

**COURSE STRUCTURE FOR
COMPUTER SCIENCE AND ENGINEERING**

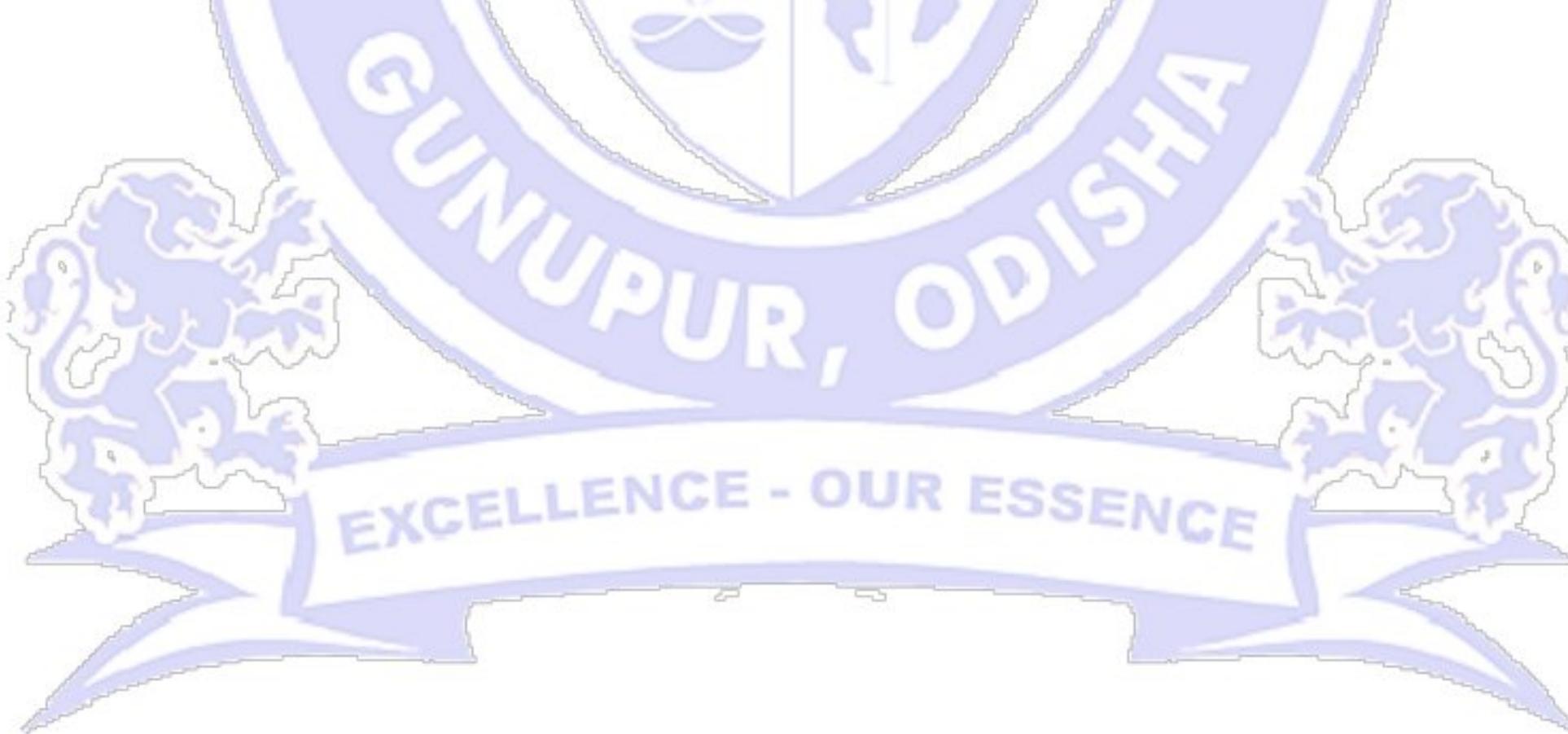
SN	Sub Code	Name of the Subject	L	T	P	C	ISA	ESA
1	21BCSBS23001	Discrete Mathematics Structures	3	1	0	4	30	70
2	21BCSES23001	Digital Electronics	3	0	0	3	30	70
3	21BCSPC23001	Data Base Management Systems	3	0	0	3	30	70
4	21BCSPC23002	Object Oriented Programming through Java	3	0	0	3	30	70
5	21BCSPE23011	Introduction to Data Science	3	0	0	3	30	70
6	21BHSHS20002	Engineering Economics and Costing	2	0	0	2	30	70
7	21BCSES23101	Digital Electronics Lab	0	0	2	1	35	15
8	21BCSPC23101	Data Base Management Systems Lab	0	0	2	1	35	15
9	21BCSPC23102	Object Oriented Programming through Java Lab	0	0	2	1	35	15
10	21BCSPW23101	Summer Industry Internship-I	0	0	2	1	35	15
11	21BCSPW23102	End Semester Project	0	0	2	1	70	30
12	21BCSMC20003	Environmental Sciences	0	0	0	0	0	0
TOTAL			17	1	10	23	390	510

