

# राष्ट्रीय प्रौद्योगिकी संस्थान रायपुर NATIONAL INSTITUTE OF TECHNOLOGY RAIPUR

ATIONAL INSTITUTE OF TECHNOLOGY RAIPUF (Institute of National Importance) G.E. Road, Raipur – 492010 (CG)

# COURSE OF STUDY AND SCHEME OF EXAMINATION OF B.TECH NATIONAL INSTITUTE OF TECHNOLOGY, RAIPUR

**Branch- Computer science & Engineering** 

Course- B.Tech.(NIT Scheme)

# Semester- V

S. N o.	Board of Studies	Sub. Code	Subject Name	Pe we	erio eek	ds/	Examination Scheme		Total Marks	Credits L+(T+P) /2			
				L	т	Ρ	ТА	FE	SE	T.C. A	ESE		
1	Comp. Sc. & Engg.	CS20511(CS)	Operating System	3	1	-	20	15	15	50	70	120	4
2	Comp. Sc. & Engg.	CS20512(CS)	Data Base Management System	3	1	-	20	15	15	50	70	120	4
3	Comp. Sc. & Engg.	CS20513(CS)	Computer Graphics & Multimedia	3	1	-	20	15	15	50	70	120	4
4	Comp. Sc. & Engg.	CS20514(CS)	Data Communication/P PL	3	1	-	20	15	15	50	70	120	4
5	Comp. Sc. & Engg.	CS20515(CS)	Theory of Computation	3	1	-	20	15	15	50	70	120	4
6	Comp. Sc. & Engg.	MA20516(CS)	Operations Research	4	1	-	20	15	15	50	70	120	5
7	Comp. Sc. & Engg.	CS20521(CS)	Operating System (Lab)	-	-	3	30	-	-	30	20	50	2
8	Comp. Sc. & Engg.	CS20522(CS)	Data Base Management System(Lab)	-	-	3	30	-	-	30	20	50	2
9	Comp. Sc & Engg.	CS20523(CS)	Computer Graphics & Multimedia (Lab)	-	-	3	30	-	-	30	20	50	2
10	Humanities	EN20524(CS)	Managerial skill	-	-	2	25		-	25	0	25	1
11	Comp. Sc & Engg.	CS20525(CS)	Technical Visit/Practical Training	-	-	-	25	-	-	25	0	25	1
			Total	1 9	6	1 1	26 0	90	90	440	480	920	33

H.O.D Comp.Sc. & Engg. MEMBER Board of Studies Deptt. Of CS&E **MEMBER** Board of Studies Deptt. Of CS&E **MEMBER** Board of Studies Deptt. Of CS&E



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# DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING <u>SYLLABUS</u>

Name of Subject	Operationg System	Subject Code	CS20511(CS)
Semester	B.Tech. V	Board Of Studies	Comp.Sc. & Engg.
Maximum Marks	70	Minimum Marks	28
Lecture Periods/week	Tutorial Periods/Week	Practical Periods/Week	Credits
3	1	_	4

## **UNIT-1 INTRODUCTION:**

Operation System objective and function, The Evolution of operating Systems, Batch, Multi program, interactive, time sharing and real time systems, Distributed OS, Network OS, Embedded OS, Parallel OS. Operating System Structure- Kernel, Shell, System calls, System Components, operating system service, Distributed Computing, The Key Architecture Trend; Parallel Computation, Input-Output Trends.

## **UNIT-2 PROCESS AND CPU SHEDULING:**

Process concept:- Introduction, Definitions of "Process", Process States, Process State Transitions, The process Control Block, Operations on Processes, advantages, comparison with program, interrupt Processing, Threads ,multithreading, user level threads, kernel level threads, advantages, comparison with process, CPU scheduling: concepts, types of schedulers, scheduling criteria, and scheduling Algorithms. Algorithm evaluation, Multiprocessor scheduling, Real Time Scheduling.

### **UNIT- 3 CONCURRENT PROCESSES AND DEAD LOCKS:**

Mutual Exclusion, the critical section problem ,Software and Hardware solutions for mutual exclusion, semaphores, Classical problems in concurrency , inter process communication Concurrent Process:introduction, parallel Processing ,A Control Structure for indicating parallelism, Deadlock-System model, Deadlock characterization. Prevention, Avoidance and Detection, Recovery from deadlock, combined approach.

