

COIMBATORE INSTITUTE OF TECHNOLOGY, COIMBATORE
(Government Aided Autonomous Institution)

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

BOARD OF STUDIES - MINUTES OF THE MEETING

BoS/R2023/MoM 2

22.07.2023

The Board of Studies (BoS) meeting of the department of Electrical and Electronics Engineering was held on 22.07.2023, Saturday by 9.30 A.M at M109 to finalize the curriculum structure and syllabus of Regulation 2023 (UG & PG), vision, mission, PEOs, PSOs and Cos, verticals for R 2019 to ratify the one credit courses and NPTEL waiver courses. The board member details are as follows.

S.No.	Name of the Members
CHAIRPERSON - BoS	
1.	Dr.S.Vasantharathna, Professor and Head, Department of EEE, Coimbatore Institute of Technology, Coimbatore -641 014
UNIVERSITY NOMINEE	
2.	Dr. Sujatha Balaraman Professor Department of EEE Government College of Technology, Coimbatore – 641013 Phone: 9976443102 Email: sujathaeec@gct.ac.in
SUBJECT EXPERTS	
3.	Dr. M. Sabarimalai Manikandan Associate Professor Department of EEE Indian Institute of Technology, Palakkad Phone: 7894447889 Email: msm@iitpkd.ac.in
4.	Dr. P. Parthiban Associate Professor Department of EEE National Institute of Technology, Surathkal Phone: 9019153775 Email: parthiban@nitk.edu.in
INDUSTRY EXPERT	

5.	Mr. Uthra Project M Soliton T Phone: 7 Email: ut
6.	Ms. Girij Joint Dir Central P Email: gi 94490370

S.No	Inter
1.	Dr.S.Vas
2.	Dr.V.Ma
3.	Dr.E.Cha
4.	Dr.S.Suj
5.	Dr.J.Dev
6.	Dr.S.Gee
7.	Dr.G.Ma
8.	Ms.D.Pre
9.	Ms.K.Va
10.	Ms.P.De
11.	Dr.A.Ka
12.	Dr.S.Ela
13.	Ms.A.Pri
14.	Dr.S.Gur
15.	Dr.S.Nar
16.	Dr.R.Raj

CO-OPTED MEM

1.	Mr. R. (
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5.	Mr. Uthrakumar Arumuganainar Project Manager Soliton Technologies, Coimbatore Phone: 7795353007 Email: uthrakumar@solitontech.com
ALUMNUS	
6.	Ms. Girija G Joint Director Central Power Research Institute, Bangalore Email: girija@cpri.in 9449037091

S.No	Internal Members	S.No	Internal Members
1.	Dr.S.Vasantharathna	17.	Ms.M.Mynavathi
2.	Dr.V.Manikandan	18.	Dr.M.Packiasudha
3.	Dr.E.ChandiraSekaran	19.	Dr.M.Radha
4.	Dr.S.Suja	20.	Dr.RathnaPriya
5.	Dr.J.Devi Shree	21.	Dr.K.Suresh
6.	Dr.S.Geetha	22.	Dr.M.L.Merlinsajini
7.	Dr.G.Manavaalan	23.	Mr.P.Vinodkumar
8.	Ms.D.Prema	24.	Mr.B.Vasanthan
9.	Ms.K.Vanithamani	25.	Ms. Y. Hamsavarthini
10.	Ms.P.Devaki	26.	Ms.K.Arthi
11.	Dr.A.Kavithamani	27.	Ms.E.Suganya
12.	Dr.S.Elango	28.	Dr. R. Prabhakaran/Department of Mathematics
13.	Ms.A.Priyadharshini	29.	Dr.S.Sugapriya/Department of Chemistry
14.	Dr.S.Gunasekaran	30.	Dr.N. Muthukumarasamy /Department of Physics
15.	Dr.S.Nanda Kumar	31	Dr. A. Shantha Devi/Science and Humanities
16.	Dr.R.Rajalakshmi		

CO-OPTED MEMBER

1.	Mr. R. Chandrasekaran
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MINUTES OF THE MEETING

The Chairperson Dr. S. Vasantharathna welcomed the members of the Board of Studies meeting by explaining the meeting agenda as follows.

