KUMARAGURU college of technology
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DEPARTMENT OF BIOTECHNOLOGY

Action Taken Report -"Alumni Feedback"
Academic Year 2018-2019

Date: 15-Apr 2019

S.No	Suggestions	Action Taken
1.	Include latest edition of textbooks and references in the curriculum	Textbooks and references are up to date
2.	Include lab for Genome extraction procedure	Experiment included in the U17BTI5201 Genetic Engineering and Genomics

Prepared by
BOS Coordinator

Approved by
Chairman BOS

Proof: Reference & Textbooks updated

U17BTI6205 BIOLOGICAL DATA ANALYSIS

L	T	P	J	C
2	0	2	0	3

Course Objectives:

- To introduce the concept of massive data mining from biological experiments.
- To identify basic experimental design principles in solving biological questions.
- To develop and test hypothesis statistically using data using R – programming.

Course Outcomes (COs):

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

CO1: Understand and apply the biological annotation for macromolecules; apply and interpret the structural analysis of macromolecules using high throughput experiment.

CO2 Apply and interpret the biological data through fundamental statistical analysis.

CO3: Apply and interpret biological data related with hypothesis testing

CO4: Explore and infer biological data using visualization.

CO5: Understand and apply R-programming for biological data analysis

CO6: Provide optimal solution and statistics to biological problems

Pre-requisite

1. U17MAT4105 Biostatistics

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	S			S	S					M	S		S	S
CO2	S			S	S									
CO3	S			S	S									
CO4	S			S	S									
CO5	S			S	S									
CO6	S			S	S					S		M	S	S

Course Assessment methods:

Direct
1. Continuous Assessment Test
2. Assignment
3. End Semester Examination

Course Content

BIOINFORMATICS: MINING THE MASSIVE DATA FROM HIGH THROUGHPUT GENOMICS EXPERIMENTS **6 hour**

Introduction – Sequence alignment, Genome sequencing - Nanopore and illumina sequencing, gene annotation, RNA folding - RNAhybrid, protein structure prediction - Secondary structure information; Microarray analysis, proteomics, Protein-Protein Interaction

INTRODUCTION TO BIOSTATISTICAL ANALYSIS **6 hour**

Signature of BOS chairman, BT

Statistical methods in the context of biological research – Data exploration and Analysis - Arithmetic mean, standard deviation, coefficient of variation, standard error of mean, correlation analysis; regression analysis [Problems alone should be solved]

HYPOTHESIS TESTING **6 hour**

Introduction to general concepts; characteristics - Type I and II error; Student's t-test, chi-square test, One Way ANOVA (Kruskal–Wallis H test), Mann–Whitney U test; Wilcoxon signed-rank test

DATA EXPLORATION **6 hour**

Data visualization and summary statistics – variable types, Exploring categorical variable – Relative frequency and percentage, Bar graph, Pie chart; Exploring numerical variables – Histogram, Mean and median, Variance and Standard deviation, quantiles, Box plots; Data Preprocessing – Outliers, data transformation

BIOLOGICAL DATA ANALYSIS USING R PROGRAMMING **6 hour**

Overview – Variable, Data types, Operators, Useful Function, Data frames, Working with images and strings, Library functions.

List of Experiments **15 hour**

1. Introduction to R installation, package management and basic operators
2. Bioconductor tools – Introduction & usage
3. Biological sequences and sequence analysis
4. Basic plot and customized plot using ggplot2
5. R for large biological datasets
6. Descriptive statistics and One-way ANOVA
7. Image analysis using EBImage
8. Case Study : Microarray data analysis using Bioconductor package [Demo only]

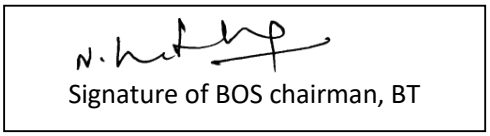
Theory: 30 hour **Tutorial: 0 hour** **Practical: 30 hour** **Project: 0 hour** **Total: 60 hour**

REFERENCES

1. Hartvigsen, G. (2014). A primer in biological data analysis and visualization using R. Columbia University Press.
2. O'Brien, C. M. (2013). Biostatistics with R: An Introduction to Statistics Through Biological Data by Babak Shahbaba. International Statistical Review, 81(3), 472-473.
3. McDonald, J. H. (2009). Handbook of biological statistics (Vol. 2, pp. 173-181). Baltimore, MD: sparky house publishing.
4. Whitlock, M. C., & Schluter, D. (2009). The analysis of biological data (No. 574.015195 W5).
5. Sanghamitra, B., Ujjwal, M., & TL, W. J. (Eds.). (2007). Analysis of biological data: a soft computing approach (Vol. 3). World Scientific.

Web References:

1. http://bioconductor.org/
2. https://onlinecourses.science.psu.edu/statprogram/r
3. http://www.r-tutor.com/r-introduction



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marker genes; Plasmid Vectors: Lambda phage vectors, phagemid, cosmid, yeast vectors , Baculoviral based vector, mammalian expression vectors, plant transformation vector; binary vector,
Case study: TOPO vector- Vector Map

GENE CLONING AND APPLICATIONS **15 hour**

Construction and screening of genomic and cDNA libraries, over-expression and purification of recombinant His tag fusion proteins using Ni+ column. Blotting techniques, Polymerase Chain Reaction (PCR); DNA fingerprinting, gene silencing: RNAi and gene knock-out; site directed mutagenesis, genome editing: CRISPR-Cas9 technology, TALEN tool, Modern molecular diagnostic tools; Q –PCR, Spectral karyotype Imaging, MPLA, Application of genetically modified organisms: medicine, agriculture, Biosafety guidelines and release procedure for GMOs in India
Case study: BT cotton -Safety issues

GENOME MAPPING AND SEQUENCING **15 hour**

History and mile stones of human genome project, Genome organization: prokaryote, eukaryote; complexity of genomes; genome mapping: FISH, STS content mapping, Advanced DNA sequencing methods: pyrosequencing, nanopore sequencing, genome sequencing methods: top down approach, bottom- up approach; genome sequence assembly; comparative study on the genome sequencing methods, Differential gene expression analysis; DDRT- PCR, subtractive hybridization, representational display analysis, Serial Analysis of Gene Expression, Microarray: fabrication of cDNA based array, DNA chip; application microarray in gene expression analysis.
Case study: Analysis and interpretation of microarray data

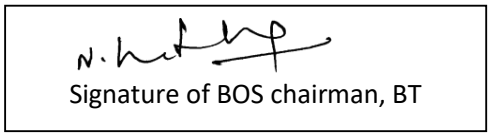
List of Experiments **30 Hour**

1. PCR amplification of DNA fragment using gene specific primers
2. Elution of DNA from agarose gel using silica column and calculation of Insert-vector ratio and Ligation of a PCR product in plasmid vector
3. Preparation and Transformation of competent cells (*E.coli* by heat-Shock/electroporation method)
4. Selection of recombinant clones using blue & white selection.
5. Confirmation of presence of insert in the recombinant clones by colony PCR.
6. Optimization of inducer concentration for recombinant protein expression.
7. Confirmation of recombinant protein using Western blotting.
8. DNA fingerprinting by RAPD analysis.
9. Molecular diagnosis of pathogens in water sample.
10. Metagenomic analysis of soil microbes.

Theory:45 hour Tutorial: 0 hour Practical: 30 Hour Project: 0 hour Total Hour: 75

References:

1. Brown T.A., (2017), Genomes 4, Bios Scientific Publishers Ltd, Oxford, 3rd edition.
2. Glick B.R.,and Pasternick J.J., (2017), Molecular Biotechnology: Principles and Applications of Recombinant DNA, 5th Edition, ASM press, Eashington.
3. Sathyanarayana U (2008) Biotechnology, Books & Allied (p) ltd.-Kolkata
4. Primrose S.B., Twyman RM., (2006), Principles of Gene Manipulation and Genomics , 7th Edition, Blackwell Science


Signature of BOS chairman, BT

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Department of Electrical and Electronics Engineering

AY: 2018-19 **date: 11-12-2018**

Action taken report -Alumni Feedback

S.No	Analysis	Action taken report
1.	Course related to basic economics to be included along with the Indian constitution to align with the UPSC exams.	The courses Constitution of India &Engineering Economics and Financial Management are Included in R17 & R18 regulation
2.	Circuit debugging Software/ language courses to be included in the curriculum.	Engineering Clinic 1 to 5 and Problem solving and Programming using C & Python is introduced to provide Hands on experience on circuit debugging, Software language

Prepared By,

Dr,V.Kandasamy

BoS Coordinator

Approved By,

11/12/18

Dr.K.Malarvizhi

BoS Chairman

Proof for Action Taken: 1 - The courses Constitution of India & Engineering Economics and Financial Management are Included in R17 & R18 regulation

List of Mandatory Non-Credit Courses					
S. No	**Course Code**	**Course Title**	**Course Mode**	**CT**	**Semester**
1	U17VEP3503	Family Values	Lab	HS	3
2	U17CHT3000	Environmental Science and Engineering	Theory	MC	3
3	U17VEP4504	Professional Values	Lab	HS	4
4	U17VEP5505	Social Values	Lab	HS	5
5	U17VEP6506	National Values	Lab	HS	6
6	U17INT6000	Constitution of India	Theory	MC	6
7	U17VEP7507	Global Values	Lab	HS	7

List of Mandatory Non-Credit Courses					
S. No	**Course Code**	**Course Title**	**Course Mode**	**CT**	**Semester**
1	U18VEP1501	Personal Values	Lab	HS	1
2	U18VEP2502	Inter Personal values	Lab	HS	2
3	U18VEP3503	Family Values	Lab	HS	3
4	U18CHT3000	Environmental Science and Engineering	Theory	MC	3
5	U18VEP4504	Professional Values	Lab	HS	4
6	U18VEP5505	Social Values	Lab	HS	5
7	U18INT6000	Constitution of India	Theory	MC	6
8	U18VEP6506	National Values	Lab	HS	6
9	U18VEP7507	Global Values	Lab	HS	7

SEMESTER VII										
S. No	**Course code**	**Course Title**	**Course Mode**	**CT**	**L**	**T**	**P**	**J**	**C**	**Pre-requisite**
1	U17MBT7000	Engineering Economics and Financial Management	Theory	HS	3	0	0	0	3	-
2	U17EET7001	Special Electrical Machines	Theory	PC	3	0	0	0	3	U17EEI3201 U17EEI4201
3	U17EEI7202	Power System Analysis	Embedded-Theory & Lab	PC	2	1	2	0	4	U17MAT3101 U17EET4002 U17EEI4201
4	U17EEE****	Professional Elective III	Theory	PE	3	0	0	0	3	-
5	U17EEE****	Professional Elective IV	Theory	PE	3	0	0	0	3	-
6	U17EEP7702	Project Phase I	Project	PW	0	0	0	6	3	-
Total Credits									**19**	
Total Contact Hours/week									**23**	

SEMESTER VII										
S. No	**Course code**	**Course Title**	**Course Mode**	**CT**	**L**	**T**	**P**	**J**	**C**	**Pre-requisite**
1	U18MBT7000	Engineering Economics and Financial Management	Theory	HS	3	0	0	0	3	-
2	U18EET7001	Special Electrical Machines	Theory	PC	3	0	0	0	3	U17EEI3201 U17EEI4201
3	U18EEE****	Professional Elective III	Theory	PE	3	0	0	0	3	-
4	U18EEE****	Professional Elective IV	Theory	PE	3	0	0	0	3	-
5	U18EEP7702	Project Phase I	Project	PW	0	0	0	6	3	-
Total Credits									**15**	
Total Contact Hours/week									**18**	

Proof for Action Taken: 2 - Engineering Clinic 1 to 5 and Problem solving and Programming using C & Python is introduced to provide Hands on experience on circuit debugging, Software language.

