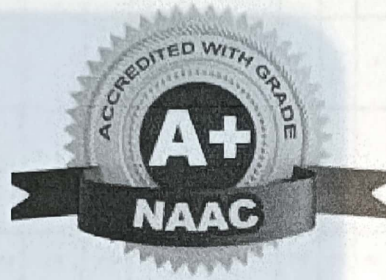




**TULSIRAMJI GAIKWAD-PATIL**  
**College of Engineering & Technology**

Mohgaon, Wardha Road, Nagpur - 441 108

An Autonomous Institute



**DEPARTMENT**  
**OF**  
**COMPUTER SCIENCE AND ENGINEERING**

**B.Tech. Computer Science and**  
**Engineering**

**Teaching Scheme**  
Considering

**National Education**  
**Policy 2020**

From  
**Academic Year 2024-25**



## Programme : Computer Science and Engineering

List of Program Electives offered By Computer Science and Engineering Department

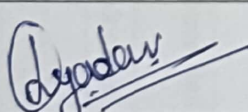
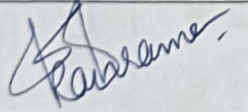
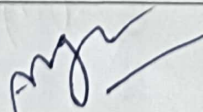
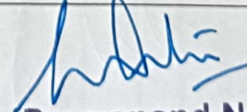
Program Elective- I	Program Elective-II	Program Elective- III	Program Elective- IV	Program Elective- V
Semester V	Semester VI	Semester VI	Semester VII	Semester VIII
BCS33506 - Artificial Intelligence	BCS33605 - Neural Network and Fuzzy Logic	BCS33609 - TCP/IP	BCS34701 - MOOC's - 1	BCS34805 - Natural Language Processing
BCS33507 - Principles of Distributed Systems	BCS33606 - Cloud Computing	BCS33610 - Computer Graphics	BCS34702 - MOOC's - 2	BCS34806 - Parallel and Distributed Database
BCS33508 - Design Patterns	BCS33607 - Software Project Management	BCS33611 - Network Security	-	BCS34807 - Software Testing and Quality Assurance
BCS33509 - Introduction to Data Science	BCS33608 - Data Visualization Techniques	BCS33612 - Blockchain and Distributed Ledger Technology	-	BCS34808 - Big Data Analytics

## Program: Computer Science and Engineering

List of Open Electives offered By Computer Science and Engineering Department

Open Elective-I	Open Elective-II	Open Elective-III
Semester-III	Semester-IV	Semester-V
BCS32306: Object Oriented Programming	BCS32406: Introduction to DBMS	BCS32504: Software Engineering

Course Category	BSC (Basic Science Course)	ESC (Engineering Science Course.)	PCC (Programme Core courses)	PEC (Programme Elective courses)	OEC (Open Elective Course)	Multidisciplinary courses	VSEC (Skill Course)	Humanities Social Science & Management	Experiential Learning Courses	CC (Liberal Learning Courses)	Semester Wise Credits
Semester -I	10	05	02	--	--	--	02	--	-	02	21
Semester -II	08	08	--	--	--	--	02	02	-	02	22
Semester -III	--	--	10	--	04	02	--	04	02	--	22
Semester -IV	--	--	10	--	02	02	02	06	-	--	22
Semester -V	--	--	11	04	02	04	--	--	-	--	21
Semester -VI	--	--	08	08	--	02	02	--	-	--	20
Semester -VII	--	--	04	04	--	--	--	--	12	--	20
Semester -VIII	--	--	04	06	--	02	--	--	08	--	20
<b>Cumulative Sum</b>	18	13	49	22	08	12	08	12	22	04	168

 HOD	 Dean Academics	 Vice Principal	 Principal	Nov, 2024	1.00	Applicable for AY 2024-25 Onwards
Tulsiramji Gaikwad-Patil	Tulsiramji Gaikwad-Patil	Tulsiramji Gaikwad-Patil	Dr. Premanand Naktode	Date of Release	Version	

Department of Computer Science And Engineering  
Tulsiramji Gaikwad-patil College of Engineering and Technology, Nagpur

TGPCET, Nagpur



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Second Year (Semester-IV) B.Tech. (CSE)

Course Code:BCS32401 (Operating System)

Teaching Scheme		Examination Scheme	
Lectures	2Hrs / week	CT-1	7 Marks
Tutorial	-	CT-2	8 Marks
Total Credit	2	TA	5 Marks
		ESE	30 Marks
		Total	50 Marks

Duration of ESE: 02Hrs 00Min.

