



KUMARAGURU
college of technology
character is life

Department of Electrical and Electronics Engineering

AY: 2017-18

date: 13-04-2018

Action taken report -Employers Feedback

S.No	Analysis	Action taken report
1.	Topic on "BLDC motor" to be added in U18EEI3201 DC machines and Transformer course.	Included in U18EEI3201 course

Prepared By,

Dr. V. Kandasamy

BoS Coordinator

Approved By,

Dr. K. Malarvizhi

BoS Chairman

Proof for Action Taken: 1 - Included in U18EEI3201 course

U18EEI3201

DC MACHINES AND TRANSFORMERS

L	T	P	J	C
3	0	2	0	4

COURSE OUTCOMES

After successful completion of this course, the students will be able to

- | | | |
|------------|--|-----------|
| CO1 | Apply laws of magnetic circuits to understand the performance characteristics of DC machines and its applications. | K2 |
| CO2 | Conduct and analyze various testing procedures of DC generators and motors | K3 |
| CO3 | Analyze performance characteristics of transformers and its applications | K2 |
| CO4 | Conduct and analyze various testing procedures of transformers | K3 |
| CO5 | Select DC machines and transformers for various applications | K1 |

CO/PO Mapping (S/M/W indicates strength of correlation) S-Strong, M-Medium, W-Weak														
COs	Programme Outcomes(POs)												PSOs	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	S	S	S	M	W									S
CO2	S	S	S	M	W								M	
CO3	S	S	M										M	S
CO4	W	M	S									M	M	
CO5	W	M	S									M		S

COURSE ASSESSMENT METHODS

Direct
1. Continuous Assessment Test I, II 2. Model Examination (For Practical Courses & Embedded Courses) 3. Assignment, Open Book Test, Cooperative Learning Report, Group Presentation, Problem based Learning, Project based Learning, Mini Projects, Project Report, Quiz, Role Play, Self-Explanatory Videos, Prototype or Product Demonstration etc. (as applicable) 4. End Semester Examination
Indirect
1. Course End Survey 2. Programme Exit Survey 3. Placement/Higher Education Record 4. Feedback (Students, Employers, Parents, Professional Body members, Alumni)

THEORETICAL COMPONENT CONTENTS:

DC GENERATORS


10 Hours

Review of magnetic circuits- IEC & IEEE Standards - Constructional features of DC machines- Principle of operation of DC generator-EMF equation-Types of field excitations-separately excited, shunt and series-Voltage build up in a shunt generator, critical field resistance and critical speed, Armature reaction and Commutation.

DC MOTORS

9 Hours

Principle of operation- Back EMF-Torque equation-Types and characteristics-Need for starters and types-Speed control of DC shunt and series motors- Braking of DC Motors- **Introduction to BLDC motors.**

 Signature of the Chairman BOS EEE
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TESTING OF DC MACHINES**8 Hours**

Losses and efficiency – Testing of DC machines: Brake test - Swinburne's test – Hopkinson's test.

TRANSFORMERS**12 Hours**

Single Phase Transformer : Construction and Principle of Operation – EMF Equation - Transformer on No Load and Load - Phasor Diagram - Equivalent Circuit – Voltage Regulation - Losses - Efficiency - All Day Efficiency - Parallel Operation - Three Phase Transformer connections –Auto transformers- Construction and applications

TESTING OF TRANSFORMERS**6 Hours**

Polarity test – Open circuit and Short circuit tests – Sumpner's test – Separation of no load losses- Introduction to CAD modelling of transformers using Magnet 7.5

**PRACTICAL COMPONENT CONTENTS:
LIST OF EXPERIMENTS**

1. Open Circuit and load characteristics of DC shunt generator.
2. Brake test of DC shunt motor
3. Load characteristics of DC series motor
4. Speed control on DC motor
5. Separation of no load losses of DC shunt motor
6. Hopkinson's test on DC motor generator set
7. Load test on single-phase transformer
8. OC and short circuit test on single-phase transformer
9. Sumpner's test
10. SCOTT connection


TEXTBOOKS:

1. D P Kothari, and I J Nagrath, "Electric Machines", McGraw Hill Education (India) Private Limited, New Delhi, 2013.
2. AE Fitzgerald and C Kingsley, "Electric Machinery", New York, McGraw Hill Education 2013

REFERENCES:

1. Ashfaq Husain, "Electric Machines", Dhanpat Rai & Co., New Delhi 2011
2. P.S.Bimbhra, "Electrical Machinery", 7th Edition, Khanna Publishers, 2011, New Delhi.

Theory: 45 Tutorial: 0 Practical: 30 Project: 0 Total: 75 Hours


Signature of the Chairman BOS EEE



KUMARAGURU
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DEPARTMENT OF BIOTECHNOLOGY

Action Taken Report - "Employers Feedback"
Academic Year 2017-18

Date: 11-Apr 2018

S.No	Suggestions	Action Taken
1.	One-credit course can be offered for a longer period, distributed over a semester or a month	One-credit course is offered for 30 hours with industrial experts/ domain experts
2.	Sufficient time to be given to the students before conducting exam for one -credit courses	Exams are scheduled with an suitable time interval for preparation.
3.	Students are encouraged to undergo industry training during the course	Mandatory internship is provided to the students during the summer and winter vacation and its a part of the curriculum U17BTP4701 & U18BTP4701 Industry Internship/ Innovation project.


Prepared by
BOS Coordinator


Approved by
Chairman BOS

Proof : Mandatory Internship in R17 curriculum included

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Semester IV										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U17MAT4105	Biostatistics	Theory	BS	3	1	0	0	4	-
2	U17BTT4001	Fluid and Particle mechanics in Bioprocess	Theory	PC	3	0	0	0	3	U17BTT3003
3	U17BTI4202	Instrumental Method of Analysis	Embedded Theory & Lab	BS	3	0	2	0	4	-
4	U17BTI4203	Cell & Molecular Biology	Embedded Theory & Lab	PC	3	0	2	0	4	U17BTI3204
5	U17BTP4704	Industry Internship/Innovation project*	Project	PC	0	0	0	0	1	-
6	U17INI4600	Engineering Clinics II	Embedded Theory & Lab	ES	0	0	4	2	3	-
Total Credits									19	
Total Contact Hour/week									21	
Semester V										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U17BTI5201	Genetic Engineering and Genomics	Embedded	PC	3	0	2	0	4	U17BTI4203
2	U17BTI5202	Protein and Enzyme Technology	Embedded	PC	3	0	2	0	4	U17BTI3204
4	U17BTI5203	Heat and Mass Transport in Bioprocess	Embedded	PC	3	0	2	0	4	U17BTT3003 U17BTT4001
5	U17BTE----	Professional Elective-I	Theory	PE	3	0	0	0	3	-
6	U17INI5600	Engineering Clinics III	Embedded Theory & Lab	ES	0	0	4	2	3	-
7	U17----	Open elective -I		OE	3	0	0	0	3	-
Total Credits									21	
Total Contact Hour/week									25	

* Conducted during summer vacations

Signature of BOS chairman, BT

KUMARAGURU COLLEGE OF TECHNOLOGY
DEPARTMENT OF BIOTECHNOLOGY
B.TECH., BIOTECHNOLOGY
REGULATION 2018
CURRICULUM

Semester I

S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	Pre-requisite
1	U18ENI1201	Fundamental of English Communication-I	Embedded Theory & Lab	HS	2	0	2	0	3	Nil
2	U18MAI1201	Linear Algebra and Calculus	Embedded Theory & Lab	BS	3	0	2	0	4	Nil
3	U18MEI1201	Engineering Graphics	Embedded Theory & Lab	ES	2	0	2	0	3	Nil
4	U18PHI1202	Engineering Physics	Embedded Theory & Lab	BS	3	0	2	0	4	Nil
5	U18CSI1202	Problem Solving and Programming in C	Embedded Theory & Lab	ES	2	0	2	0	3	Nil
6	U18INI1600	Engineering Clinics I	Embedded Lab & Project	ES	0	0	4	2	3	Nil
Total Credits:									20	
Total Contact Hours/ Week :									26	

Semester II

S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	Pre-requisite
1	U18ENI2201	Fundamental of English Communication-II	Embedded Theory & Lab	HS	2	0	2	0	3	U18ENI1201
2	U18MAI2201	Advanced Calculus and Laplace transforms	Embedded Theory & Lab	BS	3	0	2	0	4	U18MAI1201
3	U18EEI1208	Basics Electrical and Electronics Engineering	Embedded Theory & Lab	ES	3	0	2	0	4	Nil
4	U18CHI2201	Engineering Chemistry	Embedded Theory & Lab	BS	3	0	2	0	4	Nil
5	U18CSI2201	Python Programming	Embedded Theory & Lab	ES	2	0	2	0	3	U18CSI1201
6	U18BTI2202	Introduction to Biotechnology	Embedded Theory & Lab	PC	2	0	2	0	3	Nil
7	U18INI2600	Engineering Clinics II	Embedded Lab & Project	ES	0	0	4	2	3	Nil
Total Credits:									24	
Total Contact Hours/ Week :									26	

Semester III

S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	Pre-requisite
1	U18MAT3103	Probability and Statistics	Theory	BS	3	1	0	0	4	Nil
2	U18BTT3001	Bioorganic Chemistry	Theory	PC	3	0	0	0	3	Nil
3	U18BTT3102	Bioprocess Calculations	Theory	PC	3	1	0	0	4	Nil
4	U18BTI3203	Concepts in Biochemistry	Embedded Theory & Lab	PC	3	0	2	0	4	Nil
5	U18BTI3204	Microbiology	Embedded Theory & Lab	PC	3	0	2	0	4	Nil
6	U18INI3600	Engineering Clinics III	Embedded Lab & Project	ES	0	0	4	2	3	Nil
Total Credits:									22	
Total Contact Hours/ Week :									25	



Signature of BOS Chairman

Semester IV

S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	Pre-requisite
1	U18MAT4102	Numerical Methods	Theory	BS	3	1	0	0	4	Nil
2	U18BTT4001	Fluid and Particle Mechanics in Bioprocess	Theory	PC	3	0	0	0	3	U18BTT3102
3	U18BTI4202	Protein and Enzyme Technology	Embedded Theory & Lab	PC	3	0	2	0	4	U18BTI3203
4	U18BTI4203	Instrumental Methods of Analysis	Embedded Theory & Lab	PC	3	0	2	0	4	Nil
5	U18BTI4204	Cell and Molecular Biology	Embedded Theory & Lab	PC	3	0	2	0	4	Nil
4	U18BTP4705	Industry Internship/ Innovation Project	Project	PC	0	0	0	0	1	Nil
7	U18INI4600	Engineering Clinics IV	Embedded Lab & Project	ES	0	0	4	2	3	Nil
Total Credits:									23	
Total Contact Hours/ Week :									26	

Semester V

S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	Pre-requisite
1	U18BTI5201	Genetic Engineering and Genomics	Embedded Theory & Lab	PC	3	0	2	0	4	U18BTI4203
2	U18BTI5202	Bioprocess Engineering	Embedded Theory & Lab	PC	3	0	2	0	4	U18BTT4001
3	U18BTI5203	Heat and Mass Transport in Bioprocess	Embedded Theory & Lab	PC	3	0	2	0	4	U18BTT4001
4	U18BTExxx	Professional Elective I	Theory	PE	3	0	0	0	3	Nil
5	U18INI5600	Engineering Clinics V	Embedded Lab & Project	ES	0	0	4	2	3	Nil
6	U18 —	Open Elective I	Theory	OE	3	0	0	0	3	Nil
Total Credits:									21	
Total Contact Hours/ Week :									25	