KUMARAGURU COLLEGE OF TECHNOLOGY
B.E ELECTRICAL AND ELECTRONICS ENGINEERING
CURRICULUM
REGULATIONS 2018

SEMESTER I										
S. No	**Course code**	**Course Title**	**Course Mode**	**CT**	**L**	**T**	**P**	**J**	**C**	**Pre-requisite**
1	U18MAI1201	Linear Algebra and Calculus	Embedded-Theory & Lab	BS	3	0	2	0	4	-
2	U18PHI1201	Engineering Physics	Embedded-Theory & Lab	BS	3	0	2	0	4	-
3	U18CSI1202	Problem solving and Programming using C	Embedded-Theory & Lab	ES	2	0	2	0	3	-
4	U18MEI1201	Engineering Graphics	Embedded-Theory & Lab	ES	2	0	2	0	3	-
5	U18ENI1201	Fundamentals of Communication-I	Embedded-Theory & Lab	HS	2	0	2	0	3	-
6	U18INI1600	Engineering Clinic 1	Embedded-Practical & Project	ES	0	0	4	2	3	-
								Total Credits	**20**	
								Total Contact Hours/week	**28**	

SEMESTER II										
S. No	**Course code**	**Course Title**	**Course Mode**	**CT**	**L**	**T**	**P**	**J**	**C**	**Pre-requisite**
1	U18MAI2201	Advanced Calculus and Laplace Transforms	Embedded-Theory & Lab	BS	3	0	2	0	4	U18MAI1201
2	U18CHI2201	Engineering Chemistry	Embedded-Theory & Lab	BS	3	0	2	0	4	-
3	U18ENI2201	Fundamentals of Communication-II	Embedded-Theory & Lab	HS	2	0	2	0	3	-
4	U18CSI2201	Python Programming	Embedded-Theory & Lab	ES	2	0	2	0	3	-
5	U18EEI2201	Electric Circuit Analysis	Embedded-Theory & Lab	PC	3	0	2	0	4	-
6	U18INI2600	Engineering Clinic 2	Embedded-Practical & Project	ES	0	0	4	2	3	-
								Total Credits	**21**	
								Total Contact Hours/week	**29**	

Signature of the Chairman BOS EEE

SEMESTER III										
S. No	**Course code**	**Course Title**	**Course Mode**	**CT**	**L**	**T**	**P**	**J**	**C**	**Pre-requisite**
1	U18MAT3101	Partial Differential Equations and Transforms	Theory	BS	3	1	0	0	4	-
2	U18EEI3201	DC Machines and Transformers	Embedded-Theory & Lab	PC	3	0	2	0	4	-
3	U18EET3002	Electromagnetic Fields	Theory	PC	3	0	0	0	3	-
4	U18EEI3203	Analog Electronics and Linear Integrated Circuits	Embedded-Theory & Lab	PC	3	0	2	0	4	-
5	U18EET3004	Measurements and Instrumentation	Theory	PC	3	0	0	0	3	-
6	U18INI3600	Engineering Clinic 3	Embedded-Practical & Project	ES	0	0	4	2	3	-
									Total Credits	**21**
									Total Contact Hours/week	**26**

SEMESTER IV										
S. No	**Course code**	**Course Title**	**Course Mode**	**CT**	**L**	**T**	**P**	**J**	**C**	**Pre-requisite**
1	U18MAT4101	Numerical Methods and Probability	Theory	BS	3	1	0	0	4	-
2	U18EEI4201	Induction and Synchronous Machines	Embedded-Theory & Lab	PC	3	0	2	0	4	U18EEI3201
3	U18EET4002	Generation, Transmission and Distribution	Theory	PC	3	0	0	0	3	U18EET3002
4	U18EEI4203	Digital Electronics	Embedded-Theory & Lab	PC	3	0	2	0	4	U18EEI3203
5	U18EET4004	Network and System	Theory	PC	3	0	0	0	3	U18EEI2200
6	U18EEI4205	PLC Automation	Embedded-Theory & Lab	PC	2	0	2	0	3	U18EEI3203
7	U18INI4600	Engineering Clinic 4	Embedded-Practical & Project	ES	0	0	4	2	3	U18INI3600
									Total Credits	**24**
									Total Contact Hours/week	**30**

Signature of the Chairman BOS EEE

SEMESTER V										
S. No	**Course code**	**Course Title**	**Course Mode**	**CT**	**L**	**T**	**P**	**J**	**C**	**Pre-requisite**
1	U18EET5001	Power Electronics	Theory	PC	3	0	0	0	3	U18EEI4201
2	U18EEI5202	Microprocessors and Microcontrollers	Embedded-Theory & Lab	PC	3	0	2	0	4	U18EEI4203
3	U18EEI5203	Control Systems	Embedded-Theory & Lab	PC	3	0	2	0	4	U18MAT3101
4	U18EET5004	Electrical Machine Design	Theory	PC	3	0	0	0	3	U18EEI3201 U18EEI4201
5	U18EET5005	Digital Signal Processing	Theory	PC	3	0	0	0	3	U18MAT3101
6	U18EEE****	Professional Elective I	Theory	PE	3	0	0	0	3	-
7	U18*******	Open Elective-I	Theory	OE	3	0	0	0	3	-
8	U18INI5600	Engineering Clinic – Full design project	Embedded-Practical & Project	ES	0	0	4	2	3	U18INI4600
Total Credits									**26**	
Total Contact Hours/week									**31**	

SEMESTER VI										
S. No	**Course code**	**Course Title**	**Course Mode**	**CT**	**L**	**T**	**P**	**J**	**C**	**Pre-requisite**
1	U18EEI6201	Embedded System	Embedded-Theory & Lab	PC	2	0	2	0	3	U18EEI5202
2	U18EET6002	Power system Protection and switch gear	Theory	PC	3	0	0	0	3	U18EET4002
3	U18EEI6203	Power system Analysis	Embedded-Theory & Lab	PC	3	0	2	0	4	U18MAT3101 U18EET4002 U18EEI4201
4	U18EEI6204	Solid state drives	Embedded-Theory & Lab	PC	3	0	2	0	4	U18EET5001
5	U18CSI6211	Data structures and Algorithms	Embedded-Theory & Lab	ES	3	0	2	0	4	
6	U18EEE****	Professional Elective –II	Theory	PE	3	0	0	0	3	-
7	U18*******	Open Elective-II	Theory	OE	3	0	0	0	3	-
Total Credits									**24**	
Total Contact Hours/week									**26**	

Signature of the Chairman BOS EEE

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Department of Information Technology

AY: 2018-19 **Date:15.04.2019**

Action taken report -Alumni Feedback

S.No	Analysis	Action taken report
1.	To provide the knowledge of current trends, courses like Machine learning, and cloud computing are suggested to be offered as core courses	Machine Learning and Cloud Computing are moved into core courses in R17 & R18 Curriculum
2.	To provide the knowledge to students in current trends and technologies	

Prepared by

BoS Coordinator

Approved by

BoS Chairman

Proof for Action Taken 1 & Action Taken 2: Machine Learning and Cloud Computing are moved into core courses in R17 & R18 Curriculum

R17 Curriculum

SEMESTER – VII										Pre-requisite
S.No	Course Code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U17ITT7001	Social Media Marketing	Theory	HS	3	0	0	0	3	-
2	U17ITI7202	Cloud Computing	Embedded - Theory and Lab	PC	2	0	2	0	3	U17ITI4204
3	U17ITI7203	Machine Learning	Embedded - Theory and Lab	PC	3	0	2	0	4	U17ITI5202
4	U17INT7000	Professional Communication & Analytical Reasoning	Theory	HS	3	0	0	0	3	-
5	U17ITE----	Professional Elective II	Theory	PE	3	0	0	0	3	-
6	U17ITP7704	Project Phase I	Project	PW	0	0	0	6	3	-
								Total Credits	**19**	
								Total Contact Hours/week	**19**	

R18 Curriculum

SEMESTER – VII										Pre-requisite
S.No	Course Code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U18ITT7001	Social Media Marketing	Theory	HS	3	0	0	0	3	-
2	U18ITI7202	Cloud Computing	Embedded - Theory and Lab	PC	2	0	2	0	3	U18ITI4204
3	U18ITI7203	Machine Learning	Embedded - Theory and Lab	PC	3	0	2	0	4	U18ITI5201
4	U18INT7000	Professional Communication & Analytical Reasoning	Theory	HS	3	0	0	0	3	-
5	U18ITE----	Professional Elective II	Theory	PE	3	0	0	0	3	-
6	U18ITP7704	Project Phase I	Project	PW	0	0	0	6	3	-
								Total Credits	**19**	
								Total Periods per week	**19**	

U17ITI7202 /U18ITI7202 CLOUD COMPUTING

COURSE OBJECTIVES:

- To understand cloud computing challenges and services
- To acquire knowledge about various cloud tools
- To develop different optimization algorithm for cloud environment

COURSE OUTCOMES:

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

CO1 Develop private cloud using tools
CO2 Identify cloud service and its applications
CO3 Illustrate functions of web service with cloud service
CO4 Apply virtualization concepts for real time problems
CO5 Develop Economic based scheduling algorithm
CO6 Create algorithm using different Queuing model

Pre-requisite: U17ITI4204-COMPUTER NETWORKS

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			S							M	M		
CO2	M	M			S							M	M		
CO3	M	M			S							M	M		
CO4	M	M			S							M	M		
CO5	S	S			S							S	S		
CO6	S	S			S							S	S		

COURSE ASSESSMENT METHODS:

Direct
1. Continuous Assessment Test I, II (Theory component)
2. Assignment, Group Presentation (Theory component)
3. Pre/Post - experiment Test/Viva(Lab component)
4. Model examination (Lab component)
5. End Semester Examination (Theory and Lab components
Indirect
1 Course Exit Survey

THEORY COMPONENT CONTENTS

CLOUD INTRODUCTION **7 Hours**

Cloud Computing Fundamentals: Cloud Computing definition, Types of cloud, Cloud services: Benefits and challenges of cloud computing, Evolution of Cloud Computing , usage scenarios and Applications , Business models around Cloud – Major Players in Cloud Computing - Issues in Cloud - Eucalyptus - Nimbus - Open Nebula, CloudSim

CLOUD SERVICES AND FILE SYSTEM **8 Hours**

Types of Cloud services: Software as a Service - Platform as a Service – Infrastructure as a Service - Database as a Service - Monitoring as a Service – Communication as services. Service providers- Google App Engine, Amazon EC2, Microsoft Azure, Sales force. Introduction to Map Reduce, GFS, HDFS, Hadoop Framework

COLLABORATING WITH CLOUD **7 Hours**

Collaborating on Calendars, Schedules and Task Management – Collaborating on Event Management, Contact Management, Project Management – Collaborating on Word Processing, Databases – Storing and Sharing Files- Collaborating via Web-Based Communication Tools – Evaluating Web Mail Services – Collaborating via Social Networks – Collaborating via Blogs and Wikis

VIRTUALIZATION FOR CLOUD **8 Hours**

Need for Virtualization – Pros and cons of Virtualization – Types of Virtualization – System Vm, Process VM, Virtual Machine monitor – Virtual machine properties - Interpretation an and binary translation, HLL VM - Hypervisors – Xen, KVM , VMWare, Virtual Box, Hyper-V

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

LIST OF EXPERIMENTS

1. Study and compare various simulators in cloud computing.
2. Setup a Private Cloud Using Open Stack or Eucalyptus.
3. Develop Market oriented cloud computing model using Aneka toolkit
4. Compare energy conscious algorithm using green cloud simulator
5. Develop Economic based scheduling algorithm for cloud computing
6. Create algorithm using different Queuing model for cloud computing

REFERENCES

1. Bloor R., Kanfman M., Halper F. Judith Hurwitz —Cloud Computing for Dummies‖ (Wiley India Edition),2010
2. John Rittinghouse & James Ransome, —Cloud Computing Implementation Management and Strategy‖, CRC Press, 2010.
3. Antohy T Velte ,Cloud Computing : —A Practical Approach‖, McGraw Hill,2009
4. Michael Miller, Cloud Computing: —Web-Based Applications That Change the Way You Work and Collaborate Online‖, Que Publishing, August 2008.
5. James E Smith, Ravi Nair, —Virtual Machines‖, Morgan Kaufmann Publishers, 2006.
6. http://cloud-standards.org/wiki/index.php?title=Main_Page

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

U17ITI7203/U18ITI7203

MACHINE LEARNING

L	T	P	J	C
3	0	2	0	4

COURSE OBJECTIVES:

- To understand the need for machine learning for various problem solving
- To study the various supervised, semi-supervised and unsupervised learning algorithms in machine learning
- To understand the latest trends in machine learning
- To design appropriate machine learning algorithms for problem solving

COURSE OUTCOMES:

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

CO1	Differentiate between supervised, unsupervised, semi-supervised machine learning approaches
CO2	Discuss the decision tree algorithm and identity and overcome the problem of overfitting
CO3	Discuss and apply the back-propagation algorithm and genetic algorithms to various problems
CO4	Apply the Bayesian concepts to machine learning
CO5	Analyse and suggest appropriate machine learning approaches for various types of problems

Pre-requisite: U17ITI5202–DATA MINING TECHNIQUES

CO/PO Mapping (S/M/W indicates strength of correlation) S-Strong, M-Medium, W-Weak												PSO		
	Programme Outcomes(POs)													
COs	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	S	S											M		
CO2	M	M											M		
CO3	M	M	M										M		
CO4	M	M	M										M		
CO5	M	M	M	M	M				M			M	M	M	M

COURSE ASSESSMENT METHODS:

Direct
1. Continuous Assessment Test I, II (Theory component)
2. Assignment, Group Presentation (Theory component)
3. Pre/Post - experiment Test/Viva(Lab component)
4. Model examination (Lab component)
5. End Semester Examination (Theory and Lab components)
Indirect
1. Course-end survey

THEORY COMPONENT CONTENTS

INTRODUCTION **9 Hours**

Learning Problems – Perspectives and Issues – Concept Learning – Version Spaces and Candidate Eliminations – Inductive bias – Decision Tree learning – Representation – Algorithm – Heuristic Space Search.