**COURSE STRUCTURE FOR
COMPUTER SCIENCE AND ENGINEERING
DATA SCIENCE (DS)**

SN	Sub Code	Name of the Subject	L	T	P	C	ISA	ESA
1	21BCDBS23001	Applied Statistics	3	1	0	4	30	70
2	21BCDES23001	Digital Electronics	3	0	0	3	30	70
3	21BCDPC23001	Data Base Management Systems	3	0	0	3	30	70
4	21BCDPC23002	Object Oriented Programming through Java	3	0	0	3	30	70
5	21BCDPE23011	Introduction to Data Science	3	0	0	3	30	70
6	21BHSHS20001	Organizational Behavior	2	0	0	2	30	70
7	21BCDES23101	Digital Electronics Lab	0	0	2	1	35	15
8	21BCDPC23101	Data Base Management Systems Lab	0	0	2	1	35	15
9	21BCDPC23102	Object Oriented Programming through Java Lab	0	0	2	1	35	15
10	21BCDPW23101	Summer Industry Internship-I	0	0	2	1	35	15
11	21BCDPW23102	End Semester Project	0	0	2	1	70	30
12	21BCDMC20003	Environmental Sciences	0	0	0	0	0	0
TOTAL			17	1	10	23	390	510

COURSE STRUCTURE FOR
COMPUTER SCIENCE AND ENGINEERING ARTIFICIAL
INTELLIGENCE AND MACHINE LEARNING (AI&ML)

SN	Sub Code	Name of the Subject	L	T	P	C	ISA	ESA
1	21BCMBS23001	Applied Statistics	3	1	0	4	30	70
2	21BCMPC23001	Data Base Management Systems	3	0	0	3	30	70
3	21BCMES23001	Digital Electronics	3	0	0	3	30	70
4	21BCMPC23002	Object Oriented Programming through Java	3	0	0	3	30	70
5	21BCMPE23011	Artificial Intelligence & Expert Systems	3	0	0	3	30	70
6	21BCMPE23011	Organizational Behavior	2	0	0	2	30	70
7	21BCMES23101	Digital Electronics Lab	0	0	2	1	35	15
8	21BCMPC23102	Object Oriented Programming through Java Lab	0	0	2	1	35	15
9	21BCMPC23101	Data Base Management Systems Lab	0	0	2	1	35	15
10	21BCMPW23101	Summer Industry Internship-I	0	0	2	1	35	15
11	21BCMPW23102	End Semester Project	0	0	2	1	70	30
12	21BCMMC20003	Environmental Sciences	0	0	0	0	0	0
		TOTAL	17	1	10	23	390	510



