



**List of Courses Focus on Employability/ Entrepreneurship/
Skill Development**

Department : Information Technology

Programme Name : B.Tech. & M.Tech.

Academic Year : 2021-22

Courses which focuses on Professional Ethics, Gender, Human Values, Environment & Sustainability and other value framework:

Sr. No.	Course Code	Name of the Course
01.	LW201TMC01	INDIAN CONSTITUTION
02.	IT204THS02	MANAGEMENT-1 - MANAGEMENT PROCESS AND ORGANIZATIONAL BEHAVIOUR
03.	IT05PMC01	CONSTITUTION OF INDIA
04.	IT05PMC01	ESSENCE OF INDIAN TRADITIONAL KNOWLEDGE
05.	LAPBTX4	CONSTITUTION OF INDIA



Scheme and Syllabus

SCHOOL OF STUDIES OF ENGINEERING & TECHNOLOGY
GURU GHASIDAS VISHWAVIDYALAYA (A CENTRAL UNIVERSITY)
CBCS-NEW, STUDY & EVALUATION SCHEME
PROPOSED W.E.F. SESSION 2020-2021
B.Tech. I Year (SEMESTER II)
(Common for CSE, ECE and IT)

SN	Course No.	SUBJECT	PERIODS			EVALUATION SCHEME			CREDITS
			L	T	P	IA	ESE	SUB-TOTAL	
1.	MA202TBS03	MATHEMATICS-II	3	1	-	30	70	100	4
2.	CY202TBS04	CHEMISTRY	3	1	-	30	70	100	4
3.	CE202TES03	ENGINEERING MECHANICS	3	1	-	30	70	100	4
4.	CS202TES04	COMPUTER PROGRAMMING	3	0	-	30	70	100	3
5.	CM202TES05	BASIC CIVIL & MECHANICAL ENGINEERING	3	0	0	30	70	100	3
6.	LW202TMC01	INDIAN CONSTITUTION	2	0	0	-	-	-	-
Total			17	3	0	150	350	500	18
PRACTICALS									
1.	CY202PBS02	CHEMISTRY LAB	-	-	2	30	20	50	1
2.	CE202PES04	ENGINEERING MECHANICS LAB	-	-	2	30	20	50	1
3.	CS202PES05	COMPUTER PROGRAMMING LAB	-	-	2	30	20	50	1
Total			-	-	6	90	60	150	3
GRAND TOTAL			17	3	6	240	410	650	21

Total Credits : **21**
Total Contact Hour : **26**
Total Marks : **650**

*INTERNAL ASSESSMENT- Two Class Test of 15 Marks each will be conducted.
L-LECTURE, T-TUTORIAL, P-PRACTICAL, ESE –END SEMESTER EXAMINATION



B. TECH. FIRST YEAR SYLLABUS (W.E.F SESSION 2020-21)

SYLLABUS	(SEMESTER-I)	Periods/ Week			Internal Assessment (IA)			ESE	Grand Total	Credit s
		L	T	P	CT-I	CT-II	TOTAL			
<i>Subject Code:</i>	LW201TMC01							--	--	--
<i>Subject:</i>	INDIAN CONSTITUTION	2	0	-	-	-	-			

Course Learning Objectives:

- To the importance of preamble of the constitution of India.
- To understand the fundamental rights and duty as a citizen of India.
- To understand the functioning of union and state government and their inter-relationship.

Course Content:

UNIT 1: Introduction: Constitution-meaning of the term, Sources and constitutional theory, Features, Citizenship. Preamble.

UNIT 2: Fundamental Rights and Duties: Fundamental Rights, Fundamental Duties, Directive Principles of State Policy

UNIT 3: Union Government: Structure of Indian Union: Federalism, Centre-State relationship President: Role. Power and position, Prime Minister and council of ministers, Cabinet and Central Secretariat, Lok Sabha. Rajya Sabha

UNIT 4: State Government: Governor: Role and position, Chief Minister and council of ministers, State Secretariat

UNIT 5: Relationship between Centre and States: Distribution of Legislative Powers, Administrative Relations, Coordination between States

Textbooks/References:

1. Constitution of India, V.N. Shukla
2. The Constitutional Law of India, J.N. Pandey
3. Indian Constitutional Law. M.P. Jain

Course Outcome: At the end of the course students will be able to:

- Describe the salient features of the Indian Constitution
- List the Fundamental Rights and Fundamental Duties of Indian citizens
- Describe the Directive Principles of State Policy and their significance



**SCHEME FOR EXAMINATION
B.TECH (FOUR YEAR) DEGREE COURSE
SECOND YEAR, INFORMATION TECHNOLOGY
SEMESTER IV
EFFECTIVE FROM SESSION 2021-22**