NEURAL NETWORKS AND GENETIC ALGORITHMS **9 Hours**

Neural Network Representation – Problems – Perceptrons – Multilayer Networks and Back Propagation Algorithms – Advanced Topics – Genetic Algorithms – Hypothesis Space Search – Genetic Programming – Models of Evaluation and Learning.

BAYESIAN AND COMPUTATIONAL LEARNING **9 Hours**

Bayes Theorem – Concept Learning – Maximum Likelihood – Minimum Description Length Principle – Bayes Optimal Classifier – Gibbs Algorithm – Naïve Bayes Classifier – Bayesian Belief Network – EM Algorithm – Probability Learning – Sample Complexity – Finite and Infinite Hypothesis Spaces – Mistake Bound Model.

INSTANT BASED LEARNING **9 Hours**

K- Nearest Neighbour Learning – Locally weighted Regression – Radial Basis Functions – Case Based Learning.

ADVANCED LEARNING **9 Hours**

Learning Sets of Rules – Sequential Covering Algorithm – Learning Rule Set – First Order Rules – Sets of First Order Rules – Induction on Inverted Deduction – Inverting Resolution – Analytical Learning – Perfect Domain Theories – Explanation Base Learning – FOCL Algorithm – Reinforcement Learning – Task – Q-Learning – Temporal Difference Learning

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

REFERENCES:

1. Tom M. Mitchell, —Machine Learning, McGraw-Hill Education (India) Private Limited, 2013.
2. EthemAlpaydin, —Introduction to Machine Learning (Adaptive Computation and Machine Learning), The MIT Press 2004.
3. Stephen Marsland, —Machine Learning: An Algorithmic Perspective, CRC Press, 2009.
4. Kevin P. Murphy , Machine Learning A Probabilistic Perspective, The MIT Press,2012
5. Jason Bell, —Machine learning – Hands on for Developers and Technical Professionals, First Edition, Wiley, 2014
6. Peter Flach, —Machine Learning: The Art and Science of Algorithms that Make Sense of Data, First Edition, Cambridge University Press, 2012.

LAB COMPONENT:

List of Projects:

1.Supervised and Unsupervised learning
2.Social Media Analysis
3.Sentimental Analysis
4.Recommender Systems
5.Prediction algorithms

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

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Department of Textile Technology

AY: 2018-19 **Date: 15.04.2019**

Action taken report –Alumni Feedback

S.No	Analysis	Action taken report
1.	New course on electrical and electronics application in textiles can be introduced	Course code: U14MCT605 Course Name: Control And Instrumentation for Textile Technology
2.	Innovative teaching in lab can be practised	Proto type machines installed in labs

Approved by

Dr.Bharathi Dhurai

BoS Chair person

KUMARAGURU college of technology
character is life

Department of Textile Technology

AY: 2018-19 **Date: 15.04.2019**

Action taken report –Alumni Feedback

S.No	Analysis	Action taken report
1.	New course on electrical and electronics application in textiles can be introduced	Course code: U14MCT605 Course Name: Control And Instrumentation for Textile Technology
2.	Innovative teaching in lab can be practised	Proto type machines installed in labs

Proof

Course code: U14MCT605
Course Name: Control And Instrumentation for Textile Technology

U14MCT605	Control and Instrumentation for Textile Technology	L	T	P	C
		3	0	0	3

Course Outcomes

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

CO1: Classify the measuring instruments by explaining their static characteristics and use basic statistical methods for measurements. (K2, K3)

CO2: Describe the working principle, characteristics of non electrical transducers Such as displacement, velocity, temperature, pressure, humidity, force and light. (K2)

CO3: Explain the working principles of fiber testing methods and machines.

CO4: Choose appropriate transducer for a given textile application. (K3)

CO5: Distinguish manual systems and automation. (K2)

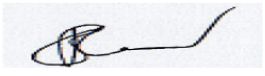
CO6: Summarize various components of automatic control system and write process equation for simple operations related to material handling and feeding systems. (K2, K3)

CO7: Distinguish and describe the architecture, I/O and memory of PLCs with conventional controllers. (K2)

CO8: Write simple PLC program by using logic and special functions. (K3, K5)

Pre-requisites :

1. U14TXT401/Yarn Manufacturing Technology II
2. U14TXT303/ Woven Fabric Manufacturing Technology



Signature of BOS chairman, TXT

CO/PO Mapping (S/M/W indicates strength of correlation) S-Strong, M-Medium, W-Weak												
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
CO1	S											
CO2	S	S										
CO3	S	S										
CO4	S	S										
CO5												
CO6			M									
CO7				M	M							
CO8				M	M							

Course Assessment methods

Direct	Indirect
1. Internal test I 2. Internal test II 3. Internal test III 4. Assignment/ Seminar/ Tutorial 5. End Semester Examination	1. Course end survey

INTRODUCTION TO MEASUREMENT SYSTEMS **5 Hours**

Functional Elements of Measuring Instruments – Classification of measuring instruments and transducers- Static Characteristics of instruments – General working principles of Resistive, capacitive and inductive type transducers with governing equations.

MEASUREMENT OF NON ELECTRICAL PARAMETERS-1* **8 Hours**

Linear and angular displacement : Resistive, capacitive, inductive types and Optics (encoders), proximity sensors

Velocity measurement: tachometers and resolvers

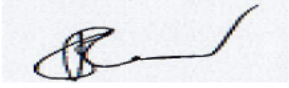
Temperature measurement : only contact type : Bimetallic, RTD, Thermocouple and Thermistor

Humidity: Capacitive and resistive and hot and wet bulbs.

Self study: Fire, smoke and metal detectors.

MEASUREMENT OF NON ELECTRICAL PARAMETERS-2* **7 Hours**

Force measurement: Resistive type strain gauges, Load cells, Universal testing machine and Fiber optic strain gauge- Piezo electric transducers



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Pressure measurements : Bellows, diaphragms, capsules and pressure switches
Light : UV, IR, Light emitter and detector
Self Study: Fiber testing : Volume, Evenness, strength (single yarn and fabric) and density

CONTROL SYSTEMS **8 Hours**

Elements of automated control system - Open loop and closed loop systems- process parameter definition- discontinuous controller and continuous controller (P, PID) Comparison of controllers based on relays, electronic circuits and computers- Integration of simple mechanical systems and electrical systems with computer : Material handling Systems, automatic feeding assembly and transfer lines for textile.

PROGRAMMABLE LOGIC CONTROLLERS **8 Hours**

Digital Logic gates - History of PLCs- Types of PLCs - Architecture of PLC - Processor- Memory Units- I/O modules : I/O processing and module selection – Signal processing – Power supply

PLC PROGRAMMING **9 Hours**

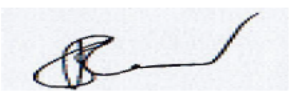
Introduction to IEC 61131 - System functions – sequence control – ladder logic – programming sequences – limitation of ladder programming – logic instruction sets – standard PLC functions – special function relays – data handling instructions – arithmetic instructions – data manipulation – program subroutines – simple programming examples with respect to textile process.

*Emphasis to be given on how these sensors are used in textile industry along with their principles, characteristics and selection.

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

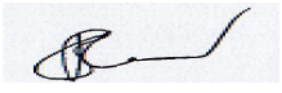
REFERENCES

1. Doebelin E O, "Measurement System: Application and Design", McGraw Hill Pub., New York, 1995.
2. Sawhney.A.K, "A course in Electrical and Electronics Measurements and Instrumentation, DhanpatRai and Sons, New Delhi, 2005.
3. Curtis D. Johnson, "Process Control: Instrumentation Technology,"



Signature of BOS chairman, TXT

Prentice Hall, 2006
4. Frank D. Petruzella, "Programmable Logic Controllers", McGraw-Hill Companies, 3rd Edition, 2013.
5. Krishna Kant, "Computer – Based Industrial Control", PHI Learning Pvt Ltd, 2nd edition, New Delhi, 2011.
6. Venkatachalam. A and Ashok Kumar L, Monograph on " Instrumentation & Textile Control Engineering" – Nov 05
7. Nalura B C. "Theory and Applications of Automation Controls", New Age International (P) Ltd Pub, 1998.



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Proto type machines installed in labs

Autoconer lab model machine

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Department of Textile Technology

AY: 2018-19 -2 **Date: 15.04.2019**

Action taken report –Alumni Feedback

S.No	Analysis	Action taken report
1.	Computer aided design (CAD) course can be introduced	Textile and Apparel CAD Lab course introduced in VII semester Course Code: U17TXP7505 Course Name: Textile and Apparel CAD Lab
2.	Textile and apparel costing course to be made as core course	Textile and apparel costing course made as core course Course Code: U17TXT7003 Course Name: Textile and Apparel Costing

Approved by

Dr.J Srinivasan

BoS Chair person

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Department of Textile Technology

AY: 2018-19 -2 **Date: 15.04.2019**

Action taken report –Alumni Feedback

S.No	Analysis	Action taken report
1.	Computer aided design (CAD) course can be introduced	Textile and Apparel CAD Lab course introduced in VII semester Course Code: U17TXP7505 Course Name: Textile and Apparel CAD Lab
2.	Textile and apparel costing course to be made as core course	Textile and apparel costing course made as core course Course Code: U17TXT7003 Course Name: Textile and Apparel Costing

Proof

Textile and Apparel CAD Lab course introduced in VII semester
Course Code: U17TXP7505
Course Name: Textile and Apparel CAD Lab

U17TXP7505 TEXTILE AND APPAREL CAD LAB

L	T	P	J	C
0	0	2	0	1

Course Outcomes (COs)

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

CO1: Practice weave design using software tools.
CO2: Develop 2D fabric simulation with different weaves for dobby and jacquard design.
CO3: Create various types of motifs for printing with repeat designs.
CO4: Develop garment patterns for children's wear using CAD software.
CO5: Develop garment patterns for men's and women's wear using CAD software.
CO6: Calculate the Marker efficiency fot T-Shirt, Ladies top, skirt using CAD software.

Pre-requisite:

U17TXI6201 Garment Manufacturing Technology

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	PSO 1	PSO 2
CO1	M	M			S									S
CO2	M	M			S									S
CO3	M	M			S									S
CO4	M	M			S									S
CO5	M	M		M	S									S
CO6	M			M			M							S

Course Assessment methods

Direct	Indirect
1. Observation 2. Lab Exercises 3. Model Practical Examination 4. End Semester Practical Examination	1. Course end survey

List of Experiment(s)

Development of various motifs using software tools.

1. Sketch and design a garment including accessories.
2. Development of a dobby design for checked fabric & preparation of 2D simulation.
3. Development of a Jacquard design & preparation of 2D simulation.
4. Development of a Print design and making screen for individual colours.
5. Development of a repeats for Home Textiles.
6. Developing design, pattern and marker plan for baby frock. Calculation of marker efficiency.
7. Developing design, pattern and marker plan for romper. Calculation of marker efficiency.
8. Developing design, pattern and marker plan for "T" shirt. Calculation of marker efficiency.
9. Developing design, pattern and marker plan for a ladies top. Calculation of marker efficiency and development of a lay plan.
10. Developing design, pattern and marker plan for a ladies skirt. Calculation of marker efficiency.
11. Developing design, pattern and marker plan for men's formal trouser. Calculation of marker efficiency.

