



Regulation 2018		Semester I	Total Hours			15
Category	Course Code	Course Name	Hours / Week			C
			L	T	P	
M	18LEM101T	CONSTITUTION OF INDIA	1	0	0	-

**Prerequisite Course (s)**

NIL

**Course Objective (s):**

The purpose of learning this course is to:

CLR-1	Utilize the citizen's rights
CLR-2	Utilize the basic citizen's fundamental rights of freedom of speech, expression, equality, religion and privacy
CLR-3	Identify the Indian constitutional framework with union parliament, government and their functions and citizen's rights
CLR-4	Utilize the States functionality and provisions for the betterment of the individual and society
CLR-5	Identify the emergency provisions, the functions of election and public service commissions, identify the tax system
CLR-6	Utilize the rights of a citizen both individual and as a society by understanding the constitutional provision and rights

**Course Outcome (s) (COs):**

At the end of this course, learners will be able to:

CO1	Identify the basic provisions in the Indian constitution
CO2	List the fundamental rights, rights to equality, freedom, religion, culture, education and the right against exploitation
CO3	Identify the fundamental duties of the Union of India, President, Vice-President, Union Ministers and Parliament functions
CO4	Identify the power of states, its legislature, Governors role and the state judiciary
CO5	List the special provisions and functionality of election commission, public service commission, individual tax and GST
CO6	Build knowledge on the various aspects in the Indian Constitution, its provisions and right of a citizen and the society

**CO-PO Mapping**

COs	POs												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	-	-	-	-	-	-	2	3	3	3	-	3	-	-	-
CO2	-	-	-	-	-	-	2	3	3	3	-	3	-	-	-
CO3	-	-	-	-	-	-	2	3	3	3	2	3	-	-	-
CO4	-	-	-	-	-	-	2	3	3	3	2	3	-	-	-
CO5	-	-	-	-	-	-	2	3	3	3	2	3	-	-	-
CO6	-	-	-	-	-	-	2	3	3	3	2	3	-	-	-
CO (Avg)	-	-	-	-	-	-	2	3	3	3	2	3	-	-	-

1: Slight (Low)

2: Moderate (Medium)

3: Substantial (High)





<b>UNIT I</b>	<b>INDIAN CONSTITUTION</b>	<b>3</b>
Meaning of the Constitution law and Constitutionalism- Historical perspective of the Constitution of India- Salient features and characteristics of the Constitution of India Citizenship- Scheme of the fundamental rights- Scheme of the Fundamental Duties and its legal status		
<b>UNIT II</b>	<b>FUNDAMENTAL RIGHTS</b>	<b>3</b>
The Directive Principles of State Policy- Scheme of the Fundamental Right to Equality- Scheme of the Fundamental Right to certain Freedom under Article 19- Scope of the Right to Life and Personal Liberty under Article 21- Union Government, Union Legislature (Parliament)- Lok Sabha and Rajya Sabha (with Powers and Functions), Union Executive		
<b>UNIT III</b>	<b>POWERS AND FUNCTIONS OF CENTRAL GOVERNMENT</b>	<b>3</b>
President of India (with Powers and Functions)- Prime Minister of India (with Powers and Functions) - Union Judiciary (Supreme Court)- Jurisdiction of the Supreme Court - State Government, Legislature, Legislative Assembly, Legislative Council- Powers and Functions of the State Legislature, State Executive- Governor of the State (with Powers and Functions)		
<b>UNIT IV</b>	<b>POWERS AND FUNCTIONS OF STATE GOVERNMENT</b>	<b>3</b>
The Chief Minister of the State (with Powers and Functions)- State Judiciary (High Courts) Union Territory, Panchayat, Municipality- Scheduled and Tribal Areas- Co-operative Societies Consumer Rights - Consumer Protection Act		
<b>UNIT V</b>	<b>POWERS AND FUNCTIONS OF ELECTION AND SERVICE COMMISSION</b>	<b>3</b>
Local Self Government – Constitutional Scheme in India-Emergency Provisions : National, President Rule, Financial Emergency - Election Commission of India (with Powers and Functions) - The Union Public Service Commission (with Powers and Functions) - Amendment of the Constitutional Powers and Procedure -Income Tax, Goods and Services Tax		
<b>Text Book (s)</b>		
NIL		
<b>Reference (s)</b>		
1	Durgadas Basu, Introduction to the Constitution of India, Lexis- Nexis, 2015	
2	Subash C Kashyap, Our Parliament, National Books Trust, 2011	
3	Kaushal Kumar Agarwal, India's No 1 book on Tax : Simple Language Advanced Problems: Income Tax, Kindle, 2017	
4	Vivek K R Agarwal, GST Guide for students: Making GST – Good and Simple Tax, Neelam Book House, 2017	





Regulation 2018		Semester II	Total Hours			30
Category	Course Code	Course Name	Hours / Week			C
			L	T	P	
M	18LEM102T	VALUE EDUCATION	1	0	0	-

**Prerequisite Course (s)**

NIL

**Course Objective (s):**

The purpose of learning this course is to:

- CLR-1 Connect the learners to their potential, identify their potential to create a new positive world
- CLR-2 Analyze the merits and demerits of different educational systems. Identify the different systems of education
- CLR-3 Draw attention towards the weaknesses they are susceptible to and inspire them through positive models
- CLR-4 Instill a sense of professional ethics which help them develop a safe comfortable and prosperous society
- CLR-5 Cultivate a spirit of willing accommodation in an increasingly diverse world
- CLR-6 Strengthen, enhance the spirit of positivity and facilitate positive contribution in various spheres of life

**Course Outcome (s) (COs):**

At the end of this course, learners will be able to:

- CO1 Equipped with an awareness of their positive energy and power
- CO2 Identify the meaning of 'education'; have a clearer and better understanding in taking education to the masses
- CO3 Assess their weaknesses; understand risks involved and rectify them through learning from positive and negative instances
- CO4 Realize their professional responsibilities
- CO5 Acquire the required values in an expanding pluralistic world not be swept off their feet due to the rapid changes
- CO6 Equip with better understanding of themselves, society they live. Identify responsibilities in creating a peaceful world

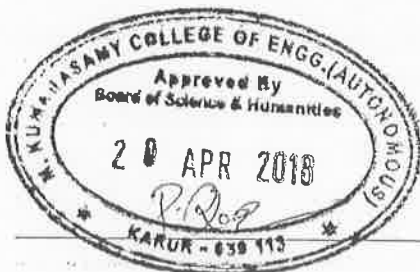
**CO-PO Mapping**

COs	POs												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSG3
CO1	1	2	-	-	2	3	-	3	3	3	-	3	1	-	-
CO2	2	3	2	-	3	3	2	2	3	3	-	3	1	-	-
CO3	2	-	-	-	2	3	2	2	3	3	-	3	1	-	-
CO4	3	2	-	-	3	3	3	3	3	3	-	3	1	-	-
CO5	2	-	-	-	3	3	3	3	3	3	-	3	1	-	-
CO6	2	2	-	-	3	3	3	3	3	3	-	3	1	-	-
CO (Avg)	2.00	2.25	2.00	-	2.66	3	2.6	2.66	3	3	-	3	1	-	-

