
25	Tue		
26	Wed		
27	Thu		
28	Fri		
29	Sat		
30	Sun		Holiday
31	Mon		
Total number of working days : 12			
Total number of holidays : 02			
செல்ததுக் கொம்பவன் ஒவ்வொரு வாய்ப்பிலும் உள்ள ஆபத்தைப் பங்கிற்றான். சாதிப்பவன் ஒவ்வொரு ஆபத்திலும் உள்ள வாய்ப்பிலைப் பங்கிற்றான்.			

❖ Supplementary Examinations

Supplementary examination is an additional examination conducted within a month of time after declaring the results of ESE. In order to complete the program within 2 years, only the student with maximum of two arrears will be permitted to appear for supplementary examination. The supplementary examination will be conducted in fourth semester only. For supplementary examination, the continuous assessment marks of the last attempt will be considered.

Benefits

- ❖ More number of students will receive the degree within the stipulated time
- ❖ The industries prefers to recruit students having nil arrears. If the supplementary examinations is conducted then more number of students will be eligible for the recruitment

Punctuality in Attendance

The students are requested to keep up punctuality in attending the college. The late comers will be losing their attendance and in turn the internal marks. Hence all the students are requested to attend the college in time. A student shall be permitted to appear for the End Semester Examination at the end of the semester only if he/she secures not less than 75% of overall attendance.

Repeating the Course

A student who secures overall attendance which is less than 60% has to repeat the course with the approval, when it is next offered.

Tutor Ward System

In the tutor ward system, 30 students are allotted to a tutor who will be taking care of these students. The students are requested to utilize the facility.

The internal marks will be provided fully based on the continuous assessment tests (CAT 1 to 3)											
Marks Distribution of Continuous Assessment Marks (CAM) and End Semester Examination Marks (ESM)											
Scheme for Continuous Assessment Test											
S. No	Course Type	Continues Assessment components									
		Test Marks	Average of pre / post test / viva for each experiment	Average marks of report for each Test	Model Exam / Report	Assignment	Review - 1	Review - 2	Review - 3	Attendance	Total Marks
1.	Theory	25	-	-	-	10	-	-	-	05	40
2.	Practical	-	15	15	10	-	-	-	-	10	50
3.	Project Phase - I	-	-	-	-	-	15	15	30	-	50
4.	Project Phase - II	-	-	-	-	-	15	15	20	-	50

Question Paper Pattern									
Question paper pattern for CAT and ESE will be based on the patterns shown in Table (a) and (b)									
Table (a) Question Paper patterns for CAT 1 and 2									
Exam	2 Marks		10 Marks		Total Marks				
ESE	5(At least two questions from each unit)		3 (out of 4 Questions and at least two questions from each unit)		40				

Table (b) Question paper patterns for CAT 3 and End semester Examination									
Exam	2 Marks		12 Marks		Total Marks				
ESE	6 (At least one questions from each unit)		4 (out of 6 Questions and at least two questions from each unit)		60				

June 2023			
Date	Day	Schedule	Working day/ Holiday
1	Thu		40
2	Fri		
3	Sat		
4	Sun		Holiday
5	Mon		41
6	Tue		42
7	Wed		43
8	Thu		44
9	Fri		
10	Sat		
11	Sun		Holiday
12	Mon		45
13	Tue		46
14	Wed		47
15	Thu		48
16	Fri		
17	Sat		Holiday
18	Sun		Holiday
19	Mon		49
20	Tue		50
21	Wed		51
22	Thu	Project Review - III	52
23	Fri		
24	Sat		
25	Sun		Holiday
26	Mon		53
27	Tue		54
28	Wed	QCM - 3	55
29	Thu	Bakrid	Holiday
30	Fri		
Total number of working days : 16			
Total number of holidays : 05			
செல்ததுக் கொம்பவன் ஒவ்வொரு வாய்ப்பிலும் உள்ள ஆபத்தைப் பங்கிற்றான். சாதிப்பவன் ஒவ்வொரு ஆபத்திலும் உள்ள வாய்ப்பிலைப் பங்கிற்றான்.			

2. A-1-214

May 2023			
Date	Day	Schedule	Working day/ Holiday
1	Mon	May Day	Holiday
2	Tue		22
3	Wed		23
4	Thu		24
5	Fri		
6	Sat		
7	Sun		Holiday
8	Mon		25
9	Tue		26
10	Wed		27
11	Thu		28
12	Fri		
13	Sat		
14	Sun		Holiday
15	Mon		29
16	Tue		30
17	Wed		31
18	Thu	Project Review - II	32
19	Fri		
20	Sat		Holiday
21	Sun		Holiday
22	Mon		33
23	Tue		34
24	Wed		35
25	Thu		36
26	Fri		
27	Sat		
28	Sun		Holiday
29	Mon		37
30	Tue		38
31	Wed		39
Total number of working days : 18			
Total number of holidays : 06			
தலை ஆய்ந்து எங்கள் பார், தலைநிமிர்ந்து உங்கள் நடக்க கவாய்மை - புத்தகம்			

Distribution of Attendance marks for theory : 5 marks

The distribution of 5 marks for theory class attendance is as follows :
 5 marks for 95% attendance and above
 4 marks for 90% attendance and above but below 95%
 3 marks for 85% attendance and above but below 90%
 2 marks for 80% attendance and above but below 85%
 1 mark for 75% attendance and above but below 80%

Distribution of Attendance marks for practical : 10 marks

The distribution of 10 marks for practical class attendance is as follows :
 10 marks for 95% attendance and above
 8 marks for 90% attendance and above but below 95%
 6 marks for 85% attendance and above but below 90%
 4 marks for 80% attendance and above but below 85%
 2 marks for 75% attendance and above but below 80%

Note :

Continuous assessment mark will be based on the performance of the students in the continuous assessment test, Assignment and attendance percentage.