Practical: 30 Hours	Total: 30 Hours

Dr.J.Srinivasan
Signature of BOS chairman, TXT

Textile and apparel costing course made as core course
Course Code: U17TXT7003
Course Name: Textile and Apparel Costing

U17TXT7003 TEXTILE AND APPAREL COSTING

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: Discuss the cost management concepts.
CO2: Explain elements of cost of a product.
CO3: Discuss various expenses incurred in textile industry.
CO4: Elaborate factors influencing costing of textile product.
CO5: Prepare cost sheet for garment industry.
CO6: Compile various trims and accessories for apparels.
Pre Requisite: U17TXT4001 Yarn Manufacturing Technology-II

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	PSO 1	PSO 2
CO1	M													
CO2	M	M											M	
CO3		M		S	M									
CO4	M	M		S										
CO5		M												
CO6	M													

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

INTRODUCTION **9 Hours**

Costing: Aims of costing- Costing as an aid to management. Cost terms related to income measurement, profit planning and cost control for textile industry. Inventory control in textile industry, Types of costing- Aims of estimation - Difference between Estimation and Costing - Types of estimates.

ELEMENTS OF COST **9 Hours**

Elements of cost –Fixed cost, Variable cost- Material cost – Labour cost – Different types of expenses – Cost of product – Advertisement cost. Factors affecting pricing, Full-cost pricing, Marginal cost pricing. Cost sheet.

Dr.J.Srinivasan

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COSTING STRATEGY **9 Hours**

Analysis of overhead expenses – Factory expenses – Administrative expenses – Selling and distribution expenses – Allocation of overhead expenses – Depreciation: Causes and reasons– Methods of calculating depreciation –Break even analysis - Simple calculations.

COSTING OF TEXTILE PRODUCTS **9 Hours**

Yarn costing - Fabric Costing - Costing of fabric processing – Factors that determination of the price of garments –Cost of components - Job-order costing for a garment industry. Batch costing. Process costing; waste cost and its control in a textile mill. CMT (Cutting, Making & Trimming) Cost, simple cost calculations.

COSTING OF ACCESSORIES **9 Hours**

Packing and labeling cost – different types and functions – Cost of bought out components. Shipment cost - Duty drawback. Cost calculation of Ladies and Men and Children's wear – Woven and Knitted - Simple calculations.

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

REFERENCES

1. RajkishoreNayak, Rajiv Padhye., "Garment ManufacturingTechnology", Woodhead Publishing in association with The Textile Institute, UK,2015.
2. Lall Nigam B.M and Jain I.C., "Cost accounting: Principles & practice Prentice Hall India, 2000.
3. Jain S.P., Narang.K.L., "Elements of Cost Accounting", Kalyani publishers, 2000.
4. Johnson Maurice, E. Moore, "Apparel Product Development", Om Book Service, 2001.
5. Katherine McKelvy, "Fashion Source Book", Om Book Service, 2001.
6. Jain S.P., Narang, K.L., "Cost Accounting –Principles and Practice", Kalyani Publishers, 2009.
7. Larry M,Walther& Christopher J Kousen, " Managerial and Cost Accounting", Ventus Publishing,ISBN:978 87 7681 491 5 (2009)
8. M.Krishnakumar "Apparel Costing: A functional Approach" Abhishek Publications, 2011, ISBN, 8182473926.

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Department of Aeronautical Engineering

AY: 2018-19 **Date: 15.04.2019**

Action taken report -Alumni Feedback

S.No	Analysis	Action taken report
1.	All theory courses in fifth semester seem to be overloaded for students. It can be revisited.	Will be considered for next revision
2.	'Computational Fluid Dynamics' course should have 2 lecture hours and 1 tutorial hour.	Design and Simulation Laboratory has been included in the sixth semester instead of 1 Tutorial hour Computational Fluid Dynamics Laboratory is named as Design and Simulation Laboratory as it deals both FEM and CFD.
3.	Heat Transfer is compulsory for all the interviews	Heat and Mass Transfer course is included as a Professional Elective

Prepared By,

BoS Coordinator

Approved By,

BoS Chairman

Proof for Action Taken: 2 Design and Simulation Laboratory has been included in the sixth semester instead of 1 Tutorial hour
Computational Fluid Dynamics Laboratory is named as Design and Simulation Laboratory as it deals both FEM and CFD.

Semester VI										Pre-requisite
S.No	**Course code**	**Course Title**	**Course Mode**	**CT**	**L**	**T**	**P**	**J**	**C**	
1	U17AET6001	Flight Dynamics	Theory	PC	3	0	0	0	3	U17AEI4201
2	U17AET6002	Finite Element Method	Theory	PC	3	0	0	0	3	U17AET4003
3	U17AET6003	Vibrations and Aeroelasticity	Theory	PC	3	0	0	0	3	U17AEI5202
4	U17AET6104	Rocket Propulsion	Theory	PC	2	1	0	0	3	U17AEI5205
5	OE II	Open Elective II	Theory	OE	3	0	0	0	3	-------
6	U17AEE00--	Professional Elective I	Theory	PE	3	0	0	0	3	-------
7	U17AEP6505	Design and Simulation Laboratory	Lab	PC	0	0	2	0	1	U17AET5003
8	U17INI6600	Engineering Clinic 4	Embedded-Practical & Project	ES	0	0	4	2	3	-------
								Total Credits	**22**	
								Total Contact Hours/week	**26**	

Proof for Action Taken: 3 Heat and Mass Transfer course is included as a Professional Elective

PROFESSIONAL ELECTIVES

Course Code	Course Title	Course category	Course Mode	L	T	P	J	C
U18AEE0001	Experimental Aerodynamics	Elective	Theory	3	0	0	0	3
U18AEE0002	Viscous Flow Theory	Elective	Theory	3	0	0	0	3
U18AEE0003	Hypersonic Aerodynamics	Elective	Theory	3	0	0	0	3
U18AEE0004	Cryogenic Engineering	Elective	Theory	3	0	0	0	3
U18AEE0005	Principles of Combustion	Elective	Theory	3	0	0	0	3
U18AEE0006	Heat and Mass Transfer	Elective	Theory	3	0	0	0	3
U18AEE0007	Composite Materials and Structures	Elective	Theory	3	0	0	0	3
U18AEE0008	Theory of Elasticity	Elective	Theory	3	0	0	0	3
U18AEE0009	Fatigue and Fracture Mechanics	Elective	Theory	3	0	0	0	3
U18AEE0010	Experimental Stress Analysis	Elective	Theory	3	0	0	0	3
U18AEE0011	Space Mechanics	Elective	Theory	3	0	0	0	3
U18AEE0012	Non Destructive Testing	Elective	Theory	3	0	0	0	3
U18AEE0013	Aircraft Maintenance Practices	Elective	Theory	3	0	0	0	3
U18AEE0014	Helicopter Aerodynamics	Elective	Theory	3	0	0	0	3
U18AEE0015	High Energetic Fuels and Propellants	Elective	Theory	3	0	0	0	3
U18AEE0016	Aircraft Structural Analysis	Elective	Theory	3	0	0	0	3
U18AEE0017	Autonomous Navigation	Elective	Theory	3	0	0	0	3
U18AEE0018	Additive Manufacturing and Tooling	Elective	Theory	3	0	0	0	3

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Department of Automobile Engineering

AY: 2018-19

Date: 15.04.2019

Action taken report - Alumni Feedback

S.No	Analysis	Action taken report
1	It would be required to have safe driving skills promoted to all the automobile students by proper training.	Awareness program on safe driving was organized. Driving simulator is used for practice.
2	Basics of Automobile Engineering in the 1st and 2nd semester or a bridge course can be conducted	Awareness programs / workshops and guest lectures by SAE, ARAI were organized to orient the students in the basics of automotive. Also, self-learning centre is utilized for learning the basics.

Prepared by,

BoS Coordinator

Approved by,

BoS Chairman

ABT Maruti

KCT AUTOMOTIVE ASSOCIATION

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DEPARTMENT OF AUTOMOBILE ENGINEERING & ABT MARUTI DRIVING SCHOOL

Cordially invite you for the

REFRESHER PROGRAM ON "DEFENSIVE DRIVING" FOR KCT DRIVERS

On Friday, 5th August 2016 at 10.00 am
Automotive Learning Center, 1st Floor, E-Block
Department of Automobile Engineering

AGENDA	
Self Introduction	10.00 am to 10.15 am
Msil Introduction	10.15 am to 10.25 am
Bad Drivers	10.25 am to 10.45 am
Causes of Accidents	10.45 am to 11.25 am
Tea Break	
Types of Road Markings	11.35 am to 12.10 pm
Maintenance Tips	12.10 pm to 12.40 pm
Lunch Break	
First Aid	02.00 pm to 02.35 pm
How to Improve Attitude	02.35 pm to 03.10 pm
Safety Policies of Corporate	03.10 pm to 03.30 pm
Driving Simulator Demonstration	03.30 am to 04.00 pm

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Department of Civil Engineering

AY: 2018-19 **15.04.2019**

Action taken report -Alumni Feedback

S.No	Analysis	Action taken report
1.	The course on Total Quality Management is generic and must be reframed with applications to Civil Engineering Projects	Risk Assessment, Six Sigma content has added in Total Quality Management Syllabus.
2.	The course on Foundation Engineering is framed with only basics and classical methods, recent advances can be included.	A new unit/topic is included in the Foundation Engineering syllabus content as suggested.
3.	The courses on design must have tutorial or lab hours	Most of the design courses are explored for including practical hours

Prepared by,

BoS Coordinator

Approved by,

BoS Chairman

U17MBT6000

TOTAL QUALITY MANAGEMENT

L	T	P	J	C
3	0	0	0	3

Course Objectives

- The objective of this course is to know the basics of quality management.
- To understand the TQM tools and principles.
- To understand the management statistical techniques.
- To understand the quality system documentation and auditing.

Course Outcome

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

CO1: Apply & analyze quality concepts and philosophies of TQM.

CO2: Apply concepts of continuous improvement.

CO3: Apply TQM concepts to enhance customer satisfaction and deal with customer related aspects.

CO4: Apply and analyze the quality tools, management tools and statistical fundamentals to improve quality.

CO5: Understand quality systems, procedures for its implementation, documentation and auditing.

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

Course Assessment methods:

1. Continuous Assessment Test I,II
2. Assignment, Group Discussion
3. End semester Examination

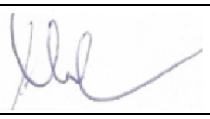
INTRODUCTION 9 Hours

Definition of Quality, Dimensions of Quality, Quality costs, Top Management Commitment, Quality Council, Quality Statements, Barriers to TQM Implementation, Contributions of Deming, Juran and Crosby, Team Balancing

TQM PRINCIPLES 9 Hours

Customer satisfaction – Customer Perception of Quality, Customer Complaints, Service Quality, Customer Retention, Continuous Process Improvement,5S, Kaizen, Just-In-Time and TPS

STATISTICAL PROCESS CONTROL 9 Hours



Signature of the Chairman
BOS/Civil Engineering

The seven tools of quality, New seven Management tools, Statistical Fundamentals – Measures of central Tendency and Dispersion, Population and Sample, Normal Curve, Control Charts for variables and attributes, Concept of six sigma.

TQM TOOLS **9 Hours**

Quality Policy Deployment (QPD), Quality Function Deployment (QFD), Benchmarking, Taguchi Quality Loss Function, Total Productive Maintenance (TPM), FMEA

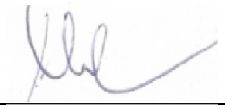
QUALITY SYSTEMS **9 Hours**

Need for ISO 9000 and Other Quality Systems, ISO 9001:2008 Quality System – Elements, Implementation of Quality System, Documentation, Quality Auditing, ISO 14001:2004.