- To discuss and finalize the B.E. curriculum structure and syllabi of all the semesters for the Regulation 2023.
- To discuss and finalize the M.E. (ERTS) curriculum structure and syllabi of all the semesters for the Regulation 2023.
- To discuss and approve the mandatory courses of R 2023, vision, mission, PEOs, PSOs and Cos.
- To discuss and finalize the B.E / B. Tech Honors (Specialization) / Honors /Minor for the students admitted from 2021 onwards under the regulation R 2019.
- To ratify the One Credit Courses and NPTEL waiver courses of R 2019.

ITEM 01	The Chairperson Dr. S. Vasantharathna presented the curriculum structure for the Regulation 2023.
Discussion	UG Curriculum structure is designed with 5 theory subjects, 3 laboratory subjects, internship, mini-project, project work and mandatory courses. Each theory subject is proposed with 4 units and 6 course outcomes.
Resolution	Approved by all the board members.
ITEM 02	TECHNICAL ENGLISH
Discussion	Syllabus is approved by all the board members.
ITEM 03	LINEAR ALGEBRA AND CALCULUS
Discussion	Syllabus is approved by all the board members.
ITEM 04	ELECTRON DEVICES AND CIRCUITS
Discussion	Board members suggested to check the redundancy in comparison with higher semester subjects such as SMPS and UPS and suggested to add high frequency transformers. Board members suggested to reframe the second unit by adding opto-electronic devices and linear power supplies and rectifiers.
Decision	Co-Opted member Dr. N. Muthukumarasamy, Professor & Head, Department of Physics has been asked to modify the syllabus content accordingly.
ITEM 05	ELECTROCHEMICAL TECHNOLOGIES
Discussion	Syllabus is approved by all the board members and suggested to list only two text books.
ITEM 06	BASIC CIVIL AND MECHANICAL ENGINEERING
Discussion	Board members have suggested to align the syllabus of mechanical engineering more towards the thermal concepts needed for electrical engineers as suggested in Bureau of Energy Efficiency (BEE). Topics on power plants are to be removed and the topics such as boilers, pumps, turbines and related thermal concepts, HVAC, refrigerators and compressors are to be added. The syllabus weightage of civil and mechanical could be equalized by having two units each for civil and mechanical (with 3 COs each).

Decision	Co-Op
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ITEM 12	ELEC
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Discussion	Dr. P.
ITEM 15	LABO
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Decision	Co-Opted member Dr. R. Sathish Kumar has been asked to modify the syllabus accordingly.
ITEM 07	BASIC SCIENCES LABORATORY
Discussion	Board members asked to ensure that the experiments are in-line with the respective theory concepts and to list 6-8 number of experiments and also suggested to reframe the experiment name by indicating the concept rather than the study. The experiments of physics and chemistry laboratories should be listed in the same page, under one title with 3 COs each.
Decision	Co-opted members Dr. N. Muthukumarasamy and Dr. S. Sugapriya have been asked to modify the syllabus accordingly.
ITEM 08	ENGINEERING DESIGN LABORATORY
Discussion	Syllabus is approved by all the board members and Dr. P. Parthiban suggested to check the possibility of having this lab in higher semesters.
ITEM 09	COMPUTER AIDED ENGINEERING VISUALIZATION LABORATORY
Discussion	Syllabus has to be framed to address the continuous assessment pattern by listing the experiment titles alone.
ITEM 10	COMPLEX ANALYSIS AND TRANSFORMS
Discussion	Board members approved the syllabus and suggested to teach the related applications in electrical engineering.
Decision	Co-opted member Dr. R. Prabhakaran has been asked to make a note on the discussion.
ITEM 11	ELECTRIC AND MAGNETIC CIRCUITS
Discussion	Dr. Sujatha Balaraman suggested to remove the concept of linearity in unit 1 and reframe the title of unit 2 as AC fundamentals.
ITEM 12	ELECTRICAL MEASUREMENTS AND INSTRUMENTATION
Discussion	Board members suggested to check the redundancy of the optical device concepts with the subject of electron devices and circuits.
ITEM 13	DIGITAL CIRCUITS
Discussion	Board members suggested to follow the sequence of units by swapping unit 1 and unit 2 and to ensure the redundancy of the title logic gates in both the units and to reframe the Cos.
Decision	Co-opted members Dr. N. Muthukumarasamy is asked to modify the syllabus accordingly.
ITEM 14	ANALOG ELECTRONICS
Discussion	Dr. P. Parthiban suggested to include the introduction of SPICE model in the syllabus
ITEM 15	LABORATORIES IN SEMESTER 2
Discussion	Basic Science Laboratory: Board members asked to ensure that the experiments are in-line with the respective theory concepts and to list 6-8 number of experiments and also suggested to reframe the experiment name by indicating the concept rather than the study. The experiments of physics and chemistry laboratories should be listed in the same page, under one title with 3 COs each. C Programming Laboratory: Mr. Uthara emphasized on introducing theory and the deliberate discussions were made and also discussed to emphasize more on core subjects and futuristic subjects. Hence programming subjects could not be accommodated as theory. However data structures and algorithms is introduced as theory and OOPS and C++ is also introduced as an additional laboratory.