### **UNIT-4 MEMORY MANAGEMENT:**

Base machine, resident Monitor, multiprogramming with fixed partition, Multiprogramming with variable partitions, Paging, Segmentation, paged - segmentation, Virtual Memory concepts, Demand paging, performance, page Replacement algorithms, Allocation of frames, Thrashing, cache memory organization impact on performance.

### **UNIT-5 I/O AND FILES MANAGEMENT:**

I/O Device and the organization of the I/O function, I/O Buffering, Disk I/O, Disk Sheduling Algorithms, File system: File Concepts, attributes, operations, File organization and Access mechanism, disk space allocation methods, Directory structure, free disk space management, File sharing, **Implementation** issues. Case studies: Unix system, Windows XP.

### **Text Books:**

1. Operating System concepts, Silberscatz A and Peterson, J.L, PE-LPE

## **Reference Books:**

- 1. Operating System Design & Implementation, Tanenbaum, A.S., PHI.
- 2. Operating system concepts Galvin, Silberscatz John Weiley & Sons
- 3. Operating systems H.M.Deital Pearson Education
- 4. Operating System Concept & Design, Milenkovic M, McGraw Hill.
- 5. Operation System, Stalling William, Maxwell MCMillan International Editions.



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# DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING SYLLABUS

Name of Subject	Database Management System	Subject Code	CS20512(CS)
Semester	B.Tech. V	Board Of Studies	Comp.Sc. & Engg.
Maximum Marks	70	Minimum Marks	28
Lecture Periods/week	Tutorial Periods/Week	Practical Periods/Week	Credits
3	1	-	4

## UNIT-I INTRODUCTION TO DATA BASE & INDEXING TECHNIQUES: -

Advantages of DBMS, Type of Data Models, Schema and instances, DBMS Architecture and Data Independence, Entity- Relationship Model, Attributes and Keys, Relationship Types, Weak Entity set, Strong Entity Set, Enhanced E–R Modeling, Specialization and Generalization, Indexes, Multi level indexes, Dynamics Multilevel indexes using B trees and B+- Trees.

# UNIT-II THE RELATIONAL DATA MODEL & SQL:-

Relational data model concepts, constraints, relational algebra, relational calculus, Tuple relational calculus. SQL: DDL,DML, DCL, Types of constraints, Defining different constraints on a table, Defining & Dropping integrity constraints in the alter table command, View, Index.

## UNIT-III DATABASE DESIGN:-

Functional Dependencies and Normalization for Relational Databases: Informal design guidelines for relation schemes, Functional dependencies, Normal forms based on primary keys, General definitions of second and third normal forms, Boyce- Codd normal form, problem related with normal forms & solutions. Multi valued & Join Dependencies, 4th & 5th Normalization.

## UNIT-IV QUERY & TRANSACTION PROCESSING:-

Query Processing : Query processing stages, Query interpretation, Query execution plan, Table scans, Fill factor, Multiple index access, Methods for join tables scans, Structure of a query optimizer. Transaction Processing: Types of failures, ACID property, schedules and recoverability, serialbility of schedules, Levels of transaction consistency, Deadlocks, Nested transaction, Transaction benchmarking.

## UNIT -V CRASH RECOVERY & CONCURRENCY CONTROL:-

Failure classification, Different type of Recovery techniques & their comparative analysis, deferred update, immediate update, Shadow paging, Check points, On-line backup during database updates. Concurrency Control: Different type of concurrency control techniques & their comparative analysis, Locking techniques, Time- stamp ordering, Multi-version techniques, Optimistic techniques, Multiple granularity.

## **Text Books:**

- 1. Database system concept, Korth & Sudarshan, MH.
- 2. Principles of Database Systems", 2nd Edn., Ullman, J.O, Galgotia Publications.
- 3. Introduction to Database Systems, C.J.Date, Pearson Education.
- 4. Fundamentals of Database Systems, Elmasri & Navathe, Pearson Education.



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# **DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

# **SYLLABUS**

Name of Subject	Computer Graphics & Multimedia	Subject Code	CS20513(CS)
Semester	B.Tech. V	Board Of Studies	Comp.Sc. & Engg.
Maximum Marks	70	Minimum Marks	28
Lastura Dariada/waak	Tutorial Periods/Week	Practical	Credits
Lecture Periods/week		Periods/Week	
3	1	-	4

## UNIT-I OVERVIEW OF GRAPHICS SYSTEM:-

Video display devices, Input devices, Raster scan & Random scan system, line-circle ellipse generating algorithm, filled area primitives, 2-D & 3-D transformation, Clipping:, Liang Barsky 2-D clipping :Cohen Sutherland, Polygon clipping: Sutherland Hodgeman & Weiler-Atherton polygon clipping.