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

REFERENCES

1. Dale H.Besterfiled, "Total Quality Management", Pearson Education, 2016 .
2. James R.Evans& William M.Lidsay, "The Management and Control of Quality", South-Western (Thomson Learning), 2008.
3. Feigenbaum.A.V. "Total Quality Management", McGraw Hill, 2013.
4. Oakland.J.S. "Total Quality Management", Butterworth – Hcinemann Ltd., Oxford, 2011.
5. Narayana V. and Sreenivasan, N.S. "Quality Management – Concepts and Tasks", New Age International 2007.
6. Zeiri. "Total Quality Management for Engineers", Wood Head Publishers.2009
7. Bhaskar S. "Total Quality Management", Anuradha Agencies, Chennai. (2007-revised edition).



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BEARING CAPACITY AND SETTLEMENT **10 Hours**

Introduction- Location and depth of foundation – Codal provisions – bearing capacity of shallow foundation on homogeneous deposits – Terzaghi's formula and BIS formula – factors affecting bearing capacity – problems – Bearing capacity from in-situ tests (plate load, SPT and SCPT) Allowable bearing pressure – Seismic considerations in bearing capacity evaluation. Determination of settlement of foundations on granular and clay deposits – Total and differential settlement.

SHALLOW FOUNDATION **7 Hours**

Types of footings – Contact pressure distribution, isolated footing – combined footings – proportioning – Mat foundation – Types and applications- Floating foundation – Seismic force consideration – Codal provision (No structural design).

PILE FOUNDATION **10 Hours**

Types of piles and their function – Factors influencing the selection of pile – Load carrying capacity of single pile in granular and cohesive soil – static formula - dynamic formula – Capacity from insitu tests – negative skin friction – uplift capacity – Group capacity by different methods (Feld's rule, Converse-Labarre formula and block failure criterion) – Settlement of pile groups – interpretation of pile load test – Under reamed piles.

RETAINING WALLS **10 Hours**

Plastic equilibrium in soils – active and passive states- Rankine's theory – cohesionless and cohesive soil – Condition for critical failure plane – Earth pressure on retaining walls of simple configurations – Culmann's Graphical method – pressure on the wall due to line load – Stability analysis of retaining walls - Use of geosynthetics in retaining wall.

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

REFERENCES

1. Arora K.R. "Soil Mechanics and Foundation Engineering", Standard Publishers and Distributors, new Delhi, 7th Edition 2014.
2. Punmia, B. C., Jain, A. K., and Jain, A. K. "Soil Mechanics and Foundations", Laxmi Publications, New Delhi, 17th Edition: 2017
3. Gopal Ranjan and Rao A.S.R. "Basic and Applied soil mechanics", Wiley eastern ltd, New Delhi, 2nd Edition 2014.
4. Murthy, V.N.S., "Soil Mechanics and Foundation Engineering", CBS Publishers Distribution Ltd., New Delhi. 5th Edition 2011.
5. Das, B.M, "Principles of Geotechnical Engineering", Thompson Brooks/ Coles Learning, Singapore, 5th Edition, 2002.

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Signature of the Chairman
BOS/Civil Engineering

U17INI5600 ENGINEERING CLINIC - III

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:U17INI5600

CO/PO Mapping

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

COs	Programme													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO	PSO2
CO1	S	S	S	S	S	M	W		S			S		M
CO2											S			
CO3										S				M

Course Assessment methods:

1. Project reviews 50%
2. Workbook report 10%
3. Demonstration & Viva-voce 40%

Content:

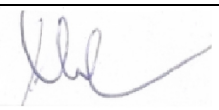
The course will offer the students with an opportunity to gain a basic understanding of computer controlled electronic devices and apply the concepts to design and build simple to complex devices. As a practical project based embedded course, the students will be taught the concepts using a variety of 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 project combining concepts learnt in Engineering clinics I and II

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.

Total Hours: 90



Signature of the Chairman
BOS/Civil Engineering

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Department of Computer Science and Engineering

AY: 2018-19

Date:15.04.2019

Action taken report -Alumni Feedback

S.No	Analysis	Action taken report
1.	Students can be given exposure to Node JS and Angular JS	U15CSIN11-Web Application Development using NodeJS and U15CSIN12- Web Application Development using AngularJS are offered as one credit course for the students.

Prepared By
(Feedback/BoS Coordinator)
(Dr. D. Chandrakala)

Approved By
(Signature of Bos hairman)
(Dr. J. Cynthia)

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

Proof for ATR- Alumni

15CSIN11	WEB APPLICATION DEVELOPMENT USING NODEJS	L	T	P	J	C
		0	0	2	0	1

Course Outcomes

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

CO1	Analyze the usage of NodeJS in MEAN stack.[K4,S2]
CO2	Design and develop an application in NodeJS concepts. [K5, S3]

Pre-requisites : Basic Javascript and HTML

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

Course Assessment Methods

Direct
1. Objective type questions
2. Application development

INTRODUCTION TO MEAN STACK — 7 Hours

MEAN Stack –Uses and Features of MEAN- MongoDB – ExpressJS – Node.js – AngularJS-Node in MEAN stack – Installation and Sample Application in node

INTRODUCTION TO NODE.JS — 8 Hours

Introduction to Node.js - Asynchronous/Non-blocking – Node Package Manager - Need For Packages - Packages – Callback -Blocking Code Example-Non-Blocking Code Example-Events -Callback Vs. Events – Streams - Readable Streams - Writable Streams – Pipes – Prompt

Theory: 3 **Tutorial: 0** **Practical: 12** **Project: 0** **Total: 15 Hours**

Proof for ATR – Alumini

U15CSIN12	WEB APPLICATION DEVELOPMENT USING ANGULARJS	L	T	P	J	C
		0	0	2	0	1

Course Outcomes

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

CO1	Discover the usage of AngularJS in MEAN stack. [K4, S2]
CO2	Design and develop web application using AngularJS framework. [K5, S3]

Pre-requisites : Basic Javascript and HTML

CO/PO Mapping

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

CO/PSO Mapping

COs	Programme Outcomes(POs)												Programme Specific Outcomes (PSOs)		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	S	S	M		M				S	M		M	S	M	
CO2	S	S	S		S			S	S	M		M	S	M	

Course Assessment Methods

Direct

1. Objective type questions
2. Application development

INTRODUCTION TO ANGULAR — 7 Hours

Introduction - Advantages & Disadvantages – Features - Environment setup -Working on IDE - Structure of Angular Projects -Architecture of Angular Projects - Creating a Custom Component-Section in Component -Modules introduction

DIRECTIVE – BINDING - ROUTING — 8 Hours

Component Directive - Structural Directive - Attribute Directive - Sample Programs in Directive - Data Binding - Data Binding types - Sample Project - Routing Introduction - Routing and Navigation – Pipes - Built-in Pipes - Animation

Theory: 3 **Tutorial: 0** **Practical: 24** **Project: 0** **Total: 15 Hours**

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KUMARAGURU COLLEGE OF TECHNOLOGY, COIMBATORE-641049

(An Autonomous Institution affiliated to Anna University, Chennai)

Action Taken **Report -Alumni**

Department of Electronics and Communication Engineering

Academic Year: 2018 – 2019

Date: 15.04.2019

S.No	Feedback	Action Taken
1.	Data communication, switching and radio communication technologies content needs to be enriched in the syllabus	Data communication and switching concepts are included in the U17ECI5203 - Communication Networks.
2.	Number of courses in elective list should be increased.	Increased the elective count under five elective buckets.
3.	Mathematics course has to be added in core instead of elective for PG curriculum.	P18MAT0101-Applied Mathematics course added in first semester of PG.

Prepared By,

BoS Coordinator

Approved By,

BoS Chairman

Proof for Action Taken 1:Data communication and switching concepts are included in the U17ECI5203 - Communication Networks.

U17ECI5203 **COMMUNICATION NETWORKS**

L	T	P	J	C
3	0	2	0	4

Course Outcomes (COs):

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

CO1: Describe network topologies, protocols and models (K2).
CO2: Demonstrate and analyze data link layer protocols and LAN standards (K3,S4).
CO3: Analyze routing algorithms and methods to improve QoS. (K3,S4)
CO4: Summarize transport layer protocols and congestion controls methods.(K2)
CO5: Describe various application layer services. (K2)
CO6: Implement and Analyze cryptographic and security techniques. (K3,S4)

Pre-requisites: -

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

COs	PROGRAMME OUTCOMES													
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	S													S
CO2	S	W												S
CO3	S	S	M						M	M				S
CO4	S	M							M	M				S
CO5	S	M	M	W										S
CO6		S	M	W										S

Course Assessment Methods

DIRECT
Continuous Assessment Test I, II (Theory Component) Assignment (Theory Component) Pre/Post - experiment Test/Viva; Experimental Report for each experiment (Lab component) Model examination (lab component) End Semester Examination (Theory and lab component)
INDIRECT
Course-end survey

DATA COMMUNICATIONS **09 Hours**

Introduction to networks –Topologies – Protocols and Standards–ISO/OSI model-TCP/IP-Comparison of OSI model and TCP/IP, Transmission Media, Switching Techniques, Connecting devices – Hubs, Bridges, Switches, Routers, Gateways.

Signature of BOS chairman, ECE

DATA LINK LAYER **09 Hours**

LAN: Ethernet IEEE 802.3, IEEE802.5, IEEE802.11, FDDI, Bridges. Error detection and correction– Forward Error Correction –Flow Control and Error control techniques - Stop and wait – Go back N ARQ – Selective repeat ARQ - sliding window techniques – HDLC.

NETWORK LAYER **09 Hours**

Internetworks – Packet Switching and Datagram approach – IP addressing methods – IPv6–Subnetting – Routing – Distance Vector Routing, Link State Routing, Quality of services (QOS) – methods to improve QOS parameters.

TRANSPORT LAYER AND APPLICATION LAYER **09 Hours**

Functions of transport layer – Multiplexing – Demultiplexing – Sockets – User Datagram Protocol (UDP) – Transmission Control Protocol(TCP) – Congestion Control– RSVP. Application layer: Domain Name Space(DNS), SMTP, FTP, HTTP, WWW

NETWORK SECURITY **09 Hours**

Security Goals, attacks, Services and Techniques, Symmetric key cryptography – Data Encryption standard & Advanced Encryption Standard, RC4. Asymmetric key cryptography – RSA &Diffie-Hellman algorithms. Internet Security – Application layer security and firewalls.

REFERENCES:

1. Behrouz.A.Foruzan, —Data communication and Networking, Fifth Edition, Tata McGraw-Hill, 2013.
2. Andrew S. Tannenbaum,—ComputerNetworks, FourthEdition, PHI, 2003
3. James.F.Kurouse&W.Rouse, —Computer Networking: A Top down Approach Featuring, Addison Wesley,2009.
4. Larry.L.Peterson&Peter.S.Davie, —Computer Networks, third edition, Harcourt AsiaPvt.Ltd,2007

LAB COMPONENT:

LIST OF EXPERIMENTS

Design and implementation of:

1. Simulation of Ethernet (IEEE802.3) using various Application layer protocols.
2. Analysis of QoS parameters in LAN
3. Simulate a wireless network with distance vector routing protocol (AODV) and link state routing protocol.(OLSR)
4. Implementation of CSMA/CD protocol for Ethernet LAN.
5. Implementation of CSMA/CA protocol for wireless LAN.
6. Configure a Network Topology using Packet tracer.
7. Analysis of Encryption and Decryption algorithm with RC4.

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

Signature of BOS chairman, ECE

Proof for Action Taken 2: Increased the elective count under five elective buckets.