NAME OF THE SUBJECT	L	T	P	C
DISCRETE MATHEMATICAL STRUCTURES	3	1	0	4
UNIT I - MATHEMATICAL LOGIC & SET THEORY	(10 Hours)			
Propositional logic, Propositional Equivalence, Predicates and Quantifiers, Nested Quantifiers, Proof methods and Strategies, Sequences and Summations, Mathematical Induction, Recursive definition and structural induction.				
UNIT II- RECURRENCE RELATION	(10 Hours)			
Recurrence relation, Solution to recurrence relation, Generating functions, Inclusion and exclusion, Relation and their properties, Closure of relations, Equivalence relations, Partial orderings.				
UNIT III - BOOLEAN ALGEBRA & ALGEBRAIC SYSTEMS	(10 Hours)			
Algebraic systems, Lattices, Distributive and Complemented Lattices, Sub-lattices, Boolean Lattices and Boolean Algebra, Boolean Functions and Boolean Expressions. Semi groups, Monoids, Groups, Subgrorups, Cosets, Lagrange theorem, Permutation groups, , Normal subgroups. Homomorphism, isomorphism.				
UNIT IV- GRAPH THEORY	(10 Hours)			
Basic Definitions – Some Special Graphs – Matrix , Representation of Graphs --- Paths and circuits - Eulerian and Hamiltonian Graphs – connected graphs, Planar graph, Graph coloring ,Trees - Spanning Trees - Rooted trees – Binary Trees, Minimum Spanning tree -Kruskal's algorithm , Prim's algorithm , Tree Traversal.				
Prescribed Books:				
1. Kenneth H. Rosen, "Discrete Mathematics and its Applications", Sixth Edition, 2008, Tata McGraw Hill Education, New Delhi				
Reference Books:				
1. C. L. Liu and D. Mohapatra, "Elements of Discrete Mathematics", Third Edition, 2008, 2. N. Deo, Graph Theory and Applications to Engineering and Computer Science, Prentice Hall of India 3. Discrete Mathematics by Schaum's Outlines(Second Edition) 4. Ralph P. Grimaldi, "Discrete and Combinatorial Mathematics", Fifth Edition, 2005,Pearon Education, New Delhi				



NAME OF THE SUBJECT	L	T	P	C				
APPLIED STATISTICS	3	1	0	3				
UNIT:1 (10 Hours)								
The Role of Statistics in Engineering: The Engineering Method and Statistical Thinking - Collecting Engineering Data - Basic Principles - Retrospective Study - Observational Study - Designed Experiments -Observing Processes Over Time - Mechanistic and Empirical Models								
Data Description and Representation: Collection of data- Classification and Tabulation of data - Stem-and-Leaf Diagrams - Frequency Distributions and Histograms - Box Plots - Time Sequence Plots - Probability Plots								
UNIT:2 (10 Hours)								
Descriptive Statistics: Measures of central Tendency-Measures of Dispersion- Skewness and Kurtosis. Correlation and Regression: Scatter Diagram – Types of Correlation – Karl Pearson's Coefficient of Correlation and Spearman's Rank Correlations- Method of Least Squares – Linear Regression.								
UNIT:3 (12 Hours)								
Sampling: Different types of sampling - Sampling Distributions – Sampling Distribution of Mean.								
Point Estimation of Parameters: General Concepts of Point Estimation -Unbiased Estimators - Variance of a Point Estimator - Standard Error- Methods of Point Estimation (Method of Moments - Method of Maximum Likelihood).Statistical Intervals for a Single Sample: Confidence Interval on the Mean of a Normal Distribution with Variance Known - Confidence Interval on the Mean of a Normal Distribution with Variance Unknown - Confidence Interval on the Variance and Standard Deviation of a Normal Distribution - A Large-Sample Confidence Interval for a Population Proportion.								
UNIT:4 (12 Hours)								
Tests of Hypotheses for a Single Sample: Tests of Statistical Hypotheses - General Procedure for Hypothesis Testing –Tests on the Mean of a Normal Distribution with Variance Known - Tests on the Mean of a Normal Distribution with Variance Unknown - Tests on the Variance and Standard Deviation of a Normal Distribution.Statistical Inference for Two Samples: Inference For a Difference in Means of Two Normal Distributions with Variances Known - Inference For a Difference in Means of Two Normal Distributions with Variances Unknown -Inference on the Variances of Two Normal Distributions – Inference on Two Population Proportions.								
Text Books:								
1. Douglas C. Montgomery and George C. Runger. <i>Applied Statistics and Probability for Engineers</i> , (3rdEdn), John Wiley and Sons, Inc., New York, 2003.								
2. Robert H. Carver and Jane Gradwohl Nash. <i>Doing Data Analysis with SPSS Version 18.0</i> , (Indian Edition), Cengage Learning, New Delhi, 2012.								
3. Richard A. Johnson and C.B.Gupta, <i>Probability and Statistics for Engineers</i> , (7thEdn.), Pearson Education, Indian Impression 2006.								
Reference Books:								
1. Mohammed A.Shayib. <i>Applied Statistics</i> , First Edition. EBook, Bookboon.com 2013.								
2. Peter R.Nelson, Marie Coffin, Copeland Kanen, A.F. <i>Introductory Statistics for Engineering Experimentation</i> , Elsevier Science and Technology Books, New York, 2003.								
3. Sheldon M. Ross, <i>Introduction to Probability and Statistics</i> , (3rdEdn), Elsevier Science and Technology Books, New York, 2004.								
4. T.T.Song, <i>Fundamentals of Probability and Statistics for Engineers</i> , John Wiley and Sons, Ltd., New York, 2004.								
5. J.P.Marques de Sá , <i>Applied Statistics using SPSS, STATISTICA, MATLAB and R</i> , (2ndEdn.), Springer Verlag, Heidelberg, 2007.								
Online resources								
➤ http://apus.libguides.com								
➤ www.mii.lt								
➤ www.sosmath.com								
➤ www.macalester.edu								
➤ www.nptel.iitm.ac.in								