1: Slight (Low)

2: Moderate (Medium)

3: Substantial (High)





UNIT I	VISIONS FOR YOUTH	6
Introduction (Quiz) - Two speeches by great personalities (Oral presentations) - Quotes, proverbs relating to the power and potential of youth, Excerpts: Wings of Fire (Collecting proverbs highlighting the potential of youth) - Two news articles highlighting the initiatives for social causes by youth (Role play in a similar context) - One song exhibiting the positive energy of youth (Discussion on the song)		
UNIT II	YOUTH AND EDUCATION	6
Meaning and the significance of education (Brainstorming) - Overview of different (traditional, modern) educational systems (Debate) - Role of youth in education, Urban and Rural set up, dissemination (Student presentations) - Designing and framing educational curriculum and materials (Students' Presentation based on write ups) -The pressing challenges in current educational system (Collage Design)		
UNIT III	YOUTH AND SOCIETY	6
Need for social values in the present context (Poem – “Where the mind is without fear”, Write up on various instances from real life) - Individual and group behaviour, respect for others (Case study on recent happenings) - Civic sense, bullying-substance abuse, uses of expletives (Case study on recent happenings) - Hero worship, gender insensitivity moral policing (Case study on recent happenings) - Positive contribution by youth in promoting social welfare ( Short videos followed by discussions)		
UNIT IV	YOUTH AS PROFESSIONALS	6
Introduction to professional values (Brainstorming through visual cues) - Engineering societies in India (Quiz) - Challenges to be addressed by Engineers in India (Case Study) - Challenges in different sectors: agriculture (Case Study) - Challenges in different sectors: urban development, environment (Group activity (oral and written)) - Challenges in different sectors: sustainable development, cyber security (Case Study – from Newspapers)		
UNIT V	YOUTH IN PLURALISTIC SOCIETY	6
Introduction to pluralistic society, forces of globalization (Group Discussion) - Science and technology intercultural proximity (Narration of stories from various religions to illustrate the oneness of humanity) - Positive, Negative impact: religion, politics, gender, economic status, aesthetics (Discussion on “To Kill a Mocking Bird”) - Values required to live in a global society (Poster presentation on festivals of various religions) - Learning the etiquettes of various societies (Poster presentation on festivals of various religions) - Success of pluralistic society, enliven the society, religious harmony through literary (Writing the aspects of pluralistic society based on the text).		
<b>Text Book (s)</b>		
Nil		
<b>Reference (s)</b>		
1	Kalam, APJ Abdul. Wings of Fire: AN Autobiography of APJ Abdul Kalam. Ed. Sangam Books Ltd., 1999	
2	“Banaras Hindu University Speech” and “To Students”. The Voice of Truth. General Editor Shriman Narayan. Navajivan Publishing House. pp. 3-13 and pp. 425-30. www.mkgandhi.org	
3	Piroda, Sam. “Challenges in Science and Technology”. www.nfdindia.org/loc19.htm	





**M.KUMARASAMY**  
**COLLEGE OF ENGINEERING**

NAAC Accredited Autonomous Institution  
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4	Thomas A Address to VTU Students by Narayana Murthy. <a href="https://www.karnataka.com/personalities/narayana-murthy/vtu-address-2006/">https://www.karnataka.com/personalities/narayana-murthy/vtu-address-2006/</a>
5	World Economic forum. "India's top 7 challenges from skills to water scarcity"





Regulation 2018		Semester V/VI	Total Hours			15
Category	Course Code	Course Name	Hours / Week			C
			L	T	P	
M	18LEM302T	SELF DEVELOPMENT AND ENTREPRENEURSHIP	1	0	0	Nil

**Prerequisite Course (s)**

Nil

**Course Objective (s):** The purpose of learning this course is to:

1	Develop entrepreneurship and self-employment abilities to start any venture plan, use, and monitor and control resources optimally and economically.
2	Know the Micro, small and medium industries Registration Process.
3	Study about product selection and development.
4	Learn about the Project report preparation.
5	Analysis the Enterprise risk management.

**Course Outcome (s) (COs):** At the end of this course, learners will be able to:

CO1	Identify entrepreneurial quality.
CO2	Know the entrepreneurial support agencies.
CO3	Prepare project setup planning and project report
CO4	Select appropriate agencies for technical and financial support.
CO5	Explain SWOT analysis and strategies to achieve goals.

**CO-PO Mapping**

COs	POs												PSOs	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	-	-	-	-	-	1	-	-	1	1	1	1	-	-
CO2	-	1	-	-	-	2	1	1	1	2	2	1	-	-
CO3	1	3	-	-	-	-	2	1	1	1	2	1	-	-
CO4	-	1	-	-	-	1	2	1	1	1	2	1	-	-
CO5	2	1	-	-	-	-	1	-	1	1	1	1	-	-
CO (Avg)	1.50	1.50	-	-	-	1.33	1.50	1.00	1.00	1.20	1.60	1.60	-	-

1: Slight (Low)

2: Moderate (Medium)

3: Substantial (High)





<b>UNIT I</b>	<b>INTRODUCTION TO SELF-EMPLOYMENT AND ENTREPRENEURSHIP DEVELOPMENT</b>	<b>6</b>
Introduction of self-employment – Characteristics- Creativity. Entrepreneurship development-Qualities of entrepreneur and Characteristics of Diploma holder as a self-employer like developing networking and personal contacts, importance of productivity, quality, cost consciousness and customers' satisfaction. Types of enterprise-Sole partnership -Partnership firm- Joint stock company- Co-operative society.		
<b>UNIT II</b>	<b>ENTREPRENEURIAL SUPPORT AGENCIES</b>	<b>6</b>
Definition – Micro, small and medium industries- Registration process of an enterprise with Government agencies-Name, type and role of state and national level support agencies. Current state & National Level Promotional Schemes for establishment of new.		
<b>UNIT III</b>	<b>PROJECT SET UP PLANNING</b>	<b>6</b>
Product Selection: importance- Product development stages. Process Selection: Factors affecting process selection - Technology lifecycle. Process Conversion-Capacity Planning: Basic method to assess / estimate capacity. Selection of location and layouts: Factors affecting selection of location - Objectives and types of plant layout.		
<b>UNIT IV</b>	<b>PROJECT PROPOSAL PLANNING</b>	<b>6</b>
7-M resources- Marketing- definition, need for enterprise, 4Ps channels- Market survey. Methods - Project report preparation for mechanical feature based product: Meaning of project planning and report: Feasibility study. Details required for preparing project plan. Project cost estimation.		
<b>UNIT V</b>	<b>ENTERPRISE AND RISK MANAGEMENT</b>	<b>6</b>
Concept of risk in the context of enterprise/ project-Uncertainty and certainty of project elements- Decision making under risk-Methods of risk management-Strength, Weakness, Opportunity and Threat (SWOT) analysis.		
<b>Reference (s)</b>		
1	Entrepreneurship & Venture Management, Clifford and Bombak, Joseph R. Momanso.	
2	Small Industries management – Karmakar.M.B.	
3	Creativity –Pradeep Khandwala	
4	Entrepreneurship development and Management, R.K.Singal, S.K.Kataria Sons.	





