गुरु घासीदास विश्वविद्यालय
(केन्द्रीय विश्वविद्यालय अधिनियम 2009 क्र. 25 के अंतर्गत स्थापित केन्द्रीय विश्वविद्यालय)
कोनी, बिलासपुर – 495009 (छ.ग.)

Guru Ghasidas Vishwavidyalaya
(A Central University Established by the Central Universities Act 2009 No. 25 of 2009)
Koni, Bilaspur – 495009 (C.G.)

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

Department : *Electronics & Communication Engineering*

Programme Name : *B.Tech.*

Academic Year :

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

Sr. No.	Course Code	Name of the Course
01.	ECUATH2	Human Values & Ethics
02.	LAUBTC1	Environmental Science and Ecology
03.	FOUBTC2	Constitution of India

विभागाध्यक्ष (इलें. एवं संचार अभियांत्रिकी)
H.O.D. (Elect. & Comm. Engineering)
प्रौद्योगिकी संस्थान
Institute of Technology
गु. घा. वि., बिलासपुर (छ.ग.)
G. G. V. Bilaspur (C.G.)

Scheme and Syllabus

SCHOOL OF STUDIES OF ENGINEERING AND TECHNOLOGY

Scheme of Teaching and Evaluation 2022-2023 (As per NEP-2020)
Choice Based Credit System (CBCS) and Outcome Based Education (OBE)
(Effective from the Academic year 2023-2024)

I-SEMESTER BTech ECE/ IT/CSE

S.N.	Course Code	Course Title	Teaching Hours/ week			Examination				Credits
			Theory lectures	Tutorial	Practical/ Drawing	Examination in Hours	CIA Marks	SEA Marks	Total Marks	
			L	T	P					
1	AMUATB4	Engineering Mathematics - B	3	1	-	03	40	60	100	4
2	PPUATB2	Engineering Physics	3	1	-	03	40	60	100	4
3	ITUATE2	Introduction to Information Technology	3	-	-	03	40	60	100	3
4	ECUATE3	Basic Electrical Engineering	3	-	-	03	40	60	100	3
5	ELUATH1	English for Communication	3	-	-	03	40	60	100	3
6	ECUATH2/ CSUATH2/ITUATH2	Human Values & Ethics	1	-	-	02	50	-	50	1
7	PPUALB2	Engineering Physics Laboratory	-	-	2	03	25	25	50	1
8	MEUALL1	Engineering Graphics	1	-	3	03	25	25	50	3
9	ECUALE3	Basic Electrical Engineering Laboratory	-	-	2	03	25	25	50	1
10	NSUALS1	NSS	-	-	2	01	25	25	50	1
Total			**17**	**2**	**09**	**27**	**350**	**400**	**750**	**24**

Note: AM:Mathematics, PP:Physics, ME: Mechanical Engineering, IP: Industrial & Production Engineering, CE: Civil Engineering, CS: Computer Sc. & Engg., IT: Information Technology, PE: Physical Education, NS: NSS, U: Undergraduate, T: Theory, L: Laboratory,

BASIC SCIENCE (B)	ENGINEERING SCIENCE (E)	SKILL ENHANCEMENT COURSE (L)	HUMANITIES SCIENCE (H)	MANDATORY COURSE (C)	EXTRA-CURRICULAR ACTIVITIES (S)
1. Mathematics – A 2. Physics 3. Chemistry 4. Mathematics - B	1. Engineering Mechanics 2. Introduction to Information Technology 3. Basic Electrical Engineering 4. Basic Electrical and Electronics Engineering 5. Computer Programming 6. Basic Communication Engineering	1. Engineering Graphics 2. Engineering Workshop Practices	1. English for communication 2. Human Values and Ethics	1. Indian Constitution 2. Environmental Science & Ecology	1. NSS 2.Sports and Yoga

Credit Definition:

- 1-hour lecture **(L)** per week per semester = **1Credit**
- 1-hour tutorial **(T)** per week per semester = **1Credit**
- 2-hour Practical/Drawing **(P)** per week per semester = **1 Credit**

- **Four credit** courses are to be designed for **50** hours of Teaching-Learning process.
- **Three credit** courses are to be designed for **40** hours of Teaching-Learning process.
- **Two credit** courses are to be designed for **30** hours of Teaching-Learning process.
- **One credit** courses are to be designed for **15** hours of Teaching-Learning process

Note: The above is applicable only to THEORY courses

AICTE Activity Points to be earned by students admitted to B.Tech. programme (For more details refer to Chapter 6, AICTE Activity Point Programme, Model Internship Guidelines):

Over and above the academic grades, every regular student admitted to the 4 years Degree program and every student entering 4years Degree programme through lateral entry, shall earn 100 and 75 Activity Points respectively for the award of degree through AICTE Activity Point Programme. The Activity Points earned shall be reflected on the student's eighth semester Grade Card.

The activities can be spread over the years, any time during the semester weekends and holidays, as per the liking and convenience of the student from the year of entry to the programme. However, the minimum hours' requirement should be fulfilled. Activity Points (non-credit) donot affect SGPA/CGPA and shall not be considered for vertical progression.

Eligibility for UG Certificate:

A. **Undergraduate Certificate course will be offered by all departments of SoS(E&T), GGV.**
B. **For applicability of UG Certificate, the candidate who wants to exit after completing 1st year (02 semesters) BTech degree with 10 credits of skill-based courses lasting two months, including atleast 06 credits job specific internship/apprenticeship with NHEQF level 5/UCF level 4.5.**
C. **A student shall report to the concerned Head on or before the date notified by the Department/School/University, if he/she is interested to exit with UG Certificate**

SCHOOL OF STUDIES OF ENGINEERING AND TECHNOLOGY

Scheme of Teaching and Evaluation 2022-2023 (As per NEP-2020)

Choice Based Credit System (CBCS) and Outcome Based Education (OBE)

(Effective from the Academic year 2023–2024)

II-SEMESTER BTech ECE/ IT/CSE

S. N.	Course Code	Course Title	Teaching Hours/week			Examination				Credits
			Theory lectures	Tutorial	Practical/ Drawing	Examination in Hours	CIA Marks	SEA Marks	Total Marks	
			L	T	P					
1	AMUBTB1	Engineering Mathematics - A	3	1	-	03	40	60	100	4
2	CYUBTB3	Engineering Chemistry	3	-	-	03	40	60	100	3
3	CSUBTE5	Computer Programming	3	-	-	03	40	60	100	3
4	ECUBTE7	Introduction to Electronics & Communication Engineering	3	-	-	03	40	60	100	3
5	LAUBTC1	Indian Constitution	1	-	-	01	50	-	50	1
6	FOUBTC2	Environmental Science and Ecology	2	-	-	03	40	60	100	2
7	CYUBLB3	Engineering Chemistry Laboratory	-	-	2	03	25	25	50	1
8	IPUBLL2	Engineering Workshop Practices	-	-	2	03	25	25	50	1
9	CSUBLE5	Computer Programming Laboratory	-	-	2	03	25	25	50	1
10	PEUBLS2	Sports and Yoga	-	-	2		25	25	50	1
Total			**15**	**1**	**08**	**25**	**350**	**400**	**750**	**20**

Note: AM:Mathematics, PP:Physics, ME: Mechanical Engineering, IP: Industrial & Production Engineering, CE: Civil Engineering, CS: Computer Sc. & Engg., IT: Information Technology, PE: Physical Education, FO: Forestry, LA: Law, NS: NSS, U: Undergraduate, T: Theory, L: Laboratory.

