KUMARAGURU
college of technology
character is life

Department of Electrical and Electronics Engineering

AY: 2017-18 **date: 13-04-2018**

Action taken report -Students Feedback

S.No	Analysis	Action taken report
1	Python programming course could be introduced to enhance the programming skills.	Python Programming course is included in R18 regulation U18CSI12201-Python Programming
2	Internet of Things (IOT) course with both theory /lab component and Android can be included.	U18EEE0008 internet of things along with practical components is Included in R18 as elective course
3	Programmable Logic Controllers (PLC) course with both theory and lab component can be included in the curriculum.	PLC automation course is included In R17 & R18 regulation

Prepared By,

Dr,V.Kandasamy

BoS Coordinator

Approved By,

13/4/18

Dr.K.Malarvizhi

BoS Chairman

Action Taken: 1 - Python Programming course is included in R18 regulation U18CSI12201- Python Programming

U18CSI2201 **PYTHON PROGRAMMING**

(Common to All Branches)

L	T	P	J	C
2	0	2	0	3

COURSE OUTCOMES

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

CO1 Classify and make use of python programming elements to solve and debug simple logical problems.(K4,S3)
CO2 Experiment with the various control statements in Python.(K3,S2)
CO3 Develop Python programs using functions and strings.(K3,S2)
CO4 Analyze a problem and use appropriate data structures to solve it.(K4,S3)
CO5 Develop python programs to implement various file operations and exception handling.(K3,S2)

CO/PO MAPPING
(S/M/W indicates strength of correlation) S-Strong, M-Medium, W-Weak

Cos	PROGRAMME OUTCOMES (POs)												PSO		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1		S			M					M		M			
CO2			M							M		M			
CO3			M							M		M		M	
CO4	S	S	M		M					M		M		M	
CO5			M							M		M			

COURSE ASSESSMENT METHODS

Direct
1. Continuous Assessment Test I, II (Theory component) 2. Open Book Test, Assignment 3. Viva, Experimental Report for each Experiment (lab Component) 4. Model Examination (lab component) 5. End Semester Examination (Theory and lab components)
Indirect
1. Course-end survey

THEORETICAL COMPONENT CONTENTS:

BASICS OF PYTHON PROGRAMMING **6 Hours**

Introduction-Python Interpreter-Interactive and script mode -Values and types, operators, expressions, statements, precedence of operators, Multiple assignments, comments.

CONTROL STATEMENTS AND FUNCTIONS IN PYTHON **6 Hours**

Conditional (if), alternative (if-else), chained conditional (if-elif-else)-Iteration-while, for, break, continue, pass – Functions - Introduction, inbuilt functions, user defined functions, passing parameters, return values, recursion, Lambda functions.

Signature of the Chairman BOS EEE

DATA STRUCTURES: STRINGS,LISTS and SETS **7 Hours**

Strings-String slices, immutability, string methods and operations -Lists-creating lists, list operations, list methods, mutability, aliasing, cloning lists, list and strings, list and functions-list processing-list comprehension, searching and sorting, Sets-creating sets, set operations.

DATA STRUCTURES: TUPLES, DICTIONARIES **5 Hours**

Tuples-Tuple assignment, Operations on Tuples, lists and tuples, Tuple as return value- Dictionaries-operations and methods, Nested Dictionaries.

FILES, MODULES, PACKAGES **6 Hours**

Files and Exception-Text files, reading and writing files, format Operator-Modules-Python Modules-Creating own Python Modules-packages, Introduction to exception handling.

PRACTICAL COMPONENT CONTENTS:

LIST OF EXPERIMENTS

1. Implement simple python programs using interactive and script mode.
2. Develop python programs using id() and type() functions
3. Implement range() function in python
4. Implement various control statements in python.
5. Develop python programs to perform various string operations like concatenation, slicing, Indexing.
6. Demonstrate string functions using python.
7. Implement user defined functions using python.
8. Develop python programs to perform operations on list
9. Implement dictionary and set in python
10. Develop programs to work with Tuples.
11. Create programs to solve problems using various data structures in python.
12. Implement python program to perform file operations.
13. Implement python programs using modules and packages.

REFERENCES

1. Ashok NamdevKamthane,Amit Ashok Kamthane, “Programming and Problem Solving with Python” , Mc-Graw Hill Education,2018.
2. Allen B. Downey, “Think Python: How to Think Like a Computer Scientist”, Second edition, Updated for Python 3, Shroff / O’Reilly Publishers, 2016.
3. Robert Sedgewick, Kevin Wayne, Robert Dondero, “Introduction to Programming in Python: An Inter-disciplinary Approach”, Pearson India Education Services Pvt. Ltd., 2016.
4. Timothy A. Budd,” Exploring Python”, Mc-Graw Hill Education (India) Private Ltd., 2015.
5. Kenneth A. Lambert, “Fundamentals of Python: First Programs”, CENGAGE Learning, 2012.
6. Charles Dierbach, “Introduction to Computer Science using Python: A Computational Problem Solving Focus”, Wiley India Edition, 2013.

E BOOKS AND ONLINE LEARNING MATERIALS

1. www.mhhe.com/kamthane/python
2. Allen B. Downey, Think Python: How to Think Like a Computer Scientist, Second edition, Updated for Python 3, Shroff / O’Reilly Publishers, 2016 (http://greenteapress.com/wp/think-python/)

Signature of the Chairman BOS EEE

Proof for Action Taken: 2 - U18EEE0008 internet of things along with practical components is Included in R18 as elective course

U18EEE0008	INTERNET OF THINGS	L	T	P	J	C
		2	0	2	0	3

COURSE OUTCOMES

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

CO1	Outline the Internet of Things Architecture, Sensor, Actuators and Networking	**K2**
CO2	Summarize various hardware and software elements of IoT	**K2**
CO3	Outline the various associated technologies of IoT	**K2**
CO4	Illustrate IoT for different Commercial and Industrial applications.	**K2**
CO5	Model the IoT application	**K3**

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									
CO2					S									
CO3					S									
CO4					S									
CO5					S								S	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:

Introduction to IoT **8 hours**

Architectural Overview, Design principles and needed capabilities, IoT Applications, Sensing, Actuation, Basics of Networking, M2M and IoT Technology Fundamentals- Devices and gateways, Data management, Business processes in IoT, Everything as a Service(XaaS), Role of Cloud in IoT, Security aspects in IoT.

Elements of IoT **9 Hours**

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Hardware Components- Computing (Arduino, Raspberry Pi), Communication, Sensing, Actuation, I/O interfaces.
Software Components- Programming API's (using Python/Node.js/Arduino) for Communication Protocols-MQTT, BLE, CoAP, UDP, TCP, LoRa WAN.

Associated Technologies **8 Hours**

Introduction to SDN-SDN for IoT, Data Handling and Analytics, Cloud Computing-Cloud Computing, Fog Computing-Edge Computing, Li-Fi.

APPLICATIONS **5 Hours**

Smart Cities and Smart Homes-Connected Vehicles, Smart Grid, Industrial IoT, Precision Agriculture, Healthcare.

PRACTICAL COMPONENT CONTENTS:
LIST OF EXPERIMENTS

Arduino I/O programming

1. LED and DIP Switch
2. Interfacing with Sensor and Actuators
3. Interfacing with LCD Display
4. Communication over Bluetooth-MIT APP Inventor
5. Cloud Interfacing (Azure/Amazon web services/Think speak)

Raspberry Pi Programming using Python

6. LED and DIP Switch
7. Interfacing with Sensor and Actuators
8. To install MySQL database on Raspberry Pi and perform basic SQL queries.
9. Write a program to create TCP/UDP server on Arduino/Raspberry Pi and respond with humidity data to TCP client when requested.
10. Cloud Interfacing (Azure/Amazon web services/Think speak)

Study on Industrial IoT Gateway and LoRa Communication

REFERENCES

1. Vijay Madisetti, Arshdeep Bahga, Ïnternet of Things, "A Hands on Approach", University Press
2. David Hanes, "IoT Fundamentals Networking Technologies, Protocols, and Use Cases for Internet of Things", CISCO Press, 2017
3. Pethuru Raj and Anupama C. Raman, "The Internet of Things: Enabling Technologies, Platforms, and Use Cases", CRC Press, 2017
4. Raj Kamal, "Internet of Things: Architecture and Design", McGraw Hill
5. NPTEL Reference: https://nptel.ac.in/courses/106/105/106105166/

Theory: 30 **Tutorial: 0** **Practical: 30** **Project: 0** **Total: 60 Hours**

Signature of the Chairman BOS EEE

Proof for Action Taken: 3 - PLC automation course is included In R17 & R18 regulation.

U17EEI4205 **PLC AUTOMATION**

L	T	P	J	C
2	0	2	0	3

COURSE OUTCOMES

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

CO1	Describe the architecture of PLC.	**K2**
CO2	Understand the working of PLC analog input and output devices.	**K2**
CO3	Program on basic ladder logic diagram using timer and counters.	**K2**
CO4	Understand the interface of PC with PLC and hardware implementation	**K2**

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	PO 8	PO 9	PO1 0	PO1 1	PO1 2	PSO 1	PSO 2
CO 1	S													
CO 2	S		S											
CO 3	S				S						M			
CO 4	S			S									S	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:

INTRODUCTION TO PLC **10 hours**

Definition and history of PLC, Overall PLC system, PLC Input and output modules, central processing unit, processor, input modules (Interfaces), power supplies , PLC advantages and disadvantages, selection criteria for PLC, Input ON/OFF switching devices, Input analog devices, Output ON/OFF devices, output analog devices.

PROGRAMMING OF PLC **10 hours**

Methods of Programming - construction of PLC ladder diagram, Basic components & their symbols in ladder diagram, Fundamental of ladder diagram, Boolean logic &relay logic, and analysis of rungs. Timers and counters, programming with timers and counters.

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APPLICATION OF PLC **10 hours**

Instructions in PLC , program control instruction ,math instruction, sequencer instruction , use of PC as PLC , application of PLC, case studies of bottle filling system.

PRACTICAL COMPONENT CONTENTS:

LIST OF EXPERIMENTS

1. Develop a Boolean logic to flash Lamp
2. Implementation of simple combination logic using PLC
3. Sequential Logic using PLC
4. Timer – On Delay and Off Delay
5. Counter – Up and Down
6. Design of Alarms and Interlocks
7. Water Level Control System
8. Temperature control system
9. Implementation of motor control forward and Reverse control using PLC

REFERENCES

1. Frank D. Petruzella, "Programmable Logic Controllers", McGraw-Hill Companies, 3rdEdition, March 2013.
2. Ian G.Warnock, "Programmable Controllers Operation and Application", Prentice Hall International, UK, 1992.
3. John W. Webb and Ronald A.Reis, "Programmable Logic Controllers – Principles and Applications", Prentice Hall Inc., New Jersey, 3rdEdition, 1995.
4. Krishnakant , "Computer Based Industrial Control", Prentice Hall of India, 1997.