Course Objective:

- 1 To introduce the operating system concepts, designs and provide skills required to Implement the services.
- 2 To describe the trade-offs between conflicting objectives in large scale system design.
- 3 To develop the knowledge for application of the various design issues and services.

#### Course Contents

**Unit I**  
**Introduction:** Evolution of OS, Types of OS, Basic h/w support necessary for modern operating systems, services provided by OS, system programs and system calls, OS structure: Layered, Monolithic, Microkernel Operating Systems.

**Unit II**  
**Process Management:** Process concept, Process control Block, Process states, Primitive and Non-Primitive Processes, Types of scheduler, context switch, threads, multithreading model  
**Scheduling:** Goals of scheduling and different scheduling algorithm (FIFO, SJF, Priority, and Round Robin).

**Unit III**  
**Memory Management:** Contiguous allocation, Relocation, Paging, Segmentation, Segmentation with paging, demand paging, page faults and instruction restart, page replacement algorithms  
**File Systems:** File concept, Access methods, Disk space management and space allocation strategies, directory structures, Recovery, Log-structured File System, disk scheduling algorithms.

#### Text Books

- 1 Operating System Concepts (8th Edition) by Silberschatz, Peter B. Galvin and Greg Gagne, Wiley Indian Edition (2010).
- 2 Modern Operating Systems (Third Edition) by Andrew S Tanenbaum, Prentice Hall India (2008)
- 3 Operating Systems by D.M. Dhamdhere, Tata McGraw Hill 2nd edition

#### Reference Books

- 1 Operating Systems (5th Ed) – Internals and Design Principles by William Stallings, Prentice Hall India, 2000
- 2 Operating System: Concepts and Design by Milan Milenkovic, McGraw Hill Higher Education

#### Useful Links

- 1 <https://nptel.ac.in/courses/106/105/106105214/>
- 2 <https://nptel.ac.in/courses/106/102/106102132/>

	Course Outcomes	CL	Class Session
1	Understand the evolution of OS functionality, structures and layers.	2	9
2	Execute a model scheduling algorithm to compute scheduling criteria.	3	9
3	Analysis page replacement algorithms, memory management problems and segmentation.	4	9

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**Second Year (Semester-IV) B.Tech. (CSE)**

Course Code: BCS32402 (Database Management System)

Teaching Scheme		Examination Scheme	
Lectures	3Hrs/week	CT-1	15 Marks
Tutorial	-	CT-2	15 Marks
Total Credit	3	TA	10 Marks
		ESE	60 Marks
		<b>Total</b>	100 Marks
		Duration of ESE :03Hrs 00Min.	

**Course Objective:**

1	To understand the role of a database management system in an organization.
2	To construct simple and advanced database queries using a data language.
3	To understand and apply logical database design principles and database normalization.
4	To understand the concept of query processing and optimization, focusing on the transformation of relational expressions into execution plans.
5	To understand the fundamentals of transaction processing, including the ACID properties and their significance in maintaining data integrity.