Professional Electives									
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C
Communication System									
1	U17ECE0001	Cognitive Radio	Theory	PE	3	0	0	0	3
2	U17ECE0002	Satellite Communication	Theory	PE	3	0	0	0	3
3	U17ECE0003	MIMO systems	Theory	PE	3	0	0	0	3
4	U17ECE0004	Advanced Wireless Communication	Theory	PE	3	0	0	0	3
5	U17ECE0005	RADAR and Navigational Aids	Theory	PE	3	0	0	0	3
Signal Processing									
1	U17ECE0011	Digital Image Processing	Theory	PE	3	0	0	0	3
2	U17ECE0012	Multimedia and Compression	Theory	PE	3	0	0	0	3
3	U17ECE0013	Biomedical Signal Processing	Theory	PE	3	0	0	0	3
4	U17ECE0014	Machine Learning	Theory	PE	3	0	0	0	3
5	U17ECE0015	Statistical Signal processing	Theory	PE	3	0	0	0	3
Communication Networks									
1	U17ECE0021	Adhoc wireless networks.	Theory	PE	3	0	0	0	3
2	U17ECE0022	High speed networks.	Theory	PE	3	0	0	0	3
3	U17ECE0023	Network security	Theory	PE	3	0	0	0	3
4	U17ECE0024	Wireless system and standards	Theory	PE	3	0	0	0	3
5	U17ECE0025	Graph theory and its applications.	Theory	PE	3	0	0	0	3
RF and Antenna									
1	U17ECE0031	RF MEMS	Theory	PE	3	0	0	0	3
2	U17ECE0032	RF System Design	Theory	PE	3	0	0	0	3
3	U17ECE0033	Electromagnetic Interference and Compatibility	Theory	PE	3	0	0	0	3
4	U17ECE0034	Computational Electromagnetics	Theory	PE	3	0	0	0	3
VLSI									
1	U17ECE0041	VLSI testing and testability	Theory	PE	3	0	0	0	3
2	U17ECE0042	System design with FPGA	Theory	PE	3	0	0	0	3
3	U17ECE0043	System on Chip	Theory	PE	3	0	0	0	3
4	U17ECE0044	Nano Electronics	Theory	PE	3	0	0	0	3
5	U17ECE0045	Low power VLSI	Theory	PE	3	0	0	0	3
Embedded System									
1	U17ECE0051	Industrial Robotics	Theory	PE	3	0	0	0	3
2	U17ECE0052	Industrial Automation	Theory	PE	3	0	0	0	3
3	U17ECE0053	Virtual Instrumentation	Theory	PE	3	0	0	0	3
4	U17ECE0054	Real time Embedded Systems	Theory	PE	3	0	0	0	3
5	U17ECE0055	Automotive Electronics	Theory	PE	3	0	0	0	3

Signature of BOS chairman, ECE

Proof for Action taken 3: P18MAT0101-Applied Mathematics course added in first semester of PG.

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COIMBATORE – 641 049

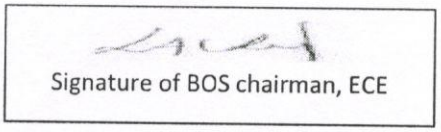
REGULATIONS 2018

M.E. COMMUNICATION SYSTEMS

CURRICULUM

SEMESTER I							
Course Code	**Course Title**	**Course Mode**	**L**	**T**	**P**	**J**	**C**
P18INT0001	Research Methodology and Statistics	Theory	3	0	0	0	3
P18COT1001	RF and Microwave Integrated Circuits	Theory	3	0	0	0	3
P18COI1202	Advanced Signal Processing	Embedded	3	0	2	0	4
P18COI1203	Advanced Digital Communication Techniques	Embedded	3	0	2	0	4
P18MAT0101	Applied Mathematics	Theory	3	1	0	0	4
						Total Credits	**18**
						Total Hours per week	**20**
SEMESTER-II							
Course Code	**Course Title**	**Course Mode**	**L**	**T**	**P**	**J**	**C**
P18COT0004	High Performance Networks	Theory	3	0	0	0	3
P18COT2001	Wireless Sensor Networks	Theory	3	0	0	0	3
P18COI2202	Advanced Radiation Systems	Embedded	3	0	2	0	4
P18COI2203	Wireless Communication Systems	Embedded	3	0	2	0	4
P18COE____	Professional Elective I	Theory	3	0	0	0	3
						Total Credits	**17**
						Total Hours per week	**19**
SEMESTER-III							
Course Code	**Course Title**	**Course Mode**	**L**	**T**	**P**	**J**	**C**
P18COE____	Professional Elective II	Theory	3	0	0	0	3
	Audit Course						
P18COP3701	Project Phase I / Industry Project	Project	0	0	0	24	12
						Total Credits	**15**
						Total Hours per week	**27**
SEMESTER-IV							
Course Code	**Course Title**	**Course Mode**	**L**	**T**	**P**	**J**	**C**
P18COP4701	Project Phase II/ Industry Project	Project	0	0	0	36	18
						Total Credits	**18**
						Total Hours per week	**36**

Grand Total Credits: 68



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Department of Electronics & Instrumentation Engineering

AY: 2018-19 15.04.2019

Action taken report - Alumni Feedback

S.No	Analysis	Action taken report
1.	Real-time exposure of concepts to be given in laboratory	Most of the core courses are handled in embedded mode
2.	Need to conduct orientation programs for students on placements	Incorporated
3.	Syllabus to be updated to prepare students for Competitive exams and events.	The Course U18EIT6003 – Comprehensive studies is included for competitive exams like GATE etc.

Prepared by

V. Manekala AP/EIE

BoS Coordinator

Approved by

BoS Chairman

Proof for ATR point No 1

CURRICULUM

SEMESTER I										
S. No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	Pre-requisite
1	U18ENI1201	Fundamentals of Communication I	Embedded - Theory and Practical	HS	2	0	2	0	3	--
2	U18MAI1201	Linear Algebra and Calculus	Embedded- Theory and Practical	BS	3	0	2	0	4	--
3	U18 PHI1201	Engineering Physics	Embedded - Theory and Practical	BS	3	0	2	0	4	--
4	U18MEI1201	Engineering Graphics	Embedded- Theory and Practical	ES	2	0	2	0	3	--
5	U18CSI1202	Problem Solving and Programming Using C	Embedded - Theory and Practical	ES	2	0	2	0	3	--
6	U18INI1600	Engineering Clinics I	Embedded- Practical and Project	ES	0	0	4	2	3	--
								Total Credits	20	
								Total Contact Hours/week	28	

SEMESTER II										
S. No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	Pre-requisite
1	U18MAI2201	Advanced Calculus and Laplace Transforms	Embedded- Theory and Practical	BS	3	0	2	0	4	U18MAI1201
2	U18ENI2201	Fundamentals of Communication II	Embedded- Theory and Practical	HS	2	0	2	0	3	--
3	U18CHI2201	Engineering Chemistry	Embedded- Theory and Practical	BS	3	0	2	0	4	--
4	U18EII2201	Foundation in Electrical and Electronics Engineering	Embedded- Theory and Practical	PC	3	0	2	0	4	U18PHI1201
5	U18CSI2201	Python Programming	Embedded- Theory and Practical	ES	2	0	2	0	3	--
6	U18INI2600	Engineering Clinics II	Embedded- Practical and Project	ES	0	0	4	2	3	--
								Total Credits	21	
								Total Contact Hours/week	29	

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SEMESTER III

S. No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	Pre-requisite
1	U18EII3201	Analog Electronics	Embedded - Theory and Practical	PC	3	0	2	0	4	-
2	U18EII3202	Sensors and Measurements	Embedded - Theory and Practical	PC	3	0	2	0	4	-
3	U18BTT3006	Biology for Engineers	Theory	BS	3	0	0	0	3	-
4	U18MAT3104	Numerical methods and Probability	Theory & Tutorial	BS	3	1	0	0	4	-
5	U18MET3007	Mechanics and Thermodynamics	Theory	ES	3	0	0	0	3	-
6	U18INI3600	Engineering Clinics III	Embedded - Practical and Project	ES	0	0	4	2	3	-
								Total Credits	**21**	
								Total Contact Hours/week	**26**	

SEMESTER IV

S. No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	Pre-requisite
1	U18EII4201	Electronic Signal Conditioning	Embedded - Theory and Practical	PC	3	0	2	0	4	U18EII3201
2	U18EII4202	Digital Fundamentals and Microprocessor	Embedded - Theory and Practical	PC	3	0	2	0	4	--
3	U18EII4203	Modelling and Analysis of Dynamic Systems	Embedded - Theory and Practical	PC	3	0	2	0	4	--
4	U18EIT4004	MEMS and Sensor Design	Theory	PC	3	0	0	0	3	U18EII3202
5	U18EIT4005	Ancillary Support System	Theory	PC	3	0	0	0	3	--
6	U18INI4600	Engineering Clinics IV	Embedded - Practical and Project	ES	0	0	4	2	3	--
								Total Credits	**21**	
								Total Contact Hours/week	**27**	

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SEMESTER V

S. No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	Pre-requisite
1	U18EII5201	Process Dynamics and Control	Embedded-Theory and Practical	PC	3	0	2	0	4	U18EII4203
2	U18EII5202	Embedded Microcontrollers	Embedded-Theory and Practical	PC	3	0	2	0	4	U18EII4202
3	U18EII5203	Field Instrumentation	Embedded-Theory and Practical	PC	3	0	2	0	4	U18EII3202
4	U18EIT5004	Industrial Communication and networking	Theory	PC	3	0	0	0	3	--
5	U18EIE00- -	Professional Elective I	Theory	PE	3	0	0	0	3	--
6	U18- - - - - - -	Open Elective I	Theory	OE	3	0	0	0	3	--
7	U18INI5600	Engineering Clinics V	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	U18EII6201	Industrial Automation	Embedded-Theory and Practical	PC	3	0	2	0	4	U18EII5201 U18EII5203
2	U18EII6202	Digital Signal Processing & Deep learning	Embedded-Theory and Practical	PC	3	0	2	0	4	U18EII4203
3	U18EIE00- -	Professional Elective II	Theory	PE	3	0	0	0	3	--
4	U18- - - - - - -	Open Elective II	Theory	OE	3	0	0	0	3	--
5	U18EIT6003	Comprehensive Studies	Theory	PC	2	0	0	0	2	U18EII3201, U18EII3202, U18EII4202 U18EII5201, U18EII5203
6	U18EIE00- -	Professional Elective III	Theory	PE	3	0	0	0	3	--

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Total Credits	**19**	
Total Contact Hours/week	**21**	

SEMESTER VII

S. No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	Pre-requisite
1	U18EIT7001	Analytical Instrumentation	Theory	PC	3	0	0	0	3	U18EII3202
2	U18EII7202	Advanced Control system	Embedded Theory and Practical	PC	3	0	2	0	4	U18EII5201
3	U18EIE00- -	Professional Elective IV	Theory	PE	3	0	0	0	3	- -
4	U18MBT7000	Engineering Economics and financial management	Theory	HS	3	0	0	0	3	--
5	U18EIP7703	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	U18EIP8701	Capstone Project	Project Only Course	PW	0	0	0	24	12	U18EIP7703
Total Credits									**12**	
Total Contact Hours/week									**24**	

BOS Chairman

Proof for ATR point No 3

U18EIT6003 **COMPREHENSIVE STUDIES**

L	T	P	J	C
2	0	0	0	2

Course Outcomes (CO):

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

CO1: Solve problems in areas of engineering mathematics and electrical circuits.

CO2: Solve problems in areas of signals and systems, analog electronics and control systems.

CO3: Solve problems in areas of digital electronics, measurements, sensors and industrial instrumentation

CO4 : Solve problems in areas of communication and optical instrumentation.

Pre-requisite: U18EII3201, U18EII3202, U18EII4202 U18EII5201, U18EII5203

COs	PO												PSO	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	S	M		S	M								M	
CO2	M	M		M									M	
CO3	W		M										M	
CO4	M	M		W										M

Course Assessment Methods:	
Direct	**Indirect**
• Internal Tests • Assignment • End Semester Theory Exam	• Course Exit Survey

Course Content:

SECTION 1: ENGINEERING MATHEMATICS

Linear Algebra: Matrix algebra, systems of linear equations, Eigen values and Eigen vectors.

Calculus: Mean value theorems, theorems of integral calculus, partial derivatives, maxima and minima, multiple integrals, Fourier series, vector identities, line, surface and volume integrals, Stokes, Gauss and Green's theorems.

Differential equations: First order equation (linear and nonlinear), higher order linear differential equations with constant coefficients, method of variation of parameters, Cauchy's and Euler's equations, initial and boundary value problems, solution of partial differential equations: variable separable method.

Analysis of complex variables: Analytic functions, Cauchy's integral theorem and integral formula, Taylor's and Laurent's series, residue theorem, solution of integrals.

Probability and Statistics: Sampling theorems, conditional probability, mean, median, mode and standard deviation, random variables, discrete and continuous distributions: normal, Poisson and binomial distributions.

K.K.

BOS Chairman

Numerical Methods: Matrix inversion, solutions of non-linear algebraic equations, iterative methods for solving differential equations, numerical integration, regression and correlation analysis.