NAME OF THE SUBJECT DIGITAL ELECTRONICS	L	T	P	C				
	3	0	0	3				
Unit 1	(12 Hours)							
Number Systems and Codes: Binary, Octal, Hexadecimal, and Decimal Number System and their Conversion; Representation of Signed Binary and Floating-Point Number; Binary Arithmetic using 1's and 2's Complements, Binary Codes - BCD Code, Gray Code, ASCII Character Code.								
Boolean Algebra and Logic Gates: Axioms and Laws of Boolean Algebra; Reducing Boolean Expressions; Logic Levels and Pulse Waveforms; Logic Gates; Boolean Expressions and Logic Diagrams; Canonical and Standard Forms.								
Unit 2	(12 Hours)							
Gate-level Minimization: K-maps - Two, Three, and Four Variable K-maps, Don't-Care Conditions; NAND and NOR Implementation; Other Two-Level Implementations, Exclusive-OR Function.								
Combinational Logic: Combinational Circuits; Analysis Procedure; Design Procedure; Adders; Subtractors; Parallel Binary Adders; Binary Adder-Subtractor; Binary Multiplier; Magnitude Comparator; Decoders; Encoders; Multiplexers; De-multiplexers.								
Unit 3	(12 Hours)							
Synchronous Sequential Logic: Sequential Circuits; Storage Elements: Latches, Flip-Flops, Master-Slave Flip-Flop; Conversion of Flip-Flops; Analysis of Clocked Sequential Circuits; Mealy and Moore Models of Finite State Machines; Design Procedure.								
Registers and Counters: Shift Registers; Data Transmission in Shift Registers; SISO, SIPO, PISO, and PIPO Shift Registers; Counters; Asynchronous Counters; Design of Asynchronous Counters; Synchronous Counters; Design of Synchronous Counters; Ring Counter.								
Unit 4	(8 Hours)							
Memory and Programmable Logic: Introduction; Random-Access Memory; Memory Decoding; Error Detection and Correction; Read-Only Memory; Programmable Logic Array; Programmable Array Logic; Sequential Programmable Devices.								
Text Books:								
1. M. Morris Mano, and Michael D. Ciletti, <i>Digital Design: With an Introduction to the Verilog HDL, VHDL, and SystemVerilog</i> . Pearson Education, Sixth Edition, 2017.								
2. Anand Kumar, <i>Fundamentals of Digital Circuits</i> . PHI Learning Pvt. Ltd., New Delhi, Fourth Edition, 2016.								
3. R. P. Jain, <i>Modern Digital Electronics</i> . Tata McGraw-Hill Education Pvt. Ltd., Fourth Edition, 2009.								
Reference Books:								
1. John P. Uyemura, <i>A First Course in Digital Systems Design: An Integrated Approach</i> . Thomson Press (India) Ltd., India Edition, 2002.								
2. William H. Gothmann, <i>Digital Electronics: An Introduction to Theory and Practice</i> , PHI Learning Pvt. Ltd., New Delhi, Second Edition, 2006.								
3. D.V. Hall, <i>Digital Circuits and Systems</i> . Tata McGraw-Hill Education Pvt. Ltd., 1989.								
4. Charles H. Roth, <i>Digital System Design using VHDL</i> . Tata McGraw-Hill Education Pvt. Ltd., Second Edition, 2012.								