BASIC SCIENCE (B)	ENGINEERING SCIENCE (E)	SKILL ENHANCEMENT COURSE (L)	HUMANITIES SCIENCE (H)	MANDATORY COURSE (C)	EXTRA-CURRICULAR ACTIVITIES (S)
1. Mathematics – A 2. Physics 3. Chemistry 4. Mathematics - B	1. Engineering Mechanics 2. Introduction to Information Technology 3. Basic Electrical Engineering 4. Basic Electrical and Electronics Engineering 5. Computer Programming 6. Basic Communication Engineering	1. Engineering Graphics 2. Engineering Workshop Practices	1. English for communication 2. Human Values and Ethics	1. Indian Constitution 2. Environmental Science & Ecology	1. NSS 2.Sports and Yoga

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Note: The above is applicable only to THEORY courses

AICTE Activity Points to be earned by students admitted to B.Tech. programme (For more details refer to Chapter 6, AICTE Activity Point Programme, Model Internship Guidelines):

Over and above the academic grades, every regular student admitted to the 4 years Degree program and every student entering 4years Degree programme through lateral entry, shall earn 100 and 75 Activity Points respectively for the award of degree through AICTE Activity Point Programme. The Activity Points earned shall be reflected on the student's eighth semester Grade Card.

The activities can be spread over the years, any time during the semester weekends and holidays, as per the liking and convenience of the student from the year of entry to the programme. However, the minimum hours' requirement should be fulfilled. Activity Points (non-credit) donot affect SGPA/CGPA and shall not be considered for vertical progression.

Eligibility for UG Certificate:

A. **Undergraduate Certificate course will be offered by all departments of SoS(E&T), GGV.**
B. **For applicability of UG Certificate, the candidate who wants to exit after completing 1st year (02 semesters) BTech degree with 10 credits of skill-based courses lasting two months, including atleast 06 credits job specific internship/apprenticeship with NHEQF level 5/UCF level 4.5.**
C. **A student shall report to the concerned Head on or before the date notified by the Department/School/University, if he/she is interested to exit with UG Certificate**

SYLLABUS	(SEMESTER-I)	Periods/ Week			Internal Assessment (IA)				ESE	Grand Total	Credits
Subject Code:	ECUATH2 (for ECE) CSUATH2 (for CSE) ITUATH2 (for IT)	L	T	P	CT-1	CT-II	Attendance & Assignments	TOTAL	-	50	1
Subject:	HUMAN VALUES & ETHICS	1	0	-	20	20	10	50			

COURSE OBJECTIVE:

1. To create an awareness on Engineering Ethics and Human Values.
2. To understand social responsibility of an engineer.
3. To appreciate ethical dilemma while discharging duties in professional life.

UNIT I: Introduction to Value Education

1. Value Education, Definition, Concept and Need for Value Education.
2. The Content and Process of Value Education.
3. Basic Guidelines for Value Education.
4. Self exploration as a means of Value Education.
5. Happiness and Prosperity as parts of Value Education.

UNIT II: Harmony in the Human Being

1. Human Being is more than just the Body.
2. Harmony of the Self ('I') with the Body.
3. Understanding Myself as Co-existence of the Self and the Body.
4. Understanding Needs of the Self and the needs of the Body.
5. Understanding the activities in the Self and the activities in the Body.

UNIT III: Harmony in the Family and Society and Harmony in the Nature

1. Family as a basic unit of Human Interaction and Values in Relationships.
2. The Basics for Respect and today's Crisis: Affection, e, Guidance, Reverence, Glory,Gratitude and Love.
3. Comprehensive Human Goal: The Five Dimensions of Human Endeavour.
4. Harmony in Nature: The Four Orders in Nature.
5. The Holistic Perception of Harmony in Existence.

UNIT IV: Social Ethics

1. The Basics for Ethical Human Conduct.
2. Defects in Ethical Human Conduct.
3. Holistic Alternative and Universal Order.
4. Universal Human Order and Ethical Conduct.
5. Human Rights violation and Social Disparities.