ITEM 16	DIFFERENTIAL EQUATION AND NUMERICAL METHODS
Discussion	Board members suggested to include the applications of the concepts in electrical engineering.
Decision	Co-opted member Dr. R. Prabhakaran has been asked to make a note on the discussion.
ITEM 17	ELECTRIC CIRCUIT ANALYSIS
Discussion	Approved by all the board members by suggesting that the software tools are need not be mentioned explicitly and could be mentioned as technical tools.
ITEM 18	ELECTROMAGNETIC FIELDS
Discussion	Board members suggested to remove the vector calculus unit, as it is studied in maths and instead the latest titles in-line with the theoretical concepts with the case studies could be introduced. Mr. Uthara suggested to include the concept of RF and Radar in-line with the subject and the text books can be replaced with latest books.
ITEM 19	DC MACHINES AND TRANSFORMERS
Discussion	Dr. Sujatha Balaraman suggested to replace the title and the content of unit 2.
ITEM 20	LINEAR INTEGRATED CIRCUITS
Discussion	Mr. Uthara suggested to include the concepts towards advanced converters, case studies with examples.
ITEM 21	DC MACHINES AND TRANSFORMERS LABORATORY
Discussion	Syllabus is approved by all the board members and the study experiments are to be removed.
ITEM 22	ANALOG AND LINEAR INTEGRATED CIRCUITS LABORATORY
Discussion	Mr. Uthara suggested to include the experiments in-line with current technology.
ITEM 23	OOPS AND C++ LABORATORY
Discussion	Dr. Sujatha Balaraman suggested to reframe the experiment titles 11-16 by focussing the concepts of the subject.
ITEM 24	AC ROTATING MACHINES
Discussion	Board members suggested to reframe the titles of unit 1, unit 2 and unit 4, shifting the concept up to slip test from unit 2 to unit, using the keyword either generator or alternator uniformly and to include the concept of BLDC.
ITEM 25	TRANSMISSION AND DISTRIBUTION OF ELECTRICAL POWER
Discussion	Board members suggested to allot the lecture hours as per the significance of the concepts and to check the COs/ Single line diagram is to be removed / The units could be aligned by starting from AC Vs DC, T&D – OHL Vs UG, conductor materials – line parameters, mechanical design and simulator.
ITEM 26	SIGNALS AND NETWORKS
Discussion	Board members suggested to check the redundancy and the inclusion of duality and dual networks in graph theory
ITEM 27	CONTROL SYSTEMS
Discussion	Board members suggested to include the concept of gear systems.
ITEM 28	DIGITAL SYSTEM DESIGN
Discussion	Mr. Uthara suggested to include the concept of digital communication. Board members suggested to follow the sequence of the concepts registers followed by counters.