Semester VI

S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	Pre-requisite
1	U18BTT6001	Biopharmaceutical Technology	Theory	PC	3	0	0	0	3	Nil
2	U18BTT6002	Cell Culture Techniques	Theory	PC	3	0	0	0	3	U18BTI4204
3	U18BTI6203	Immunology	Embedded Theory & Lab	PC	3	0	2	0	4	U18BTI4204
4	U18BTI6204	Biological Data Analysis	Embedded Theory & Lab	PC	2	0	2	0	3	U18CSI2201
5	U18BTP6505	Cell Culture Laboratory	Lab	PC	0	0	2	0	1	Nil
6	U18 —	Open Elective II	Theory	OE	3	0	0	0	3	Nil
Total Credits:									17	
Total Contact Hours/ Week :									20	

Semester VII

S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	Pre-requisite
1	U18MBT7001	Engineering Economics and Financial Management	Theory	HS	3	0	0	0	3	Nil
2	U18BTT7002	Preclinical and Clinical Regulatory Affairs	Theory	PC	3	0	0	0	3	U18BTT6001
3	U18BTI7203	Bioinformatics	Embedded Theory & Lab	PC	3	0	2	0	4	U18BTI6204
4	U18BTI7204	Downstream Processing	Embedded Theory & Lab	PC	3	0	2	0	4	U18BTI5203
5	U18BTP7705	Project Phase I	Project	EEC	0	0	0	4	2	Nil
6	U18BTExxx	Professional Elective II	Theory	PE	3	0	0	0	3	Nil
7	U18BTExxx	Professional Elective III	Theory	PE	3	0	0	0	3	Nil
Total Credits:									22	
Total Contact Hours/ Week :									26	



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Department of Information Technology

AY: 2017-18

Date: 11.04.2018

Action taken report -Employers Feedback

S.No	Analysis	Action taken report
1.	Over all credits can be reduced	R17 Curriculum: 1. Information Coding Techniques courses are moved to elective. R18 Curriculum: Foundations of Information Technology theory removed.
2.	Courses related to programming, web development, security can be provided to the students to enrich their knowledge in problem solving	New One Credit Courses for R15 regulation: 1. U15ITIN12 - Python Programming 2. U15ITIN13 - Progressive Web apps New Electives for R15 regulation: 1. U15ITE037 - Problem Solving

Prepared by

BoS Coordinator

Approved by

BoS Chairman

Proof for action taken 1:

PROGRAMME ELECTIVES									
S.No	Course Code	Course Title	Course Mode	CT	L	T	P	J	C
Data Analytics									
1.	U17ITE0001	Artificial Intelligence	Theory	PE	3	0	0	0	3
2.	U17ITE0002	Deep Learning	Theory	PE	3	0	0	0	3
3.	U17ITE0003	Data Visualization	Theory	PE	3	0	0	0	3
Cyber Security									
4.	U17ITE0004	Information Coding Techniques	Theory	PE	3	0	0	0	3
5.	U17ITE0005	Web Application Security	Theory	PE	3	0	0	0	3
6.	U17ITE0006	Biometric Systems	Theory	PE	3	0	0	0	3
7.	U17ITE0007	Blockchain Technology	Theory	PE	3	0	0	0	3
Network and IoT									
8.	U17ITE0008	Adhoc and Sensor Networks	Theory	PE	3	0	0	0	3
9.	U17ITE0009	Next Generation Networks	Theory	PE	3	0	0	0	3
10.	U17ITE0010	Software Defined Networks	Theory	PE	3	0	0	0	3
Other Electives									
11.	U17ITE0011	Distributed Systems	Theory	PE	3	0	0	0	3
12.	U17ITE0012	Principles of Compiler Design	Theory	PE	3	0	0	0	3
13.	U17ITE0013	Graphics and Multimedia	Theory	PE	3	0	0	0	3
14.	U17MAE0101	Partial Differential Equations and Transforms	Theory	BS	3	1	0	0	4

U17ITE0004 INFORMATION CODING TECHNIQUES

L	T	P	J	C
3	0	0	0	3

COURSE OBJECTIVES:

- To understand Information properties and source coding techniques
- To acquire knowledge about error coding techniques for efficient transmission
- To understand various compression algorithms for data, Image and video

COURSE OUTCOMES:

After successful completion of this course, the students should be able to

- CO1 Apply the suitable coding schemes for information.
- CO2 Make use of coding schemes for text compression.
- CO3 Illustrate the compression schemes for video and image.
- CO4 Utilize the various types of error control codes.
- CO5 Construct the code tree and state diagram for error control codes

Pre-requisite: Nil

CO/PO Mapping (S/M/W indicates strength of correlation) S-Strong, M-Medium, W-Weak													PSO		
COs	Programme Outcomes(POs)														
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	1	2	3
CO1	M	M										M	M		
CO2	M	M										M	M		
CO3	M	M										M	M		
CO4	M	M										M	M		
CO5	M	M										M	M		

COURSE ASSESSMENT METHODS:

Direct
1. Continuous Assessment Test I, II 2. Assignment, Group Presentation 3. End Semester Examination
Indirect
1. Course-end survey

THEORY COMPONENT CONTENTS

INFORMATION THEORY

9

Hours

Information-Entropy-Information rate-classification of codes – Kraft Mc Millanine quality-Source coding theorem-Shannon – Fano coding – Huffman coding-Extended Huffman coding – Joint and conditional entropies-Mutual information-Discrete memory less channels-BSC- BEC – Channel capacity-Shannon limit.

SOURCE CODING:TEXT,AUDIO ANDS PEECH

9 Hours

Text: Adaptive Huffman Coding – Arithmetic Coding – LZW algorithm-Audio: Perceptual coding-Masking techniques – Psychoacousticmodel- MEGAudiolayersI,II,III,DolbyAC3-Speech: Channel Vocoder-Linear Predictive Coding.

SOURCE CODING:IMAGE AND VIDEO

9 Hours

Image and Video Formats-GIF-TIFF- SIF-CIF – QCIF-Image compression: READ-JPEG – Video Compression: Principles-I, B, P frames - Motion estimation - Motion compensation -H.261 -MPEG standard.

ERROR CONTROL CODING: BLOCK CODES

9 Hours

Definitions and Principles: Hamming weight-Hamming distance-Minimum distance decoding –Single parity codes – Hamming codes – Repetition codes – Linear block codes – Cyclic codes –Syndrome calculation-Encoder and decoder– Cyclic Redundancy check codes.

ERROR CONTROL CODING: CONVOLUTIONAL CODES

9

Hours

Convolutional codes–code tree–trellis-state diagram-Encoding–Decoding: Sequential search and Viterbi algorithm– Principle of Turbo coding.

REFERENCE BOOKS:

1. Simon Haykin, -Communication Systems, fourth edition, John Wiley & Sons, 2014.
2. Bose. R., -Information Theory, Coding And Cryptography, TMH 2011
3. Fred Halsall, -Multimedia Communications: Applications, Networks, Protocols And Standards, Pearson Education Asia, 2011
4. Sayood. K., -Introduction To Data Compression, Fourth edition, Elsevier, 2014.
5. Gravano. S., -Introduction To Error Control Codes, Oxford University Press, 2010.

Theory: 45 Tutorial: 0 Practical: 0 Project: 0 Total: 45 Hours

Proof for action taken 2:

ONE CREDIT COURSES									
1.	U15ITIN01	Innovation and Entrepreneurship	EEC	1	1	0	0	1	-
2.	U15ITIN02	ERP and Business	EEC	1	1	0	0	1	-
3.	U15ITIN03	Agile Software Development	EEC	1	1	0	0	1	ITT501
4.	U15ITIN04	UX/UI Design	EEC	1	1	0	0	1	-
5	U15ITIN05	Mobile Application	EEC	1	0	0	2	1	ITT402, ITT502
6	U15ITIN06	Front End Design	EEC	1	1	0	0	1	-
7	U15ITIN08	CCNA- Routing And Switching	EEC	1	0	0	2	1	-
8	U15ITIN09	Data Analytics	EEC	1	0	0	2	1	-
9	U15ITIN10	Graphics Design using Photoshop	EEC	1	0	0	2	1	-
10	U15ITIN11	Professional	EEC	1	1	0	0	1	-
11	U15ITIN12	Python Programming	EEC	1	0	0	2	1	-
12	U15ITIN13	Progressive Web	EEC	1	1	0	0	1	-
13	U15ITIN15	Full Stack	EEC	1	0	0	2	1	-

Professional Electives (PE)

	Course Code	Course Title	Category	Contact Hours	Hrs/Week & Credits				Pre-requisites
					L	T	P	C	
1	U15ITE001	Theory of	PE	3	3	0	0	3	MAT403
2	U15ITE002	TCP/ IP Socket Programming	PE	3	3	0	0	3	ITT402
3	U15ITE003	Distributed Systems	PE	3	3	0	0	3	ITT402
4	U15ITE004	Principles of Compiler Design	PE	3	3	0	0	3	-
5	U15ITE005	User Interface Design	PE	3	3	0	0	3	-
6	U15ITE006	Cloud Computing	PE	3	3	0	0	3	ITT402
7	U15ITE007	Ad Hoc & Sensor Networks	PE	3	3	0	0	3	ITT402
8	U15ITE008	High Speed Networks	PE	3	3	0	0	3	ITT402
9	U15ITE009	Computational Intelligence	PE	3	3	0	0	3	ITE024, MAT403
10	U15ITE010	Service Oriented Architecture	PE	3	3	0	0	3	ITT601
11	U15ITE011	Real Time Systems	PE	3	3	0	0	3	ITT404
12	U15ITE012	Information Coding Techniques	PE	3	3	0	0	3	-
13	U15ITE013	Software Architecture	PE	3	3	0	0	3	ITT501
14	U15ITE014	Digital Image	PE	3	3	0	0	3	ECT511
15	U15MCE708	Mobile Robotics	PE	3	3	0	0	3	-
16	U15GST002	Total Quality Management	HS	3	3	0	0	3	-
17	U15GST003	Principles of Management	HS	3	3	0	0	3	-
18	U15GST004	Operation Research	BS	3	3	0	0	3	-
19	U15ITE015	C # and .NET	PE	3	3	0	0	3	ITT303
20	U15ITE016	Building Enterprise Applications	PE	3	3	0	0	3	ITT502
21	U15ITE017	Business	PE	3	3	0	0	3	ITT604
22	U15ITE018	Information	PE	3	3	0	0	3	ITT604
23	U15ITE019	Software Quality Assurance & Testing	PE	3	3	0	0	3	ITT501
24	U15ITE020	Software Project Management	PE	3	3	0	0	3	ITT501
25	U15ITE021	Management Information System	PE	3	3	0	0	3	-
26	U15ITE022	Information Security	PE	3	3	0	0	3	-
27	U15ITE023	Open Source Technologies	PE	3	3	0	0	3	-

28	U15ITE024	Artificial	PE	3	3	0	0	3	MAT403
29	U15ITE025	Coding and Hacking	PE	6	0	0	6	3	-
30	U15ITE026	Front End Web	PE	6	2	0	4	4	-
31	U15ITE027	Introduction to Enterprise	PE	3	3	0	0	3	-
32	U15ITE028	Ethical Hacking	PE	3	3	0	0	3	-
33	U15ITE029	Embedded Platforms	PE	4	2	1	1	4	-
34	U15ITE030	Integrated Product Development	PE	4	1	1	2	3	-
35	U15ITE031	Cyber Security	PE	3	3	0	0	3	-
36	U15ITE032	Design Patterns	PE	3	3	0	0	3	ITT303
37	U15ITE033	Sensors, Actuators & Interfaces	PE	5	2	1	2	4	-
38	U15ITE034	Internship-I	EEC	2 weeks	0	0	2	1	-
39	U15ITE035	Internship-II	EEC	4 weeks	0	0	4	2	-
40	U15ITE036	Internship-III	EEC	6 weeks	0	0	6	3	-
41	U15ITE037	Problem Solving	PE	8	0	0	8	4	-
42	U15ITE038	Machine Learning	PE	3	3	0	0	3	-
43	U15ITE039	Block Chain	PE	3	3	0	0	3	-