**Course Contents**

<b>Unit I</b>	<b>Introduction to Database System Concepts and Architecture</b> Databases and Database Users, Characteristics of the Database Approach, Advantages of Using the DBMS Approach, Data Models, Schemas, and Instances, Three-Schema Architecture and Data Independence, Database Languages and Interfaces, The Database System Environment.
<b>Unit II</b>	<b>The Relational Data Model and SQL</b> Relational Model Concepts, Relational Model Constraints and Relational Database Schemas, Update Operations, Transactions, SQL Data Definition, Data Types and Constraints, Data Management in SQL, Transforming ER Model into Relational Model.
<b>Unit III</b>	<b>Database Design and Normalization</b> Functional Dependencies, Inference Rules, Equivalence, and Minimal Cover, Properties of Relational Decomposition, Normal Forms Based on Primary Keys, General Definitions of Second and Third Normal Forms, Boyce-Codd Normal Form.
<b>Unit IV</b>	<b>Indexing and Hashing</b> Ordered Indices, B+-Tree Index Files and its Extensions, Static Hashing and Dynamic Hashing, Comparison of Ordered Indexing and Hashing, Bitmap Indices, Some General Issues Concerning Indexing. <b>Query Processing and Optimization</b> Measures of Query Cost, Query Operation: Selection, Sorting and Join Operation, Transformation of Relational Expressions.
<b>Unit V</b>	<b>Transaction Processing, Concurrency Control and Recovery</b> Introduction to Transaction Processing, Characterizing Schedules Based on Recoverability, Characterizing Schedules Based on Serializability, Two-Phase Locking Techniques for Concurrency Control, Deadlock Handling and Multiple Granularity, Database Recovery Techniques.

### Text Books

- 1 Abraham Silberschatz, Henry F. Korth and S. Sudarshan; Database System Concepts, Sixth Edition, Tata McGraw-Hill, 2011.
- 2 Ramez Elmasri and Shamkant Navathe; Fundamentals of Database Systems, Sixth Edition, Addison Wesley 2011.

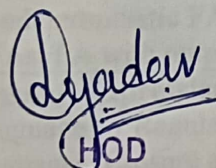
### Reference Books

- 1 Raghu Ramakrishnan and Johannes Gehrke; Database Management Systems; Third Edition; Tata McGraw-Hill Publication, 2003.
- 2 C. J. Date; Database in Depth – Relational Theory for Practitioners; O' Reilly Media, 2005.

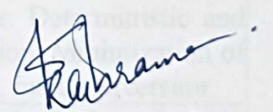
### Useful Links

- 1 <https://www.digimat.in/nptel/courses/video/106105175/L01.html>
- 2 <https://archive.nptel.ac.in/courses/106/105/106105175/>

	Course Outcomes	CL	Class Session
1	<b>Understand</b> Model data requirements for an application using conceptual modelling tools.	2	9
2	<b>Model</b> database schemas by applying normalization techniques.	3	9
3	<b>Perform</b> efficient data storage and retrieval queries using SQL.	3	9
4	<b>Evaluate</b> the cost and efficiency of various Query Operations such as Selection, Sorting, and Join in different query execution scenarios.	4	9
5	<b>Analyze</b> how different schedules impact the recoverability of a database during system failures and the role of transaction logs in ensuring recoverable states.	4	9

  
HOD

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**Second Year (Semester-IV) B.Tech. (CSE)**

**Course Code: BCS32403 (Theoretical Foundation of Computer Science)**

Teaching Scheme		Examination Scheme	
Lectures	3 Hrs/week	CT-1	15 Marks
Tutorial	-	CT-2	15 Marks
Total Credit	3	CA	10 Marks
		ESE	60 Marks
		<b>Total</b>	<b>100 Marks</b>
		Duration of ESE :03Hrs 00Min.	

**Course Objective:**

- 1 To introduce the students to basics of Theory of Computation
- 2 To study abstract computing models to provide a formal connection between algorithmic problem solving and the theory of languages
- 3 To explore Context-Free Grammars, Context-Free Languages, their properties, simplifications, normal forms, and applications in formal language theory.
- 4 To Learn Pushdown Automata and Turing Machines, focusing on their definitions, equivalences, and applications in language theory.
- 5 To Understand computability theory, decidability, complexity classes (P, NP), and NP-completeness.