Regulation 2018		Semester I/Semester II	Total Hours			30
Category	Course Code	Course Name	Hours / Week			C
			L	T	P	
H	18MBH101L	PROFESSIONAL SKILLS AND PRACTICES	0	0	2	1

Prerequisite Course (s)

Nil

Course Objective (s):

The purpose of learning this course is to:

CLR-1 Equip students with different aspects of Presentation

CLR-2 Train students to use appropriate language for public speaking.

CLR-3 Help students better understand basic leadership qualities and personality traits

CLR-4 Train the students to face interview confidently.

CLR-5 Make students understand how setting goals in life is important.

CLR-6 Make students ready for work life.

Course Outcome (s) (COs):

At the end of this course, learners will be able to:

CO1 Make presentation in a formal way.

CO2 Speak with clarity and confidence, thereby enhancing their employability skills.

CO3 Enable students to understand different aspects of leadership and evaluate in their own strengths.

CO4 Clear the job interview successfully.

CO5 Realize that selecting goal is a fundamental component to long- term success of an individual.

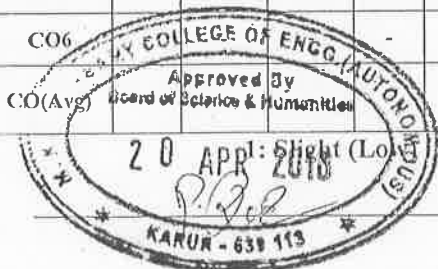
CO6 Exhibit the professional skills well.

CO-PO Mapping

COs	POs												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	-	-	-	-	-	3	2	3	3	3	2	3	-	-	1
CO2	-	-	-	-	-	3	2	3	3	3	2	3	-	-	1
CO3	-	-	-	-	-	3	2	3	3	3	2	3	-	-	1
CO4	-	-	-	-	-	3	2	3	3	3	2	3	-	-	1
CO5	-	-	-	-	-	3	2	3	3	3	2	3	-	-	1
CO6	-	-	-	-	-	3	2	3	3	3	2	3	-	-	1
CO(Avg)	-	-	-	-	-	3	2	3	3	3	2	3	-	-	1

2: Moderate (Medium)

3: Substantial (High)







<b>UNIT I</b>	<b>PRESENTATIONS</b>	<b>5</b>
Tips and Techniques for an Effective Presentation - Effective presentation structure - Types of Presentation - Verbal aspect of a presentation - Non-verbal aspect of a presentation – body language - Stress management during a presentation		
<b>UNIT II</b>	<b>PUBLIC SPEAKING</b>	<b>5</b>
Importance of Public Speech - Dealing with fear and Anxiety - Tips and Techniques for Public Speaking - Informative Speech - Delivering a Persuasive Speech - Dealing with audience questions		
<b>UNIT III</b>	<b>LEADERSHIP SKILLS</b>	<b>5</b>
Communication – Motivation – Delegating – Creativity – Responsibility - Commitment		
<b>UNIT IV</b>	<b>INTERVIEW SKILLS</b>	<b>5</b>
Preparing for a Job Interview - The Interview Process - Telephone Interviews - Interview Techniques - Mock Interview - Mock Interview		
<b>UNIT V</b>	<b>GOAL SETTING</b>	<b>5</b>
Types of goals - Reasons for goal setting - Goal Setting Process - S.M.A.R.T. goals - Tips and Techniques for Goal Setting - Trouble in Setting Goals		
<b>LIST OF EXPERIMENTS</b>		<b>5</b>
<ol style="list-style-type: none"> <li>1. Make a presentation on a general topic</li> <li>2. Give a persuasive speech</li> <li>3. Exhibit your leadership qualities</li> <li>4. Mock interview</li> <li>5. Share your realistic short term and long term goals and the ways to attain them.</li> </ol>		
<b>Text Book (s)</b>		
NIL		
<b>Reference(s)</b>		
1	Aruna Koneru, Professional Communication, Tata McGraw-Hill Publishing Company Limited, New Delhi	
2	Professional Skills and Practice, Oxford University Press	
3	<a href="https://www.skillsyouneed.com">https://www.skillsyouneed.com</a>	
4	<a href="https://www.Business English Site.com">https://www.Business English Site.com</a>	





Regulation 2018		Semester VI	Total Hours			30
Category	Course Code	Course Name	Hours / Week			C
			L	T	P	
H	18MBH201T	MANAGEMENT PRINCIPLES FOR ENGINEERS	2	0	0	2

**Prerequisite Course (s)**

Nil

**Course Objective (s):** The purpose of learning this course is to:

1	Enable the students to study the evolution of management.
2	Study about planning tools and techniques in management for engineers.
3	Learn about career planning for engineers.
4	Enable the effective and barriers communication in the organization.
5	Study the system and process of effective controlling in the organization.

**Course Outcome (s) (COs):** At the end of this course, learners will be able to:

CO1	Acquired the knowledge on fundamental concept of management and its various functions.
CO2	Gained knowledge on planning and decision making process.
CO3	Attained the knowledge of organization structure and career planning.
CO4	Demonstrate the ability to directing, leadership and communicate effectively.
CO5	Analysis isolates issues and formulates best control methods.

**CO-PO Mapping**

COs	POs												PSOs	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	2	-	-	-	-	1	-	-	1	-	1	2	-	-
CO2	2	2	-	-	-	1	-	-	1	1	1	1	-	-
CO3	2	-	-	-	-	1	-	-	-	-	1	2	-	-
CO4	1	-	-	-	-	1	-	-	1	1	1	-	-	-
CO5	2	-	-	-	-	1	-	-	-	1	1	3	-	-
CO (Avg)	1.80	2.00	-	-	-	1.00	-	-	1.00	1.00	1.00	2.00	-	-

1: Slight (Low)

2: Moderate (Medium)

3: Substantial (High)





<b>UNIT I</b>	<b>INTRODUCTION TO MANAGEMENT PRINCIPLES</b>	<b>6</b>
Meaning, Definition of Management – Managerial Role - POSDCORB -Management vs. Administration- Evolution of Management Thoughts- Henry Fayol’s 14 Principles- Opportunities and Challenges in Management.		
<b>UNIT II</b>	<b>PLANNING</b>	<b>6</b>
Nature and purpose of planning – Planning process – Types of planning – Objectives – Setting - Objectives – policies – Planning premises – Strategic Management – Planning Tools and Techniques – Decision making steps and process.		
<b>UNIT III</b>	<b>ORGANIZING</b>	<b>6</b>
Nature and purpose – Formal and informal organization – organization chart – Organization Structure– Types – Line and staff authority – Departmentalization – Delegation of Authority – Centralization and Decentralization – Job Design.		
<b>UNIT IV</b>	<b>DIRECTING</b>	<b>6</b>
Foundations of individual and group behavior – Motivation – Motivation Theories – Motivational - Techniques –Leadership – Types and Theories of Leadership – Communication – Process of Communication – Barrier in Communication – Effective Communication.		
<b>UNIT V</b>	<b>CONTROLLING</b>	<b>6</b>
System and Process of Controlling – budgetary and Non-Budgetary Control Techniques – Use of Computers and IT in Management control – Control and performance – Direct and Preventive control – Reporting.		
<b>Reference (s)</b>		
1	P.C.Tripathi., P.N Reddy, Principles of Management, McGraw Hill, 5 <sup>th</sup> Edition 2012.	
2	Harold Koontz, Heinz Wehrich, A RamachandraAryasri, Tata McGraw Hill, Principles of Management, 2016	
3	Charles W Hill, Stephen L Meshane, Principles of Management, McGraw Hill, Special Indian Edition 2007.	
4	1.Stephen A. Robbins & David A. Decenzo& Mary Coulter, “Fundamentals of Management” 7th Edition, Pearson Education, 2011.	
5	Harold Koontz & Heinz Wehrich “Essentials of management” Tata McGraw Hill, 1998.	