SL. NO.	SUBJECT CODE	SUBJECTS	PERIODS/ WEEK			EVALUATION SCHEME			CREDITS
			L	T	P	IA	ESE	TOTAL	
THEORY									
1	IT204TPC01	DISCRETE MATHEMATICS	3	1	0	30	70	100	4
2	IT204TPC02	COMPUTER ORGANIZATION & ARCHITECTURE	3	0	0	30	70	100	3
3	IT204TPC03	OPERATING SYSTEMS	3	0	0	30	70	100	3
4	IT204TPC04	DESIGN & ANALYSIS OF ALGORITHMS	3	0	0	30	70	100	3
5	IT204THS02	MANAGEMENT I - MANAGEMENT PROCESS AND ORGANIZATIONAL BEHAVIOUR	3	0	0	30	70	100	3
PRACTICAL									
1	IT204PPC01	COMPUTER ORGANIZATION & ARCHITECTURE LAB	0	0	4	30	20	50	2
2	IT204PPC02	OPERATING SYSTEMS LAB	0	0	4	30	20	50	2
3	IT204PPC03	IT WORKSHOP	1	0	2	30	20	50	2
TOTAL CREDITS									22
IA- INTERNAL ASSESSMENT, ESE-END SEMESTER EXAMINATION, L-LECTURE, T-TUTORIAL, P-PRACTICAL									

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SUB CODE	L	T	P	DURATION/WEEK	IA	ESE	CREDITS
IT204THS02	3	0	0	3 hours	30	70	3

MANAGEMENT PROCESS AND ORGANIZATIONAL BEHAVIOUR

Course Objectives:

1. To help the students to develop cognizance of the importance of Management processes.
2. To enable students to describe how people behave under different conditions and understand why people behave as they do.
3. To provide the students to analyse specific strategic human resources demands for future action.
4. To enable students to synthesize related information and evaluate options for the most logical and optimal solution such that they would be able to predict and control management processes, human behaviour and improve results.

Course Outcomes (Cos):

On completion of this course, the students will be able to

1. To understand the concept of Management.
2. Demonstrate the applicability of the concept of Management processes to understand the functioning of the organization.
3. Demonstrate the applicability of the concept of organizational behavior to understand the behavior of people in the organization.
4. Analyze the complexities associated with management of the group behavior in the organization.
5. Demonstrate the applicability to manage the organization.

UNIT -I

School of Management Thought: Evolution of Management thought, Systems and Contingency approach of management, Decision Theory School.

UNIT -II

Managerial processes, functions, skills and roles in an organization. Nature, process and technique of planning, Organizing, Staffing, Directing, Coordinating, Control.

UNIT -III

Organizational Behavior: Concept, Significance, Understanding and Managing individual behavior – Personality, Perceptions, Values, Attitudes, Learning, Work-motivation, Individual Decision Making and Problem solving.



UNIT -IV

Understanding and Managing Group Processes: Interpersonal and Group dynamics. Applications of emotional intelligence in organizations. Group decision making. Leadership and Influence Process : Concept, styles and Theories.

UNIT - V

Understanding and Managing Organizational Systems, Organizational Conflict — sources, pattern levels and types of conflict. Organizational design and structure. Work stress.

Suggested Readings

1. Koontz, Harold, Cyril O'Donnell, and Heinz, Whelrich. Essentials of Management. New Delhi: Tata Mc Graw Hill.
2. Robbins, S.P. Organizational Behaviour. New Delhi: PHI.
3. Luthans, F. Organisational Behaviour. NewYork: Mc Graw Hill.



SCHEME FOR EXAMINATION
B.TECH (FOUR YEAR) DEGREE COURSE
THIRD YEAR, INFORMATION TECHNOLOGY
SEMESTER V
EFFECTIVE FROM SESSION 2020-21

SL. NO.	SUBJECT CODE	SUBJECTS	PERIODS/ WEEK			EVALUATION SCHEME			CREDITS
			L	T	P	IA	ESE	TOTAL	
THEORY									
1	IT05TES01	SIGNALS & SYSTEMS	3	0	0	30	70	100	3
2	IT05TPC01	DATABASE MANAGEMENT SYSTEMS	3	0	0	30	70	100	3
3	IT05TPC02	FORMAL LANGUAGE & AUTOMATA THEORY	3	0	0	30	70	100	3
4	IT05TPC03	OBJECT ORIENTED PROGRAMMING	3	1	0	30	70	100	4
5	IT05TPE1X	ELECTIVE - I	3	0	0	30	70	100	3
PRACTICAL									
1	IT05PPC01	DATABASE MANAGEMENT SYSTEMS LAB	0	0	4	30	20	50	2
2	IT05PPC02	OBJECT ORIENTED PROGRAMMING LAB	0	0	4	30	20	50	2
3	IT05PMC01	CONSTITUTION OF INDIA/ ESSENCE OF INDIAN TRADITIONAL KNOWLEDGE	-	-	2	-	-	-	0
TOTAL CREDITS									20
IA- INTERNAL ASSESSMENT, ESE-END SEMESTER EXAMINATION, L-LECTURE, T-TUTORIAL, P-PRACTICAL									