Instrumentation Engineering

SECTION 2: ELECTRICAL CIRCUITS:

Voltage and current sources: independent, dependent, ideal and practical; v-i relationships of resistor, inductor, mutual inductor and capacitor; transient analysis of RLC circuits with dc excitation.

Kirchoff's laws, mesh and nodal analysis, superposition, Thevenin, Norton, maximum power transfer and reciprocity theorems.

Peak-, average- and rms values of ac quantities; apparent-, active- and reactive powers; phasor analysis, impedance and admittance; series and parallel resonance, locus diagrams, realization of basic filters with R, L and C elements.

One-port and two-port networks, driving point impedance and admittance, open-, and short circuit parameters.

SECTION 3: SIGNALS AND SYSTEMS

Periodic, aperiodic and impulse signals; Laplace, Fourier and z-transforms; transfer function, frequency response of first and second order linear time invariant systems, impulse response of systems; convolution, correlation. Discrete time system: impulse response, frequency response, pulse transfer function; DFT and FFT; basics of IIR and FIR filters.

SECTION 4: CONTROL SYSTEMS

Feedback principles, signal flow graphs, transient response, steady-state-errors, Bode plot, phase and gain margins, Routh and Nyquist criteria, root loci, design of lead, lag and lead-lag compensators, state-space representation of systems; time-delay systems; mechanical, hydraulic and pneumatic system components, synchro pair, servo and stepper motors, servo valves; on-off, P, P-I, P-I-D, cascade, feedforward, and ratio controllers.

SECTION 5: ANALOG ELECTRONICS

Characteristics and applications of diode, Zener diode, BJT and MOSFET; small signal analysis of transistor circuits, feedback amplifiers. Characteristics of operational amplifiers; applications of opamps: difference amplifier, adder, subtractor, integrator, differentiator, instrumentation amplifier, precision rectifier, active filters and other circuits. Oscillators, signal generators, voltage controlled oscillators and phase locked loop.

SECTION 6: DIGITAL ELECTRONICS

Combinational logic circuits, minimization of Boolean functions. IC families: TTL and CMOS. Arithmetic circuits, comparators, Schmitt trigger, multi-vibrators, sequential circuits, flip-flops, shift registers, timers and counters; sample-and-hold circuit, multiplexer, analog-to-digital (successive approximation, integrating, flash and sigma-delta) and digital-to-analog converters (weighted R, R-2R ladder and current steering logic). Characteristics of ADC and DAC (resolution, quantization, significant bits, conversion/settling time); basics of number systems, 8-bit microprocessor and microcontroller: applications, memory and input-output interfacing; basics of data acquisition systems.

SECTION 7: MEASUREMENTS

SI units, systematic and random errors in measurement, expression of uncertainty - accuracy and precision index, propagation of errors. PMMC, MI and dynamometer type instruments; dc potentiometer; bridges for measurement of R, L and C, Q-meter. Measurement of voltage, current and power in single and three phase circuits; ac and dc current probes; true rms meters, voltage and current scaling, instrument transformers, timer/counter, time, phase and frequency measurements, digital voltmeter, digital multimeter; oscilloscope, shielding and grounding.

SECTION 8: SENSORS AND INDUSTRIAL INSTRUMENTATION

Resistive-, capacitive-, inductive-, piezoelectric-, Hall effect sensors and associated signal

K.K.

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conditioning circuits; transducers for industrial instrumentation: displacement (linear and angular), velocity, acceleration, force, torque, vibration, shock, pressure (including low pressure), flow (differential pressure, variable area, electromagnetic, ultrasonic, turbine and open channel flow meters) temperature (thermocouple, bolometer, RTD (3/4 wire), thermistor, pyrometer and semiconductor); liquid level, pH, conductivity and viscosity measurement.

SECTION 9: COMMUNICATION AND OPTICAL INSTRUMENTATION

Amplitude- and frequency modulation and demodulation; Shannon's sampling theorem, pulse code modulation; frequency and time division multiplexing, amplitude-, phase-, frequency-, pulse shift keying for digital modulation; optical sources and detectors: LED, laser, photo-diode, light dependent resistor and their characteristics; interferometer: applications in metrology; basics of fiber optic sensing.

Theory Hours: 45	Practical Hours: 0	Total Hours: 45

Refences :

1. GATE Solved Papers for Instrumentation (IN)
2. Guidebook for Gate Instrumentation Engineering.

K.K.

BOS Chairman

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Department of Fashion Technology

AY: 2018-19

Action taken report -Alumni Feedback

Date : 15.04.2019

S.No	Analysis	Action taken report
1.	To provide entrepreneurship skills, a course Boutique management should be provided.	The course U18FTE0004 Fashion Boutique management is added and given under fashion design track.
2.	Apparel merchandising and cost management should be shifted to sixth semester instead of providing in seventh semester.	U18FTT6002 Apparel merchandising and cost management course is provided in sixth semester.
3.	Industrial engineering course should be provided in sixth semester to train the students for placement in seventh semester.	U18FTT6003 Industrial engineering course is provided in sixth semester in the curriculum.
4.	The management course apparel retail management should be shifted to seventh semester from sixth semester. In that space a technical course could be provided.	The course U18FTT7002 apparel retail management is shifted to seventh semester from sixth semester.

PreparedBy,

BoS Coordinator

Approved By,

BoS Chairman

Sl.No 1: A course Boutique management should be provided .

Programme Electives									
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C
Fashion designing									
1	U18FTE0001	Apparel Product Development	Theory	PE	3	0	0	0	3
2	U18FTE0002	Surface Ornamentation	Theory	PE	3	0	0	0	3
3	U18FTE0003	Visual Merchandising	Theory	PE	3	0	0	0	3
4	U18FTE0004	Fashion Boutique Management	Theory	PE	3	0	0	0	3
5	U18FTE0005	Traditional Indian Textiles and Crafts	Theory	PE	3	0	0	0	3

U18FTE0004 FASHION BOUTIQUE MANAGEMENT

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

CO1	Acquire knowledge on creating a business plan	K3
CO2	Analyze the factors affecting boutique design and development	K4
CO3	Acquire knowledge on boutique operations management	K3
CO4	Create new strategies for marketing and promotion	K6
CO5	Understand the procedure for financial planning and startup formalities	K5
CO6	Develop project proposal to start a Fashion Boutique	K6

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	PO 10	PO 11	PO12	PSO 1	PSO 2
CO1	M			S			S						M	
CO2		M	S		S	S	S			S		M	W	
CO3		S	S		S	S	S	S		S		S	S	S
CO4		M		S	M				S	S		S	S	S
CO5		S									S	M	S	
CO6				S					M	M	S		S	

Course Assessment methods:

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

Course Content

Business plan **9 Hours**

Scope for boutiques – creation of business plan for starting a boutique- parts of a business plan – components of a business plan – types of business plans – Competitive analysis & case study analysis -Assessment of Feasibility (Technical, Financial & Marketing) - finding the right plan

Boutique design & development **9 Hours**

Location decision- importance, levels and determining factors. Types of location, types of consumer goods and location decision. Exterior Design, Store Layout & Space management, Atmospherics, colour planning, physical materials in store designing, atmospherics in the context of internet retailing.

Boutique Operations Management **9 Hours**

Business Model – online & offline - store design, visual merchandising & display, customer service, budgeting & accounting, money and credit handling, shoplifting prevention, premises maintenance, systems & staff management, inventory optimization and management, administration and supply chain management

Marketing & Promotion **9 Hours**

New marketing strategies – loyalty programs -sales promotion through advertising, public relations, direct marketing, personal selling, promotion mix; digital marketing, social media leverage – email & influencer marketing – future trends

Financial Planning & Project Management **9Hours**

Formats in business ownership- registration & licensing- financial support from Government and institutions- Taxes - government incentives (financial &non financial) – Steps and formalities to start a boutique – evaluation and sickness prevention activities

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

REFERENCES

1. Stewart B., “Opening Boutique Guide”, Bull City Publishing, 2016.
2. https://www.bizmove.com/starting-business/how-to-start-a-boutique-business.pdf
3. Wright C, “Business Boutique”, Ramsey Press, Tennessee, 2017.
4. https://www.thebalancesmb.com/department-store-mission-statements-4068552
5. https://www.entrepreneur.com/article/38290
6. https://www.smartsheet.com/store-layout
7. https://www.smartsheet.com/retail-store-operations
8. https://www.shopkeep.com/blog/promotion-ideas-for-retail-stores

Sl.No 2: Apparel merchandising and cost management is shifted to sixth semester

Semester VI										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U18FTT6001	Apparel Production Planning and Control	Theory	PC	3	0	0	0	3	Nil
2	U18FTT6002	Apparel Merchandising and Cost Management	Theory	PC	3	0	0	0	3	Nil
3	U18FTT6003	Industrial Engineering in Apparel Industry	Theory	PC	3	0	0	0	3	Nil
4	U18FTE….	Programme Elective I	Theory	PE	3	0	0	0	3	Nil
5	U18OE….	Open Elective II	Theory	OE	3	0	0	0	3	Nil
6	U18FTE…	Programme Elective II	Theory	PE	3	0	0	0	3	Nil
7	U18FTP6504	Apparel CAD lab	Lab	PC	0	0	2	0	1	Nil
8	U18FTP6505	Portfolio Presentation I	Lab	PC	0	0	2	0	1	U18FTI4203
								Total Credits	20	
								Total Contact Hours/week	22	

Sl.No 3- U18FTT6003 Industrial engineering course is provided in sixth semester in the curriculum

Semester VI										Pre-requisite
S.No	Course code	Course Title	Course Mode	CT	L	T	P	J	C	
1	U18FTT6001	Apparel Production Planning and Control	Theory	PC	3	0	0	0	3	Nil
2	U18FTT6002	Apparel Merchandising and Cost Management	Theory	PC	3	0	0	0	3	Nil
3	U18FTT6003	Industrial Engineering in Apparel Industry	Theory	PC	3	0	0	0	3	Nil
4	U18FTE….	Programme Elective I	Theory	PE	3	0	0	0	3	Nil
5	U18OE….	Open Elective II	Theory	OE	3	0	0	0	3	Nil
6	U18FTE…	Programme Elective II	Theory	PE	3	0	0	0	3	Nil
7	U18FTP6504	Apparel CAD lab	Lab	PC	0	0	2	0	1	Nil
8	U18FTP6505	Portfolio Presentation I	Lab	PC	0	0	2	0	1	U18FTI4203
								Total Credits	20	
								Total Contact Hours/week	22	

:

Sl.No 4- The course U18FTT7002 apparel retail management is shifted to seventh semester from sixth semester.

Semester VII										Pre-requisite
S.No	**Course code**	**Course Title**	**Course Mode**	**CT**	**L**	**T**	**P**	**J**	**C**	
1	U18FTT7001	Apparel Brand Management	Theory	PC	3	0	0	0	3	Nil
2	U18FTT7002	Apparel Retail Management	Theory	PC	3	0	0	0	3	Nil
3	U18FTE….	Programme Elective III	Theory	PE	3	0	0	0	3	Nil
4	U18FTE….	Programme Elective IV	Theory	PE	3	0	0	0	3	Nil
5	U18FTP7503	Portfolio Presentation II	Lab	PC	0	0	2	0	1	U18FTP6505
6	U18FTP7701	Project -Phase I	Project only Course	PW	0	0	0	6	3	Nil
Total Credits									**16**	
Total Contact Hours/week									**20**	

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DEPARTMENT OF COMPUTER APPLICATIONS

AY: 2018-19 **Date: 15.04.2019**

Action taken report -Alumni

S.NO	ANALYSIS	ACTION TAKEN REPORT
1.	P18CAI3201 - User Interface Design - Can include more exercise for lab component. The syllabus can be a combination of 3 units design and 2 units on development.	Considered for next syllabus revision
2.	More practice can be given to the students in analysis part during the class hours, so that they can perform well.	In the course P18CAT3102 Analysis of Algorithms, additional hours like tutorials used to work out problems.

PreparedBy,

BoS Coordinator

Approved By,

BoS Chairman

Proof for Action Taken 2 : Analysis of Algorithms , additional hours for tutorials .

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

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Department of Mechanical Engineering

AY: 2018-19 **Date: 15 – 04 – 2019**

Alumni Feedback

1. It is suggested to include fundamentals of friction in the syllabus.
2. Suggested to include 3 credit course on Machine Drawing to meet the core industry requirements.