U15ITIN12	Python Programming		L	T	P	C						
			0	0	2	1						
COURSE OBJECTIVES <ul style="list-style-type: none">To understand the basics and working of python programmingTo learn the concepts of control structures using pythonTo reuse the code using functions in python												
Course Outcomes: After successful completion of this course, the students should be able to												
CO1	Working and writing a basic python code						K2					
CO2	Apply the concepts of control structures and functions to solve a problem						K3					
CO3	Analyze the strings, manipulate it and working with data structures						K3					
Pre-requisite: Nil												
CO/PO Mapping (S/M/W indicates strength of correlation) S-Strong, M-Medium, W-Weak												
Cos	Programme Outcomes(POs)											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	S	S			M							M
CO2	S	S			M							M
CO3	S	S	S		M							M
Course Assessment methods:												
Direct				Indirect								
1. Quiz 2. Assignment				1. Course Exit Survey								
List of Experiments: <ol style="list-style-type: none">Installation and setting up path for pythonWorking with Python Basic SyntaxProblems based on Conditional Statements such as odd or even, positive or negative etc.Problems based on Control Structures – print the next number in the series, Armstrong number, Fibonacci series, factorial, floyd’s triangle, pascal’s triangle etc.Problems based on String Manipulation – string tokenizer, count the number of alphabets, whitespaces & digits, reversing a sentenceWorking with Functions & recursive functions – factorial, sorting, searchingProblems based on Data structures – Lists, Tuples, Dictionary, Sets												
Theory: 0 hours				Practical: 30 hours		Total Hours: 30hours						

U15ITIN13	Progressive Web Apps		L	T	P	C						
			0	0	2	1						
<u>COURSE OBJECTIVES</u>												
<ul style="list-style-type: none">To learn about the Progressive Web AppsTo learn about auditing the web apps												
Course Outcomes:												
After successful completion of this course, the students should be able to												
CO1	Create web application and to work with service workers						K2					
CO2	Identify and use cached assets in the application						K3					
CO3	Audit and analyze web apps						K4					
Pre-requisite: Nil												
CO/PO Mapping (S/M/W indicates strength of correlation) S-Strong, M-Medium, W-Weak												
COs	Programme Outcomes(POs)											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	M	M	M								W	
CO2	M	W	M								W	
CO3	M	W	M		M						M	
Course Assessment methods:												
Direct				Indirect								
3. Assignment 4. Written Test				1. Course Exit Survey								
Progressive Web Apps:												
What is PWA? – Why PWA? – Core technologies – Introduction to Service Workers – Working with Fetch API – Catching Files – Lighthouse PWA Analysis Tool – Working with Promises - IndexedDB											8 hours	
Live Data in the Service Worker – Using Workbox – Responsive Design – Responsive Images – Introduction to Push Notifications – Payment Request API – Integrating Analytics											7 hours	
Theory: 0 hours			Practical:30 hours			Total Hours: 30 hours						
REFERENCES												
1. “Building Progressive Web Apps: Bringing the power of Native to the Browser” by Tal Ater, O’Reilly Publications												
2. “Beginning Progressive Web App Development: Creating a Native App Experience on the Web” by Dennis Sheppard, Apress												

U15ITE037	PROBLEM SOLVING					L	T	P	J	C		
						0	0	8	0	4		
Course Outcomes												
After successful completion of this course, the students should be able to												
CO1: Select appropriate data types and control structures for solving a given problem.												
CO2: Develop algorithmic solutions to simple computational problems.												
CO3: Implement various stack,queue,list, sorting and searching algorithms.												
CO4: Develop simple applications using various data structures.												
CO5: Construct Java program using concepts of class, methods and objects & exception handling.												
Pre-requisites:												
C/C++,Data Structures,Object Oriented Programming												
CO/PO Mapping (S/M/W indicates strength of correlation) S-Strong, M-Medium, W-Weak												
COs	Programme Outcomes(POs)											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	S	S	S		S				S			
CO2	S	S	S		S				S	M		M
CO3	S	S	S		S				S	M		M
CO4	S	S	S		S				S	M		M
CO5	M	M	M		S				M			
Course Assessment methods												
Direct												
1. Online Test - I 2. Online Test - II 3. Final Assessment												
Indirect												
1. Course-end survey												

LAB COMPONENTS

LIST OF EXPERIMENTS

120 Hours

1. C/C++ Language – Arrays, Strings, Pointers, Structures
2. Memory management, File handling
3. Applications on stack, list, queue
4. Applications on tree, graph
5. Java – Packages, Exception handling, Framework, Error handling, Threads

Theory: 0	Tutorial: 0	Practical: 120	Project: 0	Total: 120 Hours
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KUMARAGURU
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Department of Aeronautical Engineering

AY: 2017-18

Date: 11.04.2018

Action taken report -Employer Feedback

S.No	Analysis	Action taken report
1.	Aircraft Systems and Avionics can be separate courses	Aircraft Systems and Avionics are made separate courses
2.	Too many courses on mathematics can be combined to get some additional core courses	Will be considered in the next revision of Curriculum & Syllabi as suggested by member
3.	Some electives require embedded systems	
4.	'Model based Systems Engineering' course can be added as elective	

Prepared By,

BoS Coordinator

Approved By,

BoS Chairman

Proof for Action Taken: 1 Aircraft Systems and Avionics are made separate courses

Semester V										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U17AET5101	High speed Aerodynamics	Theory	PC	2	1	0	0	3	U17AEI4201
2	U17AEI5202	Aircraft Structures II	Embedded-Theory & Lab	PC	2	0	2	0	3	U17AET4003
3	U17AET5003	Computational Fluid Dynamics	Theory	PC	3	0	0	0	3	U17AEI4201
4	U17AEI5204	Aircraft Systems and Instruments	Embedded-Theory & Lab	PC	2	0	2	0	3	-----
5	U17AEI5205	Aircraft Propulsion	Embedded-Theory & Lab	PC	2	0	2	0	3	U17AEI3202
6	OE I	Open Elective I	Theory	OE	3	0	0	0	3	-----
7	U17INI5600	Engineering Clinic 3	Embedded-Practical & Project	ES	0	0	4	2	3	-----
Total Credits									21	
Total Contact Hours/week									27	

Semester VII										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U17AEI7201	Aircraft Design	Embedded-Theory & Lab	PC	2	0	2	0	3	U17AET6001
2	U17AEI7202	Aircraft Maintenance Practices	Embedded-Theory & Lab	PC	2	0	2	0	3	U17AEI5204
3	U17AEI7203	Avionics	Embedded-Theory & Lab	PC	2	0	2	0	3	U17EEI3202
4	U17AET7004	Aviation Logistics and Supply Chain Management	Theory	PC	3	0	0	0	3	-----
5	U17AEE00--	Professional Elective II	Theory	PE	3	0	0	0	3	-----
6	U17AEE00--	Professional Elective III	Theory	PE	3	0	0	0	3	-----
7	U17AEE00--	Professional Elective IV	Theory	PE	3	0	0	0	3	-----
8	U17AEP7705	Project Work – Phase I	Project	PW	0	0	0	6	3	-----
Total Credits									24	
Total Contact Hours/week									30	



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Department of Textile Technology

AY: 2017-18

Date: 11.04.2018

Action taken report -Employers Feedback

S.No	Analysis	Action taken report
1.	New course for statistical analysis in lab form can be introduced	Introduced in second semester Course Code: U17MAP2501 Course Name: Statistical analysis and application laboratory
2.	Fibre analytical lab can be introduced	Lab introduced in II semester Course Code: U17TXP2503 Course Name: Polymer and fibre analytical laboratory
3.	Textile mill management course can be introduced	Introduced in Professional electives Course Code: U17TXE0013 Course Name : Textile Mill Management

Approved by

Dr. Bharathi Dhurai

BoS Chair person



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Department of Textile Technology

AY: 2017-18

Date: 11.04.2018

Action taken report -Employers Feedback

S.No	Analysis	Action taken report
1.	New course for statistical analysis in lab form can be introduced	Introduced in second semester Course Code: U17MAP2501 Course Name: Statistical analysis and application laboratory
2.	Fibre analytical lab can be introduced	Lab introduced in II semester Course Code: U17TXP2503 Course Name: Polymer and fibre analytical laboratory
3.	Textile mill management course can be introduced	Introduced in Professional electives Course Code: U17TXE0013 Course Name : Textile Mill Management

Proof

Introduced in second semester

Course Code: U17MAP2501

Course Name: Statistical analysis and application laboratory

U17MAP2501

**Statistical Analysis and
Application Laboratory**

L	T	P	J	C
0	0	2	0	1

Course Outcomes

At the end of the course the student will be able to

CO1: Develop data presentation skills

CO2: Estimate the measures of location and dispersion

CO3: Perform analysis of variance and interpret the results

CO4: Apply various distributions to test statistical hypotheses.

CO5: Plot control charts and evaluate the process control.

CO6: Fit the regression equations and analyse the correlation between variables.

Pre-requisites :

Probability and Applied statistics

CO/PO Mapping (S/M/W indicates strength of correlation) S-Strong, M-Medium, W-Weak												
COs	Programme Outcomes(POs)											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	S				W							
CO2	S	M										
CO3	M											
CO4		M		M								
CO5	M				W							

Course Assessment methods

Direct
1. Pre-or Post-experiment Test/Viva; Experimental Report for each experiment; Comprehensive report / Model Examination
2. End Semester Examination
Indirect
1. Course-end survey

List of Experiments

30 Hours

1. Data presentation methods - Bar Chart, Pie Chart
 2. Application of descriptive statistics - Mean, median, mode, standard deviation
 3. Application of t test
 4. Application of Chi square test
 5. Application of normal distribution
 6. Application of one way ANOVA
 7. Application of Two way ANOVA
 8. Control chart for variables (mean and range chart)
 9. Control chart for attributes
 10. Correlation and regression
-

Theory: 0	Tutorial: 0	Practical: 30	Project: 0	Total: 30 Hours
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REFERENCES

1. "Statistics for Textile and Apparel Management" J. Hayavadana ,April 14, 2012 by WPI Publishing, ISBN 9789380308043 - CAT# N11324
2. "Statistics for Textile Engineers" Prof. J. R. Nagla, Woodhead Publishing India Pvt Ltd, 2014, ISBN: 978-93-80308-37-1
3. Statistical Quality control in textile Mills, SITRA, Coimbatore
4. Practical Statistics for the Textile Industry: Part I & Part II by GAV Leaf, The Textile Institute, ISBN 10: 0900739525.
5. MATLAB: "An Introduction with Applications", Amos Gilat, Fourth Edition, John Wiley & Sons, INC.
6. MATLAB: "An Introduction with Applications", Rao V.Dukkipatti, New Age International Publishers.

Introduced in Professional electives
Course Code: U17TXE0013
Course Name : Textile Mill Management

126

U17TXE0013 TEXTILE MILL MANAGEMENT

L	T	P	J	C
3	0	0	0	3

Course Outcomes (COs)

After successful completion of this course, the students should be able to

- CO1:** Understand Indian textile policy.
- CO2:** Understand the Central and State Government Schemes in Indian textile sector.
- CO3:** Understand the textile mill organization and planning
- CO4:** Understand the Power requirements for textile mill.
- CO5:** Understand the Personnel and Marketing Management in textile mill.

CO-POs & PSOs Mapping (S/M/W indicates strength of correlation) S-Strong, M-Medium, W-Weak														
COs	Programme Outcomes (POs) & Programme Specific Outcomes (PSOs)													
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12	PSO1	PSO2
CO1		M			S									
CO2	M		S											
CO3	M	M											S	
CO4			S		S								M	
CO5					S									


Course Assessment methods

Direct	Indirect
1.Internal test I 2. Internal test II 3.Assignment/ Seminar/ Tutorial 4.End Semester Examination	1.Course end survey

Textile Industry

9 Hours

Global scenario – Indian textile Industry – Indian Textile Policy – Trade policy – Fiscal policy – NTC – STC – Textile committee – National Hand loom Development Corporation – Mills association – Research institutions – Technical Textile Units – Current five year Plan: Targets and achievements; statistics on global and national fibre, yarn and fabric production, consumption, exports and imports; government policies; taxes and tariff structure; power scenario and energy management in textile mills.