ITEM 29	AC ROTATING MACHINES
Discussion	Board members suggested to include the applications of the concepts in electrical engineering.
ITEM 30	DIGITAL SYSTEM DESIGN
Discussion	Board members suggested to include the applications of the concepts in electrical engineering.
ITEM 31	CONTROL SYSTEMS
Discussion	Board members suggested to include the concept of gear systems.
ITEM 32	POWER ELECTRONICS
Discussion	Board members suggested to include the concepts towards advanced converters, case studies with examples.
ITEM 33	POWER ELECTRONICS LABORATORY
Discussion	Syllabus is approved by all the board members and the study experiments are to be removed.
ITEM 34	EMBEDDED SYSTEMS
Discussion	Board members suggested to reframe the titles of unit 1, unit 2 and unit 4, shifting the concept up to slip test from unit 2 to unit, using the keyword either generator or alternator uniformly and to include the concept of BLDC.
ITEM 35	POWER ELECTRONICS
Discussion	Board members suggested to allot the lecture hours as per the significance of the concepts and to check the COs/ Single line diagram is to be removed / The units could be aligned by starting from AC Vs DC, T&D – OHL Vs UG, conductor materials – line parameters, mechanical design and simulator.
ITEM 36	POWER ELECTRONICS LABORATORY
Discussion	Syllabus is approved by all the board members and the study experiments are to be removed.
ITEM 37	EMBEDDED SYSTEMS
Discussion	Mr. Uthara suggested to include the concept of digital communication. Board members suggested to follow the sequence of the concepts registers followed by counters.
ITEM 38	DIGITAL SYSTEM DESIGN
Discussion	Mr. Uthara suggested to include the concept of digital communication. Board members suggested to follow the sequence of the concepts registers followed by counters.
ITEM 39	ELECTRICAL POWER TRANSMISSION AND DISTRIBUTION
Discussion	Board members suggested to allot the lecture hours as per the significance of the concepts and to check the COs/ Single line diagram is to be removed / The units could be aligned by starting from AC Vs DC, T&D – OHL Vs UG, conductor materials – line parameters, mechanical design and simulator.
ITEM 40	DATA COMMUNICATION
Discussion	Mr. Uthara suggested to include the concept of digital communication. Board members suggested to follow the sequence of the concepts registers followed by counters.
ITEM 41	LABORATORY
Discussion	Board members suggested to include the concept of gear systems.
ITEM 42	GENERATION OF ELECTRICAL POWER
Discussion	Dr. Sujatha Balaraman suggested to replace the title and the content of unit 2.

ITEM 29	AC ROTATING MACHINES LABORATORY
Discussion	Board members approve the syllabus
ITEM 30	DIGITAL SYSTEM DESIGN LABORATORY
Discussion	Board members suggested to frame the title as design and development instead of modelling.
ITEM 31	CONTROL SYSTEMS LABORATORY
Discussion	Board members suggested to list more number of hands-on experiments / to reframe the titles with appropriate keywords/ to have the common list of experiments by combining both control and instrumentation and to promote the usage of open source softwares.
ITEM 32	POWER SYSTEM ANALYSIS
Discussion	Board members suggested to reframe the title of unit 3 and to remove the title types of faults in unit 3.
ITEM 33	POWER ELECTRONICS
Discussion	Board members suggested to indicate the requirement of qualitative treatment for the respective titles.
ITEM 34	EMBEDDED SYSTEM DESIGN
Discussion	Board members suggested to discuss case studies through term paper and not to be mentioned in unit 1/ to combine of unit 1 and unit 2/ Removal of the expansion of GPIO and course project/ and to focus more on ARM (Peripherals and applications are to be added in detail in unit 3) / SPI, I ² C, CAN etc have to be included.
ITEM 35	POWER SYSTEM SIMULATION LABORATORY
Discussion	Approved by all the board members
ITEM 36	POWER ELECTRONICS LABORATORY
Discussion	Mr. Uthara suggested to include the experiments such as ICs with multiple outputs with low power and low cost.
ITEM 37	EMBEDDED SYSTEM DESIGN LABORATORY
Discussion	Mr. Uthara suggested to include the experiments from the concept of device to device communication.
ITEM 38	DIGITAL PROTECTION OF POWER SYSTEMS
Discussion	Board members suggested to include the application of HRC fuse and to remove the title of solid state transformer and to reframe the unit 4 title (Digital may be removed).
ITEM 39	ELECTRIC VEHICLE
Discussion	Board members suggested to avoid the redundancy of the titles with electrochemical technologies subject / to elaborate the BMS/to include the automated power steering concepts. Mr. Uthara suggested to include the starting issues of BLDC mtors/ supporting system may be considered as a separate unit.
ITEM 40	DATA STRUCTURES AND ALGORITHMS
Discussion	Mr. Uthara suggested to include the extended topics in-line with industries.
ITEM 41	LABORATORIES IN SEMESTER 7
Discussion	Approved by all the members and suggested to include SoH in EV laboratory
ITEM 42	GENERATION OF ELECTRICAL ENERGY
Discussion	Dr. Sujatha balaraman suggested to have the titles either on steam power plant or thermal power plant and to include the load forecasting concepts.