Prepared By,

Dr.B.Senthilkumar

BoS Coordinator

Approved By,

Dr.C.Velmurugan

BoS Chairman

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Department of Mechanical Engineering

AY: 2018-19 **Date: 15 – 04 – 2019**

Alumni Feedback Analysis Report

1. It was suggested to include fundamentals of friction in the syllabus. **Response:** The curriculum includes aspects of friction in the following courses – Engineering mechanics, Kinematics of machinery and Design of transmission system. If any future requirement arises then that can be included in the curriculum and syllabus after deliberations.
2. It was suggested to include 3 credit mandatory course on Machine Drawing to meet the core industry requirements. **Response:** The input was noted, and design module coordinator will work on the ways to incorporate in the 3rd semester curriculum and syllabus.

Prepared By,

Dr.B.Senthilkumar

BoS Coordinator

Approved By,

Dr.C.Velmurugan

BoS Chairman

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Department of Mechanical Engineering

AY: 2018-19 **Date: 15 – 04 – 2019**

Action taken report - Alumni Feedback

S.No	Analysis	Action taken report
1.	It is suggested to include fundamentals of friction in the syllabus.	The curriculum includes aspects of friction in the following courses – Engineering mechanics, Kinematics of machinery and Design of transmission system. If any future requirement arises then that can be included in the curriculum and syllabus after deliberations
2.	It is suggested to include 3 credit mandatory course on Machine Drawing to meet the core industry requirements.	This input was noted, and design module coordinator will work on the ways to incorporate in the 3rd semester curriculum and syllabus.

Prepared By,

Dr.B.Senthilkumar

BoS Coordinator

Approved By,

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Department of Mechatronics Engineering

AY: 2018-19 **Date:(23.04.18)**

Action taken report -Alumni Feedback

S.No	Analysis	Action taken report
1.	The experts suggested to offer Maintenance engineering course as an elective	Maintenance engineering added as professional elective in R18
2.	U17MCT4004/ U18MCT4004 Digital electronics, Lab component is suggested to add in the syllabus	U17MCI6202 / U18MCI6202 Microcontroller and Embedded Systems lab content some digital content are added in the syllabus
3.	U17MCE0004 / U18MCE0004 Artificial intelligence and machine learning as a single course with some of the deep learning concepts.	U17MCE0004 / U18MCE0004 Artificial Intelligence and Machine Learning added as professional elective

Prepared By,

BoS Coordinator

Approved By,

BoS Chairman

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Department of Mechatronics Engineering

AY: 2018-19 **Date: (15.04.19)**

Action taken report -Alumni Feedback(Proof)

Proof 1:

14.	U18MCE0012	Design for manufacturing and Assembly	Theory	PE	3	0	0	0	3
15.	U18MCE0013	Precision manufacturing	Theory	PE	3	0	0	0	3
16.	U18MCE0015	Operation Research	Theory	PE	3	0	0	0	3
17.	U18MCE0017	Maintenance Engineering	Theory	PE	3	0	0	0	3
18.	U18MCE0018	Medical Mechatronics	Theory	PE	3	0	0	0	3

Proof 2:

LIST OF EXPERIMENTS	**30 Hours**
8051 Assembly language program & interfacing	

1. Basic programming using 8051 ALP (addition, subtraction, multiplication, ascending, descending etc.)
2. 8051 peripheral programming (ADC, counter, timer, interrupts etc.)
3. Motor control using 8051(DC motor and stepper motor)
4. Build and test circuits with switches, LEDs, resistors, potentiometers, and liquid crystal displays
5. Synchronizing hardware and software input/output with switches, lights, sound, sensors, motors, and liquid crystal displays
6. Implementation of combination lock with Capsense
7. Motor control using PWM
8. Development of hypothetical Switch Protocol using GPIO and timer using ARM7and PSoC
9. Utilization of capacitive sensing (CapSense) module of PSoC board for simple applications
10. Study of E yantra board

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

Proof 3:

Programme Electives								
S.No	**Course code**	**Course Title**	**Course Mode**	**CT**	**L**	**T**	**P**	
Mechatronics Systems								
1.	U17MCE0001	Automotive Electronics	Theory	PE	3	0	0	
2.	U17MCE0002	Condition Monitoring	Theory	PE	3	0	0	
3.	U17MCE0003	Micro Electro Mechanical Systems	Theory	PE	3	0	0	
Computational Intelligence								
4.	U17MCE0004	Artificial Intelligence and Machine Learning	Theory	PE	3	0	0	
5.	U17MCE0005	Database Management System	Theory	PE	3	0	0	
6.	U17MCE0006	Soft Computing	Theory	PE	3	0	0	
7.	U17MCE0014	Underwater Robotics	Theory	PE	3	0	0	

IDEA OF MACHINE LEARNING	**9 Hours**
Idea of Machine learning from data, Supervised Learning : Learning a Class from Examples–Noise–Learning Multiple Classes– Regression–Model Selection and Generalization, Unsupervised learning-Introduction, k-Means Algorithm, Optimization objective, Random Initialization, Choosing number of clusters -Deep learning.	

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KCT
BUSINESS SCHOOL

Department of Management Studies

AY: 2018-19

Date: 25.06.2018

Action taken report –Alumni Feedback

S. No	Analysis	Action taken report
1.	Students have gained professionalism with communication skills, but they are not contently. They are not substantiating the information with the data.	Extra sessions are arranged, and the handling of Professional Development is discussed, and pedagogy revisited
2.	Students are not aware of the regular updates in the field of management and business affairs	New case studies and reference of relevant websites has been referred to students for follow up
3.	Students are advised to take up examinations conducted by professional bodies.	Membership in professional bodies were discussed with the students. Separate company/course oriented training programmes are to be offered with.

Prepared By,

BoS Coordinator

Approved By,

BoS Chairman

Proof of Action Taken

1. Proof of Revisiting Pedagogy for Professional development

P17BACE111	Professional Development I - Career Skills	3 credits		
Objectives	1. Understand the meaning of business reports and letters. 2. Express the opinion or have a discussion about the factual issues. 3. Give a short prepared presentation and write a brief proposal.			
Pre–req Courses	None			
	Topics	**No. Of sessions**	**L**	**P**
	Reading: Understanding short real- world notices, messages - Comprehension of factual material;.- Reading for detailed factual information-Reading for gist and specific information -Reading and information transfer	**10**	0	10
	Writing: Internal communication-note, message, memo or email-Business correspondence-Blog & short case writing	**10**	0	10
	Listening: Listening for specific information-short conversations or monologues -Conversation/interview/discussion.	**10**	0	10
	Speaking: Conversation –Mini Presentation on Business theme-Discussion-Turn taking/Negotiating/ exchanging information, expressing and justifying opinions.	**10**	0	10
	Specialties: Guidance Program to choose the specialisation	**5**	0	5
	Total hours	**45**	**0**	**45**
Course outcomes	1. Improve the effectiveness of business communication and develop the presentation skill for professional development.			
Text Book	1. Business English Certificate Handbook for Teachers-University of Cambridge ESOL. 2. www.cambridgeenglish.org/exams/business-certificates/business-vantage/how-to-prepare/			
Pedagogy and Assessment	Pedagogy: Business/Newspaper Discussion, Audio Video, Workshop Assessment: News analysis & Presentation, Short case/Blog Write-ups, Movie/Book/newspaper reviews.			
Course Design	Dr.R.Gokilavani			

2. Proof of Inclusion of Case Study in pedagogy

P17BACE107	**Financial Management**		**4 credits**	
Objectives	• Introduce the broad framework of financial decision-making in a business unit. • Discuss the capital budgeting process and techniques. • Overview of cost of capital and leverage on capital structure. • Describe the components of working capital. • Use Microsoft Excel for financial decision making.			
Pre-requisite Courses	Accounting for Management			
Content	**Topics**	**No. Of sessions**	**L**	**P**
	Introduction – objectives of financial management – Profit Vs Wealth Maximization- Role of finance managers - : Basics of Time Value of Money.	**6**	6	0
	Investment Decisions: Capital Budgeting – Importance – process – determining cash flows – Techniques using Excel Spreadsheets – Capital Rationing.	**10**	4	6
	Financing Decisions: Sources of finance – Long term. Cost of capital: Concept and importance; Computations of cost of capital – Weighted Average Cost of Capital – Problems using Excel Spreadsheets.	**10**	4	6
	Capital Structure – Meaning and factors – Theories of capital structure- NI, Traditional approach, NOI and MM approach- Optimum capital structure – Problems using Excel Spreadsheets.	**9**	4	5
	Leverage – types of Leverage – EBIT-EPS relationship – Point of Indifference– Problems using Excel Spreadsheets.	**8**	4	4
	Dividend Decisions – factors – types – Models of dividend- Walter, Gordon and MM models – Problems using Excel Spreadsheets – Bonus shares.	**9**	4	5
	Liquidity Decisions: Management of working capital – Determinants – Forecasting of working capital – Problems using Excel Spreadsheets – Cash, Receivables and Inventory Management. Sources of finance – Short term.	**8**	4	4
	Total hours	**60**	**30**	**30**
Learning Outcomes	1. Outline the basic concepts of financial management 2. Compare investment alternatives to select best investment alternative and decide on the best source of funds through leverage 3. Evaluate different sources of finance to decide the optimum capital structure and plan for the working capital requirements for business operations			
Reference Books	Pandey, IM (2015). Financial Management. New Delhi. Vikas Publishing.			
Pedagogy and Assessment	Pedagogy: Discussion, Case study, Problem solving using MS Excel. Assessment: Tests, Assignments, Analysis Reports/ Presentations, End semester Exam			
Course Design	Dr.V.R.Nedunchezhian			

4. Proof of membership with professional bodies

P17BAEEF01	Commercial Banking			4 credits
Objectives	1. Introduce the concept of banking and its varied products. 2. Overview on asset liability management of banks. 3. Highlight the fee based services and corporate banking 4. Outline the types of risk and mitigation strategies and the credit appraisal criteria.			
Pre-requisite Courses	None			
Content	Topics	No.of sessions	L	P
	Money - Banks and bankers. Commercial banking - Overview – Functions- commercial banking in India- banking in modern era, Small Banks, Payment Banks - Customer relationship. Retail banking- Type of consumer loans- evaluation- credit analysis-credit scoring and consumer credit regulations.	8	4	4
	Deposit products in India and abroad – types of bank deposits, computation of interest on deposits- composition of bank deposits. Loan Pricing – objectives, methodology, pricing models, priority sector lending.	10	5	5
	Asset Liability Management in Banks, Reading and interpreting bank Balance Sheet – BASEL CAR Norms, CIBIL.	10	5	5
	Fee based services – L/C, Bank guarantees, subsidiary services, modern banking services- Challenges and prospects for modern banking. Corporate banking – nature - development in corporate banking- Consortium finance.	8	4	4
	General appraisal criteria – Characteristics of credit- credit appraisal and analysis- principles of lending. Credit assessment- Fund & Non fund based limits. Credit disbursal & monitoring – NPA Assessment & provisioning- Recovery procedures.	8	4	4
	Payment and Collection of Cheques and Other Negotiable Instruments - NI Act; Role & Duties of Paying & Collecting Banks - Technology in Banking – Core Banking solutions- payment systems and Electronic banking -Data Communication Network and EFT systems – security considerations – IT act.	8	4	4
	Lending – principles and Credit Monitoring - Cardinal Principles; Non-fund Based Limits; estimation of WC; Term Loans; Credit Appraisal Techniques; Credit Monitoring & Its Management; Base Rate -Priority Sector Advances – Recent Developments	8	4	4
	Total Hours	**60**	**30**	**30**
Learning Outcomes	1. Explain the concept of banking and its varied products. 2. Examine the credit appraisal techniques used by banks. 3. Appraise asset liability management of selected banks.			
Reference Books	IIBF - Principles and practices in banking - 3rd edition- Macmillan education,			
Pedagogy and Assessment	Pedagogy: Lectures, Discussion , cases, Bank visit Assessment: MCQ tests, Case Based Assignments / Paper Presentation/ MOOC, Credit Transfer (IIBF) , End semester exam			
Course Design	Dr.S.Sangeetha			

*credit transfer option will be given (students will attend the classes and take the continuous assessments. The End semester exam may be taken with CoE of KCT or IIBF. IIBF marks will be converted to grades and submitted to CoE)