Theory: 30 **Tutorial: 0** **Practical:15** **Project: 0** **Total: 45 Hours**

Signature of the Chairman BOS EEE

U18EEI4205 **PLC AUTOMATION**

L	T	P	J	C
2	0	2	0	3

COURSE OUTCOMES

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

CO1	Describe the architecture of PLC.	K2
CO2	Understand the working of PLC analog input and output devices.	K2
CO3	Program on basic ladder logic diagram using timer and counters.	K2
CO4	Understand the interface of PC with PLC and hardware implementation	K2

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													
CO2	S		S											
CO3	S				S						M			
CO4	S			S										
CO5	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

INTRODUCTION TO PLC **10 hours**

Definition and history of PLC, Overall PLC system, PLC Input and output modules, central processing unit, processor, input modules (Interfaces), power supplies , PLC advantages and disadvantages, selection criteria for PLC, Input ON/OFF switching devices, Input analog devices, Output ON/OFF devices, output analog devices.

PROGRAMMING OF PLC **10 hours**

Methods of Programming - construction of PLC ladder diagram, Basic components & their symbols in ladder diagram, Fundamental of ladder diagram, Boolean logic &relay logic, and analysis of rungs. Timers and counters, programming with timers and counters.

Signature of the Chairman BOS EEE

APPLICATION OF PLC **10 hours**

Instructions in PLC , program control instruction ,math instruction, sequencer instruction , use of PC as PLC , application of PLC, case studies of bottle filling system.

LABORATORY COMPONENT CONTENTS:

LIST OF EXPERIMENTS

1. Develop a Boolean logic to flash Lamp
2. Implementation of simple combination logic using PLC
3. Sequential Logic using PLC
4. Timer – On Delay and Off Delay
5. Counter – Up and Down
6. Design of Alarms and Interlocks
7. Water Level Control System
8. Temperature control system
9. Implementation of motor control forward and Reverse control using PLC

REFERENCES

1. Frank D. Petruzella, “Programmable Logic Controllers”, McGraw-Hill Companies, 3rdEdition, March 2013.
2. Ian G.Warnock, “Programmable Controllers Operation and Application”, Prentice Hall International, UK, 1992.
3. John W. Webb and Ronald A.Reis, “Programmable Logic Controllers – Principles and Applications”, Prentice Hall Inc., New Jersey, 3rdEdition, 1995.
4. Krishnakant , “Computer Based Industrial Control”, Prentice Hall of India, 1997.

Theory: 30 **Tutorial: 0** **Practical:30** **Project: 0** **Total: 60 Hours**

Signature of the Chairman BOS EEE

KUMARAGURU

DEPARTMENT OF BIOTECHNOLOGY

Action Taken Report - "Students Feedback"
Academic Year 2017-2018

Date: 11-Apr 2018

S.No	Suggestions	Action Taken
1.	Provision to take up online course to be encouraged	Online course in consultation with DCC can be taken from NPTEL, Swayam and Coursera. Details are included in the R17 and R18 curriculum.
2.	Alumni talks to be encouraged	Alumni talks are frequently arranged by the Department association and by department alumni coordinator

Prepared by
BOS Coordinator

Approved by
Chairman BOS

LIST OF ELECTIVES								
S.NO	**COURSE CODE**	**COURSE TITLE**	**COURSE MODE**	**L**	**T**	**P**	**J**	**C**
PROGRAME ELECTIVE I & II								
Group I - Bioprocess Technology								
1	P18BTE0001	Biorefinery and Sustainable Technology	Theory	3	0	0	0	3
2	P18BTE0002	Wastewater Treatment Technology	Theory	3	0	0	0	3
3	P18BTE0003	Bioremediation Technology	Theory	3	0	0	0	3
Group II - Biopharmaceutical Technology								
4	P18BTE0004	Molecular Diagnostics and Therapeutics	Theory	3	0	0	0	3
5	P18BTE0005	Cell culture and Vaccine Technology	Theory	3	0	0	0	3
6	P18BTE0006	Clinical Research and Management	Theory	3	0	0	0	3
7	P18BTE0007	Nanomaterials and Applications	Theory	3	0	0	0	3
8	P18BTE0008	Drug Delivery Principles & Engineering	Theory	3	0	0	0	3
9	P18BTE0009	Human Physiology & Allied Diseases	Theory	3	0	0	0	3

LIST OF ONE-CREDIT COURSES		
S.NO	**COURSE CODE**	**COURSE TITLE**
1	P18BTI0101	Pharmacovigilance
2	P18BTI0202	Mushroom Production
3	P18BTI0203	Natural Products
4	P18BTI0204	Protein Purification using FPLC
5	P18BT——	

* Any new course to be included after approval

Signature of BOS Chairman

Proof: Alumni Interaction with the students

Alumni Interaction Series and Hands-on Training on Phytochemical Extraction. Mr.Sampath, Senior Manager from Himalaya Drug Company P Ltd conducted the session

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Department of Aeronautical Engineering

AY: 2017-18 **Date: 11.04.2018**

Action taken report -Student Feedback

S.No	Analysis	Action taken report
1.	Flight Dynamics can be split into Aircraft Performance & Stability and Control courses	Will be considered in the next revision of Curriculum & Syllabi.
2.	Rocket Propulsion should be offered as a core course	Rocket Propulsion is offered as a core course

Prepared By,

BoS Coordinator

Approved By,

BoS Chairman

Proof for Action Taken: 2 Rocket Propulsion is offered as a core course

Semester VI										Pre-requisite
S.No	**Course code**	**Course Title**	**Course Mode**	**CT**	**L**	**T**	**P**	**J**	**C**	
1	U18AET6001	Flight Dynamics	Theory	PC	4	0	0	0	4	U18AEI4201
2	U18AET6002	Finite Element Method	Theory	PC	3	0	0	0	3	U18AEI3203
3	U18AET6003	Vibrations and Aeroelasticity	Theory	PC	3	0	0	0	3	U18AEI5202
4	U18AET6104	Rocket Propulsion	Theory	PC	2	1	0	0	3	U18AEI5205
5	OE II	Open Elective II	Theory	OE	3	0	0	0	3	-------
6	U18AEE00--	Professional Elective I	Theory	PE	3	0	0	0	3	-------
7	U18AEP6505	Design and Simulation Laboratory	Lab	PC	0	0	2	0	1	U18AET5003
8	U18AEP6506	Airframe and Aero Engine Maintenance Laboratory	Lab	PC	0	0	2	0	1	-------
								Total Credits	**21**	
								Total Contact Hours/week	**23**	

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KCT
BUSINESS SCHOOL

Department of Management Studies

Date: 30.03.2018

AY: 2017-18

Summary of the Action taken report – Students

S.No	Analysis	Action taken report
1.	New syllabus and course plans are difficult to contemplate	Explanation on PO PEO and on outcome-based education are to be included in the Student FLIP schedules
2.	More industry orientation is required	Industry interaction and all student forum and Angadi shall have industry representatives and opinions.
3.	Courses on Allied Analytics courses are to be offered with	Have been recommended and new courses added for amendment of the syllabus

Prepared By,

BoS Coordinator

Approved By,

BoS Chairman

KUMARAGURU COLLEGE OF TECHNOLOGY
KCT BUSINESS SCHOOL
COIMBATORE

Proof of Action Taken

1. Proof of Explanation on PO PEO and on outcome-based education included in the Student FLIP schedules

S.no	Topic	Hrs. Mints	Faculty + Student	Faculty Lead
	SELF DEVELOPMENT			
	Goal Setting, Plan of action, commitment	1.3	2 + 4	Dr. Vijila Kennedy / Dr. Kirupapriyadharsini
	How to make effective oral/PPT presentation	1	3 + 3	Dr. Vijila Kennedy /Ms.Lakshmi Subramani / Dr.Lakshmi Meera
	Professional Behaviour	1	1 + 5	Dr.Gokilavani
	How to learn from Peers	1	1 + 5	Dr. R.Hemanalini
	Can I Be an Entrepreneur	1	2 + 4	Dr.Lakshmi Meera
	How to participate in Institution Administration	1	1 + 5	Dr. Vijila Kennedy
	Movie Time	0.3		Students Association
	ACADEMIC			
	How do I read the course plan	0.45	4 + 2	Dr. B.Poongodi / Dr.V.Kannan/ Ms.Deepa.M
	How to write Assignment (Plagiarism)	0.3	4+ 2	Mr.A.Senthil Kumar / Dr. Mary Cherian / Ms.S.Sangeetha / Mr.V.Kaarthiekheyan
	Introduction to General Interset / Value added course	0.3	2 + 4	Dr. Mary Cherian / Dr.Lakshmi Meera
	Introduction to Blooms Taxonomy	0.3	4 + 2	Dr. Mary Cherian / Dr.Lakshmi Meera / Dr. Mohanamani.P / Dr. B.Poongodi
	My Programme structure	0.45	4 + 2	Dr.V.Kannan / Dr. Mary Cherian / Dr. B.Poongodi / Dr. R.Hemanalini
	News Reading	1.3	6	Ms.S.Sangeetha / Dr. Nalini.P /Dr.Lakshmi Meera/ Dr.V.Kaarthiekheyan/ Ms.Deepa.M/ Dr.Gokilavani
	Training Orientation	2	1 + 5	Dr.Gokilavani

	TECHNOLOGY			
	Tips for Google Search And using Social Media	0.45	1 + 5	Ms.Lakshmi Subramani
	Blog Writing	0.45	1 + 5	Mr. Anshul Saxena
	Technology Enabled Learning –Moodle	1	2 + 4	Dr. Jaishankar / Dr. R.Vinayasundaram
	How to use library & on line journals	0.45	5 + 2	Ms. A.Latha / Dr. R.Hemanalini / Ms. Mohanamani.P / Dr. B.Poongodi
	PREPARATORY COURSE			
	Case study	10	6	Dr. Mary Cherian / Prof. S.Swaminathan / Dr. Nalini.P / Ms.Deepa.M / Dr.Lakshmi Meera / Dr.V.Kaarthiekheyan
	Accounts	10	4 + 2	Prof. V.R.Nedunchezhian / Dr. Mohanamani.P / Mr.A.Senthil Kumar / Ms.S.Sangeetha
	Statistics	10	4 + 2	Dr. Kirupapriyadharsini / Dr. Jaishankar / Ms. A.Latha / Dr. B.Poongodi
	Computer skills	10	3 + 3	Dr. Jaishankar / Dr. Kirupapriyadharsini/ Ms.Lakshmi Subramani

