DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

MINOR PROGRAM IN INTERNET OF THINGS (IOT)
Scheme of Instruction
(Effective from 2023-2024)

BE (ECE) HONORS
Scheme of Instruction
(Effective from 2023-2024)
Scheme of BE (ECE) HONORS

S.No	Course Code	Course Structure	L	T	P	Credits
**Course Structure**
1		PE1 or PE 2	3	0	0	3
2	H001EC	Research Methotodologies	2	0	0	2
3		PE3	3	0	0	3
4		PE4	3	0	0	3
5		PE5	3	0	0	3
6	H002EC	Technical Paper Writing	3	0	0	1
7		PE 6	3	0	0	3
Total						18

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Course Code	:	H001EC
Course Title	:	Research Methodology
Number of Credits	:	1 (L: 0; T: 0; P: 2)
Course Category	:	ECE - HONORS

Research Methodology

Unit 1

Foundations of Research: Meaning, Objectives, Motivation, Utility. Concept of theory, empiricism, deductive and inductive theory. Characteristics of scientific method - Understanding the language of Research - Concept, Construct, Definition, Variable. Research Process.

Unit 2

Problem Identification & Formulation - Research Question – Investigation Question - Measurement Issues - Hypothesis - Qualities of a good Hypothesis Null Hypothesis & Alternative Hypothesis. Hypothesis Testing - Logic & Importance.

Unit 3

Research Design: Concept and Importance in Research - Features of a good research design - Exploratory Research Design - concept, types and uses, Descriptive Research Designs - concept, types and uses. Experimental Design: Concept of Independent & Dependent variables.

Unit 4

Qualitative and Quantitative Research: Qualitative research – Quantitative research - Concept of measurement, causality, generalization, replication. Merging the two approaches.

Unit 5

Measurement: Concept of measurement- what is measured? Problems in measurement in research- Validity and Reliability. Levels of measurement Nominal, Ordinal, Interval, Ratio. Sampling: Concepts of Statistical Population, Sample, Sampling Frame, Sampling Error, Sample Size, Non-Response. Characteristics of a good sample. Interpretation of Data and Paper Writing- Layout of a Research Paper, Impact factor of Journals, When and where to publish? Ethical issues related to publishing, Plagiarism and Self-Plagiarism.

Recommended Text Books:
1. Business Research Methods- Donald Cooper & Pamela Schindler, TMGH, 9th editions.
2. Business Research Methods- Alan Bryman & Emma Bell, Oxford University Press.
3. Research Methodology- C. R. Kothari
4. Select references from the Internet

Chairperson
Board of Studies, Dept. of ECE
Methodist College of Engg. & Tech.
Hyderabad.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Course Code	:	H002EC
Course Title	:	TECHNICAL PAPER WRITING SKILLS
Number of Credits	:	1 (L: 0; T: 0; P: 2)
Course Category	:	ECE - HONORS

TECHNICAL PAPER WRITING SKILLS

Unit 1
Writing-Basic Principles
Words-Phrases-Sentences , Construction of Cohesive Paragraphs, Elements of Style, Principles of Summarizing, Abstract, Summary, Synopsis.

Unit 2
Technical Reports : Salient Features, Types of Reports, Structure of Reports, Data Collection, Use of Graphic Aids, Drafting and Writing

Unit 3
Writing Research Papers: Basic Guidelines, Documentation

Unit 4
PRESENTATION SKILLS: Speaking Skills, Accuracy vs. Fluency, The Audience, Pronunciation Guidelines, Voice Control

Unit 5
Professional Presentations : Planning, Preparing, Presentation Strategies, Overcoming Communication Barriers, Using Technology, Effective Presentations

Text Books / Reference Books:
1. Kumar, Sanjay & Pushp Lata, "Communication Skills", Oxford University Press,2011
2. Quirk & Randolph, " A University Grammar of English", Pearson,2006
3. Rutherford, Andrea J., " Basic Communication Skills for Technology", Pearson, 2007
4. Rizvi, M Ashraf, "Effective Technical Communication", McGraw Hill,2009
5. Leigh, Andrew & Maynard, Michael, "The Perfect Presentation", Random House
6. Barker, Larry L., "Communication", Prentice-Hall
7. Lesikar & Flatley, "Basic Business Communication-Skills For Empowering the Internet Generation", Tata McGraw-Hill

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