### UNIT-II CURVES & SURFACES:-

Conics-Parametric forms for circle, ellipse, parabola, Bezier Curves-Need for cubic parametric curves c0, c1, c2 continuity, Generation though Bernstein polynomials, Condition for smooth joining of 2 segments, Convex Hull property, B-Spline Curves: Knot vectors uniform and open uniform curves, Uniform, Periodic B-splines, Open, Uniform B-splines, Non-uniform, rational B-splines, Beta splines, subdividing curves, Drawing curves using forward differences.

### UNIT-III PROJECTIONS & HIDDEN SURFACE REMOVAL:-

Parallel projection on xy-plane(including oblique view), Perspective projection-1, 2 and 3 Vanishing points, Hidden Surface Removal: Back face removal, Floating Horizon method for curved objects, Z-Buffer or depth buffer algorithm, Painter's algorithm(Depth sorting method), Binary space partitioning trees, Scanline algorithm, Warnock's algorithm(Area subdivision method).

### UNIT-IV SHADING & COLOR ISSUES :-

Illumination model for diffused & specular reflection, Computing reflection vector, Gouraud and Phogtracing, Texture mapping & their characteristics, Basic ray tracing algorithm, Constructive solid geometry methods–Octrees and Fractals, Color issues: Wavelength spectrum, RGB, CMY, HSV color model.

### UNIT-V MULTIMEDIA:-

Data Compression requirement, Information Theory based and frequency domain based compression, Basic compression techniques: lossy & lossless compression, Huffman coding, LZW coding, run length coding, DCT, compression of multimedia data. Animation: In-between using rotation and translation, Procedural animation, Image Transformation- Translation and rotation, Morphing, Motion Control (Key framing), Spline Driven animation.

### **Text Books :-**

- 1. Computer graphics-Hearn and Baker, PHI
- 2. Computer Graphics, Foley, PE-LPE,

### **Reference Books:-**

- 1. Procedural Elements of Computer graphics, Rogers, McGraw Hill
- 2. Computer graphics, Harringtons S., McGraw Hill.
- 3. Computer Graphics, Schaum Series.



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# DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING SYLLABUS

Name of Subject	Data Communication/PPL	Subject Code	CS20514(CS)
Semester	B.Tech. V	Board Of Studies	Comp.Sc. & Engg.
Maximum Marks	70	Minimum Marks	28
Lasture Derisda/wash	Tutorial Periods/Week	Practical	Credits
Lecture Periods/week		Periods/Week	
3	1	-	4

# **UNIT I - IMPERATIVE PROGRAMMING:**

The Role of Programming Languages: - Toward Higher-level Languages, Problems of Scale, Programming Paradigms, Language Implementation Bridging the Gap. Language Description:- Syntactic Structure : Expression Notations, Abstract Syntax Trees, Lexical Syntax, Context -Free Grammars, Grammars for Expressions, Variants of Grammars. Statements: Structured Programming:- The Need for Structured Programming, Syntax-Directed Control Flow, Design Considerations: Syntax, Handling Special Cases in Loops, Programming with invariants, Proof Rules for Partial Correctness, Control flowin C. Types: Data Representation:- The Role of Types, Basic Types, Arrays Sequences of Elements, Records: Named Fields, Unions and variant Records, Sets, Pointers: Efficiency and Dynamic Allocation, Two String Tables, Types and Error Checking. Procedure Activations:- Introduction to Procedures, Parameter-passing Methods, Scope Rules for Names, Nested Scopes in the Source Text, Activation Records, Lexical Scope: Procedures as in C, Lexical Scope: Nested Procedures and Pascal.

## **UNIT II- OBJECT ORIENTED PROGRAMMING:**

Groupings of Data and Operations:- Constructs fro Program Structuring, Information Hiding, Program Design with Modules, Modules and Defined Types, Object-Oriented Programming:- What is an Object? ,Object-Oriented Thinking, Inheritance, Derived Classes and information Hiding.