NAME OF THE SUBJECT	L	T	P	C
DATABASE MANAGEMENT SYSTEM	3	0	1	4
UNIT:1	(15 Hours)			
Introduction to database Systems, advantages of database system over traditional file system, Basic concepts & Definitions, Database users, Database Language, Database System Architecture, Schemas, Sub Schemas, & Instances, database constraints, 3-level database architecture, Data Abstraction, Data Independence, Mappings, Structure, Components & functions of DBMS, Data models.				
UNIT:2	(13 Hours)			
Entity relationship model, Components of ER model, Mapping E-R model to Relational schema, Relational Algebra, Tuple & Domain Relational Calculus, Relational Query Languages: SQL and QBE. Database Design:-Database development life cycle (DDLC), Automated design tools, Functional dependency and Decomposition, Join strategies, Dependency Preservation & lossless Design, Normalization, Normal forms: 1NF, 2NF, 3NF, and BCNF, Multi-valued Dependencies, 4NF & 5NF. Query processing and optimization: Evaluation of Relational Algebra Expressions, Query optimization, Query cost estimation.				
UNIT:3	(10 Hours)			
Network and Object Oriented Data models, Storage Strategies: Detailed Storage Architecture, Storing Data, Magnetic Disk, RAID, Other Disks, Magnetic Tape, Storage Access, File & Record Organization, File Organizations & Indexes, Order Indices, B+ Tree Index Files, Hashing Data Dictionary.				
UNIT:4	(12 Hours)			
Transaction processing and concurrency control: Transaction concepts, properties of transaction, concurrency control, locking and Timestamp methods for concurrency control schemes. Database Recovery System, Types of Data Base failure & Types of Database Recovery, Recovery techniques, fundamental concepts on Object-Oriented Database, Object relational database, distributed database, Parallel Database, introduction to Data warehousing & Data Mining.				
Text Books:				
1. Sudarshan, Korth: Database System Concepts, 6th edition, McGraw-Hill Education 2. Elmasari&Navathe: Fundamentals of Database System, Pearson Education.				
Reference Books:				
1. Elmasari&Navathe: <i>Fundamentals of Database System</i> , Pearson Education. 2. Ramakrishnan: <i>Database Management Systems</i> , McGraw-Hill Education. 3. Andrew S. Tanenbaum: <i>Modern Operating Systems</i> , 3rd Edition, Pearson Education. 4. Terry Dawson, Olaf Kirch: <i>Linux Network Administrator's Guide</i> , 3rd Edition O'Reilly				