Dr.J.Srinivasan
Signature of BOS chairman, TXT

Central and State Government Schemes**9 Hours**

Technology Up-gradation Fund Scheme (TUFS) – Textile Workers Rehabilitation Fund Scheme – Technology Mission on cotton – Group Work Shed Scheme – Integrated Scheme for Power loom Development – Group Insurance scheme – Scheme for Integrated Textile Parks – Hank Yarn Obligation (HYO) Tamil Nadu Industrial Investment Corporation: Small and Medium Enterprises fund.

Mill Organization and Planning**9 Hours**

Organizational Structure and Functioning of Centralized and Decentralized Sectors: Spinning – Weaving – Composite mill – Chemical processing Units. ERP – MIS – Cotton Purchase Practices – Inventory control – Spin plan – Weave plan – Product costing – Managerial responsibilities. Selection of site for textile mills – Various types of buildings. Selection and balancing of machinery – Machinery layout – Technical specifications.

Utilities**9 Hours**

Power requirements for spinning, weaving, Knitting and Garment machinery – Amenities required – Ventilation, Humidification systems – RH and temperature of various departments.

Lighting types – Intensity requirements

Personnel and Marketing Management**9 Hours**

Planning – Selection – Training – Welfare safety – Factory act – Industrial dispute act – Trade union act – Bonus act – ESI, wage structure in textiles and apparel industry – Categories of operatives in textile mills – HOK – OHS. Marketing channel – Physical distribution – Global markets centre of textile – International trade and documentation processes.

Theory: 45 Hours**Total: 45 Hours****References**

1. A. Ormerod, Textile Product Management, The Textile Institute, Manchester 1992.
2. Handbook of Import and Export Procedures, Textile Commissioner's Office Reports, Government of India, Ministry of Textiles, Government of India Publications (2005 – 2010).
3. V. D. Dudeja, Management of Textile Industry, Textile Trade Press, Ahmedabad 1990.
4. Naresh Grover "Textile Mill Management : Theory And Practice" Random Publications, Delhi, 2013.



Dr.J.Srinivasan

Signature of BOS chairman, TXT



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Department of Automobile Engineering

AY: 2017-18

Date: 11.04.2018

Action taken report -Employers Feedback

S.No	Analysis	Action taken report
1	Awareness program for students to be conducted for selecting specialization before the start of professional elective course.	Panel discussions by industry experts were arranged.

Prepared By,

BoS Coordinator

Approved By,

BoS Chairman



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Department of Civil Engineering

AY: 2017-18

11.04.2018

Action taken report - Employer Feedback

S.No	Analysis	Action taken report
1.	At least two practical courses must be given every semester	All the courses are explored for possible practical component and offered as embedded course
2.	More elective courses can be offered	Implemented as suggested.
3.	Strength of Materials course can be offered as two courses.	Syllabus content is revised, and a new course Mechanics of materials is added in the curriculum
4.	Engineering Mechanics must address the basics of dynamics	Included basics of dynamics in the syllabus of U17MET2102/Engineering Mechanics.
5.	Advanced Solid Mechanics may be refined beyond AICTE model curriculum.	Recommended for next regulation

Prepared by,

BoS Coordinator

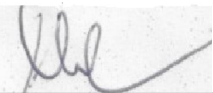
Approved by,

BoS Chairman

List of Mandatory courses

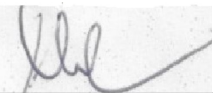
S.No	Couse Code	Course Title	Course Mode	CT	Sem
1	U18VEP1501	Human Excellence-Personal Values	Lab	HS	1
2	U18VEP2502	Human Excellence-Interpersonal Values	Lab	HS	2
3	U18VEP3503	Human Excellence-Family Values	Lab	HS	3
4	U18VEP4504	Human Excellence-Professional Values	Lab	HS	4
5	U18CHT4000	Environmental Science & Engineering	Theory	MC	4
6	U18VEP5505	Human Excellence-Social Values	Lab	HS	5
7	U18INT6000	Constitution of India	Theory	MC	6
8	U18VEP6506	Human Excellence-National Values	Lab	HS	6
9	U18VEP7507	Human Excellence-Global Values	Lab	HS	7

Professional Electives									
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C
Structural Engineering									
1	U18CEE0001	Concrete Technology	Theory	PE	3	0	0	0	3
2	U18CEE0002	Prefabricated Structures	Theory	PE	3	0	0	0	3
3	U18CEE0003	Design of Reinforced Concrete structures	Theory	PE	3	0	0	0	3
4	U18CEE0010	Prestressed Concrete structures	Theory	PE	3	0	0	0	3
5	U18CEE0011	Pre Engineered Buildings	Theory	PE	3	0	0	0	3
6	U18CEE0012	Earthquake Engineering	Theory	PE	3	0	0	0	3
Environmental & Water Resources Engineering									
1	U18CEE0004	Environmental Impact Assessment and Life Cycle Analysis	Theory	PE	3	0	0	0	3
2	U18CEE0005	Surface water Hydrology	Theory	PE	3	0	0	0	3
3	U18CEE0006	Air and Noise Pollution Control	Theory	PE	3	0	0	0	3
4	U18CEE0013	Industrial Wastewater Treatment	Theory	PE	3	0	0	0	3
5	U18CEE0014	Climate change and Sustainable Management	Theory	PE	3	0	0	0	3


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6	U18CEE0015	Waste Management	Theory	PE	3	0	0	0	3
Construction Management & Transportation Engineering									
1	U18CEE0007	Housing Planning and Management	Theory	PE	3	0	0	0	3
2	U18CEE0008	Intelligent Transportation Systems	Theory	PE	3	0	0	0	3
3	U18CEE0009	Sustainable Construction Methods	Theory	PE	3	0	0	0	3
4	U18CEE0016	Building Information Management	Theory	PE	3	0	0	0	3
5	U18CEE0017	Mass Transit Management	Theory	PE	3	0	0	0	3
6	U18CEE0018	Railways Airport Dock and Harbour Engineering	Theory	PE	3	0	0	0	3

Open Electives (OFFERED TO STUDENTS OF OTHER DEPARTMENTS)									
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C
1	U18CE0001	Climate Change Impact on Water Resources	Theory	OE	3	0	0	0	3
2	U18CE0002	Fundamentals of Soil and Water Conservation Engineering	Theory	OE	3	0	0	0	3
3	U18CE0003	Green Building Concept and Design	Theory	OE	3	0	0	0	3
4	U18CE0004	Landscape Designing	Theory	OE	3	0	0	0	3
5	U18CE0005	Green Building Desing- Civil Engineering Focussed Tools and Techniques	Theory	OE	3	0	0	0	3
6	U18CE0006	SUSTAINABLE TECHNOLOGIES AND CIRCULAR ECONOMY	Theory	OE	3	0	0	0	3


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Semester III										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U17MAT3101	Partial Differential Equations and Transforms	Theory	BS	3	1	0	0	4	Nil
2	U17CEI3201	Solid Mechanics	Embedded - Theory & Lab	ES	2	1	2	0	4	Nil
3	U17CEI3202	Surveying & Geomatics	Embedded - Theory & Lab	PC	3	0	2	0	4	Nil
4	U17CEI3203	Fluid Mechanics	Embedded - Theory & Lab	ES	2	1	2	0	4	Nil
5	U17CET3004	Building Construction and Services	Theory	PC	3	0	0	0	3	Nil
6	U17INI3600	Engineering Clinic 1	Practical & Project	ES	0	0	4	2	3	Nil
Total Credits									22	
Total Contact Hours/week									28	

Semester IV										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U17MAT4101	Numerical Methods and Probability	Theory	BS	3	1	0	0	4	Nil
2	U17CEI4201	Applied Hydraulics and Hydraulic Machinery	Embedded - Theory & Lab	PC	3	0	2	0	4	U17CEI 3203
3	U17CEI4202	Highway and Traffic Engineering	Embedded - Theory & Lab	PC	3	0	2	0	4	Nil
4	U17CEI4203	Soil Mechanics	Embedded - Theory & Lab	PC	3	0	2	0	4	Nil
5	U17CET4004	Mechanics of Materials	Theory	PC	3	0	0	0	3	U17CEI3 201
6	U17INI4600	Engineering Clinics -II	Practical & Project	ES	0	0	4	2	3	Nil
Total Credits									22	
Total Contact Hours/week									28	

L	T	P	J	C
3	1	0	0	4

Course Outcomes

After successful completion of this course, the students should be able to

- CO1:** Explain the concept of equilibrium of particles subjected to concurrent forces. **CO2:** Determine the reactions in different types of support and loading conditions. **CO3:** Estimate the moment of inertia for various shapes and sections. **CO4:** Make use of various concepts of friction. **CO5:** Solve problems using the concepts in kinematics **CO6:** Solve problems in kinetics.

Pre-requisites : Nil


	CO-PO Mapping (S/M/W indicates strength of correlation) S-Strong, M-Medium, W-Weak											
COs	Programme Outcomes(POS)											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	S											
CO2		S										
CO3		S										
CO4		M										
CO5	S											
CO6	S											

Course Assessment methods

Direct
1. Continuous Assessment Test I, II 2. Open book test; Cooperative learning report, Assignment; Journal paper review, Group Presentation, Project report, Poster preparation, Prototype or Product Demonstration etc (as applicable) 3. End Semester Examination
Indirect
1. Course-end survey

BASICS & STATICS OF PARTICLES**12 Hours**

Introduction - Units and Dimensions - Laws of Mechanics Lame's theorem, Parallelogram and triangular Laws of forces – Coplanar Forces - Resolution and Composition of forces – Free body diagram - Equilibrium of a particle.


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EQUILIBRIUM OF RIGID BODIES**12 Hours**

Moment of a force about point – Varignon's theorem- Moment of a couple-Resolution of force into force couple system-Resultant of coplanar non concurrent system - Types of supports and their reactions- Requirements of stable equilibrium - Equilibrium of Rigid bodies in two dimensions.

PROPERTIES OF SURFACES AND SOLIDS**12 Hours**

First moment of area and the Centroid of sections Rectangle, circle, triangle, T section, I section Angle section and Hollow section. Second and product moments of plane area Rectangle, triangle, circle. T Section, I section, Angle section and Hollow section, Parallel axis theorem and perpendicular axis theorem - Polar moment of inertia.

FRICTION**12 Hours**

Frictional force-Law of coulomb friction, simple contact friction, Rolling resistance and Belt friction, Ladder friction, Wedge friction.

DYNAMICS OF PARTICLES**12Hours**

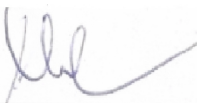
Kinematics: Rectilinear & Curvilinear motion of particles, Displacements Velocity and acceleration.

Kinetics: Newton's law, Work Energy method, Impulse and Momentum, Impact of elastic bodies.

Theory: 45	Tutorial: 15	Practical:	Project: 0	Total: 60Hours
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REFERENCES

1. Beer F.P. and Johnson Jr. E.R., Vector Mechanics for Engineers, Vol. I Statics and Vol. II Dynamics, McGraw-Hill International Edition, 2004
2. Hibbeler, R.C., Engineering Mechanics, Vol. I Statics and Vol. II Dynamics, Pearson Education, Asia Pvt. Ltd., 2000.
3. Ashok Gupta, Interactive Engineering Mechanics Statics A Virtual Tutor, Pearson Education, Asia Pvt. Ltd., New Delhi, 2002.
4. Palanichamy M.S., and Nagan S., Engineering Mechanics (Statics & Dynamics) Tata McGraw Hill, 2001.
5. Irving H. Shames, Engineering Mechanics – Statics and Dynamics, IV Edition, Pearson Education, Asia Pvt. Ltd., 2003.
6. Sukumar T.R. and Sridhar S., Engineering Mechanics, Inder Publications, Coimbatore.