2. Proof of Angadi -industry representatives

3. Proof of Revised Analytics subjects in Amended Regulation

Analytics & Systems Courses

S.No	Course Code	Course Title	Credits	Assessment		Page No.
				CAM	EoS	
1	P17BAEEA01	Introduction to Business Analytics	4	50	50	138
2	P17BAEEA02	Database Management System	4	50	50	139
3	P17BAEEA03	Business Intelligence	4	50	50	140
4	P17BAEEA04	Enterprise Resource Planning	4	50	50	141
5	P17BAEEA05	Big Data Platforms	4	50	50	142
6	P17BAEEA12	Programing for Business Analytics	4	50	50	143
7	P17BAEEA07	Advanced Statistics and Data Mining*	4	50	50	144
8	P17BAEEA08	Predictive Analytics	4	50	50	145
9	P17BAEEA09	Machine Learning	4	50	50	146
10	P17BAEEA10	Digital Analytics	4	50	50	147
11	P17BAEEA11	Web and Social Media Analytics	4	50	50	148
12	P17BAECA12	Advance Excel	1	50	-	149
13	P17BAEEA13	Digital Transformation	1	50	-	
14	P17BAEEA14	Programming language for business analytics	4	50	50	
15	P17BAEEA15	Text Mining	1	50	-	

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Department of Textile Technology

AY: 2017-18 **Date: 11.04.2018**

Action taken report -Students Feedback

S.No	Analysis	Action taken report
1.	Basic textile course to be introduced in first year of study	Introduction to textile course introduced in II semester Course code: U17TXI2201 Course Name : Introduction to textile

Approved by

Dr.Bharathi Dhurai

BoS Chairperson

KUMARAGURU college of technology
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Department of Textile Technology

AY: 2017-18 **Date: 11.04.2018**

Action taken report -Students Feedback

S.No	Analysis	Action taken report
1.	Basic textile course to be introduced in first year of study	Introduction to textile course introduced in II semester Course code: U17TXI2201 Course Name : Introduction to textile

Proof
Introduction to textile course introduced in II semester
Course code: U17TXI2201
Course Name : Introduction to textile

U17TXT2201 **Introduction of Textiles**

L	T	P	J	C
1	0	2	0	2

Course Outcomes

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

CO1: Compare different types of textile industry in India and the world
CO2: Identify the different types of fibres
CO3: Understand the spinning process and identify different types of yarns
CO4: Summarize the fabric formation process
CO5: Understand basic concepts of coloration of textiles
CO6: Discuss the overall process of the textile products

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	W											W
CO2	S	M										
CO3	M	M										
CO4	S	M					W					
CO5	M											

Course Assessment methods

Direct
1. Continuous Assessment Test I, II 2. Open book test; Assignment; Journal paper review, Group Presentation, 3. End Semester Examination
Indirect
1. Course-end survey

OVERVIEW OF THE TEXTILE INDUSTRY 2 Hours

History of textiles. Types of textile industries The textile industry around the world

FIBRE IDENTIFICATION 4 Hours

Theory: Introduction to the different types of textile fibres (plant, animal, fur, mineral, artificial, and synthetic). Basic terminology used to denote the fibre properties.

Practical: Basic fibre identification by visual examination and handle / feel test.

SPINNING AND YARNS 6 Hours

Theory: Preparation and spinning of main types of natural fibres; the basic spinning techniques: hand spinning; wheel (spindle, spinning); machine spinning.

Practical: Hand spinning and wheel spinning; identification of the main types of spun yarns.

WEAVES AND WEAVING 6 Hours

Theory: Introduction to the main types of hand and machine looms (flat, vertical, backstrap, treddle, warp-weighted, draw, jacquard, etc; introduction to the main types of weaves and finishes).

Practical: Identification of the main types of weaves; drawing a simple weave graph; working with different types of simple looms to reconstruct the weaves just looked at.

NON-WOVEN MATERIALS 4 Hours

Theory: Introduction to the main forms of non-woven materials: felt, knitted, crochet, braids, laces, etc.

Practical: Identification of the basic non-woven forms; basic felt making.

DYES AND DYEING 4 Hours

Theory: Introduction to the main types of plant, animal, mineral, synthetic dyes and dyeing techniques.

DECORATIVE TECHNIQUES 4 Hours

Theory: Introduction to the main forms of decorative techniques:(a) printed (batik, block, plate, roller, screen; computer); (b) applied (appliqué; embroidery; braids, bands and tassels; sequins, spangles, beads; etc).

Practical: Identification of the basic forms of decoration.

Seminar and Guest Lecture

Theory: 15	**Tutorial: 0**	**Practical:15**	**Project: 0**	**Total: 30 Hours**

REFERENCE:

1. Motivate series “Textiles” by a A-Wynne, Macmillan Education Ltd, London.
2. Lord P.R. and Mohammed M.H., “Weaving – Conversion of Yarn to Fabric”, Merrow Publication, 2001
3. Trotman, E.R., “Dyeing and Chemical Technology of Textile Fibres”, Charles Griffin and Co. Ltd., London. 1991.
4. Hand Book of Nonwovens – Edited by S.J.Russell, Wood head publications Ltd., ISBN- 13: 978-1-85573-603-0, 2007.

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Department of Automobile Engineering

AY: 2017-18

Date: 11.04.2018

Action taken report -Students Feedback

S.No	Analysis	Action taken report
1	Course electives can be given based on the specialization.	Electives are offered stream-wise from Regulation 2017 onwards.

Prepared by,

BoS Coordinator

Approved by,

BoS Chairman

PROFESSIONAL ELECTIVES

Automotive Design

S.No	Course Code	Course Name	Course Mode	CT	L	T	P	J	C	Pre-requisite
1	U17AUE0001	Design of Engine Components	Theory	PE	3	0	0	0	3	U17AUI3202 U17AUI4201 U17AUT3103
2	U17AUE0002	Design of Chassis Components	Theory	PE	3	0	0	0	3	U17AUI3101 U17AUI3102
3	U17AUE0003	Computational Fluid Dynamics	Theory	PE	3	0	0	0	3	U17AUI4202
4	U17AUE0004	Computer Simulation of IC Engine Processes	Theory	PE	3	0	0	0	3	U17AUI4101 U17AUT3104

Automotive Manufacturing

S.No	Course Code	Course Name	Course Mode	CT	L	T	P	J	C	Pre-requisite
1	U17AUE0005	Automotive Components Manufacturing	Theory	PE	3	0	0	0	3	U17AUI3303
2	U17AUE0006	Design for Manufacture and Assembly	Theory	PE	3	0	0	0	3	U17AUI3303
3	U17AUE0007	Composite Materials and Structures	Theory	PE	3	0	0	0	3	Nil
4	U17AUE0008	Additive Manufacturing and Tooling	Theory	PE	3	0	0	0	3	Nil

Automotive Electrical and Electronics

S.No	Course Code	Course Name	Course Mode	CT	L	T	P	J	C	Pre-requisite
1	U17AUE0009	Automotive Control System	Theory	PE	3	0	0	0	3	U17AUI4204
2	U17AUE0010	Auxiliary Vehicle Systems	Theory	PE	3	0	0	0	3	Nil
3	U17AUE0011	Fuel Cell Technology	Theory	PE	3	0	0	0	3	Nil
4	U17AUE0012	Automotive Communication Protocols	Theory	PE	3	0	0	0	3	Nil

Automotive Technology and Management

S.No	Course Code	Course Name	Course Mode	CT	L	T	P	J	C	Pre-requisite
1	U17AUE0014	Off Road Vehicles	Theory	PE	3	0	0	0	3	Nil
2	U17AUE0015	Tyre Technology	Theory	PE	3	0	0	0	3	Nil
3	U17AUE0016	Vehicle Testing and Validation	Theory	PE	3	0	0	0	3	Nil
4	U17AUE0017	Entrepreneurship Development	Theory	PE	3	0	0	0	3	Nil
5	U17AUE0018	Vehicle Transport Management	Theory	PE	3	0	0	0	3	Nil
6	U17AUE0019	Applied Hydraulics and Pneumatics	Theory	PE	3	0	0	0	3	U17AUI4202
7	U17AUE0020	Automotive Aerodynamics	Theory	PE	3	0	0	0	3	U17AUI4202

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Department of Civil Engineering

AY: 2017-18 **11.04.2018**

Action taken report - Student Feedback

S.No	Analysis	Action taken report
1.	Writing technical documents such as tenders and contract documents need more practice.	Suggested topics are included in Estimation Costing and Valuation courses.
2.	Courses and related credits needs to be distributed evenly across all semesters.	Recommended for next regulation.
3.	Total number of credits seems to be less compared to the credits required for pursuing higher studies in abroad universities.	Recommended for implementation in next regulation .

Prepared by,

BoS Coordinator

Approved by,

BoS Chairman

U18CET7001	ESTIMATION,COSTING AND VALUATION	L	T	P	J	C
		3	0	0	0	3

Course Objectives

- The students will acquire knowledge in estimation, tender practices, contract procedures, and valuation and will be able to prepare estimates, call for tenders and execute works.

Course Outcome

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

CO1: Estimate the quantities for buildings, roads, culvert, Septic tank
CO2: Rate Analysis for all Building works, canals, and Roads and Cost Estimate.
CO3: Understand types of specifications, principles for report preparation, tender notices types.
CO4: Gain knowledge on types of contracts
CO5: Evaluate valuation for building and land.

Pre-requisites:Nil

CO/PO Mapping

(S/M/W indicates strength of correlation) S-Strong, M-Medium, W-Weak

COs	Programme Outcomes(POs)												PSO	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1						S				S	S		S	
CO2						S				S	S		S	
CO3						S				S	S		S	
CO4						S				S	S		S	
CO5						S				S	S		S	M

Course Assessment methods:

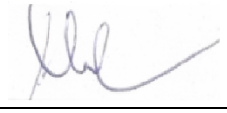
1. Continuous Assessment Test I, II
2. Open book test; Cooperative learning report, Assignment; Journal paper review, Group Presentation, Project report, Poster preparation, Prototype or Product Demonstration etc. (as applicable)
3. End Semester Examination

QUANTITY ESTIMATION **9 Hours**

Philosophy – Purpose – Methods of estimation – Types of estimates – Approximate estimates – Detailed estimate – Estimation of quantities for buildings, bituminous and cement concrete roads septic tank, soak pit, retaining walls –culverts - Preparation of Bar Bending Schedules (additional practice in classroom using computer softwares).

RATE ANALYSIS AND COSTING **9 Hours**

Standard Data – Observed Data – Schedule of rates – Market rates – Standard Data for Man Hours and Machineries for common civil works–Rate Analysis for all Building works, canals, and Roads– Cost Estimates(additional practice in class room using Computer softwares) - (Analysis of rates



Signature of the Chairman
BOS/Civil Engineering

for the item of work asked ,the data regarding labour, rates of material and rates of labour to be given in the Examination Question Paper)

SPECIFICATIONS, REPORTS AND TENDERS **9 Hours**

Specifications – Detailed and general specifications – Constructions – Sources – Types of specifications – Principles for report preparation – report on estimate of residential building – Culvert – Roads – TTTAct2000 – Tender notices – types – tender procedures – Drafting model tenders, E-tendering – Digital signature certificates – Encrypting – Decrypting – Reverse auctions.