ITEM43	SOLID STATE DRIVES
Discussion	Board members suggested to reframe the unit 4 including title / to avoid the redundancy in EE concepts and to include the latest drives and term paper with case studies.
ITEM44	SMART GRID
Discussion	Board members suggested to include the limited text books and reference books.
M.E. (ERTS)	
ITEM01	The Chairperson Dr. S. Vasantharathna presented the curriculum structure for the Regulation 2023.
Decision	Curriculum structure is designed with 5 (sem 1: 4+1 elective/ sem 2: 2+1 (th cum lab)+2 electives/ sem 3: 3 electives) theory subjects, 2 laboratory subjects (sem 1&2), project work and one credit courses.
Resolution	Approved by all the board members
ITEM02	HIGHER ENGINEERING MATHEMATICS
Discussion	Dr. Sujatha Balaraman suggested to include discrete mathematics related to embedded systems/Mr. Uthara suggested to include stability analysis by combining random variables and random process.
ITEM03	EMBEDDED CONTROLLERS
Decision	Approved by the board members.
ITEM04	EMBEDDED SYSTEM DESIGN USING FPGA
Discussion	Mr. Uthara suggested to include conceptual titles more in deep and to include testing and verification.
ITEM05	ELECTROMAGNETIC INTERFERENCE AND COMPATIBILITY
Discussion	Mr. Uthara suggested to add high speed and high power PCB design.
ITEM06	EMBEDDED CONTROLLERS AND EMBEDDED SYSTEM DESIGN USING FPGA LABORATORIES
Decision	Approved by the board members.
ITEM06	SEMESTER 2 SUBJECTS (Automated embedded systems/Robotics and RTOS (T cum Lab)
Decision	Approved by the board members.
ITEM07	IoT LABORATORY AND FEASIBILITY REPORT WRITING LABORATORY
Decision	Approved by the board members.
ITEM08	ONE CREDIT COURSES (by the industries/NPTEL)
Decision	Ratified
ITEM09	NPTEL COURSES - WAIVER OF ELECTIVES
Decision	Ratified
B.E/ B. Tech Honors (Specialization) / Honors	
ITEM01	VERTICAL CATEGORY AND SYLLABUS
Decision	Board members approved the six verticals such as power engineering/embedded systems/electric vehicle technology/power electronics and drives and control systems.
ITEM02	B.E. - MINOR
Discussion	Board members suggested to add the embedded system design and approved all the other subjects listed under the category of minor.

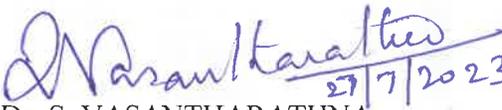
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GENERAL

ITEM 01	Board members approved the mandatory courses of R 2023.
ITEM 02	One credit courses and NPTEL courses in waiver of elective courses are ratified.
ITEM 03	Vision, mission and Pos and PEOs are reviewed.
ITEM 04	Board members suggested to include 3 to 5 PSOs as per NBA norms.
ITEM 05	COs have to be framed with suitable correct action verbs.
ITEM 06	Two text books and five reference books may be uniformly prescribed for the UG courses and only the reference books for the PG courses.
ITEM 06	All the books should be as latest editions (within 9 years) and suitable online NPTEL/Swayam materials and e-cumb references may be added.
ITEM 07	Futuristic syllabus by focusing 2030 year as the graduating year may be considered.
ITEM 08	Assessment methods, internal and external examiners, QP pattern etc were discussed.
ITEM 09	Finally, the chairperson Dr. S. Vasantharathna thanked all the external , internal and co-opted members for sharing their expertise and the meeting ended up smoothly.


27/7/2023
Dr. S. VASANTHARATHNA

CHAIR-PERSON (BoS/EEE)

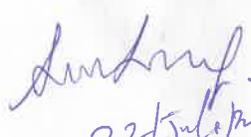
Copy to:

1. Office of the Controller of Examinations
2. Department of EEE
3. External board members (through email)
4. Internal board members (through email)

COIMBATORE INSTITUTE OF TECHNOLOGY, COIMBATORE
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING
BOS MEETING

The following members have attend the BoS meeting on 22.07.2023 at M 109 by 9.30 AM.