Signature of the Chairman BOS/Civil Engineering



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Department of Computer Science and Engineering

AY: 2017-18

Date: 11.04.2018

Action Taken Report -Employers Feedback

S.No	Analysis	Action Taken Report
1.	Industry person insisted to include subjects like social computing, advanced machine learning techniques, etc., in the curriculum	As suggested courses like U18CST5004- Social Media marketing and U18CST7002 - Machine Learning courses are included in the curriculum
2.	The employer insisted to give more emphasis on the industry needed courses like Artificial Intelligence (AI) and Internet of Things (IoT)	As indicated the mentioned courses U17CSE0003 -Artificial Intelligence and U17CSE0004 - IoT Architecture and Protocols are included as elective in R17 curriculum.
3.	Apart from core courses, Topics on Data Analysis can also be covered.	Exploratory Data Analysis (EDA) is covered for the students in U18INI5600 Engineering Clinic-V

Prepared By

(Feedback/BoS Coordinator)

(Dr. D. Chandrakala)

Approved By

(Signature of Bos Chairman)

(Dr. J. Cynthia)

**Professor & Head
Department of
Computer Science and Engineering
Kumaraguru College of Technology
COIMBATORE-641 006, INDIA**

U18CST5004

SOCIAL MEDIA MARKETING

L	T	P	J	C
3	0	0	0	3

COURSE OUTCOMES

AFTER SUCCESSFUL COMPLETION OF THIS COURSE, THE STUDENTS SHOULD BE ABLE TO

- CO1:** Identify and describe the different social media services, tools, and platforms.[K3]
CO2: Demonstrate understanding and evaluate new tools and social media platforms[K3]
CO3: Develop skills in using the predominant social media tools for business marketing.[K3]
CO4: Discover innovative uses for social media in a variety of business areas and processes [K4]
CO5: Develop a strategic plan for identifying opportunities for using social media.[K5]

Pre-requisite: Nil

CO/PO MAPPING (S/M/W indicates strength of correlation) S-Strong, M-Medium, W-Weak													CO/PSO Mapping		
COs	PROGRAMME OUTCOMES (POs)												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	S									M		M			
CO2	S	S			S					M		M			
CO3	S		S							M		M			
CO4	S									M		M			
CO5	S	S	S		S	S			M	M	S	M	M		

COURSE ASSESSMENT METHODS

DIRECT
1. Continuous Assessment Test I, II 2. Assignment 3. Mini Project 4. End Semester Examination
INDIRECT
1. Course-end survey

THEORY COMPONENT CONTENTS

UNDERSTANDING FACEBOOK AND LEVERAGING FACEBOOK FOR MARKETING

8 Hours

Introduction to basic FB terminologies-Creating a powerful personal profile for business-Marketing applications of Face book- Fundamentals of creating and maintaining fan pages-Creating groups for marketing-Face book marketing checklist-Basics of Sentimental analysis

S. Sherali
Signature of BOS chairman. CSE

INTRODUCTION TO TWITTER AS A MARKETING TOOL

10 Hours

Setting up a Twitter profile- Fundamental of Twitter: Tweet, direct messages, replies and Trending topics-Managing your Twitter experience- Fundamentals of Tweet Deck-Managing multiple Twitter accounts- Tweet management- Twitter Grader- Twitter Counter-Tweet burner-Twitter marketing checklist- Tree induction techniques.

FUNDAMENTALS OF YOUTUBE FOR CREATING COMPELLING ONLINE PRESENCE

10 Hours

Fundamentals of video marketing- Creating a YouTube channel- Creating your own Internet TV channel for marketing

USING LINKEDIN FOR MARKETING

8 Hours

LinkedIn for B2b marketing- creating a profile in LinkedIn Powerful corporate searches and connections - Recommendations and testimonials.

UNDERSTANDING CONTENT MARKETING AND USING BLOGS TO BUILD AND ENGAGE AUDIENCE

9 Hours

Basics of inbound marketing-Webinars and tele- seminars-Podcasting basics- creating blogs and building a following White papers and info graphics- Fundamentals of content curation

Theory: 45	Tutorial: 0	Practical: 0	Project: 0	Total: 45 Hours
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REFERENCES

1. Liana Li Evans, "Social Media Marketing :Strategies for Engaging in Facebook, Twitter & Other Social Media", Que Press; Ed 2010
2. Andrew Macarthy," 500 Social Media Marketing Tips: Essential Advice, Hints and Strategy for Business: Facebook, Twitter, Pinterest, Google+, YouTube, Instagram, LinkedIn, and More!" ,Springer 2017
3. Ann Handley, "Content Rules: How to Create Killer Blogs, Podcasts, Videos, Ebooks, Webinars (and More) That Engage Customers and Ignite Your Business ",Johnwiley and sons,2012
4. Barker, "Social Media Marketing: A Strategic Approach" ,Cengage; 1 edition 2013

Other References:

<https://learndigital.withgoogle.com/digitalunlocked>

<http://www.digitalvidya.com/blog/best-social-media-marketing-books-2016-top-10/>

S. Shreevani
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U18CST7002**MACHINE LEARNING TECHNIQUES**

L	T	P	J	C
3	0	0	0	3

COURSE OUTCOMES

AFTER SUCCESSFUL COMPLETION OF THIS COURSE, THE STUDENTS SHOULD BE ABLE TO

CO1: Differentiate the implementation of mathematical model to various machine learning methods. (K4)

CO2: Illustrate graphical models and multiple learners. (K4)

CO3: Develop projects using appropriate machine learning approaches for real life problems. (K5, S3)

Pre-requisite:U18CSI6203/Data Warehousing and Data Mining

CO/PO MAPPING (S/M/W indicates strength of correlation) S-Strong, M-Medium, W-Weak													CO/PSO Mapping		
COs	PROGRAMME OUTCOMES (POs)												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	S	S			S	S	S	S		M		M		M	
CO2	S	M	M	S		M	M			M		M		M	
CO3	S	S	S			S	S			M	S	M	M	M	M

COURSE ASSESSMENT METHODS

DIRECT
1. Continuous Assessment Test I, II 2. Open book test; Cooperative learning report, Assignment; Journal paper review, Group Presentation, Project report, Poster preparation, Prototype or Product Demonstration etc (as applicable) 3. End Semester Examination
INDIRECT
1. Course-end survey

THEORY COMPONENT CONTENTS**INTRODUCTION AND SUPERVISED LEARNING****9 Hours**

Introduction to Machine Learning – basic concepts in machine learning - Examples of machine learning applications -Supervised Learning: Learning a Class from Examples–Noise–Learning Multiple Classes–Regression–Model Selection and Generalization. Bayesian Decision Theory: Classification–Losses and Risks– Discriminant Functions–Association rules.

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PARAMETRIC METHODS**9 Hours**

Parametric Classification–Regression–Tuning Model Complexity–Model Selection Procedures. Multivariate Methods: Data–Parameter Estimation–Estimation of Missing Values–Multivariate Normal Distribution–Multivariate Classification and Regression.

SEMI PARAMETRIC METHODS AND LINEAR MODEL**9 Hours**

Semi parametric method: Clustering k–Means Clustering–Expectation–Maximization Algorithm–Latent Variable Models–Hierarchical Clustering. Linear Model: Generalizing linear model–Geometry of linear Discriminant–Pairwise Separations–Gradient Descent.

NON-PARAMETRIC METHODS**9 Hours**

Nonparametric Methods: Nonparametric Density Estimation and Classification–Generalization to Multivariate Data–Condensed Nearest Neighbor–Smoothing Models. Decision Trees: Univariate Trees–Pruning–Rule Extraction–Learning Rules–Multivariate Trees.

GRAPHICAL MODEL AND MULTIPLE LEARNERS**9 Hours**

Graphical Model- canonical cases for conditional Independence – example graphical models. Combining Multiple Learners: Voting–Error–Correcting Output Codes–Bagging–Boosting–Stacked Generalization–Cascading – Case Studies using machine learning tools.

Theory: 45	Tutorial: 0	Practical: 0	Project: 0	Total: 45 Hours
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REFERENCES

1. Ethem Alpaydin, "Introduction to Machine Learning", Second Edition, MIT Press, 2013
2. Tom M. Mitchell, —Machine Learning, McGraw-Hill Education (India) Private Limited, 2013
3. Stephen Marsland, —Machine Learning: An Algorithmic Perspective, CRC Press, 2009.
4. Y. S. Abu-Mostafa, M. Magdon-Ismael, and H.-T. Lin, "Learning from Data", AML Book Publishers, 2012
5. K. P. Murphy, "Machine Learning: A probabilistic perspective", MIT Press, 2012.
6. M. Mohri, A. Rostamizadeh, and A. Talwalkar, "Foundations of Machine Learning", MIT Press, 2012.

S. Durali.
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U17CSE0003

ARTIFICIAL INTELLIGENCE

L	T	P	J	C
3	0	0	0	3

COURSE OUTCOMES

AFTER SUCCESSFUL COMPLETION OF THIS COURSE, THE STUDENTS SHOULD BE ABLE TO

- CO1: Develop solutions for problems using various Artificial Intelligence concepts. K5,S3
 CO2: Design applications using PROLOG for making inferences. K4,S2
 CO3: Demonstrate usage of planning and decision making. K3
 CO4: Apply the concepts of learning using Tensor Flow and any other programming language. K4,S2

Pre-requisites :Nil

CO/PO MAPPING (S/M/W indicates strength of correlation) S-Strong, M-Medium, W-Weak													CO/PSO Mapping		
PROGRAMME OUTCOMES (POs)													PSOs		
COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	S	S	M		S	S			S	M		M	M	M	M
CO2	S	S	S		M				M	M		M		M	
CO3	S	M								M		M		M	

COURSE ASSESSMENT METHODS

DIRECT

- Continuous Assessment Test I, II
- Open book test; Cooperative learning report, Assignment; Journal paper review, Group Presentation, Project report, Poster preparation, Prototype or Product Demonstration etc
 - (as applicable)
- End Semester Examination

INDIRECT

- Course-end survey

THEORY COMPONENT CONTENTS

INTRODUCTION AND PROBLEM SOLVING

9 Hours

Definitions of AI - Intelligent Agents. Problem solving by searching: Problem-solving agents- Example problems - Search for solutions Uninformed search strategies - Informed search strategies - Heuristic functions.

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LOGIC**9 Hours**

Logical agents: Knowledge-based agents – The Wumpus world. Logic – Propositional logic: A very simple logic-Propositional theorem proving.

First order logic: Representation – Syntax and semantics of first order logic – Using first order logic-PROLOG basics

Inference in first order logic: Propositional versus first order inference– Unification and lifting – Forward chaining – Backward chaining – Resolution.

PLANNING AND DECISION MAKING**9 Hours**

Classical Planning: Definition – Algorithms for planning as state-space search-Planning graphs – Other classical planning approaches.

Making simple Decisions-Combining beliefs and desires under Uncertainty-Utility theory-Utility functions-Multi attribute utility functions-Decision networks- The value of information-Decision theoretic expert systems.

LEARNING**9 Hours**

Quantifying uncertainty: Acting under uncertainty - Probability basics – Bayes' Rule and its use.

Probabilistic reasoning: Representing knowledge in uncertain domain- The semantics of Bayesian networks. Forms of learning - Supervised learning - Learning decision trees. Reinforcement

Learning: Passive Learning – Active Learning – Learning an Action-Value function using Q Learning.

ANN AND DEEP LEARNING**9 Hours**

Introduction to artificial neural networks, Perceptrons, Multi-layer feed forward network,

Application of ANN - Deep feed forward networks – Convolution Neural networks –

Applications-Use of Tensorflow.