UNIT V: Professional Ethics

1. Value based Life and Profession.
2. Professional Ethics and Right Understanding.
3. Competence in Professional Ethics.
4. Issues in Professional Ethics – The Current Scenario.
5. Vision for Holistic Technologies, Production System and Management Models.

TEXT/ REFERENCE BOOKS:

1.A.NTripathy, New Age International Publishers, 2003.
2.Bajpai. B. L , , New Royal Book Co, Lucknow, Reprinted, 2004
3.Bertrand Russell Human Society in Ethics & Politics
4.Corliss Lamont, Philosophy of Humanism
5.Gaur. R.R. ,Sangal. R, Bagaria. G.P, A Foundation Course in Value Education, Excel Books, 2009.
6.Gaur. R.R. ,Sangal. R ,Bagaria. G.P, Teachers Manual Excel Books, 2009.
7.I.C. Sharma . Ethical Philosophy of India Nagin & co Julundhar
8.Mortimer. J. Adler, – Whatman has made of man
9.William Lilly Introduction to Ethic Allied Publisher

SYLLABUS	(SEMESTER-II)	Periods/ Week			Internal Assessment (IA)				ESE	Grand Total	Credits
Subject Code:	FOUBTC2	L	T	P	CT-1	CT-II	Attendance & Assignments	TOTAL	60	100	02
Subject:	ENVIRONMENTAL SCIENCE AND ECOLOGY	2	-	-	15	15	10	40			

UNIT I: Introduction: Environment - Components of Environment Ecosystem: Types & Structure of Ecosystem, Balanced ecosystem Human Activities – Food, Shelter, Economic & Social Security.
Definition, Scope and basic principles of ecology and environment, Fundamentals of Ecology and Ecosystem – Structural and Functional Components. Food chain & Food webs. Ecological pyramids; Energy flow
UNIT II: Air Pollution & Automobile Pollution: Definition, Effects – Global Warming, Acid rain & Ozone layer depletion, controlling measures.
UNIT III: Solid Waste Management, E - Waste Management & Biomedical Waste Management - Sources, Characteristics & Disposal methods.
UNIT IV: Natural Resources, Water resources – Availability & Quality aspects, Water borne diseases &

water induced diseases, Fluoride problem in drinking water, Mineral resources, Forest Wealth, Material Cycles – Carbon Cycle, Nitrogen Cycle & Sulphur Cycle.
UNIT V: Energy – Different types of energy, Conventional sources & Non Conventional sources of energy: solar energy, Hydro electric energy, Wind Energy, Nuclear energy, Biomass & Biogas Fossil Fuels, Hydrogen as an alternative energy.

TEXT/ REFERENCE BOOKS:

1. Fundamentals of Ecology (3rd Ed.) 2001- MC Dash, Tata - McGraw Hill, New Delhi.
2. Introduction to Environmental Engg. (1991). - GM Masters, Prentice Hall of India.
3. Benny Joseph (2005), "Environmental Studies", Tata McGraw – Hill Publishing Company Limited.
4. R.J.Ranjit Daniels and Jagadish Krishnaswamy, (2009), "Environmental Studies",Wiley India Private Ltd., New Delhi.
5. R Rajagopalan, "Environmental Studies – From Crisis to Cure",Oxford University Press, 2005.
6. Aloka Debi, "Environmental Science and Engineering", Universities Press (India) Pvt. Ltd. 2012

SYLLABUS	(SEMESTER-II)	Periods/ Week			Internal Assessment (IA)				ESE	Grand Total	Credits
Subject Code:	LAUBTC1	L	T	P	CT-1	CT-II	Attendance & Assignments	TOTAL	-	50	01
Subject:	INDIAN CONSTITUTION	1	-	-	20	20	10	50			

COURSE OBJECTIVE:

- 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.

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

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

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

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

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

TEXT/ REFERENCE BOOKS:

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