NAME OF THE SUBJECT	L	T	P	C				
OBJECT ORIENTED PROGRAMMING THROUGH JAVA	3	0	1	4				
Unit – I	(12 Hours)							
An introduction to Object Oriented Programming, Features of Object Oriented Programming Introduction to Java. Difference between C/C++ and Java, Features of Java, First Java Program, Writing the java program, Compiling the program, JVM and its significance in executing a program, Architecture of JVM. Understanding, Java Tokens, Datatypes, Operators, Control Structures and Arrays, Conditional Statements, Loops/ Iterators, Jumping Statements, Java Arrays, Multidimensional Arrays, Taking Input from keyboard, Command Line Arguments, Using Scanner Class, Using Buffered Reader class.								
Unit - II	(12 Hours)							
Introduction to Classes and Objects. Constructors, static Keyword, this Keyword, Array of Objects, Access Modifiers (Public, Private, Protected, Default). Inheritance, Types of Inheritance and Java supported Inheritance, super, Polymorphism, Method Overloading, Constructor Overloading, Method Overriding, Dynamic Method Dispatching. String Manipulations. Wrapper classes, Auto boxing and unboxing. Abstract classes, Interfaces, Multiple Inheritance Using Interfaces,								
Java API Packages, User-Defined Packages, Accessing Packages, Error and Exception Handling, Types of exceptions Hierarchy of Exception classes, try, catch, finally, throw, throws, Commonly used Exceptions and their details ,User defined exception classes.								
Unit – III (12 Hours)	(12 Hours)							
Multithreading, Thread in Java, Thread execution prevention methods. (yield(), join(), sleep()), Concept of Synchronization, Inter Thread Communication, Basics of Deadlock, Demon Thread, Improvement in Multithreading, Inner Classes, Introduction, Member inner class, Static inner class, Local inner class, Anonymous inner class.								
IO Streams (java.io package), Byte Stream and Character Stream, Files and Random Access Files, Serialization, Collection Frame Work (java.util), Util Package interfaces, List, Set, Map.								
Unit – IV	(12 Hours)							
Applet Introduction, Life Cycle of an Applet, GUI with an Applet, Abstract Window Toolkit (AWT), Introduction to GUI, Description of Components and Containers, Component/Container hierarchy, Understanding different Components/Container classes and their constructors, Event Handling, Different mechanisms of Event Handling, Listener Interfaces, Adapter classes.								
Text Books:								
1. <i>Programming in Java. Second Edition. Oxford Higher Education.</i> (Sachin Malhotra/ Saurav Choudhary)								
2. <i>Core Java For Beginners.</i> (Rashmi Kanta Das), Vikas Publication								
Reference Books:								
3. <i>JAVA Complete Reference (9th Edition)</i> Herbalt Schelidt								

NAME OF THE SUBJECT	L	T	P	C
INTRODUCTION TO DATA SCIENCE	3	0	0	3
Unit – I: Introduction	(10 Hours)			
Introduction to Data Science – Evolution of Data Science – Data Science Roles – Stages in a Data Science Project – Applications of Data Science in various fields – Data Security Issues. Data Collection Strategies, Data Categorization: NOIR Topology.				
Unit – II: Data Pre-Processing & Exploratory Data Analysis	(12 Hours)			
Descriptive Statistics – Mean Standard Deviation, Skewness and Kurtosis – Box Plots – Pivot Table – Heat Map Correlation Statistics –ANOVA. Data Pre-Processing Overview – Data Cleaning – Data Integration and Transformation – Data Reduction – Data Discretization.				
Unit – III: Model Development	(12 Hours)			
Simple and Multiple Regression – Model Evaluation using Visualization – Residual Plot – Distribution Plot – Polynomial Regression and Pipelines – Measures for In-sample Evaluation – Prediction and Decision Making.				
Unit – IV: Model Evaluation	(12 Hours)			
Generalization Error – Out-of-Sample Evaluation Metrics – Cross Validation – Over fitting – Under Fitting and Model Selection – Prediction by using Ridge Regression – Testing Multiple Parameters by using Grid Search.				
Text Books:				
1. 1. JojoMoolayil, “Smarter Decisions: The Intersection of IoT and Data Science”, PACKT, 2016. 2. 2. Cathy O’Neil and Rachel Schutt , “Doing Data Science”, O'Reilly,2015. 3. 3. David Dietrich, Barry Heller, Beibei Yang, “Data Science and Big data Analytics”, EMC 2013 4. 4. Raj, Pethuru, “Handbook of Research on Cloud Infrastructures for Big Data Analytics”, IGI Global.				