Theory: 45	Tutorial: 0	Practical: 0	Project: 0	Total: 45 Hours
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REFERENCES

1. Stuart Russell, Peter Norvig, "Artificial Intelligence – A Modern Approach", 3rd Edition, Pearson Education / Prentice Hall of India, 2015.
2. Elaine Rich, Kevin Knight, Shivashankar.B.Nair, "Artificial Intelligence", Tata Mc Graw Hill, Third Edition , 2009
3. Nils J. Nilsson, "Artificial Intelligence: A new Synthesis", Harcourt Asia Pvt. Ltd., 2000
4. George F. Luger, "Artificial Intelligence-Structures and Strategies For Complex Problem Solving", Pearson Education / PHI, 2002
5. David L. Poole, Alan K. Mackworth, "Artificial Intelligence: Foundations of Computational Agents", Cambridge University Press, 2010.
6. Ian Goodfellow, Yoshua Bengio, Aaron Courville, "Deep Learning", An MIT Press Book, 2016.
7. Li Deng , Dong Yu, "Deep Learning: Methods and Applications", Now Publishers, 2014.

S. Shrivastava
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U17 CSE0004 IOT ARCHITECTURE AND PROTOCOLS

L	T	P	J	C
3	0	0	0	3

COURSE OUTCOMES

AFTER SUCCESSFUL COMPLETION OF THIS COURSE, THE STUDENTS SHOULD BE ABLE TO

- CO1:** Categorize M2M communication and IoT Technology. [K4]
CO2: Examine IoT Reference Architecture and Real World Design Constraints. [K4]
CO3: Make use of appropriate IoT protocols for various applications. [K3]
CO4: Build applications of IoT in real time scenario. [K3]
CO5: Identify the challenges in developing industrial applications. [K3, S2]

Pre-requisite :Nil

CO/PO MAPPING (S/M/W indicates strength of correlation) S-Strong, M-Medium, W-Weak													CO/PSO Mapping		
COs	PROGRAMME OUTCOMES (POs)												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	S									M		M			
CO2	S									M		M			
CO3		M								M		M	M		
CO4			M							M		M			M
CO5	S									M		M	M		

COURSE ASSESSMENT METHODS

DIRECT	
1. Continuous Assessment Test I, II	
2. Open book test; Cooperative learning report, Assignment; Journal paper review, Group Presentation, Project report, Poster preparation, Prototype or Product Demonstration etc (as applicable)	
3. End Semester Examination	
INDIRECT	
4. Course-end survey	

THEORY COMPONENT CONTENTS**OVERVIEW****9 Hours**

IoT-An Architectural Overview– Building an architecture, Main design principles and needed capabilities, An IoT architecture outline, standards considerations. M2M and IoT Technology Fundamentals- Devices and gateways, Local and wide area networking, Data management, Business processes in IoT, Everything as a Service(XaaS), M2M and IoT Analytics, Knowledge Management

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REFERENCE ARCHITECTURE**9 Hours**

IoT Architecture-State of the Art – Introduction, State of the art, Reference Model and architecture, IoT Reference Model - IoT Reference Architecture- Introduction, Functional View, Information View, Deployment and Operational View, other Relevant architectural views. Real-World Design Constraints- Introduction, Technical Design constraints-hardware is popular again, Data representation and visualization, Interaction and remote control.

PHYSICAL AND MAC LAYER PROTOCOLS**9 Hours**

IoT Access Technologies: Physical and MAC layers, topology and Security of IEEE 802.15.4, 802.15.4g, 802.15.4e, 1901.2a, 802.11ah and LoRaWAN

NETWORK AND APPLICATION LAYER PROTOCOLS**9 Hours**

Network Layer: IP versions, Constrained Nodes and Constrained Networks – Optimizing IP for IoT: From 6LoWPAN to 6Lo, Routing over Low Power and Lossy Networks – Application Transport Methods: Supervisory Control and Data Acquisition – Application Layer Protocols: CoAP and MQTT

CASE STUDIES / INDUSTRIAL APPLICATIONS**9 Hours**

Cisco IoT system - IBM Watson IoT platform – Manufacturing - Converged Plantwide Ethernet Model (CPwE) – Power Utility Industry – GridBlocks Reference Model - Smart and Connected Cities: Layered architecture, Smart Lighting, Smart Parking Architecture and Smart Traffic Control

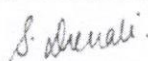
Theory: 45	Tutorial: 0	Practical: 0	Project: 0	Total: 45 Hours
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REFERENCES

1. Jan Holler, Vlasios Tsiatsis, Catherine Mulligan, Stefan Avesand, Stamatis Karnouskos, David Boyle, "From Machine-to-Machine to the Internet of Things: Introduction to a New Age of Intelligence", 1st Edition, Academic Press, 2014.
2. Peter Waher, "Learning Internet of Things", PACKT publishing, BIRMINGHAM – MUMBAI
3. Bernd Scholz-Reiter, Florian Michahelles, "Architecting the Internet of Things", ISBN 978-3-642-19156-5 e-ISBN 978-3-642-19157-2, Springer
4. Daniel Minoli, "Building the Internet of Things with IPv6 and MIPv6: The Evolving World of M2M Communications", ISBN: 978-1-118-47347-4, Willy Publications
5. Vijay Madisetti and Arshdeep Bahga, "Internet of Things (A Hands-on-Approach)", 1st Edition, VPT, 2014.
6. http://www.cse.wustl.edu/~jain/cse570-15/ftp/iot_prot/index.html

ONLINE COURSES AND VIDEO LECTURES

1. <https://www.coursera.org/learn/internet-of-things-communication>
2. <https://www.edx.org/course/iot-networks-and-protocols>



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U18INI5600

ENGINEERING CLINIC - V

L	T	P	J	C
0	0	4	2	3

COURSE OBJECTIVES

- To help the students look into the functioning of simple to complex devices and systems
- To enable the students to design and build simple systems on their own
- To help experiment with innovative ideas in design and team work
- To create an engaging and challenging environment in the engineering lab

COURSE OUTCOMES

AFTER SUCCESSFUL COMPLETION OF THIS COURSE, THE STUDENTS SHOULD BE ABLE TO:

CO1: Identify a practical problems and find a solution

CO2: Understand the project management techniques

CO3: Demonstrate their technical report writing and presentation skills

Pre-requisite: U18INI4600/Engineering Clinic-IV

CO/PO MAPPING (S/M/W indicates strength of correlation) S-Strong, M-Medium, W-Weak													CO/PSO Mapping		
COs	PROGRAMME OUTCOMES (POs)												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	S	S	S	S	S	M	W		S			S	S		
CO2											S		S		
CO3										S					

COURSE ASSESSMENT METHODS:

DIRECT	
1.	Project reviews 50%
2.	Workbook report 10%
3.	Demonstration & Viva – voce 40%
INDIRECT	
1.	Course-end survey

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Content:

The course will offer the students with an opportunity to gain a basic understanding of computer controlled electronic devices and apply the concepts to design and build simple to complex devices. As a practical project based embedded course, the students will be taught the concepts using a variety of reference material available in the public domain. While the course will start with formal instruction on hardware, programming and applications, the major portion of the course will provide the students with ample opportunity to be innovative in designing and building a range of products from toys to robots and flying machines.

In the fifth semester, students will focus primarily on Design and developing a prototype (CEDA).

GUIDELINES:

1. Practical based learning carrying credits.
2. Multi-disciplinary/ Multi-focus group of 5-6 students.
3. Groups can select to work on a specific tasks, or projects related to real world problems.
4. Each group has a faculty coordinator/Instructor who will guide/evaluate the overall group as well as individual students.
5. The students have to display their model in the 'Engineering Clinics Expo' at the end of semester.
6. The progress of the course is evaluated based on reviews and final demonstration of prototype.

Theory: 0	Tutorial: 0	Practical: 60	Project: 30	Total: 90 Hours
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KUMARAGURU
college of technology
character is life

KUMARAGURU COLLEGE OF TECHNOLOGY, COIMBATORE-641049

(An Autonomous Institution affiliated to Anna University, Chennai)

Action Taken Report – Employer Feedback

Department of Electronics and Communication Engineering

Academic Year: 2017 – 2018

Date: 11.04.2018

S.No	Feedback	Action Taken
1.	Professional Elective to be incorporated with GPS and its applications.	Introduced in the elective list as U15ECTE13-Global Positioning Systems
2.	More design-oriented courses to be included.	Design oriented courses were included as professional elective courses such as U15ECTE02-Advanced Digital Signal Processing, U15ECTE03-Advanced Processors and U15ECTE04-Advanced Wireless Communication
3.	IPR content to be introduced to the students.	Included in the professional elective list as U15GST008-Foundations Skills in Integrated Product Development
4.	Wireless security concepts may be included in the syllabus content	Included in the syllabus content. P18COE0002-Communication Network Security.

Prepared By,

BoS Coordinator

Approved By,

BoS Chairman

Proof for Action taken 1 & 2 : Introduced in the elective list as U15ECTE13- Global Positioning Systems Design oriented courses were included as professional elective courses such as U15ECTE02-Advanced Digital Signal Processing, U15ECTE03-Advanced Processors and U15ECTE04-Advanced Wireless Communication

Professional Electives (PE)									
	Course Code	Course Title	Category	Contact Hours	Hrs/Week & Credits				Pre-requisites
					L	T	P	C	
1.	<u>U15ECTE01</u>	Adhoc and Wireless Sensor Networks	PE	3	3	0	0	3	U15ECT605
2.	<u>U15ECTE02</u>	Advanced Digital Signal Processing	PE	3	3	0	0	3	U15ECT502
3.	<u>U15ECTE03</u>	Advanced Processors	PE	3	3	0	0	3	U15ECT402
4.	<u>U15ECTE04</u>	Advanced Wireless Communication	PE	3	3	0	0	3	U15ECT701 U15ECT703
5.	<u>U15ECTE05</u>	Automotive Electronics	PE	3	3	0	0	3	
6.	<u>U15ECTE06</u>	Biomedical Instrumentation	PE	3	3	0	0	3	U15ECT301 U15ECT504
7.	<u>U15ECTE07</u>	CMOS Integrated Circuits I	PE	3	3	0	0	3	U15ECT301 U15ECT401
8.	<u>U15ECTE08</u>	CMOS Integrated Circuits II	PE	3	3	0	0	3	U15ECTE07
9.	<u>U15ECTE09</u>	Cognitive Radio Communication	PE	3	3	0	0	3	U15ECT703
10.	<u>U15ECTE10</u>	Computer Architecture	PE	3	3	0	0	3	U15ECT402
11.	<u>U15ECTE11</u>	Data Compression Techniques	PE	3	3	0	0	3	
12.	<u>U15ECTE12</u>	Digital Image Processing	PE	3	3	0	0	3	U15ECT502
13.	<u>U15ECTE13</u>	Global Positioning Systems	PE	3	3	0	0	3	U15ECT703
14.	<u>U15ECTE14</u>	High Speed Networks	PE	3	3	0	0	3	U15ECT605
15.	<u>U15ECTE15</u>	Low Power VLSI	PE	3	3	0	0	3	U15ECT603
16.	<u>U15ECTE16</u>	Measurements and Instrumentation	PE	3	3	0	0	3	U15ECT301 U15ECT401
17.	<u>U15ECTE17</u>	Nano Electronics	PE	3	3	0	0	3	U15PHT203
18.	<u>U15ECTE18</u>	Network Security and Cryptography	PE	3	3	0	0	3	U15ECT605
19.	<u>U15ECTE19</u>	Radar and Navigational Aids	PE	3	3	0	0	3	U15ECT504 U15ECT604
20.	<u>U15ECTE20</u>	RF MEMs	PE	3	3	0	0	3	

P18COE0002 COMMUNICATION NETWORK SECURITY

L	T	P	J	C
3	0	0	0	3

Course Outcomes (COs):

Upon completion of the course, the student should be able to:

- CO1:** Classify the symmetric encryption techniques (K2).
- CO2:** Illustrate various Public key cryptographic techniques (K3)
- CO3:** Elaborate the network security and web security techniques(K2)
- CO4:** Outline the various wireless threats(K2).
- CO5:** Discuss the security in various wireless data networks (K2)

Pre-requisites: -

CO/PO Mapping: (S/M/W indicates strength of correlation) S-Strong, M-Medium, W-Weak											
COs	Programme Outcomes										
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11
CO1	S	M	S	M							
CO2	S	M	S	M							
CO3	S	M		M							
CO4	S			S							
CO5	S			M							

Course Assessment Methods:

Direct
1. Mid Term Examination
2. Research Assignment, Presentation
3. End Semester Examination
Indirect
1. Course-end survey

SYMMETRIC CIPHERS

09 Hrs

Design Principles - Data Encryption Standard- Strength of DES, AES Cipher- Multiple Encryption-Triple DES- Block Cipher Modes of Operation -Stream Ciphers and RC4, Confidentiality using Symmetric Encryption-Placement of Encryption Function, Traffic Confidentiality, Key Distribution and Random Number Generation.