Regulation 2018		Semester VII	Total Hours			30
Category	Course Code	Course Name	Hours / Week			C
			L	T	P	
H	18MBH202T	SOCIAL ENGINEERING	2	0	0	2

**Prerequisite Course (s)**

Nil

**Course Objective (s):** The purpose of learning this course is to:

1	Learn about fundamental concept of social engineering
2	Know the different elements of ethical hacking and social engineering.
3	Understand the concepts of threats and attack vectors
4	Understand the ethical hacking
5	Learn about the attacks against individuals and organizations

**Course Outcome (s) (COs):** At the end of this course, learners will be able to:

CO1	Understand the concept of social engineering and types of attacks.
CO2	Identify the key security concepts, CIA and IT governance and best practices
CO3	Understand principles of social engineering.
CO4	Exhibit the ethical hacking concepts and scopes, threats and attack vectors and common areas of vulnerability.
CO5	Gain knowledge of attacks against individuals and organizations.

**CO-PO Mapping**

COs	POs												PSOs	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	2	2	-	-	-	1	1	1	1	1	-	1	-	-
CO2	1	1	-	-	-	2	-	2	1	-	-	1	-	-
CO3	-	1	-	-	-	-	1	2	1	-	-	1	-	-
CO4	-	-	-	-	-	-	-	3	-	-	-	1	-	-
CO5	1	1	-	-	-	-	-	-	1	1	-	1	-	-
CO (Avg)	1.33	1.25	-	-	-	1.50	1.00	2.00	1.00	1.00	-	1.00	-	-

1: Slight (Low)

2: Moderate (Medium)





<b>UNIT I</b>	<b>INTRODUCTION TO SOCIAL ENGINEERING</b>	<b>6</b>
Social Engineering Defined - Why Does Social Engineering Work - Identify Communication Style - key aspects of social engineering - Categories of Social Engineering Attacks – human – based attacks and technology - based attacks		
<b>UNIT II</b>	<b>KEY SECURITY</b>	<b>6</b>
Key security - concepts - Types of key security concepts – Cyber security position. The CIA Triad - the significance of incident response and frameworks around cyber security. IT Governance - Best practices - compliance.		
<b>UNIT III</b>	<b>PSYCHOLOGY OF SOCIAL ENGINEERING</b>	<b>6</b>
Mind Tricks: Psychological Principle - Four fundamental aspects of human nature that social engineers - the desire to be helpful - the tendency to be trusting - the fear of offending others - the tendency to cut corners		
<b>UNIT IV</b>	<b>ETHICAL HACKING AND SOCIAL ENGINEERING</b>	<b>6</b>
Ethical Hacking Concepts and Scopes - Threats and Attack Vectors - Information Assurance - Threat Modelling - Enterprise Information Security Architecture - Vulnerability Assessment and Penetration Testing - Types of Social Engineering - Insider Attack - Preventing Insider Threats - Social Engineering Targets and Defence Strategies. Common Areas of Vulnerability - Appropriate access - Assessed resistance - Information availability		
<b>UNIT V</b>	<b>CASES OF SOCIAL ENGINEERING</b>	<b>6</b>
Notable Cases of Social Engineering - Attacks against Individuals - Attacks against Organizations - Preventing Social Engineering Attacks - Mitigating the Damage of Social Engineering Attacks - Segregation of Access - Maintain Access Logs - Ensure That Backups Occur Regularly - Automatically Revoke User Privileges If Suspicious Activity Is Detected		
<b>Reference (s)</b>		
1	Kevin D. Mitnick, William L. Simon, Steve Wozniak, The Art of Deception: Controlling the Human Element of Security, Wiley, October 17th 2003	
2	Christopher Hadnagy, Social Engineering: The Science of Human Hacking Paperback- Wiley Publishing Inc., Edition 2018	
3	Lester Evans, Cybersecurity: An Essential Guide to Computer and Cyber Security for Beginners, Including Ethical Hacking, Risk Assessment, Social Engineering, Attack and Defense Strategies, and Cyberwarfare Paperback –2018	
4	Dr. Erdal Ozkaya, Learn Social Engineering: Learn the art of human hacking with an internationally renowned expert-2018	





Regulation 2018		Semester IV			Total Hours			30							
Category	Course Code	Course Name	Hours / Week			C									
			L	T	P										
M	18MBM202L	CRITICAL AND CREATIVE THINKING SKILLS	0	0	2	1									
<b>Course Objective (s):</b>															
The purpose of learning this course is to:															
1	Focus on listening, speaking, & writing skills through audio & video sessions														
2	Hone soft skill and analytical ability of students														
3	Overcome the fear in group communication and to provide the effective communication														
4	Expertise intelligible pronunciation, stress and intonation patterns														
<b>Course Outcome (s) (Cos):</b>															
At the end of this course, learners will be able to:															
CO1	Solve both analytical and logical problems in an effective manner														
CO2	Demonstrate an ability to design and deliver messages														
CO3	Improve their communication with practical experience														
<b>CO-PO Mapping</b>															
COs	POs												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	-	-	-	-	-	-	-	-	-	-	-			
CO2	-	-	-	-	-	-	-	-	-	2	-	-			
CO3	-	-	-	-	-	-	-	-	-	2	-	-			
CO4	-	-	-	-	-	-	-	-	-	-	-	-			
CO5	-	-	-	-	-	-	-	-	-	-	-	-			
CO (Avg)	3.00	-	-	-	-	-	-	-	-	2.00	-	-			

1: Slight (Low)

2: Moderate (Medium)

3: Substantial (High)





UNIT I	Module - 1	6
<b>Aptitude:</b> Time and Work - Pipes and Cisterns. <b>Communication:</b> Sentence Pattern - Debate.		
UNIT II	Module - 2	6
<b>Aptitude:</b> Boats and Streams. <b>Communication:</b> Tenses and voices - Tech Talk.		
UNIT III	Module - 3	6
<b>Aptitude:</b> Problems on Ages - Probability <b>Communication:</b> Analogies - Biography.		
UNIT IV	Module - 4	6
<b>Aptitude:</b> Data sufficiency - Logical Puzzles. <b>Communication:</b> Punctuation - Connection.		
UNIT V	Module - 5	6
<b>Aptitude:</b> Mensuration. <b>Communication:</b> Preposition - News of the Week.		
Text Book (s)		
1	Dr.R.S.Aggarwal, "Quantitative Aptitude", S. Chand & Company Limited, 2015	
2	Dr.R.S.Aggarwal, "A Modern Approach to Verbal & Non - Verbal Reasoning", S. Chand & Company Limited, 2015	