## **UNIT III - FUNCTIONAL PROGRAMMING:**

Elements of Functional Programming:- A little Language of expressions, Types : Values and Operations, Function declarations, Approaches to Expression Evaluation, Lexical Scope, Type Checking. Functional Programming in a Typed Languages:- Exploring a List, Function Declaration by Cases, Functions as First-Class Values, ML: Implicit Types, Data Types, Exception Handling in M, Little quit in Standard ML. Functional Programming with Lists:- Scheme, a Dialect of Lisp, The Structure of Lists, List Manipulation, A Motivating Example: Differentiation, Simplification of Expressions, Storage Allocation for Lists.

### **UNIT IV- LOGIC PROGRAMMING**

Logic Programming:- Computing with Relations, Introduction to Prolog, Data Structures in Prolog, Programming techniques, Control in Prolog, Cuts.

### **UNIT V- CONCURRENT PROGRAMMING**

An Introduction to Concurrent Programming:- Parallelism in Hardware, Streams: Implicit Synchronization, Concurrency as interleaving, Liveness Properties, Safe Access to Shared Data, Concurrency in Ada, Synchronized Access to Shared variables.

### **Text Book:**

- 1. Programming Languages Design & Implementation, Terrance W. Pratt, Marvin V. Zelkowitz, and Pearson Education.
- 2. Concepts of Programming Languages Robert L. Sebesta, Pearson Education.
- 3. Programming Languages Concepts & Constructs, Ravi Sethi, Pearson Education.

4. Principles of Programming Languages: Design, Evaluation, and Implementation by Bruce J. Mac Lennan, 2nd edition. One copy is on reserve in the Science Library

5. Kenneth C. Louden. Programming Languages: Principles and Practice, 2nd Edition



# **DEPATMENT OF COMPUTER SCIENCE & ENGINEERING**

# **SYLLABUS**

Name of Subject	Theory of Computation	Subject Code	CS20515(CS)
Semester	B.Tech. V	Board Of Studies	Comp.Sc. & Engg.
Maximum Marks	70	Minimum Marks	28
Lastura Dariada/waala	Tutorial Periods/Week	Practical	Credits
Lecture Periods/week		Periods/Week	
3	1	-	4

# UNIT-1. THE FINITE AUTOMATA:

Introduction to automata theory, Examples of automata machine, Finite automata as a language acceptor and translator. Deterministic finite automata, Non deterministic finite automata, finite automata with output (Mealy Machine. Moore machine). Finite automata with Epsilon moves, Conversion of NFA to DFA by Arden's method, Minimizing number of states of a DFA .Properties and limitation of FSM. Two way finite automata.

## UNIT-2. REGULAR EXPRESSIONS :

Regular expression, Properties of Regular Expression. Finite automata and Regular expressions. Regular Expression to DFA conversion & vice versa. Pumping lemma for regular sets. Application of pumping lemma, My-hill Nerode theorem, Regular sets and Regular grammar. Closure properties of regular sets. Decision algorithm for regular sets and regular grammar.

## UNIT-3. GRAMMARS:

Definition and types of grammar. Chomsky hierarchy of grammar. Relation between types of grammars. Role and application areas of grammars. Context free grammar. Left most linear &right most derivation trees. Ambiguity in grammar. Simplification of context free grammar. Chomsky normal from. Greibach normal form, properties of context free language. Pumpinglemma from context free language. Decision algorithm for context tree language.

# UNIT-4. PUSH DOWN AUTOMATA AND TURING MACHINE:

Basic definitions. Deterministic push down automata and non deterministic push down automata. Acceptance of push down automata. Push down automata and context free language. Turing machine model. Representation of Turing Machine Construction of Turing Machine for simple problem's. Universal Turing machine and other modifications.

## **UNIT-5 COMPUTABILITY:**

Introduction and Basic concepts. Recursive function. Partial recursive function. Partial recursive function. Initial functions, computability, A Turing model for computation. Turing computable functions, Construction of Turing machine for computation. Space and time complexity. Recursive enumerable language and sets. Church's Hypothesis. Post correspondence problem. Halting problem of Turing Machine

## **Text Books:**

(1) Introduction to Automata theory. Language and Computation, John E. Hopcropt & Jeffery D. Ullman, Narosa Publishing House.

(2) Theory of Computer Science (Automata Language & Computation), K.L.P. Mishra and N. Chandrasekran, PHI.

### **Reference Books:**

(1) Theory of Automata and Formal Language, R.B. Patel & P. Nath, Umesh Publication.

- (2) An Introduction and finite automata theory, Adesh K. Pandey, TMH.
- (3) Theory of Computation, AM Natrajan. Tamilarasi, Bilasubramani, New Age International Publishers.