EXTERNAL MEMBERS

S.No.	Name of the Member	Signature
UNIVERSITY NOMINEE		
1.	Dr. Sujatha Balaraman Professor Department of EEE Government College of Technology, Engineering Coimbatore - 641013 Bodinayakanur Phone: 9976443102 Email: sujathaece@gct.ac.in / sujaengg@gmail.com	 22/7/2023
SUBJECT EXPERTS		
2.	Dr. M. Sabarimalai Manikandan Associate Professor Department of EEE Indian Institute of Technology Palakkad Email: msm@iitpkd.ac.in	
3.	Dr. P. Parthiban Associate Professor National Institute of Technology Surathkal Phone: 9019153775 Email: parthiban@nitk.edu.in	 22/7/2023
INDUSTRY EXPERTS		
4.	Mr. Uthrakumar Arumuganainar Project Manager Soliton Technologies Coimbatore Email: uthrakumar@solitontech.com	 22/7/2022
ALUMNUS		
5.	Ms. Girija G Joint Director Central Power Research Institute Bangalore Email: girija@cpri.in 9449037091	

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INTERNAL AND CO-OPTED MEMBERS

S.No	Internal Members	Signature
1.	Dr.S.Vasantharathna (Chair-Person)	<i>S. Vasantharathna</i> 22/7/2023
2.	Dr.V.Manikandan	<i>V. Manikandan</i>
3.	Dr.E.ChandiraSekaran	<i>E. Chandira Sekaran</i> 22/7/23
4.	Dr.S.Suja	<i>S. Suja</i> 22/7/23
5.	Dr.J.Devi Shree	<i>J. Devi Shree</i> 22/7/23
6.	Dr.S.Geetha	<i>S. Geetha</i> 22/7/23
7.	Dr.G.Manavaalan	<i>G. Manavaalan</i>
8.	Ms.D.Prema	<i>D. Prema</i>
9.	Ms.K.Vanithamani	<i>K. Vanithamani</i>
10.	Ms.P.Devaki	<i>P. Devaki</i>
11.	Dr.A.Kavithamani	<i>A. Kavithamani</i>
12.	Dr.S.Elango	<i>S. Elango</i> 22/7/23
13.	Ms.A.Priyadarshini	<i>A. Priyadarshini</i> 22/7/2023
14.	Dr.S.Gunasekaran	<i>S. Gunasekaran</i>
15.	Dr.S.Nanda Kumar	<i>S. Nanda Kumar</i>
16.	Dr.R.Rajalakshmi	<i>R. Rajalakshmi</i>
17.	Ms.M.Mynavathi	<i>M. Mynavathi</i>
18.	Dr.M.Packiasudha	<i>M. Packiasudha</i>
19.	Dr.M.Radha	<i>M. Radha</i>
20.	Dr.RathnaPriya	<i>R. RathnaPriya</i>
21.	Dr.K.Suresh	<i>K. Suresh</i>
22.	Dr.M.L.Merlinsajini	<i>M. L. Merlinsajini</i>
23.	Mr.P.Vinodkumar	<i>P. Vinodkumar</i>
24.	Mr.B.Vasanthan	<i>B. Vasanthan</i>
25.	Ms.K.Arthi	<i>K. Arthi</i>
26.	Ms.E.Suganya	<i>E. Suganya</i>
27.	Dr. R. Prabhakaran/Department of Mathematics	<i>R. Prabhakaran</i>
28.	Dr.S.Sugapriya/Department of Chemistry	<i>S. Sugapriya</i>
29.	Dr.N. Muthukumarasamy /Department of Physics	<i>N. Muthukumarasamy</i>
30.	Dr. Shantha Devi/ Science and Humanities	<i>S. Shantha Devi</i>

31. Dr. R. Sathiskumar / Mech. Engg.

32. Ms. Y. Hamsavarthini

CO-OPTED MEMBER

Name of the co-opted member	Signature
Mr. R. Chandrasekaran	<i>R. Chandrasekaran</i>

19EEOC32 - ENHANCING SOFT SKILLS

COURSE OUTCOMES

After completing the course successfully, the students will be able to,

CO1: Effectively communicate through verbal/oral communication and improve the listening skills

CO2: Write precise briefs or reports and technical documents

CO3: Actively participate in group discussion / meetings / interviews and prepare and deliver presentations.