Regulation 2018		Semester V	Total Hours			30
Category	Course Code	Course Name	Hours / Week			C
			L	T	P	
M	18MBM301L	ANALYTICAL AND LOGICAL THINKING SKILLS	0	0	2	1

**Course Objective (s):**

The purpose of learning this course is to:

- 1 Sharpen problem solving skills and to improve thinking capability of the students
- 2 Drive the students to use language with great commitment and cooperation
- 3 Expertise the creative thinking and presentation skills to meet the company needs

**Course Outcome (s) (Cos):**

At the end of this course, learners will be able to:

- CO1 Solve both analytical and logical problems in a fruitful manner
- CO2 Organize and convey the information in such an incomparable way
- CO3 Improve their presentation skills

**CO-PO Mapping**

COs	POs												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	-	-	-	-	-	-	-	-	-	-	-			
CO2	-	-	-	-	-	-	-	-	2	-	-	-			
CO3	-	-	-	-	-	-	-	-	-	2	-	-			
CO4	-	-	-	-	-	-	-	-	-	-	-	-			
CO5	-	-	-	-	-	-	-	-	-	-	-	-			
CO (Avg)	3.00	-	-	-	-	-	-	-	2.00	2.00	-	-			

1: Slight (Low)

2: Moderate (Medium)

3: Substantial (High)







UNIT I	Module - 1	6
<p><b>Aptitude:</b> Alligations or Mixtures - Blood Relations.</p> <p><b>Communication:</b> How to set Goals - Interpersonal Relationships - JOHARI Window - Work &amp; Business Etiquette</p>		
UNIT II	Module - 2	6
<p><b>Aptitude:</b> Partnership - Statement and Assumptions.</p> <p><b>Communication:</b> Transition to Corporate World - Career opportunities in Various Sectors and know your industry.</p>		
UNIT III	Module - 3	6
<p><b>Aptitude:</b> Arithmetic and Geometric Progressions - Syllogisms.</p> <p><b>Communication:</b> Time Management - Anger and Stress Management - Conflict Management.</p>		
UNIT IV	Module - 4	6
<p><b>Aptitude:</b> Permutations and Combinations - Statements &amp; Conclusions.</p> <p><b>Communication:</b> Launch a Product - Telephonic Etiquette.</p>		
UNIT V	Module - 5	6
<p><b>Aptitude:</b> Geometric Problems.</p> <p><b>Communication:</b> Presentation Skills - Oral presentation and public speaking skills, Business presentations.</p>		
Text Book (s)		
1	Dr.R.S.Aggarwal, "Quantitative Aptitude", S. Chand & Company Limited, 2015	
2	Dr.R.S.Aggarwal, "A Modern Approach to Verbal & Non - Verbal Reasoning", S. Chand & Company Limited, 2015	





Regulation 2018		Semester VI	Total Hours			30
Category	Course Code	Course Name	Hours / Week			C
			L	T	P	
M	18MBM302L	EMPLOYABILITY SKILLS AND PRACTICES	0	0	2	1

**Course Objective (s):**

The purpose of learning this course is to:

1	Learn the application of mathematical or statistical models to different real-world contexts
2	Focus on writing & speaking skills through vigorous practices.
3	Enhance soft skills and analytical ability of students
4	Defeat the fear while communicating in group and to master the effective communication

**Course Outcome (s) (Cos):**

At the end of this course, learners will be able to:

CO1	Solve both analytical and logical problems in a productive manner
CO2	Launch their ability of comprising and delivering the information
CO3	Upgrade their communication quality in near future

**CO-PO Mapping**

COs	POs												PSOs		
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	-	-	-	-	-	-	-	-	-	-	-			
CO2	-	-	-	-	-	-	-	-	3	-	-	-			
CO3	-	-	-	-	-	-	-	-	-	3	-	-			
CO4	-	-	-	-	-	-	-	-	-	-	-	-			
CO5	-	-	-	-	-	-	-	-	-	-	-	-			
CO (Avg)	3.00	-	-	-	-	-	-	-	3.00	3.00	-	-			

1: Slight (Low)

2: Moderate (Medium)

3: Substantial (High)





UNIT I	Module - 1	6
<p><b>Aptitude:</b> Time and Distance (Speed, Streams) - Problems on Trains - Arrangements and Blood Relations.</p> <p><b>Communication:</b> Job Application - Cover letter, Bio-data, Resume &amp; CV building.</p>		
UNIT II	Module - 2	6
<p><b>Aptitude:</b> Time and Work - Pipes &amp; Cisterns - Situation Reaction Test &amp; Data Interpretations.</p> <p><b>Communication:</b> Writing practices on circulars, notices, memos, Agenda preparation and Minutes of meeting.</p>		
UNIT III	Module - 3	6
<p><b>Aptitude:</b> Ages - Averages - Probability - Profit and Loss.</p> <p><b>Communication:</b> Email Etiquette - Essay writing.</p>		
UNIT IV	Module - 4	6
<p><b>Aptitude:</b> Mensuration - SI &amp; CI - Cause and Effect Analysis - Statement, Assumptions &amp; Conclusions.</p> <p><b>Communication:</b> Group Discussion and guidelines.</p>		
UNIT V	Module - 5	6
<p><b>Aptitude:</b> Permutation and Combinations - Partnership - Alligations or Mixtures.</p> <p><b>Communication:</b> Interview skills - General instructions, Review of interview questions, Mock Interviews.</p>		
Text Book (s)		
1	Dr.R.S.Aggarwal, "Quantitative Aptitude", S. Chand & Company Limited, 2015	
2	Dr.R.S.Aggarwal, "A Modern Approach to Verbal & Non - Verbal Reasoning", S. Chand & Company Limited, 2015	



Regulation 2018		OPEN ELECTIVE	Total Hours			45
Category	Course Code	Course Name	Hours / Week			C
			L	T	P	
O	18MBO001T	BUSINESS ETHICS AND CORPORATE SOCIAL RESPONSIBILITY	3	0	0	3

**Course Objective (s):** The purpose of learning this course is to:

1	Understand the decision process one goes through in determining what is right and wrong, and how those decisions affect professional life. Explore successful ethical values of Global visionary companies
2	Sensitize the students with understanding of ethical issues at workplace
3	Gain vivid knowledge on corporate social responsibility and to gain the importance of ethical principles and business ethics in CSR activities
4	Import knowledge on different strategies for CSR and awareness about CSR issues
5	Build the importance of ethical principles and business ethics in CSR activities globally

**Course Outcome (s) (COs):** At the end of this course, learners will be able to:

CO1	Understand the fundamentals of ethical theories and work ethics for managers
CO2	Identify the methodology for handling ethical dilemma and functional applications of ethical principles
CO3	Know the environmental responsibility of business via CSR activities
CO4	Identify the strategies for CSR and CSR issues
CO5	Understand the impact of globalization and CSR initiatives