**Course Contents**

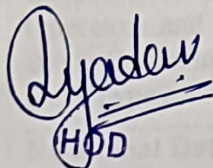
<b>Unit I</b>	<b>Finite Automata (FA):</b> An informal picture of FA, Finite State Machine (FSM), Language accepted by FA, Definition of Regular Language. FA without output: Deterministic and Nondeterministic FA (DFA and NFA), epsilon-NFA and inter-conversion. Minimization of DFAs. FA with output: Moore and Mealy machines -Definition, models, inter-conversion
<b>Unit II</b>	<b>Regular Expression:</b> Operators of RE, Precedence of operators, Algebraic laws for RE, Language to Regular Expressions, Equivalence of two REs. Pumping Lemma for Regular languages, Closure and Decision properties of Regular languages.
<b>Unit III</b>	<b>CFG &amp; CFL:</b> Basic Elements of Grammar Formal Definition of Context Free Grammar, Sentential form, Derivation and Derivation Tree/ Parse Tree, Context Free Language (CFL), Ambiguous Grammar, writing grammar for language. Simplification of CFG: Eliminating $\epsilon$ -productions, unit productions, useless production, and useless symbols. Normal Forms: Chomsky Normal Form, Greibach Normal Form, Pumping Lemma for CFG, Closure properties of CFL, Decision properties of CFL, Chomsky Hierarchy
<b>Unit IV</b>	<b>Pushdown Automata:</b> Formal definition of PDA, Equivalence of Acceptance by Final State and Empty stack, Non-deterministic PDA (NPDA), PDA and Context Free Language, Equivalence of PDA and CFG, PDA vs CFLs. Deterministic CFLs. <b>Turing Machines:</b> Formal definition of Turing Machines, Language Acceptability by Turing Machines, Design of TM, Description of TM, Techniques for TM Construction
<b>Unit V</b>	<b>Computability Theory:</b> Decidable Problems and Un-decidable Problems, Church-Turing Thesis. <b>Complexity Classes:</b> Time and Space Measures, The Class P, Examples of problems in P, The Class NP, Examples of problems in NP, P Problem Versus NP Problem, NP-completeness and hard Problems.

**Text Books**

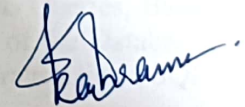


1	Michael Sipser, Introduction to the Theory of Computation, CENGAGE Learning, 3rd Edition ISBN: 978-81-315-2529-6.
2	Vivek Kulkarni, Theory of Computation, Oxford University Press, ISBN-13: 978-0-19-808458-7.
<b>Reference Books</b>	
1	Hopcroft Ulman, Introduction to Automata Theory, Languages and Computations, Pearson Education Asia, 2nd Edition, ISBN: 9788131720479.
2	Daniell. A. Cohen, Introduction to Computer Theory, Wiley-India, ISBN: 978-81-265-1334-5.
3	K.L.P Mishra, N. Chandrasekaran, Theory of Computer Science (Automata, Languages and Computation), Prentice Hall India, 2nd Edition.
<b>Useful Links</b>	
1	<a href="https://archive.nptel.ac.in/courses/106/104/106104148/">https://archive.nptel.ac.in/courses/106/104/106104148/</a>
2	<a href="http://www.digimat.in/nptel/courses/video/106104148/L01.html">http://www.digimat.in/nptel/courses/video/106104148/L01.html</a>

	<b>Course Outcomes</b>	<b>CL</b>	<b>Class Session</b>
1	<b>Understand</b> formal language, translation logic, essentials of translation, alphabets, language representation and apply it to design Finite Automata and its variants	2	9
2	<b>Construct</b> regular expression to present regular language and understand pumping lemma for RE	3	9
3	<b>Design</b> Context Free Grammars and learn to simplify the grammar	6	9
4	<b>Construct</b> Pushdown Automaton model for the Context Free Language Design Turing Machine for the different requirements outlined by theoretical computer science	6	9
5	<b>Understand</b> different classes of problems, classify and analyze them and study concepts of NP completeness	2	9

  
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**Second Year (Semester-II) B.Tech. (CSE)**

**Course Code: BCS32406 Open Elective II  
 (Introduction to Database Management System)**

Teaching Scheme		Examination Scheme	
Lectures	2 Hrs/week	CT-1	7 Marks
Tutorial	-	CT-2	8 Marks
Total Credit	2	TA	5 Marks
		ESE	30 Marks
		Total	50 Marks
		Duration of ESE :02Hrs 00Min.	