CONTRACTS **9 Hours**

Contract – Types of contracts – Formation of contract – Contract conditions – Contract for labour, material, design, construction – Drafting of contract documents based on IBRD /MORTH Standard bidding documents – Construction contracts – Turnkey Projects – Contract problems – Arbitration and legal requirements. Unit of Measurement & Conversion Factors & Learning the methods of Measurements as per Codes

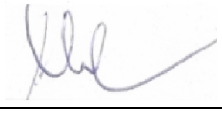
VALUATION **9 Hours**

Definitions – Various types of valuations – Valuation methods - Necessity – Capitalised value – Depreciation – Escalation –Valuation of land–Buildings –Calculation of Standard rent –Mortgage –Lease - Interpretation of Good for Construction Drawings & Understanding the Engineering inputs.

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

REFERENCES

1. Rangalwala S C “Estimating, costing and valuation ”,Charotar Publishing House”2017 17th Edition 2017 (First Reprint) (Revised) ISBN : 9789385039058
2. Dutta .B.N “Estimating and Costing in Civil Engineering: Theory and Practice Including Specifications and Valuations” (2017)
3. R.C.Kohli “A Textbook of Estimating ,Costing & Accounts (Civil)” S. Chand Publishing year-2013
4. A.K. Upadhyay “Civil Estimating & Costing: Including Quality Surveying, Tendering and Valuation” 2013
5. G. B. Deshpande (Author), J. P. Nayak “Quantity surveying, contracts and tenders” 2012
6. B.N.Suresh “Estimating and Costing” First Edition 2006
7. https://study.com/articles/Online_Quantity_Surveying_Courses_and_Classes.html
8. Indian institute of valuation(http://iivindia.org/)
9. Dutta .B.N”Estimation and Costing in civil Engineering,27th Edition -2011
10. Hand Book of Consolidated Data –8/2000, Vol.1,TNPWD
11. Tamil Nadu Transparencies in Tenders Act, 1998
12. Arbitration and Conciliation Act, 1996
13. Standard Bid Evaluation Form, Procurement of Good or Works, The World Bank, April 1996
14. Standard Data Book for Analysis and Rates, IRC, New Delhi, 2003



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BOS/Civil Engineering

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Department of Computer Science and Engineering

AY: 2017-18 **Date: 11.04.2018**

Action Taken Report -Student Feedback

S.No	Analysis	Action taken report
1.	Students felt that it would be better if more practical oriented courses are present in the curriculum	More embedded and practical oriented courses are included in the R17 curriculum
2.	At the end of second year, students should be given a detailed introduction to all the domains (Emerging Technologies and Trends)	The same is given and the students choose their fifth semester program elective based upon their interest.

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

Proof for Action Taken Report Pt. 1 & 2

KUMARAGURU COLLEGE OF TECHNOLOGY, COIMBATORE – 641 049
REGULATIONS 2017

B.E. COMPUTER SCIENCE AND ENGINEERING

CURRICULUM

Semester III										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U17MAT3104	Discrete Mathematics	Theory	BS	3	1	0	0	4	-------
2	U17CSI3201	Data Structures	Embedded - Theory & Lab	PC	3	0	2	0	4	-------
3	U17CSI3202	Object Oriented Programming	Embedded - Theory & Lab	PC	3	0	2	0	4	-------
4	U17CST3003	Computer Architecture	Theory	PC	3	0	0	0	3	-------
5	U17CSI3204	Database Management Systems	Embedded - Theory & Lab	PC	3	0	2	0	4	-------
6	U17INI3600	Engineering Clinic-I	Project based course with lab	ES	0	0	4	2	3	-------
								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	U17MAI4201	Probability and Statistics	Embedded - Theory & Lab	BS	3	0	2	0	4	-------
2	U17CST4001	Design and Analysis of Algorithms	Theory	PC	3	0	0	0	3	U17CSI3201
3	U17CSI4202	Operating Systems	Embedded - Theory & Lab	PC	3	0	2	0	4	U17CST3003
4	U17CST4003	Theory of Computation	Theory	PC	3	0	0	0	3	U17MAT3104
5	U17CSI4204	Software Engineering	Embedded - Theory & Lab	PC	3	0	2	0	4	U17CSI3202
6	U17INI4600	Engineering Clinic-II	Project based course with lab	ES	0	0	4	2	3	U17INI3600
								Total Credits	21	
								Total Contact Hours/week	27	

S. Dhanati.

Signature of BOS chairman, CSE

Semester V										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U17CSI5201	Computer Networks	Embedded - Theory & Lab	PC	3	0	2	0	4	-------
2	U17CST5002	Agile Software Development	Theory	PC	3	0	0	0	3	U17CSI4204
3	U17CSI5203	No SQL Databases	Embedded - Theory & Lab	PC	3	0	2	0	4	U17CSI3204
4	U17CST5004	Social Media Marketing	Theory	PC	3	0	0	0	3	-------
5	U17INI5600	Engineering Clinic-III	Project based course with lab	ES	0	0	4	2	3	U17INI4600
6	U17CSE----	Programme Elective-I	Theory	PE	3	0	0	0	3	-------
7	U17OE----	Open Elective	Theory	OE	3	0	0	0	3	-------
								Total Credits	23	
								Total Contact Hours/week	28	

Semester VI										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U17CSI6201	Internet and Web Programming	Embedded - Theory & Lab	PC	3	0	2	0	4	-------
2	U17CST6002	Wireless Networks and Mobile Systems	Theory	PC	3	0	0	0	3	U17CSI5201
3	U17CSI6203	Data Warehousing and Data Mining	Embedded - Theory & Lab	PC	3	0	2	0	4	U17CSI5203
4	U17INI6600	Engineering Clinic-IV	Project based course with lab	ES	0	0	4	2	3	U17INI5600
5	U17CSE----	Programme Elective-II	Theory	PE	3	0	0	0	3	-------
6	U17OE----	Open Elective	Theory	OE	3	0	0	0	3	-------
								Total Credits	20	
								Total Contact Hours/week	25	

S. Sheela.

Signature of BOS chairman, CSE

Semester VII										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U17CSI7201	Cloud Computing	Embedded - Theory & Lab	PC	3	0	2	0	4	U17CSI5201
2	U17CST7002	Machine Learning Techniques	Theory	PC	3	0	0	0	3	U17CSI6203
3	U17CST7003	Software Testing	Theory	PC	3	0	0	0	3	U17CST5002
4	U17CSE----	Programme Elective -III	Theory	PE	3	0	0	0	3	-------
5	U17CSE----	Programme Elective - IV	Theory	PE	3	0	0	0	3	-------
6	U17CSP7704	Project Phase-I	Project only Course	PW	0	0	0	6	3	-------
								Total Credits	19	
								Total Contact Hours/week	23	

Semester VIII										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U17CSP8701	Project Phase-II	Project only Course	PW	0	0	0	24	12	
								Total Credits	12	
								Total Contact Hours/week	24	

Total Credits	**160**

S. Sreenati.

Signature of BOS chairman, CSE

Mandatory Courses										
S.No	Couse Code	Course Title	Course Mode	L	T	P	J	C	CT	Semester
1	U17VEP3503	Human Excellence-Family Values	Lab	0	0	2	0	0	HS	3
2	U17VEP4504	Human Excellence-Professional Values	Lab	0	0	2	0	0	HS	4
3	U17INT5000	Constitution of India	Theory	2	0	0	0	0	MC	5
4	U17VEP5505	Human Excellence-Social Values	Lab	0	0	2	0	0	HS	5
5	U17VEP6506	Human Excellence-National Values	Lab	0	0	2	0	0	HS	6
6	U17VEP7507	Human Excellence-Global Values	Lab	0	0	2	0	0	HS	7

Programme Electives									
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C
Data Analytics									
1.	U17CSE0001	Big Data Technologies	Theory	PE	3	0	0	0	3
2.	U17CSE0002	Data Visualization	Theory	PE	3	0	0	0	3
3.	U17CSE0003	Artificial Intelligence	Theory	PE	3	0	0	0	3
Networking									
1.	U17CSE0004	IoT Architecture and Protocols	Theory	PE	3	0	0	0	3
2.	U17CSE0005	Adhoc and Sensor Networks	Theory	PE	3	0	0	0	3
3.	U17CSE0006	Software Defined Networks	Theory	PE	3	0	0	0	3
4.	U17CSE0007	Cryptography and Network Security	Theory	PE	3	0	0	0	3
5.	U17CSE0014	Blockchain Technology and applications	Theory	PE	3	0	0	0	3
General									
1.	U17CSE0008	Principles of Compiler Design	Theory	PE	3	0	0	0	3
2.	U17CSE0009	Graphics and Multimedia	Theory	PE	3	0	0	0	3
3.	U17CSE0010	Information Security	Theory	PE	3	0	0	0	3
4.	U17CSE0011	Declarative development of customized applications	Theory	PE	2	0	0	2	3
5.	U17CSE0013	ADX 201 Salesforce Administrator	Theory	PE	2	0	0	2	3

S. Sheela.

Signature of BOS chairman, CSE

KUMARAGURU college of technology
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Department of Fashion Technology

AY: 2017-18

Action taken report –Student Feedback

Date : 11.04.2018

S.No	Analysis	Action taken report
1.	More industrial visits are required to understand the concepts in apparel manufacturing.	Every semester two industrial visits are allowed to students. Based on the need and importance, few more visits are provided.
2.	More industrial training is required for apparel designing, apparel manufacturing and quality control.	One mandatory Industrial training is provided in curriculum. Students are allowed more training based on their interest in semester holidays.
3.	To under about the fabric in better way, the fabric formation i.e. knitting and weaving can be provided as two courses.	The course U17FTT3001 weaving technology and U17FTT5003 knitting technology is provided as two separate courses.