Importance of Continuous Assessment marks	
The continuous assessment marks once earned are carried over to the subsequent exams also. Hence the students are requested to work hard to get the maximum of the continuous assessment marks. If the continuous assessment marks are lower, it will pull down chances of getting the first class, distinction, gold medals and ranks.	
Importance of CAT-I/CAT-II/CAT-III/Model exam	
Continuous assessment marks are awarded for the performance in the CAT-I, CAT-II, CAT-III & Model exam. Hence all the students are requested to prepare well for each test / examination to earn the maximum continuous assessment marks.	
Undertaking Minor / Major Projects	
Each student is advised to take atleast one minor project. Getting involved in the projects will help to understand the basics of the course. Moreover, the Management awards cash prizes for the best projects in each department.	
Participation in the Curricular / Co-curricular / Extra curricular Activities	
All the students are encouraged to participate in the curricular / co-curricular / extra curricular activities. Involvement in these activities will improve their knowledge level in the subject. If a student or a team gets cash prize / award at the technical event organised by the recognised institutions, then the management of this institution will also sanction an amount equivalent to the award / cash prize as a token of appreciation.	
Leave Account Record	
For each student, leave account record is provided. The students are instructed to show the leave record to their parents and strictly adhere to the instructions given for availing the leave. The leave account record with prior approval from the HOD must be maintained properly. In exceptional cases, the students are permitted to get the approval after availing the leave.	
Transport Facility	
56 buses are arranged for the students to reach the college from Pudukkottai, Kanagachettikulam, Vilupuram, Neyveli, Panruti, Cuddalore, Nellikuppam, Madukarai and Tindivanam covering almost all the areas. Separate transport facility is arranged for the students who remain in the college after 5 p.m. for utilising computer lab, library and sports facilities. The students are requested to utilise the transport facility.	
All the students are requested to avoid mobile phones. Students who come by two wheelers must wear helmet.	

April 2023			
Date	Day	Schedule	Working day/ Holiday
1	Sat		
2	Sun		Holiday
3	Mon		6
4	Tue		7
5	Wed		8
6	Thu		9
7	Fri	Good Friday	Holiday
8	Sat		
9	Sun		Holiday
10	Mon		10
11	Tue		11
12	Wed		12
13	Thu		13
14	Fri	Tamil New Year / Dr. B.R. Ambedkar Birthday	Holiday
15	Sat		
16	Sun		Holiday
17	Mon		14
18	Tue		15
19	Wed		16
20	Thu	Project Review - I	17
21	Fri	Ramzan	Holiday
22	Sat		Holiday
23	Sun		Holiday
24	Mon		18
25	Tue		19
26	Wed		20
27	Thu		21
28	Fri		
29	Sat		
30	Sun		Holiday
Total number of working days : 16			
Total number of holidays : 09			
சலித்துக் கொள்வதன் ஒவ்வொரு வாய்ப்பிலும் உங்கள் ஆபத்தைப் பார்க்கிறாய். சாதிப்பவன் ஒவ்வொரு ஆபத்திலும் உங்கள் வாழ்வியலைப் பார்க்கிறாய்.			

March 2023			
Date	Day	Schedule	Working day/ Holiday
1	Wed		
2	Thu		
3	Fri		
4	Sat		
5	Sun		Holiday
6	Mon		
7	Tue		
8	Wed		
9	Thu		
10	Fri		
11	Sat		
12	Sun		Holiday
13	Mon		
14	Tue		
15	Wed		
16	Thu		
17	Fri		
18	Sat		
19	Sun		Holiday
20	Mon		
21	Tue		
22	Wed		
23	Thu	Commencement of classes for II year	1
24	Fri		
25	Sat		
26	Sun		Holiday
27	Mon		2
28	Tue		3
29	Wed		4
30	Thu		5
31	Fri		
Total number of working days : 5			
Total number of holidays : 01			
செல்துக் கொள்வதன் இவ்வொரு வாய்ப்பிலும் உள்ள ஆபத்தைப் பார்த்துக்கொள். சாதிப்பதன் இவ்வொரு ஆபத்திலும் உள்ள வாய்ப்புகளைப் பார்த்துக்கொள்.			

Placement and Training Division			
The placement cell functions round the clock throughout the year to establish contact with reputed multinational companies, industries and plays an important role in locating various job opportunities and placing large number of the students every year at these organizations.			
Activities of the Training Division			
<ul style="list-style-type: none"> ✦ Arranges trainings for personality and interpersonal skill development. ✦ Assists the students to get in-plant training ✦ Arranges industrial visits ✦ Creates awareness on the opportunities open for higher studies. ✦ Arranges coaching classes for GATE, GRE, TOFEL, IELTS, IAS, IES etc. 			
Placement Record			
Details of Placed Students : 2022-23			
Academic Year	Students Placed	Company	No. of Students
2013-14	85%	SOPRA STERIL	10
2014-15	93%	CTS	199
2015-16	93%	ICS	243
2016-17	93%	EMBED UR	5
2017-18	95%	ZOHIO	18
2018-19	95%	VIRTUSA	43
2019-20	95%	MULTICORE WARE	1
2020-21	96%	ACCENTURE - PEGA	4
2021-22	95%	TVM INFOTECH	3
2022-23	841*	WEBDIGITALMANTHRA	3
		INCEDEO	1
		UNISYS	6
		KAAR	13
		SOCIETE GENERALE	6
		HEXWARE	11
		MICROCHIP	2
		RENAULT NISSAN	1
		ZIFO	3
		CARATLANE	6
		Avalon	8
		Others	60
		Total	841*

Gold Medals and Top Ten Ranks		
The details of the University Goldmedals and Top Ten Ranks bagged by our students are given below.		
Year of Passing	Gold Medals	Top Ten Ranks
2012	9	58
2013	7	56
2014	7	56
2015	12	71
2016	8	72
2017	10	94
2018	11	74
2019	12	71
Gold Medals and Ranks		
As per the Regulation 2020, for the Award of Gold Medal and ranks for each branch of study, the CGPA secured from 1 st to 8 th semester should be considered and it is mandatory that the candidate should have passed all the subjects from 1 st to 8 th semester in the first attempt. Rank Certificates would be issued to the first five candidates in each branch of study.		