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# **DEPATMENT OF COMPUTER SCIENCE & ENGINEERING**

# **SYLLABUS**

Name of Subject	Operations Research	Subject Code	MA20516(CS)
Semester	B.Tech. V	Board Of Studies	Comp.Sc. & Engg.
Maximum Marks	70	Minimum Marks	28
Lastura Parioda/wask	Tutorial Periods/Week	Practical	Credits
Lecture Ferious/week		Periods/Week	
4	1	-	5

# UNIT –1 LINEAR PROGRAMMING PROBLEM

Mathematical formulation of L.P.P, Graphical method for solving LP with 2 variables, Simplex method, Application of simplex method for maximization and minimization of LP problems, Artificial variable technique for finding the initial basic feasible solution, The Big-M method, Degeneracy in simplex method, Duality theory in LP, Dual simplex method.

# UNIT-2 TRANSPORTATION, ASSIGNMENT AND REPLACEMENT PROBLEMS

- **Transportation:** North West comer rule, Least cost method, Vogel's Approximation method, Modi Method, Assignment problem.
- **Replacement:** Replacement of equipment/Asset that Deteriorates Gradually, Replacement of equipment that fails suddenly, Recruitment and Promotion problem, equipment renewal problem.

## **UNIT-3 INVENTORY MODELS**

Introduction to the inventory problem, Deterministic models, The classical EOQ (Economic order quantity) model, Purchasing model with no shortage, Manufacturing model with no shortage, purchasing model with shortage, Inventory models with probabilistic demand.

# **UNIT -4 SEQUENCING AND QUEUING THEORY**

Sequencing problem, Johnson's algorithm for processing N-jobs through 2 machine problem, N-jobs through 3 machine problem, 2- job through N machine by graphical method, Characteristics of queuing system- steady state M/M/1, M/M/1K and M/M/C queuing models.

## **UNIT-5 NET WORK ANALYSIS**

Introduction, Network and basic Components, logical sequencing, Rules of Network Construction, CPM/PERT Techniques, Critical path method(CPM), Determination of Critical path(Labelling Method), The Project Evaluation and Review Technique(PERT), Probability Considerations in PERT, Distinction between PERT and CPM, Project Cost, Time-Cost Optimization Algorithm.

## Name of Text Books:-

- 1. Operation Research-2ed, Panneerselvam, Prentice Hall of India
- 2. Operation Research: An Introduction 8rd, Hamdy a. Taha, Prentice Hall of India

# Name of Reference Books :-

- 1. Gillett B.E, Introduction to Operation Research- A Computer Oriented algorithmic approach, Mc Graw Hill.
- 2. Kanti Swarup, Gupta.P.K., Man Mohan, Operations Research, Sultan Chand&Sons.
- 3. Vohra N.D., Quantitative Techniques in Managemental, T.M.H., 1990.
- 4. Zoints. S., Linear & Integer Programming, Prentice Hall, 1975.
- 5. R.K.Gupta, Operational Research, Krishna Prakashan, Mandir, Meerut.



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# **DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

# **SYLLABUS**

Name of Subject	Operating System (Lab)	Subject Code	CS20521(CS)
Semester	B.Tech. V	Board Of Studies	Comp.Sc. & Engg.
Maximum Marks		Minimum Marks	
Lastura Dariada/waak	Tutorial Periods/Week	Practical	Credits
Lecture Ferious/week		Periods/Week	
-	-	3	2

# **Experiments to be Performed**

- 1. Write a program for the implementation of various CPU scheduling algorithms (FCFS, SJF, Priority).
- 2. Write a program for the implementation of various page replacement algorithms (FIFO, Optimal, LRU).
- 3. Write a program for the implementation of system calls (Fork and V-fork) of Unix operating system.
- 4. Write a program for the implementation of Producer-Consumer problem.
- 5. Write a program for the implementation of Readers Writers problem.
- 6. Write a program for the implementation of Banker's algorithm.
- 7. Write a program to simulate the concept of semaphores.
- 8. Write a program to simulate the concept of inter process communication.
- 9. Write a program for the implementation of various memory allocation algorithms (First fit, Best fit, and Worst fit).
- 10. Write a program for the implementation of various Disk scheduling algorithms (FCFS, SCAN, SSTF, C-SCAN).