PreparedBy,

BoS Coordinator

Approved By,

BoS Chairman

Sl.No: 2- More industrial training is required for apparel designing, apparel manufacturing and quality control

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: 3- Fabric formation i.e. knitting and weaving can be provided as two courses

U17FTT3001 WEAVING TECHNOLOGY

COURSE OUTCOMES

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

CO1	Acquaint with the objectives and acquire knowledge of working principles of machinery used for preparation of yarn for weaving	K2
CO2	Describe the working principle of beam preparatory machines for weaving.	K2
CO3	Acquire knowledge in the selection of sizing ingredients for different fibres.	K4
CO4	Understand the objectives and working principles of shuttle and shuttleless looms	K2
CO5	Develop knowledge in the selection of suitable preparatory processes for weaving	K4
CO6	Acquire knowledge on parameters for quality control in the preparatory processes and weaving.	K2

Pre Requisite:

1. U17FTT1001 Fibre Science
2. U17FTT2001 Yarn Technology
3. U17FTP1501 Fibre Analytical Laboratory

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												
CO2	S	S												
CO3		S											M	W
CO4		S											W	M
CO5		S	S		S								M	M

Course Assessment methods

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

YARN PREPARATION FOR WEAVING **9 Hours**

ProcessFlow–objectives of winding; principles of cheese and cone winding Machines; concepts in yarn clearing – mechanical, optical and electronic clearers; knotters and splicers; Yarn quality requirements for weaving.

BEAM PREPARATION FOR WEAVING **9 Hours**

Objectives of warping, material flow in beam warping and creels used in warping machines; sectional warping machines.

objectives of sizing; sizing materials and recipes used for different types of fibers; sizing machines; control systems used in sizing machine; sizing filament yarns; concept of single end sizing

SHUTTLE WEAVING **9 Hours**

Objectivesandworkingprinciples– primary, secondary and auxiliary motions; Types of looms – Handloom, Non-automatic, Semi-automatic and Automatic looms; Drop box looms; Terry loom, mechanisms of Tappet, Dobby and Jacquard weaving.

SHUTTLELESS WEAVING **9 Hours**

Basic principles of various shuttleless weaving machines – Projectile, Rapier, Air-jet, Water-jet, Multi-phase; productivity and techno-economics of these machines.

PROCESS CONTROL IN WEAVING **9 Hours**

Process and quality control measures in pirn winding, cone winding, beam warping, sectional warping, sizing, and weaving. Computerised fabric inspection, Loom data system.

TOTAL: 45 Hours

REFERENCES

1. AllanOrmerod,WalterS.Sondhelm,Weaving-TechnologyandOperations, TextileInstituteP ub., 1995.
2. LordP.R.andMohammed,Weaving:Conversionofyarntofabric, M.H. MerrowPub.CoLtd.,U.K.,1998.
3. Talukdar,Introductiontowindingandwarping,MahajanPub. (P)Ltd., 1998.
4. Talukdar, Wadekar and Ajgaonkar, Sizing–Materials, methods and machines, 2nd edition,Mahajan P ub. (P)Ltd.,1998.
5. Gokarneshan N., Weaving Preparation Technology, Abhishek Pub., 2009
6. Talukdar, SriramuluandAjgaonkar, Weaving–Machines, Mechanisms,Management, MahajanPub. (P) Ltd.,1998

L	T	P	J	C
3	0	0	0	3

U17FTT5003 KNITTING TECHNOLOGY

Course Outcomes

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

CO1	Recognize the weft knitted fabric production processes	K2
CO2	Outline the structure and properties of various weft knitted fabrics	K3
CO3	Acquire know ledge on the structure and properties of various advanced weft knitted fabrics	K3
CO4	Recognize the structure and properties and in warp knitting	K3
CO5	Recognize the Latest developments in warp knitting	K3
CO6	Acquire knowledge on the application of knitted structures for Technical Textiles	K3

Pre Requisite:

U17FTT2001 Yarn Technology

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	PS01	PS01
CO1	S	M											M	M
CO2	S	M											M	M
CO3	S	M	W										M	M

CO4	S	M	W										M	M
CO5	S	M											M	M
CO6	S	M												

Course Assessment methods:

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

PRINCIPLE OF WEFT KNITTING: 9 Hours

Comparison of Weaving and Knitting and nonwoven-Terms anddefinitionsinweft knitting –Knitting elements-Needle sand its types,sinker, camKnitting action of latch, bearded and compound needles. –Working principle andpassage of Yarn in circular and Flat knitting machine -Classifications of knitting machines.-Comparison of Plain, circular rib,andinterlock fabrics and machines. - Yarn quality for knitting.-selection of weft knitted fabrics

WEFT KNIT STRUCTURES: 9Hours

Classificationof weft knit structures,-Symbolic and diagrammatic representation of weft knit structures.- Comparison of single jersey, rib and interlock and purl structures-comparison knit, tuck, float Stitches–unconventional stitches –Single jersey derivatives, accordion, check and stripe effect.- Rib derivativesderbyribandSwiss rib, royal rib, polka rib- Rib gated structures Milano Rib,Doublepiqueand Pique poplin.- Knitted fabric Geometry Kc, Kw, Ks, R-knitted fabric defects-quality control

ADVANCED WEFT KNIT STRUCTURES: 9 Hours

Eight lockstructure, Interlock gated structures Singlepique, Ponte-di-Roma and Ottoman rib. - Derivatives of purl structure cross purl and basket purl - Blister fabrics – Introduction to Jacquard structures- socks knitting- flat bed knitting- weft knitting calculations for GSM and production- Latest developments in Weft knitting machines and fabrics, -Principles of seamless garment manufacture in circular and flat knitting-Application of weft knitted structures in technical textiles

WARP KNITTING BASICS : 9 Hours

Comparison of warp and weft knitting-basic warp knitting elements, knitting cycle-tricot, Rachel machines Comparison of tricot and Rachel Warp knitting –Basic stitches-pillar, blindlap,tricot, inlay, satin and atlas stitches.

WARP KNIT STRUCTURES 9 Hours

Fulltricot, lock knit and loop raised fabrics. Basic RaschelWarpKnit structures-power nets, curtains and laces. – Latest developments in warp knitting machines. Warp knitting calculations for GSM, production- Application of warp knitted structures in technical textiles

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

REFERENCES

1. DavidSpencer.,"KnittingTechnology",PergamonPress,Oxford2005
ISBN**(13):** 9781855733336

2.AnbumaniN, "Knitting – Fundamentals, Machines, Structures and Developments",NewAgeInternationalPublishers,2 0 1 0 .**ISBN(13):**978-81-224-1954-2

3AjgaonkarDB, "Principles ofKnitting", Universal Publishing Corporation, Mumbai, 1998, **ISBN**: 81-85027-34-X.

4. Chandrasekhar Iyer, Bernd Mammel and Wolfgang Schach., "Circular knitting", Meisenbach GmbH, Bamberg, 1995, **ISBN**: 3-87525-066-4.

KUMARAGURU

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KUMARAGURU COLLEGE OF TECHNOLOGY, COIMBATORE-641049

(An Autonomous Institution affiliated to Anna University, Chennai)

Action Taken Report – Student Feedback

Department of Electronics and Communication Engineering

Academic Year: 2017 – 2018

Date: 11.04.2018

S.No	Feedback	Action Taken
1.	Motivation towards competitive exams must be done.	At least 50% of the students in a class must undergo value added courses designed to cater competitive exams. Department Higher Studies in charge to take care of this.
2.	Course exemption clarity must be given properly. One credit course equivalence must be briefed.	One credit course in charges were instructed to give more clarity on this issue.
3.	Activity based learning must be implemented.	All the faculty were instructed to adopt novel teaching learning methods as addressed by AICTE.

Prepared By,

BoS Coordinator

Approved By,

BoS Chairman

Proof for Action Taken 1: At least 50% of the students in a class must undergo value added courses designed to cater competitive exams. Department higher studies in charge to take care of this.

S.No	Date	Nature of event	Title of event	Duration	Venue	Coordinator	Resource person	Targeted participants
1	25.09.2017	Guest Lecture	Awareness program for competitive exam- GATE 2018	1 hour	Seminar Hall C	Chandru.S.M, Kalaiselvi.A, Jaspar Vinitha sundari T	T. Murali, Director, TIME Education	Students
2	14.10.17	Technical Training Program(Others)	NSDC CERTIFICATION PROGRAMME	2 Days 9.00 AM to 4.30PM	Micro processor lab	Dr. Shivapriya, Ajay V P, Kavitha C	K.ILANCHEZHIAN,Assistant Manager- Technical,Prolific systems and technological pvt ltd.	II III Year ECE students
3	9.10.17	Guest Lecture	Career opportunities in the field of Telecom Networks through “Cisco Certified Programs”	3.00-4.30	VLSI Lab	S.David, S.M.Chandru, Dr.S.Umamaheswari	Divya martin Mary,CCNA instructor	Students
4	26.10.17	Guest Lecture	Guest lecture on Recent Trends and Challenges in VLSI Design	3 hours	EIE conference hall	Dr.Paramasivam, Ms.V.Uma Maheswari,Ms. T.Jaspar Vinitha sundari	Dr.Gunavathi, Professor, PSG College of technology, Coimbatore	210 students
5	17/11/17 & 19/11/17	Workshop	Hands on workshop on receiver design GR40RX and ISDR	2 days	PG lab	Ramprakash.K, karthikeyan,Karthik	Ramprabhu,Micro nova impex pvt ltd	Students
6	09.11.2017	Guest Lecture	GL on industrial automation	9.30am to 11.30am	Class room	Ms.Jasmine.k,Shiji ShajahanS.Nagarathinam	Project EngineerRobert Bosch Pvt LtdCoimbatore	25 students

Proof for Action Taken 2: one credit course in charges was instructed to give clarity on this issue.

S.No	Date	Nature of event	Title of event	Duration	Venue	Coordinator	Resource person	Targeted participants
1	06 &07/10/2017	Workshop	Workshop on Design and Testing of Antenna, Microwave Components using CADFEKO and VNA	2 days	VLSI lab	Dr.K.Kavitha, R.Darwin, R.Karthikeyan, A.Kumaresan	Dr.P.Sandeep Kumar, AP/Research/ SRM Univ, Dr.K.Kavitha/Prof/KCT, Mr.R.Darwin/AP/KCT, Mr.R.Karthikeyan/AP/KCT, Mr.A.Kumaresan/AP/KCT	Students
2	October 10 & 11, 2017	Workshop	Two Day Workshop on "Analog and Mixed Signal Design using CADENCE Tool"	2 days	VLSI lab	A.Kalaiselvi,R.DhivyaPraba,S.N.Shivapriya, T.Jaspar Vinitha Sundari	A.Kalaiselvi,T.Jaspar Vinitha Sundari, S. Nagarathinam, V. Umamaheswari	Students
3	06.10.2017 & 07.10.2017	Workshop	workshop on embedded systems and IOT applications	2 days	CoE lab	Bharathi.M, Amsaveni.A, Ajay V P	Mr. Madhusudan Kumar, Mr. P.Dinesh Project Engineers STEPS Knowledge Systems Private Limited Coimbatore	Students
4	13,14/10/17	One credit course	Internet of Things (IoT) using CC3200 - One Credit Course			R.Karthikeyan, S.Karthik		Students
5	10.11.17&11.11.17	One credit course	Energy Efficient microcontrollers and its application			R.Karthikeyan, S.Karthik		Students
6	28/3/18-31.3.2018	One credit course	Hands on Ws on DSD using HDL	4 days	CoE lab	R.Karthikeyan, S.Karthik	Expert from caliber	Students

Proof for Action Taken 3: all faculties were instructed to adopt novel teaching learning methods as addressed by AICTE.