CO4: Become more effective individual through goal/target setting, self motivation and practicing creative thinking.

CO5: Function effectively in multi-disciplinary and heterogeneous teams through the knowledge of team work, Inter-personal relationships, conflict management and leadership quality.

Highlights of Developing Soft Skills and Personality

Definitions and Types of Mindset - Learning Mindsets - Secrets of Developing Growth Mindsets
 - Importance of Time and Understanding Perceptions of Time - Using Time Efficiently -
 Understanding Procrastination - Overcoming Procrastination - Don't Say "Yes" to Make Others
 Happy!

Controlling Anger

Types of People - How to Say "No" - Controlling Anger - Gaining Power from Positive
 Thinking- What Makes Others Dislike You - Being Attractive - Being Attractive - Common
 Errors

Humour in Communication

Humour in the Workplace - Function of Humour in the Workplace - Money and Personality -
 Managing Money

Health and Personality

Managing Health: Importance of Exercise - Diet and Sleep - Love and Personality - Managing
 Love

Ethics and Etiquette

Business Etiquette - Managing Mind and Memory - Improving Memory - Care for
 Environment - Highlights of the Course

Books and F

- Dorch, Pat
- Kamin, M
Trainers, T
- Klaus, Pe
London: H
- Petes S. J
Hill Educat
- Stein, Ste
Success. C

Books and References

- Dorch, Patricia. What Are Soft Skills? New York:Execu Dress Publisher, 2013.
- Kamin, Maxine. Soft Skills Revolution: A Guide for Connecting with Compassion for Trainers,Teams, and Leaders. Washington, DC: Pfeiffer &Company, 2013.
- Klaus, Peggy, Jane Rohman & Molly Hamaker.The Hard Truth about Soft Skills. London:HarperCollins E-books, 2007.
- Petes S. J., Francis. Soft Skills and ProfessionalCommunication. New Delhi: Tata McGraw-HillEducation, 2011.
- Stein, Steven J. & Howard E. Book. The EQ Edge: Emotional Intelligence and Your Success.Canada: Wiley & Sons, 2006.

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Mindsets

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19EEOC28 - Introduction to Machine Learning on AWS

1. Microsoft excel for data analysis and data transformation
2. Data analysis, project life cycle, and Data Science in the real world
3. Techniques of evaluation, experimentation, and project deployment
4. Analysis segmentation using clustering and the method of prediction
5. Python with Data Science
6. Machine Learning algorithms
7. Data Science at scale with PySpark, AI with TensorFlow
8. Git, Storytelling
9. Deploying Machine Learning models on Clouds (MLOps)
10. Data visualization with Tableau
11. Natural Language Processing and its applications
12. Data Science projects, analytics, and recommender systems

ASSESSMEN

COURSE OU

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:CO3 Apply a
:**Communicati**

Concepts and communication in small group, communication to audiences. Soc

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Authoritarian Development

Writing for th

Basics of writing editing and rev

H19EEOC31 - MASS COMMUNICATION					
ASSESSMENT: Theory		L	T	P	C
		15	0	0	1
COURSE OUTCOMES:					
After completing the course successfully, the students will be able to,					
CO1	Communicate to small group and public.				
:					
CO2	Rephrase communication process to social and mass communication				
:					
CO3	Apply and communicate information through internet media writing and Editing				
:					
Communication				5	
Concepts and Process Nature and process of human communication, functions of communication, verbal and non- verbal communication, intra-personal, inter-personal, small group, public and mass communication. Nature and process of mass communication, media of mass communication, characteristics and typology of audiences. Social Functions of Mass Communication, Scope of Mass Communication.					
Communication Theories				5	
Authoritarian; Libertarian; Socialistic; social-responsibility; Normative theories; Development media theory; Democratic participation media theory.					
Writing for the Web				5	
Basics of writing for online media- structure and content Writing stories for internet, editing and rewriting.					