LIST OF ELECTIVE-I

1	IT05TPE11	SOFTWARE ENGINEERING
2	IT05TPE12	REAL TIME SYSTEM
3	IT05TPE13	CYBER LAW & ETHICS
4	IT05TPE14	EMBEDDED SYSTEMS

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SUB CODE	L	T	P	DURATION	IA	ESE	CREDITS
IT205PMC01	-	-	2	2 HOURS	-	-	0

Constitution of India

Course Objectives:

1. To realise the significance of constitution of India to students from all walks of life and help them to understand the basic concepts of Indian constitution.
2. To identify the importance of fundamental rights as well as fundamental duties.
3. To understand the functioning of Union, State and Local Governments in Indian federal system.
4. To learn procedure and effects of emergency, composition and activities of election commission and amendment procedure.

Unit I Introduction Constitution' meaning of the term., Indian Constitution: Sources and constitutional history, Features: Citizenship, Preamble, Fundamental Rights and Duties, Directive Principles of State Policy

Unit II Union Government and its Administration Structure of the Indian Union: Federalism, Centre-State relationship, President: Role, power and position, PM and Council of ministers, Cabinet and Central Secretariat, Lok Sabha, Rajya Sabha

Unit III State Government and its Administration Governor: Role and Position, CM and Council of ministers, State Secretariat: Organisation, Structure and Functions

Unit IV Local Administration District's Administration head: Role and Importance, Municipalities: Introduction, Mayor and role of Elected Representative, CEO of Municipal Corporation, Pachayati raj: Introduction, PRI: Zila Pachayat, Elected officials and their roles, CEO Zila Pachayat: Position and role, Block level: Organizational Hierarchy (Different departments), Village level: Role of Elected and Appointed officials, Importance of grass root democracy

Unit V Election Commission Election Commission: Role and Functioning, Chief Election Commissioner and Election Commissioners, State Election Commission: Role and Functioning, Institute and Bodies for the welfare of SC/ST/OBC and women

Books Recommended:

1. 'Indian Polity' by Laxmikanth
2. 'Indian Administration' by Subhash Kashyap
3. 'Indian Constitution' by D.D. Basu
4. 'Indian Administration' by Avasti and Avasti

Course Outcomes :

At the end of the course the student should be able to:

1. Understand and explain the significance of Indian Constitution as the fundamental law of the land.
2. Exercise his fundamental rights in proper sense at the same time identifies his responsibilities in national building.
3. Analyse the Indian political system, the powers and functions of the Union, State and Local Governments in detail
4. Understand Electoral Process, Emergency provisions and Amendment procedure.



SUB CODE	L	T	P	DURATION	IA	ESE	CREDITS
IT205PMC01	-	-	2	2 HOURS	-	-	0

Essence of Indian Traditional Knowledge

Course Objectives:

1. To facilitate the students with the concepts of Indian traditional knowledge and to make them understand the Importance of roots of knowledge system.
2. To make the students understand the traditional knowledge and analyze it and apply it to their day to day life.

Unit 1

Basic Structure of Indian Knowledge System

Unit2

Modern Science and Indian Knowledge System

Unit 3

Yoga

Unit 4

Holistic Health care

Unit 5

Case Studies.

Suggested Text/Reference Books

1. V. Sivaramakrishna (Ed.), Cultural Heritage of India-Course Material, Bharatiya Vidya Bhavan, Mumbai, 5th Edition, 2014
2. Swami Jitatanand, Modern Physics and Vedant, Bharatiya Vidya Bhavan
3. Fritzo Capra, Tao of Physics
4. Fritzo Capra, The wave of Life
5. V N Jha (Eng. Trans.), Tarkasangraha of Annam Bhatta, International Chinmay Foundation, Velliarnad, Amakum
6. Yoga Sutra of Patanjali, Ramakrishna Mission, Kolkatta
7. GN Jha (Eng. Trans.) Ed. R N Jha, Yoga-darshanam with Vyasa Bhashya, Vidyandhi Prakasham, Delhi, 2016
8. RN Jha, Science of Consciousness Psychotherapy and Yoga Practices, Vidyandhi Prakasham, Delhi, 2016
9. P R Sharma (English translation), Shodashang Hridayam

Course Outcomes :

At the end of the Course, Student will be able to:

1. Identify the concept of Traditional knowledge and its importance.
2. Explain the need and importance of protecting traditional knowledge.
3. Illustrate the various enactments related to the protection of traditional knowledge.
4. Interpret the concepts of Intellectual property to protect the traditional knowledge.
5. Explain the importance of Traditional knowledge in Agriculture and Medicine.