Important points for the kind attention of the Parents	
Dear Parents !	
Marks in the continuous assessment test decide the major part of the Continuous Assessment Marks. So, availing leave for the continuous assessment test must be avoided at any cost as this would seriously affect the continuous assessment marks.	
Practicals are very important not only to score more marks but also it will help to understand the theory part of the subject. Hence advice your ward not to avail leave during practical classes.	
Please spare your valuable time to talk to your son/daughter every day and try to understand what he/she is doing in respect of his/her studies. Kindly extend all your support to your son/daughter which will help them to come out successfully. For any assistance from our side you may always feel free to contact the respective Coordinator / HOD any time during the working hours.	
Wi-Fi Campus	
Our campus has been enabled by high speed uninterrupted Wi-Fi connectivity. The Computer Centre is open till 8.00 p.m. on all the working days except on the dates of University examinations.	
Library Working Hours	
8.30 a.m. to 8.30 p.m. (On all the working days) 8.30 a.m. to 10.00 p.m. (During the examination days)	
Women Cell	
For the benefit of the girl students, a Women Cell has been constituted in the college. The girl students may approach the Chairperson / members for assistance.	
Grievance Redressal Cell	
There is a Grievance Redressal Cell under the Chairmanship of the Director of the institution. Students are requested to approach the Chairman / members to redress their grievances. Mail ID : grievance@snvec.ac.in	

Annexure – II

List of Examiners



SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE

(An Autonomous Institution)
(Approved by AICTE, New Delhi & Affiliated to Pondicherry University)
(Accredited by NBA-AICTE, New Delhi, ISO 9001:2000 Certified Institution &
Accredited by NAAC with "A" Grade)
Madagadipet, Puducherry - 605 107



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING M.Tech Power Electronics and Drives

DETAILS OF EXAMINER

Specialization		Power Electronics and Drives		
S.No	Name of the Examiner	Designation & Institution Name	Mobile No	Mail ID
1.	Dr.J.Ramesh Rahul	Assistant Professor / EEE, National institute of Technology, Andhra Pradesh	7989923036	rahuljammy1925@gmail.com
2.	Dr.K.K.Saravanan	Assistant Professor / EEE, University College of Engineering, Thirukuvalai campus, Nagapattinam	9789695832	saravanan.santi@gmail.com
3.	Dr. S. Jeyasudha	Professor / EEE, K.Ramakrishnan College of Technology, Trichy,	9629054969	jeyasudhas.eee@krct.ac.in
4.	Dr.S.A.Elankurisil	Professor & Head / EEE, Adhiparasakthi Engineering College, Melmaruvathur.	9442936797	saelankurisil@gmail.com
5.	Dr.V.Vasan Prabhu	Assistant Professor / Department of Automotive Electronics, SRM Institute of Science and Technology, Chennai.	7358682007	vasanprv@srmist.edu.in
6.	Dr.V.Krishna kumar	Associate Professor / EEE, St.Joseph's college of Engineering, Chennai	9944235196	v.krishnakumarsjce@gmail.com
7.	Dr.R.Raja Singh	Associate Professor / Department of Energy and Power Electronics, VIT, Vellore.	9894250650	rrojasingh@vit.ac.in
8.	Dr.C. Kumar	Professor and Head / EEE M Kumarasamy College of Engineering Thalavapalayam Post, Karur Tk,	9994942022	kumarc@bitsathy.ac.in
9.	Dr.Srinivasan Pradabane	Assistant Professor / EEE, National institute of Technology, Warangal, Telegana	8639352033	spradabane@nitw.ac.in
10.	Dr.P.Velmurugan	Associate Professor / EEE, St.Joseph's College of Engineering, Chennai	9976949243	velupriya10@gmail.com
11.	Dr.N.Shobanadevi	Professor ,	8778149535	shobanadevi1975@gmail.com

		University College of Engineering, Ariyalur.		
12.	Dr.D.Zamrooth	Asst.Professor, Department of EEE, University college of Engineering, Kanchipuram	9176773605	zam.shireen@gmail.com
13.	Dr.A.Saraswathi	Asst.Professor, Department of EEE, University college of Engineering - Villupuram	9994549910	saraswathiask@gmail.com
14.	Dr.S.Prabhu	Associate Professor, Department of EEE, SreeVidyanikethan Engineering College, SreeSainath Nagar, Tirupati.	9600646211	prabhutajmahal6@gmail.com
15.	Dr.R.Natarajan	Associate Professor / EEE Fatima Michael College of Engineering and Technology, Madurai	9655986026	natarajanrajavel369@gmail.com
16.	Mr.C.Nandakumar	Assistant Professor / EEE Arunai Engineering College, Velu Nagar, Mathur, Tiruvannamalai	9865714571	nandha30electra@gmail.com
17.	Dr.PadmajaSankala	Asst. Professor / EEE, All India Shri Shivaji memorial Society's College of Engineeirng,Pune	9923669024	pksankala@aissmscoe.com
18.	Dr.S.Priyadharashni,	Assistant Professor / EEE, Arunai Engineering College, Velu Nagar, Mathur, Tiruvannamalai, Tamilnadu.	9994576791	priyamshanmugam@gmail.com
19.	Dr.R.Thamaraiselvi	Assistant Professor/EEE, University College of Engineering, Villupuram	9487363388	r.thamaraiselvi1@gmail.com
20.	Dr.R.Murugesan	Asst. Professor, Department of EEE, Annamacharya Institute of Technology and Sciences Thirupati	9944228455	rmurugesandr@gmail.com
21.	Dr.T.S.BalajiDamodhar	Associate Professor / EEE, Ranipettai Engineering College, Walajah, Vellore	9944665102	balajidamodhar@gmail.com
22.	Dr.C.Kannan	Associate Professor / EEE, Arunai Engineering College, Thiruvannamalai.	9841005438	kannanc305@gmail.com
23.	Dr.K.Sedhuraman	Associate Professor / EEE, Manakula Vinayagar Institute of Technology, Kaliitheerthalkuppam, Puducherry.	9092882883	sedhuramaneee@mvit.edu.in
24.	Mr.S.Rajkumar	Assistant Professor / EEE, Manakula Vinayagar Institute of Technology, Kaliitheerthalkuppam, Puducherry.	9952628247	rajkumareee@mvit.edu.in