Name of the Subject	L	T	P	C				
Artificial Intelligence and Expert Systems	3	0	0	3				
UNIT:1	(12 Hours)							
What is Artificial Intelligence? AI Technique, Level of the Model, Problem Spaces, and Search: Defining the Problem as a State Space Search, Production Systems, Problem Characteristics, Production System Characteristics, and Issues in the Design of Search Programs. Heuristic Search Techniques: Generate-and-Test, Hill Climbing, Best-first Search, Problem Reduction, Constraint Satisfaction, Means-ends Analysis.								
UNIT:2	(14 Hours)							
Knowledge Representation: Representations and Mappings, Approaches to Knowledge Representation, Using Predicate Logic: Representing Simple Facts in Logic, Representing Instance and ISA Relationships, Computable Functions and Predicates, Resolution, Natural Deduction. Using Rules: Procedural Versus Declarative Knowledge, Logic Programming, Forward Versus Backward Reasoning, Matching, Control Knowledge. Symbolic Reasoning								
Under Uncertainty: Introduction to Non monotonic Reasoning, Logics for Non monotonic Reasoning, Implementation Issues, Augmenting a Problem-solver, Depth-first Search, and Breadth-first Search. Weak and Strong Slot-and-Filler Structures: Semantic Nets, Frames, Conceptual Dependency Scripts, CYC.								
UNIT:3	(10 Hours)							
Game Playing: The Mini-max Search Procedure, Adding Alpha-beta Cutoffs, Iterative Deepening. Planning: The Blocks World, Components of a Planning System, Goal Stack Planning, Nonlinear Planning Using Constraint Posting, Hierarchical Planning, Other Planning Techniques. Understanding: What is Understanding, What Makes Understanding Hard?, Understanding as Constraint Satisfaction.								
Natural Language Processing: Introduction, Syntactic Processing, Semantic Analysis, Discourse and Pragmatic Processing, Statistical Natural Language Processing, Spell Checking.								
UNIT:4	(10 Hours)							
Learning: Rote Learning, Learning by Taking Advice, Learning in Problem-solving, Learning from Examples: Induction, Explanation-based Learning, Discovery, Analogy, Formal Learning Theory, Neural Net Learning and Genetic Learning. Expert Systems: Representing and Using Domain Knowledge, Expert System Shells, Explanation, Knowledge Acquisition.								
Teaching Methods: Chalk& Board/ PPT/Video Lectures								
Text Books:								
1. <i>Elaine Rich, Kevin Knight, & Shivashankar B Nair, Artificial Intelligence, McGraw Hill, 3rd ed., 2009</i>								
Reference Books:								
1. <i>Introduction to Artificial Intelligence & Expert Systems, Dan W Patterson, PHI, 2010</i>								
2. <i>S Kaushik, Artificial Intelligence, Cengage Learning, 1st ed.2011</i>								

NAME OF THE SUBJECT	L	T	P	C				
Engineering Economics and Costing	2	0	0	2				
UNIT: I	(12 Hours)							
Engineering Economics – Meaning, Nature, Scope, Basic problems of an economy, Micro economics and Macro Economics.								
Demand and Supply Analysis - Meaning of demand, Demand function, Law of Demand and its exceptions, Determinants of demand, Elasticity of demand & its measurement (Simple numerical problems to be solved) Meaning of supply, Law of supply and its exception, Determinants of supply, Elasticity of supply, Determination of market equilibrium (Simple numerical problems to be solved).								
Theory of Production - Production function, Laws of returns: Law of variable proportion, Law of returns to scale								
UNIT: II	(12 Hours)							
Cost and revenue concepts, Elements of costs, Preparation of cost sheet, Segregation of costs into Fixed and variable costs. Basic understanding of different market structures, Price and output Determination under perfect competition (Simple numerical problems to be solved), Break Even Analysis -								
Linear approach (Simple numerical problems to be solved). Depreciation-Depreciation of capital asset, Causes of depreciation, Methods of calculating depreciation (Straight line method, Declining balance method)								
UNIT: III	(12 Hours)							
Time value of money - Interest Analysis - Simple and compound, nominal and effective rate of interest, Cash flow diagrams, Principles of economic equivalence.								
Evaluation of engineering projects- Present worth method, Future worth method, Annual worth method, Internal rate of return method, Cost benefit analysis for public projects.								
UNIT: IV	(10 Hours)							
Overview of Indian financial system. Commercial bank, Functions of commercial bank, Credit creation, Central bank, Functions of Central Bank. Inflation- Meaning of inflation, types, causes, measures to control inflation.								
National Income - Definition, Concepts of national income, Method of measuring national income								
Text Books								
1. Vengedasalam, Deviga. Madhavan, Karunagaran, Principles of Economics, Oxford University Press.								
2. R. Paneer Selvan, "Engineering Economics", PHI								
3. Ahuja, H.L., "Principles of Micro Economics", S.Chand & Company Ltd								
4. Paul, R.R., Money, Banking and International Trade, Kalyni Publishers.								
Reference Book:								
1. Riggs, J.L., Bedworth and Randhwa, "Engineering Economics", McGraw Hill Education India								
2. Park, Chan.S, "Fundamental of Engineering Economics", Pearson.								
3. Engineering Economy by William G. Sullivan, Elin M. Wicks, C. Patric Koelling, Pearson								
4. Thuesen, G.J., Fabrycky, Engineering Economy, PHI.								