**Course Objective:**

1	To understand the fundamental concepts of database.
2	To understand creations, manipulation and querying of data in databases.
3	To Explore how databases are created, maintained, and optimized.

**Course Contents**

<b>Unit I</b>	<b>Introduction to Database Management System</b> Introduction to database Management system, purpose of database system, view of data, relational databases, Database architecture, Importance of data models, Advantages and Disadvantages of DBMS, database Languages, Acid Properties.
<b>Unit II</b>	<b>Introduction to SQL</b> Overview of SQL, SQL Data Definition, Basic Structure of SQL Queries, Basic Operators and Null Values, Aggregate Functions, Modification of the Database, Basic Commands, Intermediate SQL: Join Expressions, Views, Transactions, SQL Data Types.
<b>Unit III</b>	<b>Relational Database Design and File Organization, Indexing &amp; Hashing</b> Normalization and De-Normalization, Features of Good Relational Designs, Functional Dependencies, Normal Forms (Types), Functional Dependency Theory, Multivalued Dependencies, Fourth Normal Form, Database Design Process, File Organization, Static Hashing, Dynamic Hashing, Database Design and ER Model, Introduction to UML for Relational Database Models

**Text Books**

- 1 Henry Korth, Abraham Silberschatz & S. Sudarshan, Database System Concepts, McGrawHill Publication, 6th Edition, 2011.
- 2 Mark L. Gillenson, Fundamentals of Database Management System, Wiley Publication, 2 nd Edition, 2011.

**Reference Books**

- 1 Joel Murach, Murach's Oracle SQL and PL/SQL for Developers, Mike Murach & Associates, 2nd Edition, 2014.

2	Raghu Ramakrishnan, Johannes Gehrke, Database Management Systems, Mc Graw Hill Publication, 3rd Edition, 2003.
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**Useful Links**

1	<a href="https://www.w3schools.com/sql/sql_intro.asp">https://www.w3schools.com/sql/sql_intro.asp</a>
2	<a href="https://www.javatpoint.com/dbms-tutorial">https://www.javatpoint.com/dbms-tutorial</a>

	Course Outcomes	CL	Class Session
1	<b>Understand</b> the Lifecycle of Database Management Systems	2	9
2	<b>Apply</b> Database Design Principles and Tools and Use data modeling techniques,	3	9
3	<b>Perform</b> Database Problem-Solving for Business Challenges	3	9

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**Program: B.Tech. Second Year (CSE/IT)**

Semester		Course Code		Course Name	
IV		BSH32401		Discrete Mathematics & Graph Theory	
Teaching Scheme		Examination Scheme (Th)		Examination Scheme(P)	
Theory (Th)	2 Hrs/week	CT-I	7 Marks	-	-
Practical(P)	-	CT-II	7 Marks	-	-
Total Credits	3(Th)	CA	6 Marks	-	-
Duration of ESE:3Hrs		ESE	30 Marks	-	-
		Total Marks	50 Marks	-	-

**Pre-Requisites: NA**

**Course Outcomes:**

CO1	Use combinatorial methods to approach counting problems and apply these algebraic systems in various mathematical & practical contexts.
CO2	Understand the fundamental concepts of fuzzy sets and systems, including the difference between crisp and fuzzy sets.
CO3	Understand the basic definition and concepts in Graph theory in solving problem such as connectivity, cycle detection and path finding.