25.	Mr.M.Saravanakumar	Assistant Professor / EEE, Mailam Engineering College, Mailam	9786863566	saravanakumareee@mailameng g.com
26.	Mr.G.G.Muthukumar	Assistant Professor / EEE, Mailam Engineering College, Mailam	9894762505	muthukumareee@mailameng .com
27.	Dr.S.Satthiyaraj	Associate Professor / EEE, University College of Engineering, Panruti	9500405949	satthiya@gmail.com
28.	Dr. N. Arunkumar	Associate Professor / EEE, DhanalakshmiSrinivasanEngi neeringCollege, Perambalur	9894949670	narunme26@gmail.com
29.	Mr.A.Vinothkumar	Assistant Professor / EEE, SRI College of Engineering and Technology, Vandavasi.	6379224893	vinothkumareee91@gmail.co m
30.	Dr.G.Madhusudanan	Professor / EEE, SRM Nagar, Kattankulathur, Chengalpattu.	9884413903	madhusudanang.eee@valliam mai.co.in
31.	Dr.G.Haridoss	Associate Professor/EEE, M. A. M College of Engineering and Technology, Siruganur, Trichy	9865481065	haridoss@gmail.com
32.	Dr.S.Albert Alexander	Associate Professor / EEE, Kongu Engineering College, Perundurai, Erode.	9865931597	ootyalex@gmail.com
33.	Dr.K.Arul Kumar	Assistant Professor / EEE, Madanapalle Institute of Technology & Science, Madanapalle- Chittoor District, Andhra Pradesh	9994822651	karuleee@gmail.com
34.	Dr.Mahendran Nagalingam	Professor / HOD, SAINTGITS College of Engineering Kottayam, Kerala	9894243719	drnmpower@gmail.com
35.	Dr.R.Natarajan	Associate Professor /EEE Fatima Michael College of Engineering and Technology, Madurai	9655986026	natarajanrajavel369@gmail.co m
36.	Dr.T Suresh Padmanabhan	Associate Professor, Department of ECE, E.G.S Pillay Engineering College, Nagapattinam.	9444025552	drtsp@egspec.org
37.	Dr.Ra.Selvaganapathy	Assistant Professor / EEE, AVC College of Engineering Mayiladuthurai.	9940621275	selvaganapathyeee@avccengg .net
38.	Dr.S.S.Kumaresh	Asst.Prof / EEE, University college of Engineering, Kanchipuram.	9940545961	kumareshlive@gmail.com
39.	Dr.R.Murugesan	Assistant Professor / EEE, Annamacharya Institute of Technology and Sciences, Tirupati	9944228455	rmurugesandr@gmail.com

Specialization		Power systems		
S.No	Name of the Examiner	Designation & Institution Name	Mobile No	Mail ID
1.	Dr.N.Chidambararaj	Associate Professor / EEE, St.Joseph's College of Engineering, OMR, Chennai	9840826431	chidambararajn@stjosephs.ac.in
2.	Dr.A.Ragavendiran	Asst.Professor / EEE, AVC College of Engineering, Mannampandal Mayiladudurai	8248781797	ragavendiran.as@gmail.com
3.	Dr. V. Subha Seethalakshmi	Associate Professor / EEE, Dhanalakshmi Srinivasan Engineering College, Perambalur	9865724662	vsubha05@gmail.com
4.	Dr.S.P.Mangaiyarkarasi	Asst.Professor , Department of EEE, University college of Engineering, Panruti.	8903678363	mangaisowmeya@gmail.com
5.	Dr.R.Karthikeyan	Asst.Professor, Department of EEE, University college of Engineering, Pattukottai.	9047656765	kar_thamarai82@yahoo.com
6.	Dr.Arul Murugan	Professor & Head / EEE Excel Group of Institutions Erode, TamilNadu	9842909393	arulpvp@gmail.com
7.	Dr.P.Sathish Babu	Asst.Professor, Department of EEE, University college of Engineering, Panruti	8667313405	psathishbabu@yahoo.co.in
8.	Dr.V.Arun	Associate Professor, Department of EEE, Sree Vidyanikethan Engineering College, SreeSainath Nagar, Tirupati.	8667244175	arunphd1986@gmail.com
9.	Dr.S.Durai	Assistant Professor, Department of EEE, Annamalai University	8667264066	abccdurai@gmail.com
10.	Dr.S.Karthikeyan	Assistant Professor Department of EEE, Annamalai University	8825793371	karthikaueee79@gmail.com
11.	Dr.M.Sathya	Assistant Professor, Department of EEE, Government college of Engineering, Srirangam, Tri chy	7010271378	mrsathyaa@gces.edu.in
12.	Dr. R. Suresh	Associate Professor / EEE, SKP Engineering College , Thiruvannamalai	9943863622	rsureshskp@gmail.com
13.	Dr.P.Ajay.D.Vimal Raj	Associate Professor Department of EEE,	9486142839	ajayvimal@pec.edu

		Pondicherry Engineering College.		
14.	Ms.V.Logeshwari	Assistant Professor Department of EEE, Government College of Engineering, Srirangam.	8778727201	logulagam@gmail.com
15.	Dr. S. A.Elankurisil	Professor and Head/ EEE Adhiprasakthi Engineering College, Melmaruvathur,	9442936797	saelankurisil@gmail.com