PUBLIC-KEY ENCRYPTION AND HASH FUNCTIONS

09 Hrs

Public Key Cryptography and RSA- Principles of Public Key Cryptosystems, RSA Algorithm, Key Management – Diffie -Hellman Key Exchange, Elliptic Curve arithmetic, Elliptic Curve Cryptography

NETWORK SECURITY AND WEB SECURITY

09 Hrs

IP Security- IP Security Overview - IP Security Architecture - Authentication Header - Encapsulating Security Payload, Web Security for Wired Networks- Web Security Considerations

Signature of BOS chairman, ECE



Pro

Department of Electronics & Instrumentation Engineering

AY: 2017-18

11.04.2018

Action taken report -Employers Feedback

S.No	Analysis	Action taken report
1.	To include the word 'Transforms' instead of 'Shape' in the vision statement	Included as per the suggestion.
2.	The title of the subject PLC, DCS and SCADA could be changed as Industrial Automation or Process Automation.	U17EII6201 – Industrial Automation is included in 6th Semester.
3.	Experts suggested giving a general title for U17EIP7703 - Project phase I instead of Process control design project.	A general title for Project Work phase I is given as U17EIP7703 – Design project.
4.	Suggestion to offer 3 months internship during 8 th semester.	Students are permitted to undergo internship in various companies during the 7 th semester.

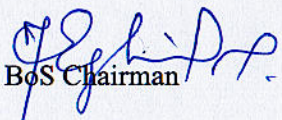
Prepared by

V. Met

V. Mainekalai AP/EIE

BoS Coordinator

Approved by


BoS Chairman

Proof For ATR point No

Department of Electronics and Instrumentation Engineering

VISION

The Department of Electronics and Instrumentation Engineering (EIE) envisions a holistic education that transforms the learners into responsible engineers which shall enable them to identify significant problems both in industry and society to arrive at creative and sustainable solutions through collaborative team efforts.

MISSION

The Department of Electronics and Instrumentation Engineering (EIE) aims to

- Implement modern andragogical approach in academics, innovative research initiatives and collaborative projects that shall ethically address the societal needs.
- Develop knowledge and skills required to excel in manufacturing, automation and allied industries on a global platform.
- Expand the knowledge for higher studies and get inspired for lifelong learning.

Program Educational Objectives (PEOs)

Graduates of B.E (Electronics and Instrumentation Engineering) will

PEO 1	Excel in technical and professional career with core competence in automation.
PEO 2	Possess the passion for professional development by continuous learning in allied Engineering and Management fields.
PEO 3	Engage in resolving industrial and social issues using contemporary tools.
PEO 4	Exhibit professionalism and ethical attitude towards resolving automation issues to society at large.

Program Outcomes (POs)

Graduates of B.E (Electronics and Instrumentation Engineering) will be able to:

PO 1	Engineering Knowledge	Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to solve complex engineering problems.
PO 2	Problem Analysis	Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO 3	Design / Development of Solutions	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO 4	Conduct Investigations of Complex Problems	Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

Proof for ATR point NO .2

Total Credits	21
Total Contact Hours/week	27

SEMESTER V										
S. No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	Pre-requisite
1	U17EII5201	Process Dynamics and Control	Embedded-Theory and Practical	PC	3	0	2	0	4	U17EII4203
2	U17EII5202	Embedded Microcontrollers	Embedded-Theory and Practical	PC	3	0	2	0	4	U17EII4202
3	U17EII5203	Field Instrumentation	Embedded-Theory and Practical	PC	3	0	2	0	4	U17EII3202
4	U17EIT5004	Industrial Communication and Networking	Theory	PC	3	0	0	0	3	--
5	U17EIE00- -	Professional Elective I	Theory	PE	3	0	0	0	3	--
6	U17- - - - -	Open Elective I	Theory	OE	3	0	0	0	3	--
7	U17INI5600	Engineering Clinics III	Embedded-Practical and Project	ES	0	0	4	2	3	--
Total Credits									24	
Total Contact Hours/week									30	

SEMESTER VI										
S. No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	Pre-requisite
1	U17EII6201	Industrial Automation	Embedded-Theory and Practical	PC	3	0	2	0	4	U17EII5201 U17EII5203
2	U17EII6202	Digital Signal Processing & Deep learning	Embedded-Theory and Practical	PC	3	0	2	0	4	U17EII4203
3	U17EIE00- -	Professional Elective II	Theory	PE	3	0	0	0	3	--
4	U17- - - - -	Open Elective II	Theory	OE	3	0	0	0	3	--
5	U17EIT6003	Comprehensive Studies	Theory	PC	2	0	0	0	2	U17EII3201, U17EII3202,


BOS Chairman

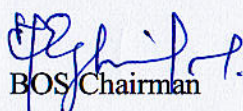
										U17EII4202 U17EII5201, U17EII5203
6	U17EIE00- -	Professional Elective III	Theory	PE	3	0	0	0	3	--
7	U17INI6600	Engineering Clinics IV	Embedded- Practical and Project	ES	0	0	4	2	3	--
Total Credits									22	
Total Contact Hours/week									26	

SEMESTER VII										
S. No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	Pre-requisite
1	U17EIT7001	Analytical Instrumentation	Theory	PC	3	0	0	0	3	U17EII3202
2	U17EII7202	Advanced Control system	Embedded- Theory and Practical	PC	3	0	2	0	4	U17EII5201
3	U17EIE00- -	Professional Elective IV	Theory	PE	3	0	0	0	3	--
4	U17MBT7000	Engineering Economics and Financial Management	Theory	HS	3	0	0	0	3	--
5	U17EIP7703	Design project	Project Only Course	PW	0	0	0	6	3	--
Total Credits									16	
Total Contact Hours/week									20	

SEMESTER VIII										
S. No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	Pre-requisite
1	U17EIP8701	Capstone Project	Project Only Course	PW	0	0	0	24	12	U17EIP7703
Total Credits									12	
Total Contact Hours/week									24	

List of Professional Electives

Electronic Automation										
S. No	Course code	Course Title	Course Mode	L	T	P	J	C	Periods	CT
1	U17EIE0001	Flexible and Wearable Electronics	Theory	3	0	0	0	3	3	PE


BOS Chairman

2017-2018 (CAV m1)

S. No.	Roll Number	Name	Details of the Industry	Duration with dates	Stipend (INR)
1	14BEI003	Ashokkumar S	TNPL, Karur	22.02.2017 -28.02.2017	-
2	14BEI009	Fenitza M	ELGI Equipments Limited	26.06.2017 -07.08.2017	-
3	14BEI014	Ilavarasan C	Tessolve Semiconductors Pvt. Limited, Coimbatore	22.01.18 - 22.07.18	Nil
4	14BEI014	Ilavarasan C	TNPL, Karur	22.02.2017 -28.02.2017	-
5	14BEI018	Sruthiy K M	Decipher India	22.12.2017 -20.04.2018	6000
6	14BEI019	Kaviarasu S	Mobiveli Technologies	22.01.18 - 22.07.18	7500
7	14BEI019	Kaviarasu S	TNPL, Karur	22.02.2017 -28.02.2017	-
8	14BEI026	Muthulakshmi L	Pricol Limited	15.12.2016-20.12.2016	-
9	14BEI030	Nivetha	Byju's The Learning App	22.01.2018 - 14.02.2018	25000
10	14BEI042	Sanjay R	TNPL, Karur	22.02.2017 -28.02.2017	-
11	14BEI045	Jayasurya S	Decipher India	22.12.2017 -20.04.2018	6000
12	14BEI048	Suresh S	Whirldata Labs, Chennai	27.12.17 - 30.06.18	11000
13	14BEI050	Venkatesh T U	Excel Mechatronics, Coimbatore	01.02.18 - 01.04.18	5000
14	14BEI053	Vinitha D	Excel Mechatronics, Coimbatore	17.02.18 - 17.05.18	5000
15	14BEI055	Vishnu Prasadh R	Byju's The Learning App	22.01.2018 - 14.02.2018	25000
16	14BEI209	Chandrika S	MS Transformer Pvt. Limited, Coimbatore	05.02.18 - 05.03.18	8000
17	14BEI210	Marithas S	Excel Mechatronics, Coimbatore	01.02.18 - 01.04.18	5000

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Department of Fashion Technology

AY: 2017-18

Action taken report -Employers Feedback

Date : 11.04.2018

S.No	Analysis	Action taken report
1.	In-plant training is mandatory. All the students must undergo the training.	In-plant training is offered in 4 th semester holidays. Students should undergo minimum 21 days training in industry. The assessment will be provided in 5 th semester for the course U17FTP5505 Industrial training.
2.	Human excellence courses should be offered as non-credit courses.	Human excellence courses are offered as non-credit courses in Regulation 2017.
3.	Basic electrical and electronics courses should be provided in the curriculum.	The course U17MET4007 Basic electrical and electronics is added in the curriculum.
4.	The course industrial engineering should be provided as core course.	The industrial engineering is shifted from elective to core and offered in 6 th semester.
5.	The course apparel merchandising and costing can be offered as a single course by merging the two components.	The course U17FTT6002 apparel merchandising and costing and clubbed and offered as single course.

Prepared By,

BoS Coordinator

Approved By,

BoS Chairman

Sl.No.1 : A mandatory Industrial training is provided.



Semester V										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U17MAT5102	Discrete Mathematics	Theory and Tutorial	BS	3	1	0	0	4	Nil
2	U17FTI5201	Textile Chemical Processing	Embedded - Theory & Lab	PC	3	0	2	0	4	Nil
3	U17FTI5202	Textile and Apparel Quality Evaluation	Embedded - Theory & Lab	PC	3	0	2	0	4	Nil
4	U17FTT5003	Knitting Technology	Theory	PC	3	0	0	0	3	U17FTT1001
5	U17FTP5504	Apparel Production Lab	Lab	PC	0	0	2	0	1	U17FTI4202
6	U17OE	Open Elective I	Theory	OE	3	0	0	0	3	Nil
7	U17INI5600	Engineering Clinic III	Project based course	ES	0	0	4	2	3	Nil
8	U17FTP5505	Industrial Training*	Industry	PC	0	0	2	0	1	NIL
Total Credits									23	
Total Contact Hours/week									30	

*Industrial training to be undertaken during the 4th Semester summer vacation –Internal evaluation

Sl.No.2 : The human excellence courses are offered as mandatory non- credit courses



List Of Mandatory Courses

S.No	Couse Code	Course Title	Course Mode	CT	Sem
1	U17VEP1501	Human Excellence -Personal Values	Lab	HS	1
2	U17VEP2502	Human Excellence- <u>Inter Personal</u> values	Lab	HS	2
3	U17VEP3503	Human Excellence-Family Values	Lab	HS	3
4	U17CHT3000	Environmental Science and Engineering	Theory	MC	3
5	U17VEP4504	Human Excellence-Professional Values	Lab	HS	4
6	U17IST4000	Constitution of India	Theory	MC	4
7	U17VEP5505	Human Excellence-Social Values	Lab	HS	5
8	U17VEP6506	Human Excellence-National Values	Lab	HS	6
9	U17VEP7507	Human Excellence-Global Values	Lab	HS	7

SL.No:5 The course U17FTT6002 apparel merchandising and costing and clubbed and offered as single course.