**Course Content**

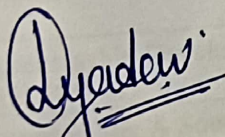
Unit I	<b>Combinatorics:</b> Rules of Sum and Product, Permutations, Combinations. Pigeonhole Principle Recurrence Relation, Linear Recurrence Relations with constant coefficients, Total Solutions, Applications of Relations and Functions, <b>Groups, Ring and Lattices:</b> Algebraic Systems, Semi Group, Groups, Monoid, Abelian Group, Sub Group, Isomorphism, Automorphisms and homomorphism group, Rings, Integral Domain & Fields Lattices and Algebraic Systems, Boolean Lattices.
Unit II	<b>Fuzzy Sets and Fuzzy Logic:</b> Fuzzy Sets and Systems, Crisp Set, Operations and Combinations on Fuzzy Sets, Relation Between Crisp and Fuzzy Sets, Fuzzy Relation, Overview of Fuzzy logic and Classical Logic.
Unit III	<b>Graph Theory:</b> Basic Concepts of Graph Theory, Digraphs, Basic Definitions, Matrix Representations of Graphs, Subgraphs and Quotient Graph, Isomorphic Graph, Paths and Circuits, Reachability and connectedness, Node base, Eulers Path and Hamilton Path, Binary Tree, Undirected Tree, Spanning Tree, Weighted Graph (Only Definitions & Examples), Minimum Spanning tree by Prims Algorithm and Kruskal's Algorithm, Representation of Algebraic Expression by Venn Diagram, and Binary Tree.

**Text Books**


1	C. L. Liu and D. P. Mohapatra, "Elements of Discrete Mathematics", 4 <sup>th</sup> Edition, MC Graw Hill
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2	Kenneth H. Rosen, "Discrete Mathematics and Its Applications", 7 <sup>th</sup> Edition, MC Graw Hill
3	Bernard Kolman, Robert C. Busby, Sharon Cutler Ross, "Discrete Mathematical Structural", 6 <sup>th</sup> Edition, Prentice Hall of India.
<b>Reference Books</b>	
1	Edger G. Goodaire, Michael M. parameter, "Discrete Mathematics with Graph Theory", 3 <sup>rd</sup> Edition, P Carson Education.
2	Tremblay J. S., "Discrete mathematical structures with Applications", 3 <sup>rd</sup> Edition, Tata MC Graw Hill
3	Mathematics for Engineers by Chandrika Prasad
4	A text book of Engineering Mathematics by N. P. Bali & M. Goyal, Laxmi Publication

Course Outcome		CL	Hours
After the completion of the course, student will be able to			
BSH32401.1	<b>Solve</b> Recurrence Relations, Generating Functions, Combinatorial Problems and Understand the concepts of Groups, Rings, Lattices.	3	11
BSH32401.2	<b>Interpret</b> Fuzzy Set Theory and d Uncertainty Concept.	4	9
BSH32401.3	<b>Analyze</b> Computational Problems in Graph Theoretical Framework.	4	10

  
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## Second Year (Semester-IV) B.Tech. Computer Science & Engineering

### BBA32401: Entrepreneurship and Management

Teaching Scheme		Examination Scheme	
Lectures	2Hrs./week	CIE	20 Marks
Tutorial	-	ESE	30Marks
Total Credit	2	Total	50Marks
		Duration of ESE: 02Hrs. 00Min.	

#### Course Objective:

1	Student will be able to understand the concept of entrepreneurship and what entrepreneurs do.
2	Student will be able to learn how entrepreneurship evolved from its earlier disorganized form to the current Government-supported form.
3	Student will be able to familiarize the fundamentals of entrepreneurship and management.

Course Contents		Hours
Unit I	Evolution of the concept of entrepreneurship, The entrepreneur: Characteristics and functions, types of entrepreneurs, distinction between manager and an entrepreneur, Intrapreneur: Concept, characteristics, barriers, intrapreneurial climate, and culture.	(9)
Unit II	Post-independence growth of entrepreneurship in India, Role of entrepreneurship in economic development, Entrepreneurship development programs: Objectives, phases, evaluation, and problems of EDPs.	(9)
Unit III	Management Functions in Entrepreneurship: Planning, organizing, and resource allocation in startups, Monitoring and evaluation in business growth. Handling crisis and change management, Case studies of ethical practices in business.	(9)