### CO-PO Mapping

COS	Pos										PSOs	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO 1	PSO 2
CO1	2	1	2	-	-	2	2	2	2	3	2	3
CO2	2	1	2	-	-	1	2	2	2	2	2	3
CO3	2	1	2	-	-	1	2	2	2	2	2	2
CO4	1	1	1	2	-	1	2	1	2	2	3	2
CO5	2	1	2	-	-	2	2	2	2	3	2	3
CO (Avg)	1.8	1	1.8	2	-	1.4	2	1.8	2	2.4	2.2	2.6

1: Slight (Low)

2: Moderate (Medium)

3: Substantial (High)



<b>UNIT I</b>	<b>ETHICS</b>	<b>9</b>
Ethics – Meaning, Definition, Business Ethics – Characteristics - Ethical Theories - Moral issues in business– Moral vs Ethics- Causes of Unethical Behavior; Ethical Abuses; Work Ethics; Code of Conduct-Advantages of Business Ethics		
<b>UNIT II</b>	<b>MANAGEMENT OF ETHICS</b>	<b>9</b>
Ethical Dilemmas-Handling Ethical Dilemmas at Work - Management of Ethics - Ethics analysis [Homer model]-Professional Ethics for Managers; Role and Function of Ethical Managers- Ethics in Marketing, Finance and Human Resource, Challenges of Business Ethics.		
<b>UNIT III</b>	<b>CORPORATE SOCIAL RESPONSIBILITY</b>	<b>9</b>
Meaning & Definition of CSR- Evolution of CSR-Consumerism-Corporate Governance- Relation Between CSR and Corporate Governance-Models of CSR in India-Drivers of CSR-CSR Initiatives in India-Stakeholders of CSR		
<b>UNIT IV</b>	<b>ISSUES IN CSR</b>	<b>9</b>
Need for CSR- Social Responsibility of Business Firm- Building Blocks of CSR - Strategies for CSR; Challenges and Implementation - CSR and Environmental Issues, Social Issues, Labour Issues and Government Issues.		
<b>UNIT V</b>	<b>GLOBAL CSR</b>	<b>9</b>
- Globalization and CSR Initiatives – Global CSR Activities and Policies – International Standards and Norms – Business Ethics, Corporate Governance Across the Nations.- International framework for corporate social Responsibility-Relationship between CSR and MDGs.		
<b>Reference (s)</b>		
1.	Manuel G. Velasquez, Business Ethics – Concepts and Cases, PHI, 7 <sup>th</sup> edition, 2016	
2.	Sanjay K. Agarwal- Corporate Social Responsibility in India, Response book, 1 <sup>st</sup> edition 2008	
3.	William Shaw, Business Ethics, Wadsworth Publishing Company, kindle edition, 2016.	
4.	C.S.V Murthy, "Business Ethics- Text and Cases",, Himalayan Publishing House, 2010.	
5.	S. A. Sherlekar, Ethics in Management, Himalaya Publishing House, 2014	
6.	William B. Werther and David B. Chandler, Strategic Corporate Social Responsibility, SAGE Publications Inc., 2013	



Regulation 2018		OPEN ELECTIVE	Total Hours			45
Category	Course Code	Course Name	Hours / Week			C
			L	T	P	
O	18MBO002T	HUMAN CAPITAL MANAGEMENT	3	0	0	3

**Course Objective (s):** The purpose of learning this course is to:

1	Enable the students to understand the HR Management and system at various levels in general and in certain specific industries or organizations.
2	Help the students focus on and analyze the issues and strategies required to select and develop manpower resources
3	Develop relevant skills necessary for application in HR related issues.
4	Enable the students to integrate the understanding of various HR concepts along with the Domain concept in order to take correct business decisions
5	Understand the issues and process of recruitment, Selection, Training, PA and other factors that comply with HRM

**Course Outcome (s) (COs):** At the end of this course, learners will be able to:

CO1	Understand the basic knowledge on HRM concepts.
CO2	Know about recruitment and selection process carried out in different types of concern.
CO3	Know the advantages of training programs provided by organization and be in a position to conduct training need analysis.
CO4	Possess knowledge on handling grievances in working environment.
CO5	Able to differentiate between domestic and international HRM.

**CO-PO Mapping**

COS	Pos										PSOs	
	PO 1	PO 2	PO 3	PO 4	PO5	PO 6	PO7	PO 8	PO9	PO10	PSO 1	PSO 2
CO1	-	2	1	2	1	1	1	2	1	1	1	2
CO2	-	3	-	-	2	1	-	1	1	1	1	2
CO3	-	-	-	-	-	-	1	1	-	1	1	-
CO4	-	-	-	-	-	2	-	-	-	1	1	1
CO5	-	-	-	-	-	-	-	-	1	1	1	1
CO (Avg)	-	2.5	1	2	1.5	1.3	1	1.3	1	1	1	1.5

1: Slight (Low)

2: Moderate (Medium)

3: Substantial (High)



<b>UNIT I</b>	<b>INTRODUCTION TO HUMAN RESOURCE MANAGEMENT</b>	<b>9</b>
Definition and Concept, Features , Objectives, Functions, Scope and Development of Human Resource Management, Importance of Human Resource Management, Human Resource Practices, Concept of Personnel Management, Difference Between Personnel Management and HRM		
<b>UNIT II</b>	<b>HUMAN RESOURCE PLANNING</b>	<b>9</b>
Concept of Human Resource Planning (HRP), Factors in HRP, Process of HRP - Source of Recruitment, Selection Process - Induction, Placement- Talent Management- Job Analysis, Job Description, Writing a Job Description, Job Specification, Job Design		
<b>UNIT III</b>	<b>TRAINING AND DEVELOPMENT</b>	<b>9</b>
Introduction, Meaning and Definition of Induction, Need for Induction , Problems Faced during Induction , Induction Programme Planning - Concept and Significance of Training, Training Needs, Training Methods, Types of Training		
<b>UNIT IV</b>	<b>PERFORMANCE APPRAISAL AND WAGES AND SALARY</b>	<b>9</b>
<b>Performance Appraisal</b> - Introduction, Concept of Performance Appraisal, Purpose of performance appraisal, Process, Methods of Performance Appraisal, Major Issues in Performance Appraisal. <b>Wages and Salary</b> - Introduction, Nature and Significance of Wage and Salary Administration, Theories of Wages, Methods of Wage Fixation		
<b>UNIT V</b>	<b>EMPLOYEE RELATIONS AND EMPLOYEE EMPOWERMENT</b>	<b>9</b>
<b>Employee Relations</b> - : Introduction, Concept of Employee Relations, Managing Discipline, Managing Grievance , Employee Counseling. <b>Employee Empowerment</b> - Introduction, Concept of Employee Empowerment, Process of Empowerment, Empowerment in Indian Scenario, Empowerment in Global Scenario		
<b>Reference (s)</b>		
1.	K. Aswathappa "Human Resource Management, Text & Cases", Tata McGraw Hill, 8 <sup>th</sup> edition, 2017	
2.	Biswajeet Pattanayak, "Human Resources Management", PHI Learning, Delhi, 5 <sup>th</sup> edition, (2018).	
3.	Gary Dessler and Biju Varkkey "Human Resource Management", Pearson, 15th edition, 2016.	
4.	Biswajeet Pattanayak, -Human Resource Managementl, New Delhi: Prentice Hall of India,4 <sup>th</sup> edition 2014.	
5.	Seema Sanghi, "Human Resources Management", Vikas Publishing House, New Delhi,2 <sup>nd</sup> Edition, (2014).	