# **DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING**

# **SYLLABUS**

Name of Subject	Data Base Management System(Lab)	Subject Code	CS20522(CS)
Semester	B.Tech. V	<b>Board Of Studies</b>	Comp.Sc. & Engg.
Maximum Marks		Minimum Marks	
Lastura Dario da /waala	Tutorial Periods/Week	Practical	Credits
Lecture Periods/week		Periods/Week	
-	-	3	2

- 1. Creating tables, Renaming tables.
- 2. Data constraints (Primary key, Foreign key, Not Null), Data insertion into a table.
- 3. Viewing data from tables.
- 4. Filtering table data.
- 5. Creating table from another table.
- 6. Inserting data into a table from another table.
- 7. Delete, alter, and update operations.
- 8. Grouping data, aggregate functions
- 9. Oracle functions (mathematical, character functions)
- 10. Sub-queries
- 11. Set operations.
- 12. Joins.
- 13. PL/SQL (Anonymous block, control structure)
- 14. PL/SQL (Procedures)
- 15. Triggers
- 16. Cursors



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# DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING SYLLABUS

Name of Subject	Computer Graphics & Multimedia (Lab)	Subject Code	CS20523(CS)
Semester	B.Tech. V	Board Of Studies	Comp.Sc. & Engg.
Maximum Marks		Minimum Marks	
Lastura Dariada/waak	Tutorial Periods/Week	Practical	Credits
Lecture Perious/week		Periods/Week	
-	-	3	2

- 1. Write a program to draw the line using DDA algorithm.
- 2. Write a program to draw the line using Bresenham's algorithm.
- 3. Write a program to draw circle using Bresenham's algorithm.
- 4. Write a program to draw circle using mid-point algorithm.
- 5. Write a program to demonstrate draw ellipse using midpoint algorithm.
- 6. Write a program Rotation of Triangle.
- 7. Write a program Translation of Line.
- 8. Write a program to perform scaling of line.
- 9. Write a program shearing of Rectangle.
- 10. Write a program to implement boundary –fill algorithm.
- 11. Write a program to implement flood -fill algorithm.
- 12. Write a program to implement Bezier curve using four control points.
- 13. Write a program to implement Cohen Sutherland line clipping algorithm.
- 14. Write a program to implement Liang Barsky line clipping algorithm.
- 15. Write a program for implementing planetary system.
- 16. Write a program for implementing a pick square.

## **Book Reference:-**

- 1. Computer Graphics & Multimedia- G. S. Baluja -Dhanpat Rai & CO.
- 2. Computer Graphics Donald Hearn & M Pauline Baker-Pearson Pvt. Ltd



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# DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING SYLLABUS

Name of Subject	Managerial skill	Subject Code	EN20524(CS)
Semester	B.Tech. V	<b>Board Of Studies</b>	Humanities
Maximum Marks		Minimum Marks	
Lastura Darioda/waak	Tutorial Periods/Week	Practical	Credits
Lecture Periods/week		Periods/Week	
-	-	2	1

## Unit-I

Managerial Communication Skills: Importance of Business Writing: writing business letters, memorandum, minutes, and reports- informal and formal, legal aspects of business communication, oral communication-presentation, conversation skills, negotiations, and listening skills, how to structure speech and presentation, body language.

## Unit-II

Managerial skills: Leadership: Characteristics of leader, how to develop leadership; ethics and values of leadership, leaders who make difference, conduct of meetings, small group communications and Brain storming, Decision making, How to make right decision, Conflicts and cooperation, Dissatisfaction: Making them productive.

## Unit-III

Proactive Manager: How to become the real you: The journey of self-discovery, the path of selfdiscovery, Assertiveness: A skill to develop, Hero or developer, Difference between manager and leader, Managerial skill check list, team development, How to teach and train, time management, Stress management, Self assessment.

## Unit-IV

Attitudinal Change: Meaning of attitude through example, benefits of positive attitude, how to develop habit of positive thinking, what is fear? How to win it? How to win over failure? How to overcome criticism? How to become real you? How to Motivate?

### Unit-V

Creativity – a managerial skill, Trying to get a grip on creativity. Overview of Management Concepts: Function of Management: Planning, organizing, staffing, controlling.

### **Text & Reference Books:**

1. Basic Managerial skills for all by E.H. McGrawth, Prentice Hall India Pvt Ltd, 2006

- 2. How to develop a pleasing personality by Atul John Rego, Better yourself bools, Mumbai, 2006
- 3. The powerful Personality by Dr. Ujjawal Patni & Dr. Pratap Deshmukh, Fusion Books, 2006
- 4. How to Success by Brian Adams, Better Yourself books, Mumbai, 1969