S.No	Date	Nature of event	Title of event	Duration	Venue	Coordinator	Resource person	Targeted participants
1	October 13-15, 2018	Workshop	Hands on workshop on Embedded Systems	3 days	PG Lab	S.Sasikala,R. Karthikeyan,D. Allin Joe	Mr.SRINATH J, Hardware Engineer-ROBERT BOSCH, Alumni, IV ECE C Students	II Students
2	24&25/10/17	Workshop	Two Days Hands on "Workshop on Routing and Switching Security"	2 days	MPMC Lab	Umamaheswari S, Nagarathinam S, David S, Pavithra P	Danapal,S.Umamaheshwari,Nagarathinam,David,Pavithra	Students
3	09.11.2017 & 10.11.2017	Workshop	Two days workshop on Fundamental digital electronic Design with Verilog HDL	2 days	Dept Conference Hall and VLSI lab	Ramprakash.K, Thilagavathi.K, Arun kumar S	Mr.J.U.Nambi (1987-1991 batch), CTO, Lyle Technologies, Coimbatore.	III Students
4	15.11.2017	Workshop	Hands on Workshop on MATLAB	8.30am to 1pm	DSP lab	Ms. Shiji Shajahan	Ms. Shiji Shajahan, AP/ECE	41 Students

ASSIGNMENT III CADENCE PROJECT

Design the following gates with given specifications, completing the design flow mentioned below.

Specifications for AND/NAND – Technology 180 nm

Specifications for OR/NOR – Technology 90 nm

Specification for XOR/XNOR – Technology 45 nm

i. Draw the schematic using virtuoso
ii. Verify Transient analysis.
iii. Observe the waveform obtained and verify it

1. 2 INPUT AND
2. 2 INPUT OR
3. 2 INPUT XOR
4. 2 INPUT NAND
5. 2 INPUT NOR
6. 2 INPUT XNOR
7. 3 INPUT AND
8. 3 INPUT OR
9. 3 INPUT XOR
10. 3 INPUT NAND
11. 3 INPUT NOR
12. 3 INPUT XNOR

Special classes on learning the complete front-end flow of circuit analysis is handled on 5/3/2018. Students were given an overview on design and analysis (front-end) of circuits using Cadence.

(Jaspar Vinitha. T)
AP/ECE

VLSI DESIGN
CADENCE ASSIGNMENT
GROUP - 12

GROUP MEMBERS

S. INDHU SREE - 15BEC118

K. GEETHANJALI - 15BEC119

M. GAYATHRI - 15BEC120

S. THUVAJA ROHANA - 15BEC220

D.R. SRI KUMARAN - 15BEC301

CADENCE SOFTWARE:

Linux OS:

1. Desktop, right click it and open the terminal
2. In the command window, choose ~~cadchsh~~ an press enter choose/cad/cshrc and press enter and choose virtuoso and click enter.

   For eg).

   File → new → Library

   Give a library name and next choose the 3rd option in that window and apply (gpdk045/gpdk090) choose any one option in it.
3. Then click file and go new then select library choose cell view and choose your library. Give view in it choose schematic and click on.

   In the window

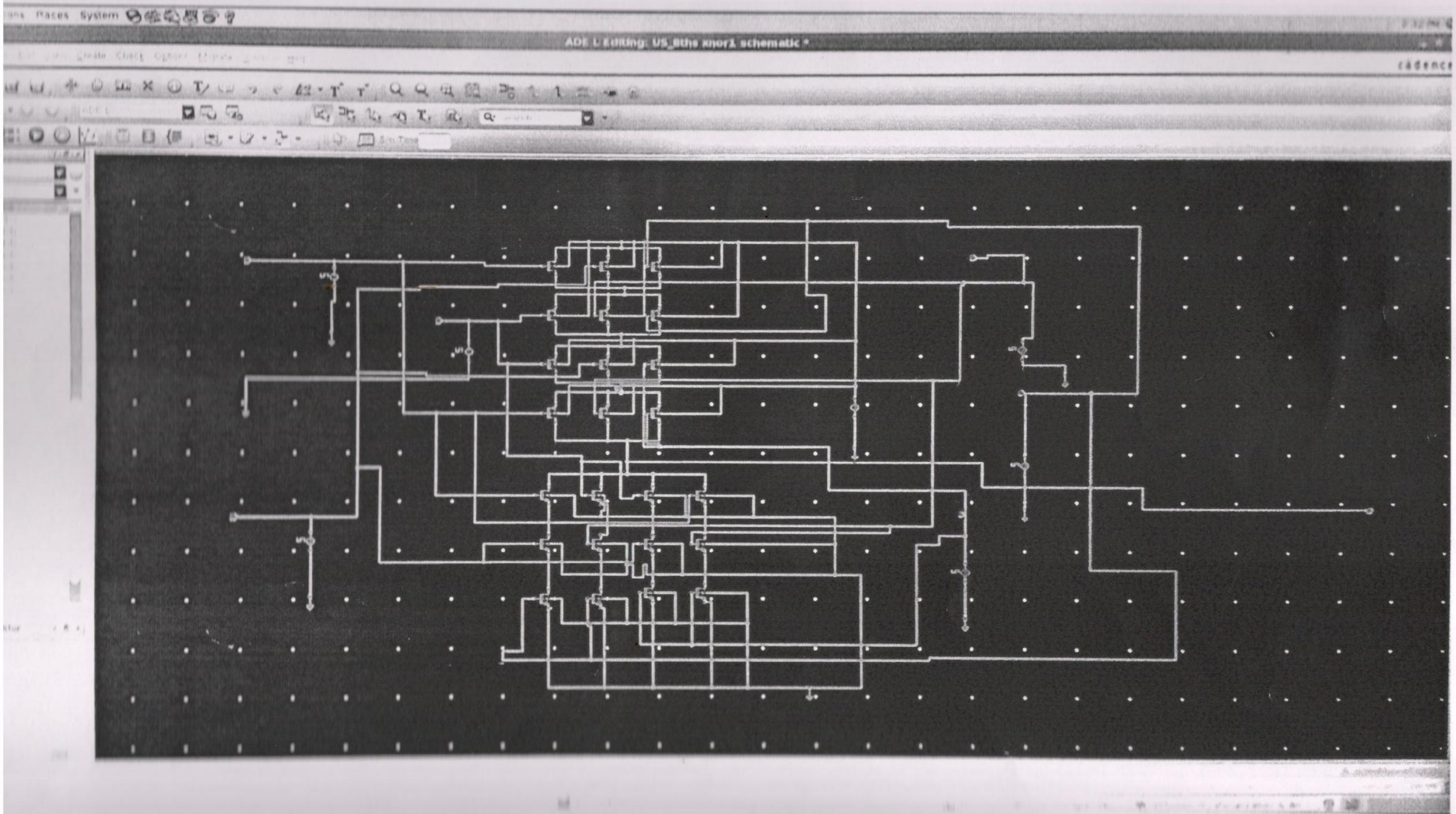
   I - [Add Instance → to choose the component]

   F - screen fit

   W - Wire

   Q - to choose voltage

   P - pin (i/p, o/p pin)



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Department of Electronics & Instrumentation Engineering

AY: 2017-18 11.04.2018

Action taken report - Students Feedback

S.No	Analysis	Action taken report
1.	To introduce a platform for submitting assignment for all the courses	Google Classroom for theory courses
2.	To offer guest lectures for Core courses.	Guest lectures are organized for most of the core courses.
3.	To include GATE questions in the questions paper from semester I onwards	Faculty are informed to include higher order thinking questions in Internal and end semester question paper.