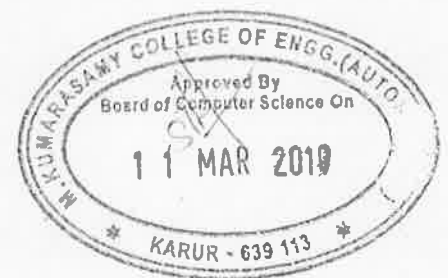
Regulation 2019		Semester I	Total Hours			15
Category	Course Code	Course Name	Hours / Week			C
			L	T	P	
M	19PATM102	English For Research Paper Writing	1	0	0	0
<b>Prerequisite Course (s)</b>						
Nil						
<b>Course Objective (s):</b>						
The purpose of learning this course is to:						
1	Understand that how to improve your writing skills and level of readability					
2	Learn about what to write in each section					
3	Understand the skills needed when writing a Title					
<b>Course Outcome (s) (COs):</b>						
At the end of this course, learners will be able to:						
CO1	Understand the basics of writing skills					
CO2	Illustrate the level of readability					
CO3	Explain about what to write in each section					
CO4	Summarize the skills needed to form a title					
<b>UNIT I</b>						<b>3</b>
Planning and Preparation, Word Order, Breaking up long sentences, Structuring Paragraphs and Sentences, Being Concise and Removing Redundancy, Avoiding Ambiguity and Vagueness						
<b>UNIT II</b>						<b>3</b>
Clarifying Who Did What, Highlighting Your Findings, Hedging and Criticising, Paraphrasing and Plagiarism, Sections of a Paper, Abstracts. Introduction						
<b>UNIT III</b>						<b>3</b>
Review of the Literature, Methods, Results, Discussion, Conclusions, The Final Check.						
<b>UNIT IV</b>						<b>3</b>
Key skills are needed when writing a title, Key skills are needed when writing an abstract, Key skills are needed when writing an introduction, Skills needed when writing a review of the literature						
<b>UNIT V</b>						<b>3</b>
Skills are needed when writing the methods, Skills needed when writing the results, Skills are needed when writing the discussion, Skills are needed when writing the conclusions, Useful Phrases, How to ensure paper is as good as it could possibly be the first- Time Submission						







Reference (s)	
1	Goldbort R (2006) Writing for Science, Yale University Press (available on Google Books)
2	Day R (2006) How to Write and Publish a Scientific Paper, Cambridge University Press
3	Highman N (1998), Handbook of Writing for the Mathematical Sciences, SIAM. Highman'sbook.
4	Adrian Wallwork, English for Writing Research Papers, Springer New York Dordrecht Heidelberg London, 2011



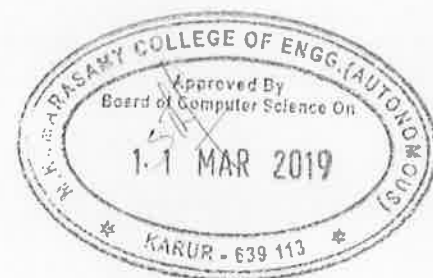


Regulation 2019		Semester II	Total Hours			15
Category	Course Code	Course Name	Hours / Week			C
			L	T	P	
M	19PATM103	Pedagogy Studies	1	0	0	0
<b>Prerequisite Course (s)</b>						
Nil						
<b>Course Objective (s):</b>						
The purpose of learning this course is to:						
1	Review existing evidence on the review topic to inform programme design and policy making undertaken by the DfID, other agencies and researchers.					
2	Identify critical evidence gaps to guide the development.					
<b>Course Outcome (s) (COs):</b>						
At the end of this course, learners will be able to:						
CO1	Discuss the growth of the demand for civil rights in India for the bulk of Indians before the arrival of Gandhi in Indian politics.					
CO2	Discuss the intellectual origins of the framework of argument that informed the conceptualization of social reforms leading to revolution in India.					
CO3	Discuss the circumstances surrounding the foundation of the Congress Socialist Party [CSP] under the leadership of Jawaharlal Nehru and the eventual failure of the proposal of direct elections through adult suffrage in the Indian Constitution.					
CO4	Discuss the passage of the Hindu Code Bill of 1956.					
<b>UNIT I</b>		<b>INTRODUCTION AND METHODOLOGY</b>				<b>3</b>
Aims and rationale, Policy background, Conceptual framework and terminology, Theories of learning, Curriculum, Teacher education, Conceptual framework, Research questions, Overview of methodology and Searching						
<b>UNIT II</b>		<b>THEMATIC OVERVIEW</b>				<b>3</b>
Pedagogical practices are being used by teachers in formal and informal classrooms in developing countries, Curriculum, Teacher education						
<b>UNIT III</b>		<b>PEDAGOGIC STRATEGIES</b>				<b>3</b>
Evidence on the effectiveness of pedagogical practices, Methodology for the in depth stage: quality assessment of included studies, How can teacher education (curriculum and practicum) and the school, curriculum and guidance materials best support effective pedagogy, Theory of change, Strength and nature of the body of evidence for effective pedagogical practices, Pedagogic theory and pedagogical approaches, Teachers' attitudes and Pedagogic strategies						
<b>UNIT IV</b>		<b>PROFESSIONAL DEVELOPMENT</b>				<b>3</b>
Alignment with classroom practices and follow-up support ,Peer support, Support from the head teacher and the community, Curriculum and assessment, Barriers to learning: limited resources and large class sizes						





UNIT V	RESEARCH GAPS AND FUTURE DIRECTIONS	3
Research design , Contexts, Pedagogy, Teacher education, Curriculum and assessment, Dissemination and research impact		
Text Book (s)		
1	Ackers J, Hardman F (2001) Classroom interaction in Kenyan primary schools, Compare, 31 (2): 245-261.	
2	Agrawal M (2004) Curricular reform in schools: The importance of evaluation, Journal of Curriculum Studies, 36 (3): 361-379.	
Reference (s)		
1	Akyeampong K (2003) Teacher training in Ghana - does it count? Multi-site teacher education research project (MUSTER) country report 1. London: DFID.	
2	Akyeampong K, Lussier K, Pryor J, Westbrook J (2013) Improving teaching and learning of basic maths and reading in Africa: Does teacher preparation count? International Journal Educational Development, 33 (3): 272-282.	
3	Alexander RJ (2001) Culture and pedagogy: International comparisons in primary education. Oxford and Boston: Blackwell.	