Semester VI										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U17FTT6001	Apparel Production Planning and Control	Theory	PC	3	0	0	0	3	U17FTT4001
2	U17FTT6002	Apparel Merchandising and Cost Management	Theory	PC	3	0	0	0	3	Nil
3	U17FTT6003	Industrial Engineering in Apparel Industry	Theory	PC	3	0	0	0	3	U17FTI3204
4	U17FTE....	Programme Elective I	Theory	PE	3	0	0	0	3	Nil
5	U17OE....	Open Elective II	Theory	OE	3	0	0	0	3	Nil
6	U17FTE....	Programme Elective II	Theory	PC	3	0	0	0	3	Nil
7	U17FTP6504	Apparel CAD lab	Lab	PC	0	0	2	0	1	U17FTI4202
8	U17FTP6505	Portfolio Presentation I	Lab	PC	0	0	2	0	1	U17FTI4202
9	U17INI6600	Engineering Clinic IV	Project based course	ES	0	0	4	2	3	Nil
Total Credits									23	

L	T	P	J	C
3	0	0	0	3

U17FTT6002 APPAREL MERCHANDISING AND COST MANAGEMENT

Course Outcomes

After successful completion of this course, the students should be able to

CO1	Acquire knowledge in basic principles of merchandising	K2
CO2	Acquire knowledge in sourcing and documentation	K2
CO3	Describe the factors that determine the cost of apparel products	K2
CO4	Calculate the CMT cost for different types of garments	K4
CO5	Evaluate the cost of apparel products based on various specifications of garments	K5
CO6	Acquire knowledge on various pricing techniques, budgeting and cost volume profit analysis	K2

Pre Requisite : NIL

CO/PO Mapping														
(S/M/W indicates strength of correlation) S-Strong, M-Medium, W-Weak														
COs	Programme Outcomes(POs)												PSOs	
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO8	PO 9	PO1 0	PO1 1	PO12	PSO 1	PS O2
CO1		S								S				
CO2		S		S										
CO3	S	S		S							S	S		

CO4		S									S		S	
CO5		S									S	S	S	
CO6		S							S		S			

Course Assessment methods

Direct	Indirect
1. Internal tests 2. Assignment 3. Group Presentation 4. Tutorial 5. End Semester Exam	1. Course Exit Survey

MERCHANDISING

9 Hours

Definition of merchandising. Classification of exporters- Manufacturer exporter, Merchant exporter, Job worker (CM/CMT),

Functions of merchandising division - Role and responsibilities of a merchandiser- different types of buyers. Communications with the buyers - awareness of current market trends- product development- line planning and line presentation.

SOURCING AND DOCUMENTATION

9 Hours

Need for sourcing-sourcing materials-manufacturing resources planning-principles of MRP. Sourcing strategies- Overseas sourcing. Supply chain and demand chain analysis- Materials management for quick response.

Order confirmation, various types of export documents, Pre-shipment, Post -shipment documentation, Terms of sale, payment, shipment etc.

COST ACCOUNTING:

6 Hours

Objectives, uses of cost accounting. Elements of cost. Direct material, Direct labour, Factory overheads. Cost- Fixed, variable, semi variable. Estimating and costing-

RAW MATERIAL AND CMT COST:

9 Hours

Factors that determine cost of garments- material cost- cost of yarn, cost of fabric production, cost of processing. Width and design of fabric affecting cost. Accessories and their costing. Packing and labeling cost

Cost of components –cutting cost – making and trim cost (CMT cost) – CMT cost for different types of garments. Shipment cost.

GARMENT PRICING AND CVP ANALYSIS

12 Hours

Determining pricing of apparel products: sample costing-marginal cost, cost plus pricing methods; Full cost pricing, conversion cost pricing, differential cost pricing, variable cost pricing, direct cost pricing. Derivation of cost of apparel products- woven/knits.

Ratio analysis, price / volume analysis. Break even analysis. Depreciation. Budgeting for apparel industry.

Theory: 45

Tutorial: 0

Practical: 0

Project: 0

Total: 45 Hours

REFERENCES

1. Philip Kotler, Kelvin Lane Keller, Abraham Koshy and Mithileshwar Jha, "Marketing Management a South Asian Perspective", Pearson Education India, 2006.
 2. John Donnellan "Merchandise Buying and Management", Farichild Publications, inc., New York, 2002.
 3. M.Y. Khan and P.K. Jain "Cost Accounting", Hill publishing Ltd., New Delhi, 2007.
 4. Ruth E. Glock and Grace I. Kunz, "Apparel Manufacturing Sewn Product Analysis", Dorling Kindersley (India) Pvt. Ltd., 2005.
 5. Chakraborty S K, "Cost Accounting and Financial Management", New age International, 2004.
- Ruth E Glock and Grace I Kunz, "Apparel Manufacturing", Prentice Hall, New Jersey, Fourth Edition, 2005



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Department of Computer Applications

AY: 2017-18

Date: 11.04.2018

Action taken report -Employers Feedback

S.No	Analysis	Action taken report
1.	To strengthen the problem solving and soft skills of the students to help them clear the aptitude tests.	Placement training hour was incorporated in the regular class time table and faculty were allotted to train the students. One credit Courses were added in the curriculum from II to IV semester: P18ENP2501 Professional Skills I P18ENP3501 Professional Skills II P18ENP4501 Professional Skills III
2.	Focus more on the practical training aspects	Students were encouraged to do interdisciplinary projects in Engineering clinics lab (P18INI4600) and mini project (P18CAP5701) during fourth semester and fifth semester respectively.

Prepared By,

BoS Coordinator

Approved By,

BoS Chairman

Proof for Action Taken:

Proof for Action Taken:

SEMESTER-II							
Course Code	Course Title	Course Mode	L	T	P	J	C
P18CAT2101	Data Structures	Theory	3	1	0	0	4
P18CAI2202	Database Management System	Embedded – Theory & Lab	3	0	2	0	4
P18CAT2103	Computer Networks	Theory	3	1	0	0	4
P18CAI2304	Software Engineering	Embedded - Theory & Project	3	0	0	2	4
P18CAP2501	Data Structures Lab Using C	Lab	0	0	4	0	2
P18CAP2502	Python Programming Lab	Lab	0	0	4	0	2
P18ENP2501	Professional Skills I	Lab	0	0	2	0	1
Total Credits							21
Total Hours per week							28
SEMESTER-III							
Course Code	Course Title	Course Mode	L	T	P	J	C
P18CAI3201	User Interface Design and Development	Embedded – Theory & Lab	3	0	2	0	4
P18CAT3102	Analysis of Algorithms	Theory	3	1	0	0	4
P18CAT3003	Data Mining and Visualization	Theory	3	0	0	0	3
P18MAI3201	Probability and Statistics for Data Analysis	Embedded – Theory & Lab	3	0	2	0	4
P18CAI3204	Programming with JAVA	Embedded – Theory & Lab	3	0	2	0	4
P18ENP3501	Professional Skills II	Lab	0	0	2	0	1
P18INI3600	Engineering Clinic –I	Embedded Lab& Project	0	0	4	2	3
Total Credits							23
Total Hours per week							30

[illegible]

SEMESTER-V								
Course Code	Course Title	Course Mode	L	T	P	J	C	
P18CAI5301	Cloud Application Development	Embedded - Theory & Project	3	0	0	2	4	
P18CAE _ _ _ _	Programme Elective II	Theory	3	0	0	0	3	
P18CAE _ _ _ _	Programme Elective III	Theory	3	0	0	0	3	
P18CAP5701	Mini Project / Industry	Project	0	0	0	12	6	
Total Credits							16	
Total Hours per week							23	



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Department of Mechanical Engineering

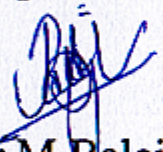
AY: 2017-18

Date: 11 – 04 – 2018

Employers Feedback

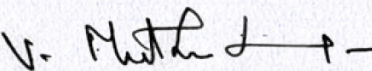
1. Industry nominee expressed his satisfaction on the discussed agenda and suggested the department to explore possibilities to give credits for internships.

Prepared By,


Dr.M.Balaji

BoS Coordinator

Approved By,



Dr.V.Muthukumaran

BoS Chairman

Professor & Head
Department of Mechanical Engineering
Kumaraguru College of Technology
Coimbatore-641 049.



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Department of Mechanical Engineering

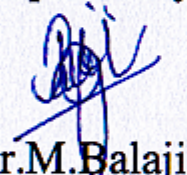
AY: 2017-18

Date: 11 – 04 – 2018

Employers Feedback Analysis Report

1. Industry nominee expressed his satisfaction on the discussed agenda and suggested the department to explore possibilities to give credits for internships. – The inputs were considered, and department will explore the possibility of offering it as mandatory credited course in future.

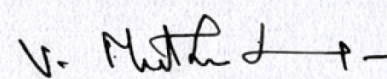
Prepared By,



Dr.M.Balaji

BoS Coordinator

Approved By,



Dr.V.Muthukumar

BoS Chairman

Professor & Head

**Department of Mechanical Engineering
Kumaraguru College of Technology
Coimbatore-641 049.**



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Department of Mechanical Engineering

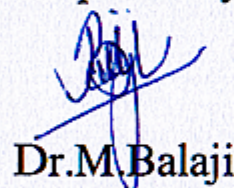
AY: 2017-18

Date: 11 – 04 – 2018

Action taken report -Employers Feedback

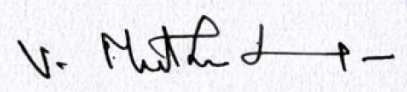
S.No	Analysis	Action taken report
1.	Industry nominee suggested to explore possibilities to give credits for internships	Students will be motivated to undergo industrial internship.

Prepared By,


Dr.M.Balaji

BoS Coordinator

Approved By,


Dr.V.Muthukumaran

BoS Chairman

Professor & Head
Department of Mechanical Engineering
Kumaraguru College of Technology
Coimbatore-641 049.



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Department of Mechatronics Engineering

AY: 2017-18

Date:(1.8.17))

Action taken report Employer's Feedback

S.No	Analysis	Action taken report
1.	Suggested to change the name of the course from U15MCT504 Mechatronics for machining to U15MCT504 Precision manufacturing	U15MCT504 Precision manufacturing was changed in R17
2.	The committee also suggested to include IOT Topics in U15MCT701 robotics and automation course	IOT Subject was introduced as separate in next R17
3.	Suggested to Include U15MCOE02 Biomimetic and bio inspired robotics in professional elective.	U15MCOE02 Biomimetic and bio inspired robotics is included as open elective.

Prepared By,

BoS Coordinator

Approved By,

BoS Chairman

Proof 1:

14.	U17MCE0013	Precision Manufacturing	Theory	PE	3	0	0	0	3
15.	U17MCE0015	Operation Research	Theory	PE	3	0	0	0	3

Proof 2:

8.	U17MCE0007	Smart Manufacturing	Theory	PE	3	0	0	0	3
9.	U17MCE0008	Statistical Quality Control	Theory	PE	3	0	0	0	3

Proof 3:

***OPEN ELECTIVE**

Code No.	Course Title	Cate gory	Con tact Hou rs	L	T	P	C	Pre- requisites
THEORY								
U15MCOE01	Robotics for Engineers	OE	3	3	0	0	3	
U15MCOE02	Biomimetics and bioinspired design	OE	3	3	0	0	3	
U15MCOE03	Textile Mechatronics	OE	3	3	0	0	3	