Specialization		Electrical Drives and Control		
S.No	Name of the Examiner	Designation & Institution Name	Mobile No	Mail ID
1	Dr.A.Venkadesan,	Assistant Professor / EEE, National Institute of Technology , NH32, Karaikal, Puducherry.	7598566739	venkadesan@nitpy.ac.in
2	Dr. R .Gunabalan	Associate Professor, School of Electrical Engineering, VIT,Vandalur-Kelambakkam Road, Chennai.	9894919269	gunabalan.r@vit.ac.in
3	Dr.V.Krishnakumar	Associate Professor / EEE St.Joseph college of Engineering Chennai.	9944235136	v.krishnakumarjce@gmail.com
4	Dr.D.Lenine	Professor/EEE R.G.M College of Engg. & Tech. Nandyal, Andhra Pradesh.	9866723784	lenine.eee@gmail.com
5.	Dr.C.Carunaiselvane	Assistant Professor, Department of Automobile Engineering SRM Institute of Science and Technology, KTR Campus, Chennai	8265804594	carunaic@srmist.edu.in

Specialization		Electrical Engineering		
S.No	Name of the Examiner	Designation & Institution Name	Mobile No	Mail ID
1	Dr.S.Senthikumar	Associate Professor / EEE University College of Engineering, Ariyalur.	7810062427	senthil21575@gmail.com
2	Dr.S.R.Sivarasu,	Professor / EEE, Sri Eshwar College of Engineering (Autonomous) Coimbatore.	8056719372 / 9942029372	sivarasu.s.r@sece.ac.in

Specialization		Image Processing		
S.No	Name of the Examiner	Designation & Institution Name	Mobile No	Mail ID
1	Dr. S. Karthick	Associate Professor / EEE, Sengunthar Engineering College, Thudupathi Post, Perundurai, Erode	9486937253	resumekarthick@gmail.com

Specialization		Very Large Scale Integration		
S.No	Name of the Examiner	Designation & Institution Name	Mobile No	Mail ID
1	Dr.T.Venishkunmar	Associate Professor / EEE, Sethu Institute of Technology, Pulloor, Kariapatti – Virudhunagar, Tamilnadu	9095577477	tvenishkumar@gmail.com

Specialization		Control System and Instrumentation		
S.No	Name of the Examiner	Designation & Institution Name	Mobile No	Mail ID
1	Dr.S.N.Sivaraj	Associate Professor/ EEE Velammal Engineering College, Chennai	9944238133/ 9080801268	sivarajsn@gmail.com
2	Dr. P. Manikannan	Professor / EEE, AKT Memorial College of Engineering and Technology, Kallakurichi	9786658571	p.manikannan@gmail.com
4	Mr.P.Jekan	Assistant Professor / EEE, SRM University, Kattankulathur, Chengalpattu.	9884937734	jeganp@srmist.edu.in

Specialization		Applied Electronics		
S.No	Name of the Examiner	Designation & Institution Name	Mobile No	Mail ID
1	Dr. J.P.Srividhya	Associate Professor / EEE, Arunai Engineering College, Tiruvannamalai	9486985422	sriviprakash2007@gmail.com

Specialization		Automotive Technology, Material Science		
S.No	Name of the Examiner	Designation & Institution Name	Mobile No	Mail ID
1	Dr. S. Roseline	Professor / EEE, M. A. M College of Engineering and Technology, Siruganur, Trichy	9443435493	roselines1969@gmail.com

2.A.1.224

ANNEXURE – III



SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE

(An Autonomous Institution)
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Madagadipet, Puducherry - 605 107

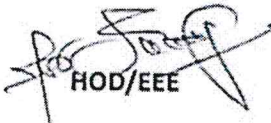


DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

M.Tech Power Electronics and Drives

List of faculties registered for the doctorate programme in the Academic year 2022-23

Sl. No	Register Number	Name of the Candidate	Mark Secured	Rank
1	22EEE005	K. Thangaraj	267	1
2	22EEE004	R. Ragupathy	242	2
3	22EEE008	J. Muruganandham	236	3
4	22EEE003	C. Adrien Perianayagam	231	4
5	22EEE006	I. Shivasankkar	225	5
6	22EEE010	K. Murugan	222	6
7	22EEE001	R. Manikandan	215	7
8	22EEE007	A. Janagiraman	206	8


HOD/EEE

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Annexure – IV
SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE
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**(COMMON TO ALL ENGINEERING & TECHNOLOGY STREAMS
 AND SCIENCE & HUMANITIES)**

COURSE CODE	COURSE TITLE	L	T	P	C
PHD21RMT101	RESEARCH METHODOLOGY	3	1	0	4

Course Category: Foundation Course

a. Preamble:

Today research is of immense importance in every field of life. Hence students need sound initiation in the world of research. Thus, this syllabus is prepared to equip students with the basics of research methodology and also provide them acquaintance with the main ingredients of collection of data, analysis of data, quantitative methods, optimization IPR and report writing.

b. Prerequisite Courses:

This course has no prerequisites

c. Related Courses:

Research and Publication Ethics.

d. Course educational objectives:

To impart knowledge and skills required for research:

- Problem formulation, analysis and solutions.
- Technical paper writing / presentation without violating professional ethics
- Be able to read and interpret statistical information
- Know the basics of different evolutionary algorithms.
- Patent drafting and filing patents.

e. Course Outcomes:

Upon the successful completion of the course, scholar will be able to:

CO Nos.	Course Outcomes	Knowledge level (Based on revised Bloom's Taxonomy)
CO1	Formulate the research problem through fundamentals of research and literature review.	K3
CO2	Identify and apply research design principles and make use of data collection and analysis techniques.	K3
CO3	Apply quantitative methods to solve research problem.	K3
CO4	Analyze the optimization techniques in solving the real problem.	K3
CO5	Interpret the research problem into registering IPR and filing patents.	K2

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f. Course Content

UNIT I – INTRODUCTION AND RESEARCH FORMULATION

L-9 + T-2

Introduction to Research: Definitions and Characteristics of Research, Motivation and Objectives, Research Methods vs. Methodology. Types of Research: Descriptive vs. Analytical, Applied vs. Fundamental, Quantitative vs. Qualitative, Conceptual vs. Empirical, Concept of Applied and Basic Research Process, Criteria of Good Research.

