

503231	PROFESSIONAL ETHICS				L	T	P	C
					1	0	0	1
Programme:	B.E. (CSE)	Sem:	VII	Category:	ES			
Prerequisite:	NIL							
Aim:	To enable the students to create an awareness on Engineering ethics and human values to instill moral and social values.							
Course Objectives:								
1	Introduces the concept of human values							
2	Inculcate about the Engineering ethics to the students							
3	Introduces the basic analyze of engineering as social experimentation							
4	To know more about responsibilities and rights							
5	To learn more about Global issues							
Course Outcomes: The students will be able to:								
CO1:	Understand the fundamental concepts of human values							
CO2:	Understand the concept of Engineering ethics							
CO3:	Analyze the engineering as social experimentation							
CO4:	Understand the concepts of responsibilities and rights							
CO5:	Understand the concept of Global issues							

COURSE OUTCOMES VS PROGRAM OUTCOMES MAPPING

Course Outcomes	Program Outcomes												Program Specific Outcomes	
	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
	CO 1	2					2						2	
CO 2	2					2			2			2	2	
CO 3	2								1			1		1
CO 4	2					2			1			1		1
CO 5	2					1			2			1		1

Unit I Human Values

Moral values and Ethics-Integrity-work ethics- service learning (3 hrs)

Unit II Engineering Ethics

Senses of Engineering Ethics- variety of Moral issues-Gilligan's theory-Types of inquiry-self interest (3 hrs)

Unit III Engineering as Social Experimentation

Engineering as Experimentation-Code of Ethics- A balanced outlook on law (3 hrs)

Unit IV Responsibilities and Rights

Collective bargaining-confidentiality –Professional Rights- Employee rights- IPR (3 hrs)

Unit V Global Issues

Environmental Ethics- computer Ethics-Moral leadership- code of conduct (3 hrs)


Total: 15 Periods

Text Book(s):

1. Mike.W.Martin and Roland schinzinger-, Ethics in Engineering, Tata McGraw hill,New Delhi, Fourth edition 2019

Reference Book(s):

1. Govindarajan M, Natarajan.S and Senthil Kumar V.S. Engineering Ethics, Prenticehall of India, New Delhi, 2003
2. Charles. B.Fledderman - Engineering Ethics, Pearson prentice hall, New Jersey,2004


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RESEARCH METHODOLOGIES

L	T	P	C
3	0	0	3

COURSE OBJECTIVE:

To familiarize the student with the basic need of research for their evolution using various methods and techniques.

COURSE OUTCOMES:

Having successfully completed this course, the students should be able to:

- Introduce about research and its importance.
- Gain knowledge about design and data collection techniques evolve in research.
- Get idea about prepare research report and its execution.

UNIT I INTRODUCTION TO RESEARCH

The hallmarks of scientific research – the building blocks of science in research – the research process for applied and basic research – the need for theoretical frame work – hypothesis development – hypothesis testing with quantitative data. The research design. The purpose of the study: Exploratory, Descriptive, Hypothesis testing (Analytical and Predictive) – cross sectional and longitudinal studies.

UNIT II EXPERIMENTAL DESIGN

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The laboratory and the field experiment – Simulation--internal and external validity – factors affecting internal validity. Measurement of variables – scales and measurement of variables – development scales - rating scale and concept in scales being developed. Stability measures. Meaning & Role of hypothesis

UNIT III DATA COLLECTION METHOD

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Interviewing, questionnaires etc. Secondary sources of data collection. Guidelines for questionnaire design – electronic questionnaire design and surveys. Special data source: Focus groups, Static and dynamic data-collection methods and when to use each. Sampling techniques and confidence in determining sample size. Hypothesis testing determination of optimal sample size.

UNIT IV A REFRESHER ON SOME MULTIVARIATE STATISTICAL TECHNIQUES

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Factor analysis – cluster analysis – discriminate analysis –multiple regression & Correlation – canonical correlation – application of SPSS package.

UNIT V THE RESEARCH REPORT

9

The purpose of the written report – concept of audience – Basics of written reports. The integral parts of a report – the title of a report. The table of content, the synopsis, the introductory section, method of sections of a report, result section – discussion section – recommendation and implementation section

TOTAL : 45 PERIODS
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REFERENCES:

1. Donald R.Cooper and Ramcis S.Schindler, Business Research Methods, TataMcGraw Hill Publishing CompanyLimited, New Delhi, 2000
2. C.R.Kothari Research Methodology, Wishva Prakashan, New Delhi, 2001
3. Uma Sekaran, Research Methods for Business, John Wiley and Sons Inc., New York, 2000.
4. Donald H.Mc.Burney, Research Methods, Thomson Asia Pvt. ltd. Singapore 2002
5. G.W.Ticehurst and A.J.Veal, Business Research Methods, Longman, 1999
6. Ranjit Kumar, Research Methodology, Sage Publication, London, New Delhi, 1999.
7. Raymond-Alain Thie'tart, ET, al., doing management research, sage publication, London, 1999.


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