NAME OF THE SUBJECT	L	T	P	C
Organizational Behaviour	2	0	0	2
UNIT:1	(08 Hours)			
Fundamentals of OB: Definition, scope and importance of OB, Relationship between OB and the individual, Evolution of OB, Theoretical framework (cognitive), behavioristic and social cognitive), Limitations of OB. Attitude: Importance of attitude in an organization, Right Attitude, Components of attitude, Relationship between behavior and attitude, Developing Emotional intelligence at the workplace, Job attitude, Barriers to changing attitudes. Personality and values: Definition and importance of Personality for performance, The Myers-Briggs Type Indicator and The Big Five personality model, Significant personality traits suitable to the workplace (personality and job – fit theory), Personality Tests and their practical applications.				
UNIT:2	(08 Hours)			
Perception: Meaning and concept of perception, Factors influencing perception, Selective perception, Attribution theory, Perceptual process, Social perception (stereotyping and halo effect). Motivation: Definition & Concept of Motive & Motivation, The Content Theories of Motivation (Maslow's Need Hierarchy & Herzberg's Two Factor model Theory), The Process Theories (Vroom's expectancy Theory & Porter Lawler model), Contemporary Theories – Equity Theory of Work Motivation. Foundations of Group Behavior: The Meaning of Group & Group behavior & Group Dynamics, Types of Groups, The Five – Stage Model of Group Development. Managing Teams: Why Work Teams, Work Teams in Organization, Developing Work Teams, Team Effectiveness & Team Building.				
UNIT:3	(08 Hours)			
Leadership: Concept of Leadership, Styles of Leadership, Trait Approach Contingency Leadership Approach, Contemporary leadership, Meaning and significance of contemporary leadership, Concept of Success stories of today's Global and Indian leaders. Organizational Culture : Meaning & Definition of Organizational Culture, creating & Sustaining Organizational Culture, Types of Culture (Strong vs. Weak Culture, Soft Vs. Hard Culture & Formal vs. Informal Culture), Creating Positive Organizational Culture, Concept of Workplace Spirituality				
UNIT:4	(08 Hours)			
Organizational Change: Meaning, Definition & Nature of Organizational Change, Types of Organizational Change, Forces that acts as stimulants to change. Implementing Organizational Change : How to overcome the Resistance to Change, Approaches to managing Organizational Change, Kurt Lewin's-Three step model, Seven Stage model of Change & Kotter's Eight-Step plan for Implementing Change, Leading the Change Process, Facilitating Change, Dealing with Individual & Group Resistance, Intervention Strategies for Facilitating Organizational Change, Methods of Implementing Organizational Change, Developing a Learning Organization.				
Reference Book:				
1. Understanding Organizational Behaviour, Parek, Oxford				
2. Organizational Behaviour, Robbins, Judge, Sanghi, Pearson.				
3. Organizational Behaviour, K. Awathappa, HPH.				
4. Organizational Behaviour, VSP Rao, Excel				