Defining and Formulating the Research Problem: Selecting the Problem, Necessity of Defining the Problem, Technique Involved in Defining a Problem.

Literature Review: Objectives of Review of Literature, Importance of Literature Review in Defining a Problem, Primary and Secondary Sources, Reviews, Treatise, Monographs, Patents, Web as a Source, searching in the Web, Critical Literature Review, Identifying Gap Areas from Literature Review and Research Database, Development of Working Hypothesis.

UNIT II – RESEARCH DESIGN, DATA COLLECTION AND ANALYSIS

L-9 + T-4

Research Design: Basic Principles, Need of Research Design, Features of Good Design, Different Research Designs, Experimental Designs, Research Databases, Development of Models, Developing a Research Plan, Exploration, Description, Diagnosis, and Experimentation.

Data Collection and Analysis: Primary and Secondary Data, Methods of Data Collection, Sampling Methods, Data Processing and Analysis Strategies and Tools, Data Analysis with Statistical Packages (Sigma STAT, SPSS for Student's t-test), Testing of Hypothesis (Student's t-test), ANOVA Technique.

UNIT III – QUANTITATIVE METHODS FOR PROBLEM SOLVING

L-9 + T-3

Basic Statistical Distributions and their Applications (No Derivations): Binomial, Poisson, Normal and their Applications in Research Studies. Fundamentals of Statistical Analysis and Inference, Multivariate methods, Concepts of Correlation and Regression Analysis, Fundamentals of Time Series Analysis and Spectral Analysis.

UNIT IV – OPTIMIZATION TECHNIQUES IN SOFT COMPUTING

L-9 + T-4

Optimization Definition, Need and Application, Formulation of Optimization Problems. Introduction to Evolutionary Algorithms, Fundamentals of Genetic Algorithms, Particle Swarm Optimization, Simulated Annealing, Introduction to Neural Networks, Neural Network Based Optimization, Introduction to Fuzzy Sets and Fuzzy Logic, Optimization of Fuzzy Logic.

UNIT V – IPR AND REPORT WRITING

L-9 + T-2

IPR: Intellectual Property Rights and Patent Law, Commercialization, Copy Right, Royalty, Trade Related aspects of Intellectual Property Rights (TRIPS).

Report Writing: Significance of Report Writing, Different Steps in Writing Report, Layout of the Research Report, Types of Reports, Mechanics of Writing a Research Report, Precautions for Writing Research Reports, Oral Presentation, Design of Research Paper, Citation, Plagiarism, Basic Knowledge of funding agencies, Proposal Submission for Funding Agencies.

Total: 60 Hours

Department of EEE – Sixth Meeting of BoS

g. Learning Resources

i. Reference Books:

1. Jeannette Lawrence, Introduction to Neural Networks: Design, Theory, and Applications, California Scientific Software, sixth edition, 1994.
2. Garg, B.L., Karadia, R., Agarwal, F. and Agarwal, An introduction to Research Methodology, RBSA Publishers, U.K., 2002.
3. Fink, A., Conducting Research Literature Reviews: From the Internet to Paper, Sage Publications, 5th edition, 2009.
4. Dr P M Bulakh, Dr P. S. Patki and Dr A S Chodhary, Research Methodology, Expert Trading Corporation Dahisar West, Mumbai, 2010.
5. Paolo Brandimarte, Quantitative Methods: An Introduction for Business Management, John Wiley & Sons, 2011.
6. Douglas C. Montgomery and George C. Runger. Applied Statistics and Probability for Engineers, 5th edition, John Wiley and Sons, Inc., New York, 2011.
7. Panneerselvam, R. Research Methodology, PHI Publications, Second edition, 2014.
8. Priya Rai, R.K. Sharma, P.K. Jain and Akash Singh, Transforming Dimension of IPR Challenges for New Age Libraries, National Law University Delhi Press, 2015.
9. Timothy J. Ross, Fuzzy Logic with Engineering Applications, Wiley publications, 4th Edition, 2016.
10. C.R. Kothari and Gaurav Garg, "Research Methodology: Methods and Techniques", New Age International (P) Ltd., Publishers, Fourth Multi Colour Edition, 2020.
11. S.C. Gupta and V.K. Kapoor, Fundamentals of Mathematical statistics, Sultan Chand & Sons, New Delhi, 12th Revised Edition, 2020.
12. Lawrence M. Leemis, Mathematical Statistics, Ascended Ideas, UK, 2020.
13. Sukanta Nayak, Fundamentals of Optimization Techniques with Algorithms, Academic Press, 2020.
14. Singiresu S. Rao, Engineering Optimization: Theory and Practice, New Age International Publishers, 5th edition 2020.

ii. Online resources:

1. https://www.soas.ac.uk/cedep-demos/000_P506_RM_3736-Demo/module/pdfs/p506_unit_01.pdf
2. <https://repository.up.ac.za/bitstream/handle/2263/27704/01chapter1.pdf?sequence=2&isAllowed=y>
3. <http://egyankosh.ac.in/bitstream/123456789/41939/1/Unit-4.pdf>
4. <https://www.formpl.us/blog/data-collection-method>
5. <https://www.questionpro.com/blog/data-collection/>
6. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4485510/>
7. <https://www.questionpro.com/blog/quantitative-research/>
8. https://hls.harvard.edu/content/uploads/2011/12/quantitative_methods.pdf
9. <https://libguides.usc.edu/writingguide/quantitative>
10. <https://mech.iitm.ac.in/nspch52.pdf>
11. <https://www.kdd.org/kdd2016/topics/view/optimization-techniques>
12. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3217699/>
13. <https://iare.ac.in/sites/default/files/M.Tech-RM%20%26%20IPR%20%28ECE%29%20PPTS.pdf>

**SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE**

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**(COMMON TO ALL ENGINEERING & TECHNOLOGY STREAMS
AND
SCIENCE & HUMANITIES)**

COURSE CODE	COURSE TITLE	L	T	P	C
PHD21RPT102	RESEARCH AND PUBLICATION ETHICS	2	1	1	4

Course Category: Foundation Course**a. Preamble:**

Today research is of immense importance in every field of life. Hence students need sound initiation in the world of research. The ethical pursuit of research in humanities, social sciences and other scientific disciplines is essential to the achievement of robust goals and research outcomes within the academe and it promotes systemic contributions in the field of advanced learning and knowledge generation.

b. Prerequisite Courses:

The course is primarily open to all Ph.D. scholars.

c. Related Courses:

Research Methodology

d. Course educational objectives:

To impart knowledge and skills required for research:

- Provide students with the fundamental knowledge of basics of philosophy of science and ethics, research integrity, publication ethics.
- Hands-on sessions are designed to identify research misconduct and predatory publications.
- Indexing and citation databases, open access publications, research metrics (citations, index, Impact Factor etc.).

e. Course Outcomes:

Upon the successful completion of the course, scholar will be able to:

CO Nos.	Course Outcomes	Knowledge level (Based on revised Bloom's Taxonomy)
CO1	Apply theories and methods in ethics, research ethics and scientific conduct.	K3
CO2	Understand the philosophy of science and ethics, research integrity and publication ethics.	K2
CO3	Identify software tools in open access publishing to check publisher copyright, predatory publications and journal suggestions.	K3

CO4	Acquire skills of presenting arguments and results of ethical inquiries and understand the usage of plagiarism tools.	K3
CO5	Utilize the indexing, citation databases and research metrics (citations, h-index, impact Factor, etc.).	K2

f. Course Content

Unit I: PHILOSOPHY, ETHICS AND SCIENTIFIC CONDUCT

L-8 + T-0

Philosophy, Ethics (3 Hrs.): Introduction to philosophy: definition, nature and scope, concept, branches - **Ethics:** definition, moral philosophy, nature of moral judgments and reactions.

Scientific Conduct (5 Hrs.): Ethics with respect to science and research - Intellectual honesty and research integrity - Scientific misconducts: Falsification, Fabrication and Plagiarism (FFP) - Redundant Publications: duplicate and overlapping publications, salami slicing - Selective reporting and misrepresentation of data.

Unit II: PUBLICATION ETHICS

L-7 + T-0

Publication ethics: definition, introduction and importance - Best practices / standards setting initiatives and guidelines: COPE, WAME, etc. - Conflicts of interest - Publication misconduct: definition, concept, problems that lead to unethical behaviour and vice versa, types - Violation of publication ethics, authorship and contributor ship - Identification of publication misconduct, complaints and appeals - Predatory publisher and journals.

Unit III: OPEN ACCESS PUBLISHING

L-0 + T-4

Open access publications and initiatives - SHERPA/RoMEO online resource to check publisher copyright & self-archiving policies - Software tool to identify predatory publications developed by SPPU - Journal finger / journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer, Journal Suggester, etc.

Unit IV: PUBLICATION MISCONDUCT

L-0 + T-2+P-2

Group Discussion (2 Hrs.): a) Subject specific ethical issues, FFP, authorship b) Conflicts of interest c) Complaints and appeals: examples and fraud from India and abroad.

Software tools (2 Hrs.): Use of plagiarism software like Turnitin, Urkund and other open source software tools.

Unit V: DATABASES AND RESEARCH METRICS

L-0 + T-4+P-3

Databases (4 Hrs): Indexing databases, Citation databases: Web of Science, Scopus, etc.

Research Metrics (3 Hrs.): Impact Factor of journal as per Journal Citations Report, SNIP, SJR, IPP, and Cite Score - Metrics: h-index, g index, i10 Index, altmetrics.

***Units 1 and 2 are** to be covered via Theory mode and **Units 3, 4 and 5** are to be covered via Tutorial practice mode.

Total: 30 Hours

g. Learning Resources

i. Reference Books:

1. Sidney Hook, Miro Todorovich, Paul Kurtz, The Ethics of Teaching and Scientific Research. Weldon Beckner, 1978.
2. Barbara H. Stanley; Joan E. Sieber; Gary B. Melton, Research Ethics: A Psychological Approach, University of Nebraska Press, 1996.
3. Anderson B.H, Dursaton and Poole M, Thesis and assignment writing, Wiley Eastern, 1997.
4. Paul Oliver, The Student's Guide to Research Ethics, Open University Press, 2003.
5. Adil E. Shamoo, David B. Resnik, Responsible Conduct of Research, Oxford University Press, 2003.
6. Bird, A, Philosophy of Science. Routledge, 2006.
7. Nicholas H. Steneck. Introduction to the Responsible Conduct of Research. Office of Research Integrity. 2007.
8. Graziano, A., M., and Raulin, M.,L, Research Methods – A Process of Inquiry, Sixth Edition, Pearson, 2007.
9. Bjorn Gustavii, How to write and illustrate scientific papers, Cambridge University Press.2008.
10. Bordens K.S. and Abbott, B.b, Research Design and Methods, Mc Graw Hill, 2008.
11. National Academy of Sciences, National Academy of Engineering and Institute of Medicine. On Being Scientist: A Guide to Responsible Conduct in Research: Third Edition. National Academies Press. 2009.
12. Jeffrey A. Gliner; George A. Morgan Lawrence Erlbaum Associates, Research Methods in Applied Settings: An Integrated Approach to Design and Analysis, Routledge, 2009.
13. Resnik, D. B. What is ethics in research & why is it important. National Institute of Environmental Health Sciences, 2011.
14. Joel Lefkowitz, Ethics and Values in Industrial-Organizational Psychology, Routledge, 2017.
15. P. Chaddah, Ethics in Competitive Research: Do not get scooped; do not get plagiarized, 2018.
16. Indian National Science Academy (INSA), Ethics in Science Education, Research and Governance. 2019.
17. Kambadur Muralidhar, Amit Ghosh Ashok Kumar Singhvi, Ethics in Science Education, Research and Governance. Indian National Science Academy, 2019.