#### Text Books

1	Entrepreneurship Development, S. Anil Kumar, New Age International, 2008, ISBN 8122414346, 9788122414349
2	Entrepreneurship: A South-Asian Perspective, Kuratko, T.V. Rao, Cengage Learning, 2012
3	Entrepreneurship Development, Satish Taneja, Himalaya Publishing House, 2012

#### Reference Books

1	Entrepreneurial Development, S.S. Khanka, S. Chand & Co., 2016
2	Entrepreneurial Development, Satish Taneja, Himalaya Publishing House, 2010, pages 64-75
3	Dynamics of Entrepreneurial Development and Management, Vasant Desai, Himalaya Publishing House, pages 46-66

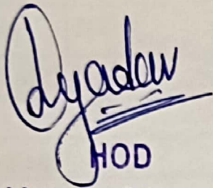
#### Useful Links

<https://nptel.ac.in/courses/110/101/110101131/>

BBA32401	Course Outcomes	CL
BBA32401.1	Explain the evolution of the concept of entrepreneurship, characteristics and functions, types of entrepreneurs,	4



BBA32401.2	Discover post-independence growth of entrepreneurship in India, role of entrepreneurship in economic development.	3
BBA32401.3	Demonstrate managerial skills in planning, organizing, leading, and controlling entrepreneurial ventures.	4

  
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College Of Engineering  
and Technology, Nagpur



**Tulsiramji Gaikwad-Patil College of Engineering and Technology**  
Wardha Road, Nagpur-441108  
**NAAC Accredited with A+ Grade**  
(An Autonomous Institute Affiliated to RTM Nagpur University, Nagpur)



**Program: B. Tech. Second Year**

**Semester-IV Human Values for Professional Society: BSH32403 (CSE/IT/DS/ME/EE/BT)**

Teaching Scheme		Examination Scheme (Th)		Examination Scheme(P)	
Theory (Th)	2 Hrs./ Week	CT-I	7 Marks	-	-
Practical(P)	-	CT-II	7 Marks	-	-
Total Credits	2(Th)	CA	6 Marks	-	-
Duration of ESE:2 Hrs.		ESE	30 Marks	-	-
		Total Marks	50 Marks	-	-

**Pre-Requisites:**

**Course Objectives:**

1. **To explain** the difference between values and ethics and to ensure sustained happiness and prosperity, which are the core aspirations of all human beings.
2. **To understand** harmony in the Family and Society-Human Relationship.
3. **To apply** in the professional and ethical life.

**Course Contents**

<b>Unit-I</b>	<b>Need, Content and Process for Value Education:-</b> Meaning and importance of Value Education, Types of Values - Personal Values, Social Values, and Moral Values & Spiritual Values, Relevance of Human values: Integrity, Empathy,
<b>Unit-II</b>	<b>Harmony in the Human Life:-</b> Define Harmony and significance of Harmony, Importance of - Harmony in the family, society and human relationship, and understand Harmony with self and Nature.
<b>Unit-III</b>	<b>Ethics in the Professional Society:-</b> Nature, characteristics and scope of professional ethics; Types of Professional Ethics, Professional Values: Trusteeship, Inclusiveness, Commitment, Sustainability, Accountability, Transparency, Impartiality.

**Text Books:-**

- 1 R.R. Gaur, R Sangal, G.P. Bagaria (2009): A Foundation Course in Human Values and Professional Ethics, Excel Books
- 2 D.R. Kiran (2014) Professional Ethics and Human Values, McGraw Hill Education (India).