M.Tech. II-Semester

P10

Sl.	Course Type/ Code	Subjects	Periods/Week			Evaluation			Credits
			L	T	P	IA	ESE	Total	
1.	ITPBTT1	Advanced Algorithms	3	0	0	40	60	100	3
2.	ITPBTT2	Advanced Computer Architecture	3	0	0	40	60	100	3
3.	ITPBTP1 ITPBTP2 ITPBTP3 ITPBTP4	Elective - III 1. Web and Database Security 2. Internet of Things 3. Data Science 4. High Performance Computing	3	0	0	40	60	100	3
4.	ITPBTP5 ITPBTP6 ITPBTP7 ITPBTP8	Elective - IV 1. Information Warfare & Security 2. Cyber Security 3. Advanced Computer Networks 4. Big Data Analytics	3	0	0	40	60	100	3
5.	MSPBTO1 IPPBTO2 IPPBTO3 CEPBTO4 MEPBTO5 CHPBTO6 ECPBTO7 MCPBTO8	Open Elective-1 1. Business Analytics 2. Industrial Safety 3. Operations Research 4. Cost Management of Engineering Projects 5. Composite Materials 6. Waste to Energy 7. IoT (Not for IT) 8. MOOCs	3	0	0	40	60	100	3
6.	ITPBLT1	Advanced Algorithms Lab	0	0	4	30	20	50	2
7.	ITPBLT2	Data Science Lab	0	0	4	30	20	50	2
8.	ELPBTX1 PEPBTX2 CEPBTX3 LAPBTX4	Audit Course/Value Added Course English for Research Paper Writing Stress Management by Yoga Disaster Management Constitution of India	2	0	0	40	60	100	2
Total			17	0	08	300	400	700	21

Note: Under MOOCs the students have to opt any subject other than Information Technology from NPTEL/UGC SWAYAM

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Subject:	Constitution of India (LAPBTN4)	Credits			
		L	T	P	Total
Type:	Audit Course Value Added Course				
Teaching Scheme:	Lectures: 2 hours week	2	0	0	2

Course outcomes: At the end of the course, students will be able to

- 1 Discuss the growth of the demand for civil rights in India for the bulk of Indians before the arrival of Gandhi in Indian politics.
- 2 Discuss the intellectual origins of the framework of argument that informed the conceptualization of social reforms leading to revolution in India.
- 3 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.
- 4 Discuss the passage of the Hindu Code Bill of 1956.

Syllabus Contents:

- History of Making of the Indian Constitution: History Drafting Committee. (Composition & Working).
- Philosophy of the Indian Constitution: Preamble, Salient Features
- Contours of Constitutional Rights & Duties: Fundamental Rights, Right to Equality, Right to Freedom, Right against Exploitation, Right to Freedom of Religion, Cultural and Educational Rights, Right to Constitutional Remedies, Directive Principles of State Policy, Fundamental Duties.
- Organs of Governance: Parliament, Composition, Qualifications and Disqualifications, Powers and Functions, Executive, President, Governor, Council of Ministers, Judiciary, appointment and Transfer of Judges, Qualifications, Powers and Functions.
- Local Administration: District's Administration head: Role and Importance, Municipalities: Introduction, Mayor and role of Elected Representative, CEO of Municipal Corporation, Pachayati raj: Introduction, PR: ZilaPachayat, Elected officials and their roles, CEO ZilaPachayat: Position and role, Block level: Organizational Hierarchy (Different departments), Village level: Role of Elected and Appointed officials, Importance of grass root democracy.
- Election Commission: Election Commission: Role and Functioning, Chief Election Commissioner and Election Commissioners, State Election Commission: Role and Functioning, Institute and Bodies for the welfare of SC/ST/OBC and women.

References:

- The Constitution of India, 1950 (Bare Act), Government Publication.
- Dr. S. N. Busi, Dr. B. R. Ambedkar framing of Indian Constitution, 1st Edition, 2015.
- M. P. Jain, Indian Constitution Law, 7th Edn., Lexis Nexis, 2014.
- D.D. Basu, Introduction to the Constitution of India, Lexis Nexis, 2015.

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