TOTAL : 15**Reference:**

1. The Technique of Clear Writing S. Banerjee
2. Professional Journalism 3 Mike Ward, Journalism Online
3. Introduction to Online Journalism: Publishing News and Information by Ronald De Walk. J. J. Astor

ASSESSMENT:**COURSE OUTC**

After completing

CO1:

CO2:

CO3:

The Challenge o

Learning to respo
improve self-esteem
with stress and unc
after facing setback

Learning from F

Taking timely actio
the change is and
resources to them.

Dealing with Setl

Overcome the app
success, Taking sto
well.

Building Resilien

Being positive abc
attitude of accepti

TOTAL : 15

y Ronald De

19EE0C30 – Embrace the Change				
ASSESSMENT: Theory	L	T	P	C
	15	0	0	1
COURSE OUTCOMES:				
After completing the course successfully, the students will be able to,				
CO1:	Understand numerous concepts and approaches such as the challenges of change, learning from failures, dealing with setbacks			
CO2:	Enhance resilience to overcome hurdles			
CO3:	Embrace uncertainty to make decisions			
The Challenge of Change				4
Learning to respond to change and overcome challenges positively, develop confidence and improve self-esteem and self-control, Equip one with an increased ability to take risks and deal with stress and uncertainty, manage failure, put mistakes behind and seek new opportunities even after facing setbacks.				
Learning from Failures				3
Taking timely action after adversity or change will enable one to embrace change, Identifying what the change is and how it will impact, Identifying the areas which need attention and allocate resources to them.				
Dealing with Setbacks				4
Overcome the apprehensions and make what appears to be the choice with the best chances of success, Taking stock of the impact of the change will help feel more confident about managing it well.				
Building Resilience for the Future				4
Being positive about the situation, capabilities, and ability to adapt to change, cultivating an attitude of accepting change as a positive development and integrating it in life without fear				
				TOTAL : 15

19EE0C29 - GOOGLE FLUTTER AND DART

ASSESSMENT: Theory

L	T	P	C
15	0	0	1

COURSE OUTCOMES:

After completing the course successfully, the students will be able to,

- CO1 : Understand the basics of Flutter
- CO2 : Identify the features of Flutter and its architecture
- CO3 : Interpret the basics of the Dart platform

Introduction to flutter

Open source software , reactive framework, advantages and disadvantages of flutter

Features of flutter and flutter architecture

5

High performance applications, testing and debugging tool, architecture - flutter engine, foundation library, widgets ,design specifications

Dart platform

5

Dart functional programming features, data types ,variables and functions in dart, decision making and loops

TOTAL : 15

ASSESSMENT

COURSE OUT

After completin

CO1: Know t

CO2: Implem

CO3: Underst

Importance of

Impact of IoT a
and for digital l

IoT in Automa

Penetration of I

IoT in Network

Concepts of Int

19

ASSESSMENT

COURSE OUT

After completin

19MAOC10-INTRODUCTION TO IoT

ASSESSMENT: Theory	L	T	P	C
	15	0	0	1

COURSE OUTCOMES:

After completing the course successfully, the students will be able to,

CO1: Know the impact IoT and digital transformation on the society

CO2: Implement the concepts of automation

CO3: Understand the necessity of security in digital world .

Importance of IoT **5**

Impact of IoT and Digital transformation on businesses and governments-Importance of software and for digital businesses and society

IoT in Automation **5**

Penetration of IoT in Automation and Artificial Intelligence

IoT in Networking **5**

Concepts of Internet Based Networking-Need of security in digital world

TOTAL : 15

19MAOC11-INTRODUCTION TO CYBERSECURITY

ASSESSMENT: Theory	L	T	P	C
	15	0	0	1

COURSE OUTCOMES:

After completing the course successfully, the students will be able to,

CO1:	Understand the vulnerable area of cyber threats	
CO2:	Know the approaches to threat detection	
CO3:	Know the opportunities in cyber security	
INTRODUCTION TO CYBER SECURITY		5
Introduction to global implications of Cyber threats-ways of cyber attack-cyber attacks on Industries		
THREAT DETECTION		5
Cisco's Approach to threat detection and defense		
OPPORTUNITIES IN CYBERSECURITY		5
Introduction to implementation of Cybersecurity-Identification of Vulnerabilities in the system-Maintaining the system		
		TOTAL : 15