ii. Online resources:

1. https://www.enago.co.kr/academy/wp-content/uploads/2018/05/Research_Ethics.pub_V2.pdf
2. <https://www.frontiersin.org/about/policies-and-publication-ethics>
3. https://www.researchgate.net/publication/340807930_RESEARCH_AND_PUBLICATION_ETHICS
4. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5508450/>
5. <https://www.iieta.org/Journals/IJSDP/Publication%20Ethics%20and%20Malpractice%20Statement>
6. <http://ignca.gov.in/short-term-certification-course/research-and-publication-ethics/>



Annexure - V
SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE

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Ph. D Course Work Evaluation Pattern

The Ph.D. candidate shall take the course work examination consisting of written Papers of 3 hours duration each and a maximum mark of 100 for each Paper.

Sl. No	Course	Title of the Course	Credits	Max.Marks		
				CAM	ESM	Total
1	I	Research Methodology	4	-	100	100
2	II	Research and Publication Ethics	4	-	100	100
3	III	Advanced Course	4	40	60	100
4	IV	Advanced Course	4	40	60	100

Table 1 Weightage of Assessment for Mandatory Courses

Title of the Course	Part-A 10X2=20 Marks)	Part-B (5X16=80 Marks)	Total (100 Marks)	Minimum Pass Mark
Research Methodology	10 Questions – Equally Distributed– Each carries TWO Marks.	5 Questions – 2 Questions from each Unit – Internal Choice – All Questions carries 16 Marks each	Part A – 20 Marks and Part B – 80 Marks Total Marks – 100 Marks	60
Research and Publication Ethics	10 Questions – Equally Distributed– Each carries TWO Marks.	5 Questions – 2 Questions from each Unit – Internal Choice – All Questions carries 16 Marks each	Part A – 20 Marks and Part B – 80 Marks Total Marks – 100 Marks	60

For each of the Mandatory courses, the candidates have to appear for an End Semester Examination in each subject conducted by the Controller of examinations for **100 marks**. The passing minimum is **60 marks in the end semester examination**.

Scheme of Evaluation for Advanced Course:

The advanced course is done under the guidance of the Supervisor. For the Continuous assessment marks (CAM) the following two components are used for evaluation.

Sl. No	Components	Marks
1	5 Seminars	20
2	3 Test	20
Total CAM		40

Pattern for Seminar Evaluation:

Sl. No	Component	Syllabus	Maxi Marks
1	Seminar - 1	From unit 1	4
2	Seminar - 2	From unit 2	4
3	Seminar - 3	From unit 3	4
4	Seminar - 4	From unit 4	4
5	Seminar - 5	From unit 5	4
Total Marks			20

Table 2 Weightage of Assessment for Advanced Courses

Sl. No	Test	Portion for Test	Test Marks	Duration of Test	Weightage for Internal Marks
1	CAT – 1	2 Units (Unit 1 and 2)	30	1 ½ hours	10***
2	CAT – 2	2 Units (Unit 3 and 4)	30	1 ½ hours	
3	CAT – 3	5 Units (Unit 1 to 5)	60	3 hours	10
Continuous Assessment for advanced courses					20

***A minimum of two tests (CAT 1 and 2) to be conducted for advanced course and, out of them, the best one is to be considered for computation of internal assessment marks.

Question Paper Pattern– Advanced Course Theory

Question paper pattern for CAT and ESE is shown in Table 3 (a) and (b) respectively.

Table 3 (a) Question Paper pattern for CAT 1 and 2

Part-A (5X2=10) 2 Mark Questions	Part-B (2X10=20) 10 Mark Questions	Total Marks (30)
5 (At least two questions from each unit)	2 (out of 4 Questions and at least two questions from each unit)	30

Table 3 (b) Question Paper pattern for CAT 3 and End Semester Examination

Part-A (5X2=10) 2 Mark Questions	Part-B (5X10=50) 10 Mark Questions	Total Marks (60)	Minimum Pass Mark
5 (At least one question from each unit)	5 (at least one question from each unit)	60	30

For each of the courses, the maximum internal mark awarded is **40 marks**. All the candidates have to appear for an **external (Semester) examination** in each subject conducted by the Controller of examinations for **60 marks**. The passing minimum is **30 marks** in the semester examination. The overall passing minimum is **60 marks**.

Research Work Proposal

- ❖ All the above course works of the scholar are to be undertaken as per the academic norms and shall be evaluated by the norms of the Institution.
- ❖ No change in the prescribed course works shall be made without the approval of the DC. The changes in course content/syllabus and grades shall be approved by the Academic Council.
- ❖ Only courses taken after the date of provisional registration shall count towards this requirement. Any courses already passed by the candidate prior to the registration shall not be counted for this purpose.
- ❖ The Ph.D. scholar has to obtain a minimum of 60%, of marks or it's equivalent grade or 6.0 CGPA on 10-point scale in the course work in order to be eligible to continue in the program and to submit the dissertation / thesis.
- ❖ The supervisors are requested to submit the CAT examinations papers [viz. CAT1, CAT2, CAT3] and PPT of all 5 seminars to the Dean Research through the concerned head of the department.
- ❖ The attendance sheet of all the CAT and seminar should be submitted with the signature of the scholar to the Dean Research with the endorsement of the supervisor and concerned head of the department.