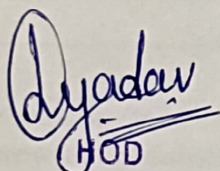
**Reference Books:-**

- 1 LaFollette, Hugh, ed. Ethics in Practice: An Anthology. Cambridge: Blackwell,1997
- 2 Vivian L Vignoles (2017): Identity: Personal and Social, Chapter to appear in Oxford Handbook of Personality and Social Psychology (2nded.), edited by Kay Deaux and Mark Snyder.
- 3 Happiness and Well-Being, NIOS Module V (Health and well-being)

**Useful Links:-**

1. [https://onlinecourses.nptel.ac.in/noc23\\_hs89/preview](https://onlinecourses.nptel.ac.in/noc23_hs89/preview)
2. <https://archive.nptel.ac.in/courses/109/104/109104068>

	Course Outcomes	CL	Class Session
	After the completion of the course, student will be able to		
BSH32403.1	Explain the importance of values education in life.	2	10
BSH32403.2	<b>Understand</b> the significance of harmony in family and society.	2	10
BSH32403.3	<b>Apply</b> ethics in personal and professional life.	3	10



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NAAC Accredited (A+ Grade)

Second Year (Semester-IV) B. Tech. Information Technology

Leadership and Team Dynamics - BSH32404 (DS/EE/CSE/AE/ECE/ME/BT)

Teaching Scheme		Examination Scheme	
Theory	2 Hrs/week	CT-I	7 Marks
Tutorial	-	CT-II	7 Marks
Total Credits	2	CA	6 Marks
		ESE	30 Marks
		Total	50 Marks
		Duration of ESE: 2Hrs	

**Course Objectives:**

- To provide a framework for the students to understand the importance of Leadership and team effectiveness in organizations.
- To develop an understanding of the interpersonal processes and group dynamics.
- To provide a theoretical understanding of leadership practices in organizations.

**Course Contents**

<b>Unit I</b>	<b>Introduction to Leadership &amp; Team Management:</b> Leadership Myths; Interactional Framework for analyzing leadership; Leadership Development: The First 90 Days as a Leader; Leader Development- The Action-Observation-Reflection Model, LMX Theory and Normative Decision Model; Situational Leadership Model; Contingency Model and Path Goal Theory; Emotional Approach Charismatic and Transformational Leadership; Leadership for Tomorrow
<b>Unit II</b>	<b>Leadership Attributes: Personality Traits and Leadership:</b> Personality Types and Leadership; Intelligence and Leadership; Emotional Intelligence and Leadership, Power and Leadership: The art of influence in leadership: Leadership and "Doing the Right Things: Character-Based Approach to Leadership; Role of Ethics and Values in Organisational Leadership
<b>Unit III</b>	<b>Leadership Behaviour:</b> Leadership Pipeline, Assessing Leadership Behaviors: Multi-rater Feedback Instruments: The Dark Side of; Leadership- Destructive Leadership; Managerial Incompetence and Derailment Conflict Management, Negotiation and Leadership, Leadership under a crisis situation: The Situation and the Environment: Culture and Leadership: Global Leadership.

**Text Books**

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|-----|--|
| T.1 | Leadership: Enhancing the lessons of experience by Hughes, R.L., Ginnett, R.C., & Curphy, G.J. (2019), 9th Edition, McGraw Hill Education, Chennai, India. |
| T.2 | Robbins, S.P. Judge, T.A. & Vohra, N., "Organizational Behavior," 18th Ed, Pearson Education. (2019)   |

**Reference Books**

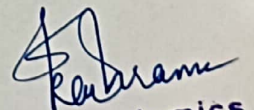


R.1	Baron R. A. and Byrne D., "Social Psychology", 10th Ed., Pearson Education, Inc. (2004)
R.2	Luthans F., "Organizational Behavior", 10th Ed., McGraw-Hill Companies. (2004)
<b>Useful Links:-</b>	
1	<a href="https://onlinecourses.nptel.ac.in/noc22_mg39/preview">https://onlinecourses.nptel.ac.in/noc22_mg39/preview</a>
2	<a href="https://nptel.ac.in/courses/110107159">https://nptel.ac.in/courses/110107159</a>

Course Code	Course Outcomes	CL	Class Sessions
<b>BSH32404.1</b>	Explain how global leadership skills contribute to leadership effectiveness.	2	10
<b>BSH32404.2</b>	Understand the leader's role in team-based organizations.	2	10
<b>BSH32404.3</b>	Classify the potential contribution of outdoor training to the development of team leadership.	2	10

  
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