Prepared by

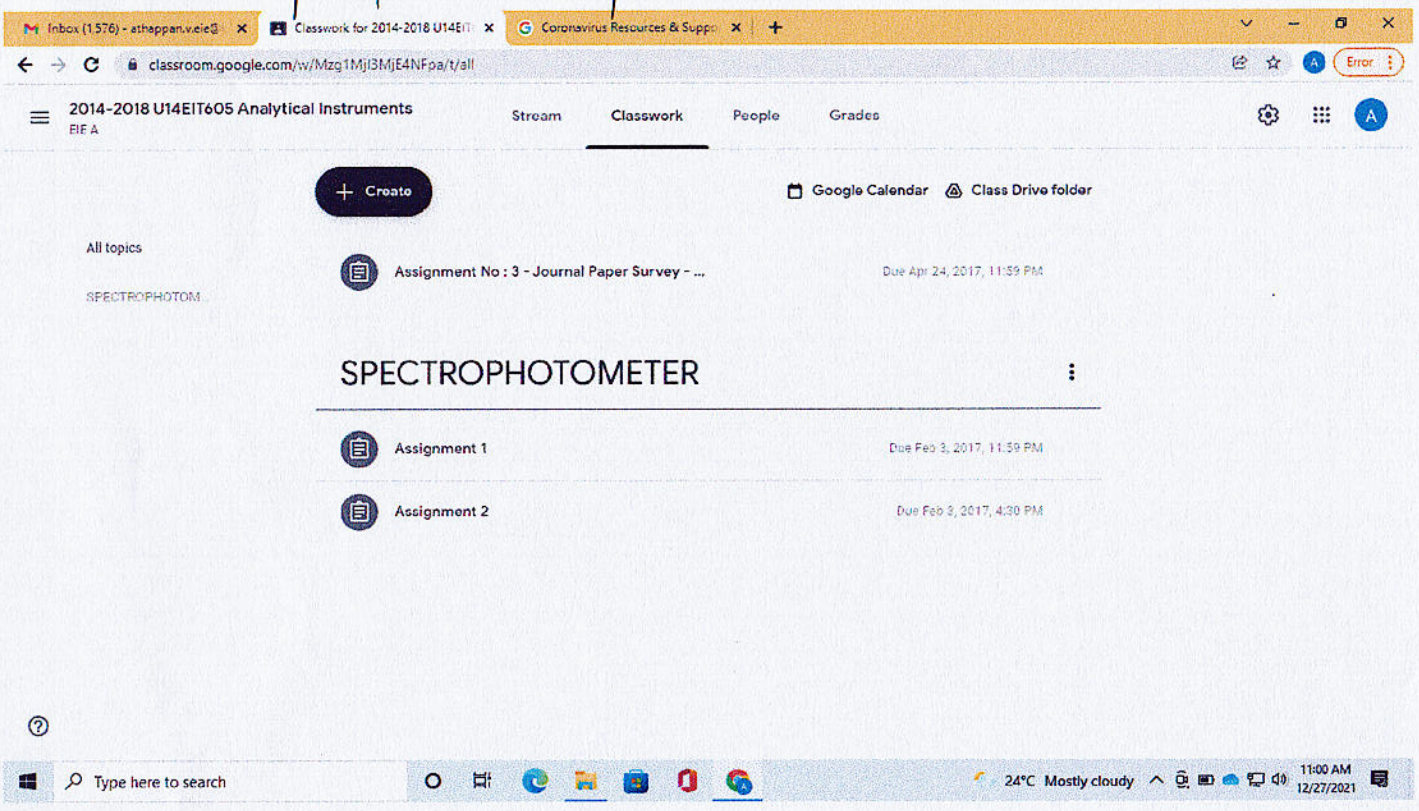
V. Mamekalai AP/EIE

BoS Coordinator

Approved by

BoS Chairman

Proof for ATR point No. 1



Proof for ATR point No. 3

Roll No: _____

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B

GENERAL INSTRUCTIONS TO THE CANDIDATES

INTERNAL TEST - II

1. Candidates are instructed to answer the questions as per Bloom's Taxonomy knowledge level (K_1 to K_6)
2. Candidates are strictly instructed not to write anything in the question paper other than their roll number.
3. Candidates should search their pockets, desks and benches and handover to the Hall Superintendent/ Invigilator if any paper, book or note which they may find therein as soon as they enter the examination hall.
4. Candidates are not permitted to bring electronic watches with memory, laptop computers, personal systems, walkie-talkie sets, paging devices, mobile phones, cameras, recording systems or any other gadget / device /object that would be of unfair assistance to him / her.
5. Corrective measures as per KCT examination policies will be imposed for malpractice in the hall like copying from any papers, books or notes and attempting to elicit the answer from neighbours.

The course outcomes that this test will assess are:

CO1: Design and simulate converters and inverters according to the specifications.
CO2: Describe the behavior of semiconductor devices.
CO3: Explain the working of AC to DC, DC to DC, DC to AC converters.
CO4: Discuss the applications of power electronic systems.
CO5: Identify the type of power electronic converters to be used in various applications.

Subject Code &Title :	**U14EITE11- Power Electronics**		
Branch :	**EIE**	**Semester :**	**VIII**
Time :	**2 hrs**	**Max Mark :**	**50**

Answer all the Questions

PART A (10 x 1 = 10 Marks)

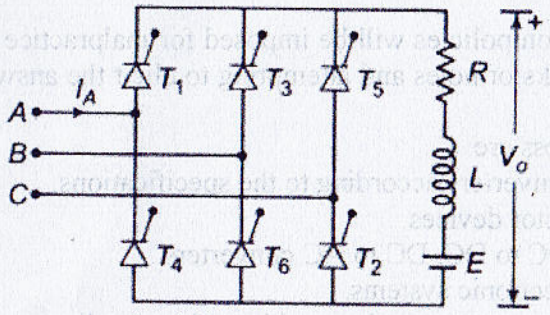
1. A chopper has Vs as the source voltage, R as the load resistance and α as the duty cycle. For this chopper, rms value of output voltage is (CO3-K2)

a)	αVs	b)	Vs/
c)	$\sqrt{\alpha}$Vs	d)	$\sqrt{(1-\alpha)}$ Vs

2. Match based on the (CO1-K2)

LIST I	LIST II
A. Thyristor	1. AC input to fixed DC output

	B. BJT and MOSFET		2. Controlled turn on and uncontrolled turn off	
	C. Rectifiers		3. Controlled turn on and uncontrolled turn	
	D. Inverters		4. DC input to fixed AC output	
	a)	A-2,B-3,C-4,D-1	b)	**A-2,B-3,C-1,D-4**
	c)	A-3,B-2,C-4,D-1	d)	A-3,B-2,C-1,D-4
3.	In DC choppers, if T is chopping period, then output voltage can be controlled by PWM by (CO3-K2) (hots)			
	a)	Varying T,keeping Ton constant	b)	**Varying Ton, keeping T constant**
	c)	Varying T alone	d)	None
4.	Give the direction of flow of current when T3 and T4 are triggered at 30° for the below circuit. (CO3-K3) (hots)			



3-ϕ full wave converter

1. RLE
2. T3
3.T4
4. A
5.A

	a)	B-T3-RLE-T4-A	b)	**A-T3-RLE-T4-B**
	c)	B- RLE - T3-T4-A	d)	B- RLE –T4-T3-A
5.	A Buck converter is switched at a frequency of 1Kz with a duty ratio of 0.5 and L= 200mH, calculate the peak to peak ripple of the load which is fed from 100V d.c voltage source. (CO4-K1) (hots)			
	a)	0.25A	b)	**0.125A**
	c)	1.25A	d)	0.025A
6.	The range of firing angle for a 3 phase, 3 pulse converter feeding a resistive load is (CO3-K2) (hots)			

	a)	30 to 180	b)	0 to 150
	c)	**30 to 150**	d)	0 to 180
7.	A 3 phase half wave converter has an average output voltage of 200V for 0° firing angle with resistive load. What is the load voltage for firing angle of 45° (CO3-K2)(hots)			
	a)	**145.3V**	b)	136.5V
	c)	150.2V	d)	189.01V
8.	Bulk power transmission over long HVDC lines are preferred on account of (CO4-K2)			
	a)	Low cost of HVDC terminals	b)	**Minimum line power losses**
	c)	No harmonic problems	d)	Simple protection
9.	Assertion(A) : half controlled converter uses a mixture of diodes and thyristors Reason (R): Semi converters have limited control over the level of dc output voltage. (CO2-K2)			
	a)	**A and B are true and B is the correct explanation for A**	b)	A is true B is false
	c)	A and B are true and B is not the correct explanation for A	d)	A and B are false
10.	The stand by batteries in the UPS system is made up of (CO5-K3)			
	a	**Nickel cadmium and lead acid**	b	Hydrogen mixture
	c	Lead-cadmium and nickel acid	d	Lead- cadmium

PART B - [Not more than 40 words] (5 x 2 = 10 Marks)

11.	Give some applications of step up and step down chopper. (CO3-K3)
12.	What is the effect of source inductance over 3 phase full wave converter (CO2-K2)
13.	Draw the block diagram of UPS system.(CO5-K2)
14.	Mention the performance indices of single phase full wave converter.(CO2-K3)
15.	What are the advantages of HVDC transmission over AC transmission? (CO5-K2)

PART C [Not more than 300 words] (3 x 10 = 30 Marks)

Answer any three Questions

(Question No. 16 is compulsory)

16.	With necessary diagrams show how buck converter is used to regulate DC voltage supplied to RL load (CO3-K2)
17.	Draw the circuit diagram of 3 phase half wave converter with R load and explain the ouput waveform for triggering angle $\alpha > 30°$ and $\alpha < 30°$.Derive the average and r.m.s load voltage value.

	(CO2-K2) (hots)
18.	Explain the effect of source inductance over single phase full converter with a neat diagram. (CO2-K2)
19.	Draw the circuit for step up and step down chopper and justify how it is used in battery powered systems.(CO3-K2)

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DEPARTMENT OF COMPUTER APPLICATIONS

AY: 2017-18 **Date: 11.04.2018**

Action taken report -Students

S.NO	ANALYSIS	ACTION TAKEN REPORT
1.	Flexibility in curriculum and need for skill-oriented courses was suggested. The curriculum should include advanced learning modules.	One credit courses introduced according to the current needs of the industry, If the student completes three one credit course , one three credit course can be waivered • P17CAC0201 Agile Methodology • P17CAC0202 Android Technologies • P17CAC0203 Ethical Hacking • P17CAC0204 Internet of Things • P17CAC0205 Multimedia Systems • P17CAC0206 Soft Skills • P17CAC0207 Technical Writing • P17CAC0208 Human Excellence – Professional Values
2.	Students needs more training for facing Interviews during campus selection.	Placement training classes conducted regularly and made as a part of regular classes.

PreparedBy,

BoS Coordinator

Approved By,

BoS Chairman

Proof for Action Taken 1:

List of One Credit Courses

Code No.	Course Title
P17CAC0201	Agile Methodology
P17CAC0202	Android Technologies
P17CAC0203	Ethical Hacking
P17CAC0204	Internet of Things
P17CAC0205	Multimedia Systems
P17CAC0206	Soft Skills
P17CAC0207	Technical Writing
P17CAC0208	Human Excellence – Professional Values
P17CAC0209	Data Analytics
P17CAC0210	PHP with Laravel Framework

Proof for Action Taken 2:

Class : MCA1

DAY	1	2	3	4
MONDAY	EPU/K00232/01	CTPS/K00090/MCA202	PSL/K00090/MCALAB1	PSL/K00090/MCALAB1
TUESDAY	PLA/MCATEMP/MCA202	PLA/MCATEMP/MCA202	CO/K00301/MCA202	OS/K00102/MCA202
WEDNESDAY	CO/K00301/MCA202	MC/K00293/MCA202	OS/K00102/MCA202	-
THURSDAY	PSL/K00090/MCALAB1	OS/K00102/MCA202	MC/K00293/MCA202	HE/K01241/MCA202
FRIDAY	CTPS/K00090/MCA202	MC/K00293/MCA202	-	HE/K01241/MCA202

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Department of Mechanical Engineering

AY: 2017-18

Date: 11.04.2018

Students Feedback

1. Three credit machine drawing course requested to be included in the curriculum and syllabus
2. Latest books are to be added in references in all courses in the central library

Prepared By,

Dr.M.Balaji

BoS coordinator

Approved By,

Dr.M.Muthukumaran

BoS Chairperson

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**

Students Feedback analysis Report

1. Three credit machine drawing course requested to be included in the curriculum and syllabus: Response: The machine drawing course is offered as a practical course in the R-17 curriculum and design module coordinator to discuss among their group to take suitable actions.

2. Latest books are to be added in references in all courses in the central library, Response: The department library coordinator requested to consolidate the requirements from the department faculty members and communicate the same with central library.