Regulation 2018		Semester I	Total Hours			45
Category	Course Code	Course Name	Hours / Week			C
			L	T	P	
C	PBA18103	<b>BUSINESS ETHICS AND CORPORATE SOCIAL RESPONSIBILITY</b>	3	0	0	3

**Course Objective (s):** The purpose of learning this course is to:

1	understand the decision process one goes through in determining what is right and wrong, and how those decisions affect professional life. Explore successful ethical values of Global visionary companies
2	sensitize the students with understanding of ethical issues at workplace
3	gain vivid knowledge on corporate social responsibility and to gain the importance of ethical principles and business ethics in CSR activities
4	import knowledge on different strategies for CSR and awareness about CSR issues
5	build the importance of ethical principles and business ethics in CSR activities globally

**Course Outcome (s) (COs):** At the end of this course, learners will be able to:

CO1	understand the fundamentals of ethical theories and work ethics for managers
CO2	identify the methodology for handling ethical dilemma and functional applications of ethical principles
CO3	know the environmental responsibility of business via CSR activities
CO4	identify the strategies for CSR and CSR issues
CO5	understand the impact of globalization and CSR initiatives

**CO-PO Mapping**

COS	Pos										PSOs	
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PSO 1	PSO 2
CO1	2	1	2	-	-	2	2	2	2	3	2	3
CO2	2	1	2	-	-	1	2	2	2	2	2	3
CO3	2	1	2	-	-	1	2	2	2	2	2	2
CO4	1	1	1	2	-	1	2	1	2	2	3	2
CO5	2	1	2	-	-	2	2	2	2	3	2	3
CO (Avg)	1.8	1	1.8	2	-	1.4	2	1.8	2	2.4	2.2	2.6

1: Slight (Low)

2: Moderate (Medium)

3: Substantial (High)



<b>UNIT I</b>	<b>ETHICS</b>	<b>9</b>
Ethics – Meaning, Definition, Business Ethics – Characteristics - Ethical Theories -The Ethical Decision Making Process - Employee Duties and Rights - Causes of Unethical Behavior; Ethical Abuses; Work Ethics; Code of Conduct.		
<b>UNIT II</b>	<b>MANAGEMENT OF ETHICS</b>	<b>9</b>
Handling Ethical Dilemmas at Work - Management of Ethics - Ethics Analysis [Hosmer Model]; Ethics in Practice - Professional Ethics for Managers; Role and Function of Ethical Managers- Ethics in Marketing, Finance and Human Resource, Challenges of Business Ethics.		
<b>UNIT III</b>	<b>CORPORATE SOCIAL RESPONSIBILITY</b>	<b>9</b>
Meaning & Definition of CSR, History & Evolution of CSR, Stakeholder Management, Relation Between CSR and Corporate Governance, Models of CSR in India, Drivers of CSR, CSR Initiatives in India.		
<b>UNIT IV</b>	<b>ISSUES IN CSR</b>	<b>9</b>
Need for CSR; Role of Business in Society, Building Blocks of CSR - Strategies for CSR; Challenges and Implementation - CSR and Environmental Issues, Social Issues, Labour Issues and Government Issues.		
<b>UNIT V</b>	<b>GLOBAL CSR</b>	<b>9</b>
Development of Strategic CSR Model- Current Issues in CSR- Globalization and CSR Initiatives - Impact on Business – Global CSR Activities and Policies – International Standards and Norms – Business Ethics, Corporate Governance Across the Nations - CSR Activities of Grouping Countries.		
<b>Reference (s)</b>		
1.	Manuel G. Velasquez, Business Ethics – Concepts and Cases, PHI, 6/e, 2009	
2.	Sanjay K. Agarwal- Corporate Social Responsibility in India, Response book, 1 <sup>st</sup> ed 2008	
3.	William Shaw, Business Ethics, Wadsworth Publishing Company, 6/e, 2007.	
4.	Subhabrata Bobby Banerjee, Corporate social responsibility: the good, the bad and the ugly, Edward Elgar Publishing, 2007.	
5.	S. A. Sherlekar, Ethics in Management, Himalaya Publishing House, 2009	
6.	William B. Werther and David B. Chandler, Strategic Corporate Social Responsibility, SAGE Publications Inc., 2011	



Department	MECHANICAL ENGINEERING					Semester	I			
Course Code	Course Name	Hours / Week			Total Hours	Credit	Maximum Marks			
		L	T	P			C	CA	ES	Total
19PMEC104T	ROBOT DESIGN & PROGRAMMING	3	0	0	45	3	50	50	100	
<b>Course Objective (s):</b>										
<ul style="list-style-type: none"> <li>➤ To teach the students about the kinematic arrangement of robots and its applications in the area of manufacturing sectors</li> <li>➤ To expose the students to build a robot for any type of application</li> </ul>										
<b>Course Outcomes:</b>										
➤ To impart knowledge in the area of Robot designing and programming in Robotic languages.										
<b>Unit I</b>	<b>INTRODUCTION</b>									<b>9</b>
Definition, Need Application, Types of robots – Classifications – Configuration, work volume, control loops, controls and intelligence, specifications of robot, degrees of freedoms, end effectors – types, selection applications.										
<b>Unit II</b>	<b>ROBOT KINEMATICS</b>									<b>9</b>
Introduction – Matrix representation Homogeneous transformation, forward and inverse – Kinematic equations, Denvit – Hartenbers representations – Inverse Kinematic relations. Fundamental problems with D-H representation, differential motion and velocity of frames – Jacobian, Differential Charges between frames:										
<b>Unit III</b>	<b>ROBOT DYNAMICS AND TRAJECTORY PLANNING</b>									<b>9</b>
Lagrangeon mechanics, dynamic equations for sing, double and multiple DOF robots – static force analysis of robots, Trajectory planning – joint space, Cartesian space description and trajectory planning – third order, fifth order - Polynomial trajectory planning										
<b>Unit IV</b>	<b>ROBOT PROGRAMMING &amp; AI TECHNIQUES</b>									<b>9</b>
Types of Programming – Teach Pendant programming – Basic concepts in AI techniques – Concept of knowledge representations – Expert system and its components.										
<b>Unit V</b>	<b>ROBOT SENSORS AND ACTUATORS</b>									<b>9</b>
Design of Robots – characteristics of actuating systems, comparison, microprocessors control of electric motors, magnetostrictive actuators, shape memory type metals, sensors, position, velocity, force, temperature, pressure sensors – Contact and non contact sensors, infrared sensors, RCC, vision sensors.										

**TOTAL: 45 HOURS**

<b>REFERENCES:</b>	
1	Saeed.B.Niku, 'Introduction to Robotics, Analysis, system, Applications', Pearson educations, 2010.
2	Groover.M.P. Industrial Robotics, McGraw – Hill International edition, 1996.
3	Wesley E Snyder R, 'Industrial Robots, Computer Interfacing and Control', Prentice Hall International Edition, 2013.
4	Gordon Mair, 'Industrial Robotics', Prentice Hall (U.K.) 1988
	John J. Craig, Introduction to Robotics: Mechanics and Control, Pearson, 3rd edition, 2004.
	Fu K S, Gonzalez, Lee C S G, Robotics: Control, Sensing, Vision and Intelligence, McGraw-Hill Book Company, 1987.