Prepared By,

Dr.M.Balaji

BoS Coordinator

Approved By,

Dr.V.Muthukumaran

BoS Chairperson

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 -Students Feedback

S.No	Analysis	Action taken report
1.	Three credit machine drawing course requested to be included in the curriculum and syllabus	U18MEI3205 Machine Drawing course introduced in III Semester
2.	Latest books are to be added in references in all courses in the central library	Latest books are added in references in all courses

Prepared By,

Dr.M.Balaji

BoS Coordinator

Approved By,

Dr.V.Muthukumaran

BoS Chairperson

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 -Student Feedback

S.No	Analysis	Action taken report
1.	U15MCT501 Signal analysis and system analysis using Fourier techniques has been included in depth.	Changed and implemented in the U15MCT501 Signal analysis and system
2.	Correlation and spectral density topics has been removed, since it requires the knowledge of Probability and Random variables as prerequisite in U15MCT501 Signal analysis and system.	Modified and implemented in the course U15MCT501 Signal analysis and system.
3.	Member suggested to change the name of the course from U15MCT504 Mechatronics for machining to U18MCE0013 Precision manufacturing.	Modified as per the suggestion and change in R17 Regulation

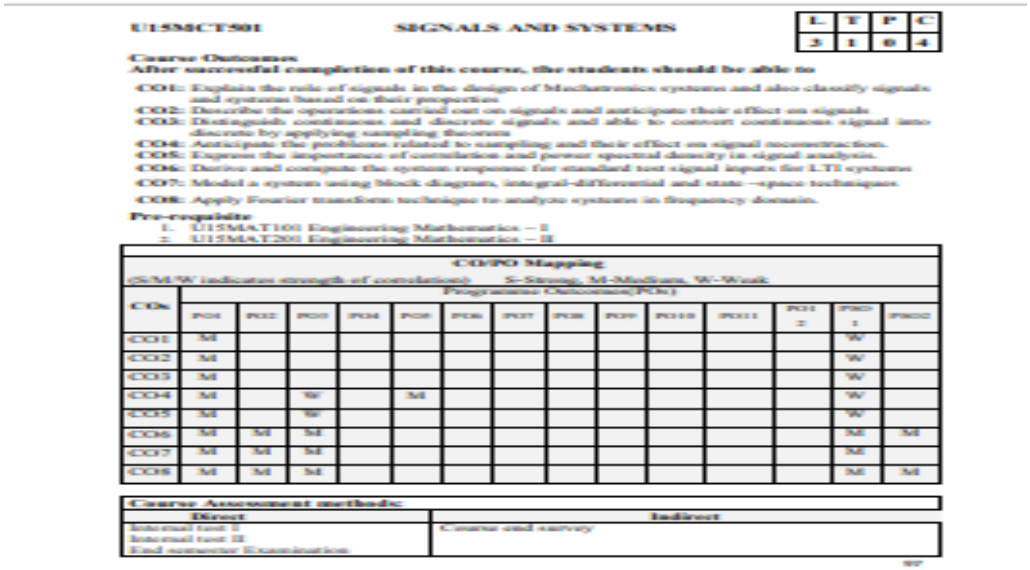
Prepared By,

BoS Coordinator

Approved By,

BoS Chairman

Action taken report 1:



U15MCT501 **SIGNALS AND SYSTEMS**

L	T	P	C
3	1	0	4

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

CO1: Explain the role of signals in the design of Mechatronics systems and also classify signals and systems based on their properties.
CO2: Describe the operations carried out on signals and anticipate their effect on signals.
CO3: Distinguish continuous and discrete signals and able to convert continuous signal into discrete by applying sampling theorem.
CO4: Anticipate the problems related to sampling and their effect on signal reconstruction.
CO5: Express the importance of correlation and power spectral density in signal analysis.
CO6: Derive and compute the system response for standard test signal inputs for LTI systems.
CO7: Model a system using block diagram, integral-differential and state –space techniques.
CO8: Apply Fourier transform technique to analyze systems in frequency domain.

Pre-requisite
1. U15MAT101 Engineering Mathematics – I
2. U15MAT201 Engineering Mathematics – II

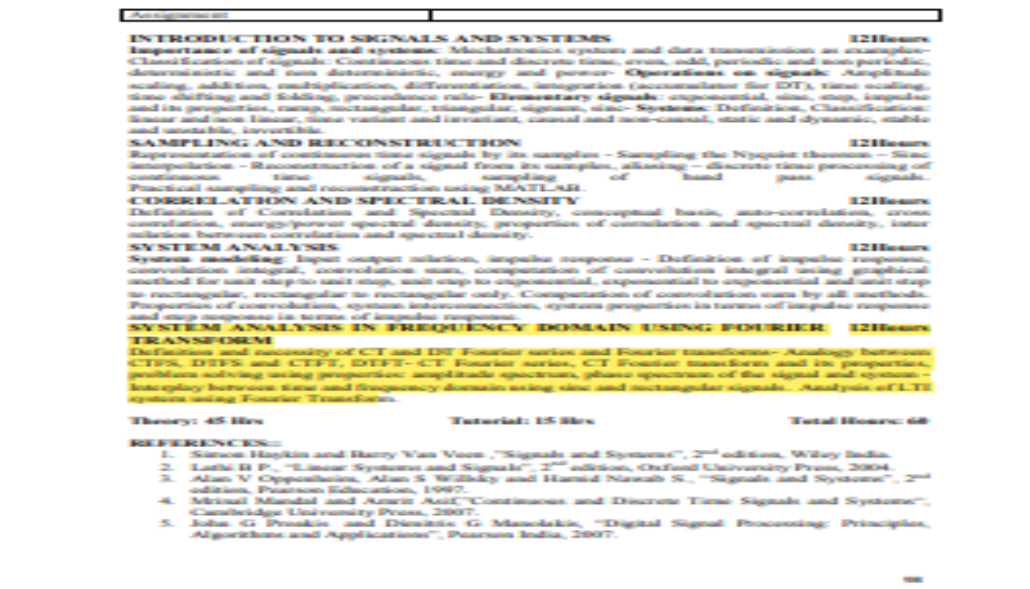
CO/PO Mapping

(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	PSO1	PSO2
CO1	M												W	
CO2	M												W	
CO3	M												W	
CO4	M		W		M								W	
CO5	M		W										W	
CO6	M	M	M										M	M
CO7	M	M	M										M	
CO8	M	M	M										M	M

Course Assessment methods:

Direct	Indirect
Internal test I Internal test II End semester Examination	Course end survey



Assignment	

INTRODUCTION TO SIGNALS AND SYSTEMS **12Hours**
Importance of signals and systems: Mechatronics system and data transmission as examples- Classification of signals: Continuous time and discrete time, even, odd, periodic and non-periodic, deterministic and non deterministic, energy and power- **Operations on signals:** Amplitude scaling, addition, multiplication, differentiation, integration (accumulator for DT), time scaling, time shifting and folding, precedence rule- **Elementary signals:** exponential, sine, step, impulse and its properties, ramp, rectangular, triangular, signum, sinc- **Systems:** Definition, Classification: linear and non linear, time variant and invariant, causal and non-causal, static and dynamic, stable and unstable, invertible.

SAMPLING AND RECONSTRUCTION **12Hours**
Representation of continuous time signals by its samples - Sampling the Nyquist theorem – Sinc interpolation – Reconstruction of a signal from its samples, aliasing – discrete time processing of continuous time signals, sampling of band pass signals. Practical sampling and reconstruction using MATLAB.

CORRELATION AND SPECTRAL DENSITY **12Hours**
Definition of Correlation and Spectral Density, conceptual basis, auto-correlation, cross correlation, energy/power spectral density, properties of correlation and spectral density, inter relation between correlation and spectral density.

SYSTEM ANALYSIS **12Hours**
System modeling: Input output relation, impulse response – Definition of impulse response, convolution integral, convolution sum, computation of convolution integral using graphical method for unit step to unit step, unit step to exponential, exponential to exponential and unit step to rectangular, rectangular to rectangular only. Computation of convolution sum by all methods. Properties of convolution, system interconnection, system properties in terms of impulse response and step response in terms of impulse response.

SYSTEM ANALYSIS IN FREQUENCY DOMAIN USING FOURIER TRANSFORM **12Hours**
Definition and necessity of CT and DT Fourier series and Fourier transforms- Analogy between CTFS, DTFS and CTFT, DTFT- CT Fourier series, CT Fourier transform and its properties, problem solving using properties: amplitude spectrum, phase spectrum of the signal and system – Interplay between time and frequency domain using sinc and rectangular signals. Analysis of LTI system using Fourier Transform.

Theory: 45 Hrs **Tutorial: 15 Hrs** **Total Hours: 60**

REFERENCES:

1. Simon Haykin and Barry Van Veen ,"Signals and Systems", 2nd edition, Wiley India.
2. Lathi B P., "Linear Systems and Signals", 2nd edition, Oxford University Press, 2004.
3. Alan V Oppenheim, Alan S Willsky and Hamid Nawab S., "Signals and Systems", 2nd edition, Pearson Education, 1997.
4. Mrinal Mandal and Amir Asif,"Continuous and Discrete Time Signals and Systems", Cambridge University Press, 2007.
5. John G Proakis and Dimitris G Manolakis, "Digital Signal Processing: Principles, Algorithms and Applications", Pearson India, 2007.

Action taken report 2:

U15MCT501 **SIGNALS AND SYSTEMS**

L	T	P	C
3	1	0	4

INTRODUCTION TO SIGNALS AND SYSTEMS **12Hours**

Importance of signals and systems: Mechatronics system and data transmission as examples- Classification of signals: Continuous time and discrete time, even, odd, periodic and non periodic, deterministic and non deterministic, energy and power- **Operations on signals**: Amplitude scaling, addition, multiplication, differentiation, integration (accumulator for DT), time scaling, time shifting and folding, precedence rule- **Elementary signals**: exponential, sine, step, impulse and its properties, ramp, rectangular, triangular, signum, sinc- **Systems**: Definition, Classification: linear and non linear, time variant and invariant, causal and non-causal, static and dynamic, stable and unstable, invertible.

SAMPLING AND RECONSTRUCTION **12Hours**

Representation of continuous time signals by its samples - Sampling the Nyquist theorem – Sinc interpolation - Reconstruction of a signal from its samples, aliasing – discrete time processing of continuous time signals, sampling of band pass signals. Practical sampling and reconstruction using MATLAB.

CORRELATION AND SPECTRAL DENSITY **12Hours**

Definition of Correlation and Spectral Density, conceptual basis, auto-correlation, cross correlation, energy/power spectral density, properties of correlation and spectral density, inter relation between correlation and spectral density.

SYSTEM ANALYSIS **12Hours**

System modeling: Input output relation, impulse response - Definition of impulse response, convolution integral, convolution sum, computation of convolution integral using graphical method for unit step to unit step, unit step to exponential, exponential to exponential and unit step to rectangular, rectangular to rectangular only. Computation of convolution sum by all methods. Properties of convolution, system interconnection, system properties in terms of impulse response and step response in terms of impulse response.

SYSTEM ANALYSIS IN FREQUENCY DOMAIN USING FOURIER TRANSFORM **12Hours**

Definition and necessity of CT and DT Fourier series and Fourier transforms- Analogy between CTFS, DTFS and CTFT, DTFT- CT Fourier series, CT Fourier transform and its properties, problem solving using properties: amplitude spectrum, phase spectrum of the signal and system - Interplay between time and frequency domain using sinc and rectangular signals. Analysis of LTI system using Fourier Transform.

Theory: 45 Hrs **Tutorial: 15 Hrs** **Total Hours: 60**

Action Taken report 3:

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