

SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY

(an Autonomous Institution under UGC, New Delhi) Recognized under 2(f) & 12(B) of UGC Act 1956 Permanently Affiliated to JNTUH, Accredited by NAAC & NBA Sheriguda(V), Ibrahimpatnam(M), Ranga Reddy Dist. – 501 510

1.3.1 - Institution integrates cross-cutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability and other value framework enshrined in Sustainable Development Goals and National Education Policy – 2020 into the Curriculum

			No. of Courses		
Programme Code	Programme Name	Name of the Department	Gender	Environment and Sustainability	Human Values and Professional ethics
1	CIVIL ENGINEERING	CIVIL ENGINEERING	32	10	2
2	ELECTRICAL & ELECTRONICS ENGINEERING	ELECTRICAL & ELECTRONICS ENGINEERING	33	3	2
3	MECHANICAL ENGINEERING	MECHANICAL ENGINEERING	33	3	2
4	ELECTRONICS & COMMUNICATION ENGINEERING	ELECTRONICS & COMMUNICATION ENGINEERING	33	3	2
5	COMPUTER SCIENCE & ENGINEERING	COMPUTER SCIENCE & ENGINEERING	33	3	2
12	INFORMATION TECHNOLOGY	INFORMATION TECHNOLOGY	33	3	2
33	COMPUTER SCIENCE AND INFORMATION TECHNOLOGY	COMPUTER SCIENCE AND INFORMATION TECHNOLOGY	33	3	2
67	COMPUTER SCIENCE & ENGINEERING	CSE (DATA SCIENCE)	33	3	2
66	COMPUTER SCIENCE & ENGINEERING	CSE (ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING)	33	3	2
62	COMPUTER SCIENCE & ENGINEERING	CSE (CYBER SECURITY)	33	3	2

69	COMPUTER SCIENCE & ENGINEERING	CSE – INTERNET OF THINGS (IoT)	33	3	2
72	ARTIFICIAL INTELLIGENCE & DATA SCIENCE	ARTIFICIAL INTELLIGENCE & DATA SCIENCE	33	3	2
58	M.TECH COMPUTER SCIENCE & ENGINEERING	COMPUTER SCIENCE & ENGINEERING	1	1	2
55	M.TECH EMBEDDED SYSTEMS	EMBEDDED SYSTEMS	1	1	2

Particulars	Page No.
List of Courses offered by institution related to gender,	3-12
environmental science, ethics and human values	
Sample Courses	13-19
Awareness Programmes	20 - 34

List of Courses offered by institution related to gender, environmental science, ethics and human values

S. No	Program Code/Name	Course Code		Name of the Course
	Courses	s relevant to Ge	ender, Ethics	and Human Values
1.	01/Civil Engineering 02/EEE 03/Mechanical Engg 04/ECE 05/CSE 12/IT	R18	COI1101	Constitution of India
2.	01/Civil Engineering 02/EEE 03/Mechanical Engg 04/ECE 05/CSE 12/IT	R18	ITK1101	Essence of Indian Traditional Knowledge
3.	01/Civil Engineering 02/EEE 03/Mechanical Engg 04/ECE 05/CSE 12/IT	R18]	MAC2100	Gender Sensitization Lab
4.	01/Civil Engineering 02/EEE 03/Mechanical Engg 04/ECE 05/CSE 12/IT	R181	MAC2200	Intellectual Property Rights
5.	01/Civil Engineering 02/EEE 03/Mechanical Engg 04/ECE 05/CSE 12/IT	R18	HMS4187	Creative Writing
6.	01/Civil Engineering 02/EEE 03/Mechanical Engg 04/ECE 05/CSE 12/IT	R18	HMS4188	Design Thinking

S. No	Program Code/Name	Course Code	Name of the Course
	Courses	s relevant to Ger	nder, Ethics and Human Values
7.	01/Civil Engineering 02/EEE 03/Mechanical Engg 04/ECE 05/CSE 12/IT	R18HMS4297	Human Values & Professional Ethics for Engineers
8.	01/Civil Engineering 02/EEE 03/Mechanical Engg 04/ECE 05/CSE 12/IT	R18HMS4298	Science Fiction
9.	01/Civil Engineering 02/EEE 03/Mechanical Engg 04/ECE 05/CSE 12/IT	R18HMS3277	Fundamentals of Entrepreneurship
10.	01/Civil Engineering 02/EEE 03/Mechanical Engg 04/ECE 05/CSE 12/IT	R18HMS3278	Day to Day Biology
11.	01/Civil Engineering 02/EEE 03/Mechanical Engg 04/ECE 05/CSE 12/IT 33/CSIT 66/CSE(AI&ML) 67/CSE(DS) 62/CSE(CS) 69/CSE(IOT) 72/AI&DS	R20ITK1101	Essence of Indian Traditional Knowledge

S. No	Program Code/Name	Course Code	Name of the Course			
5.110	Courses relevant to Gender, Ethics and Human Values					
12.	01/Civil Engineering 02/EEE 03/Mechanical Engg 04/ECE 05/CSE 12/IT 33/CSIT 66/CSE(AI&ML) 67/CSE(DS) 62/CSE(CS) 69/CSE(IOT) 72/AI&DS	R20MAC2100	Gender Sensitization Lab (An Activity-based Course)			
13.	01/Civil Engineering 02/EEE 03/Mechanical Engg 04/ECE 05/CSE 12/IT 33/CSIT 66/CSE(AI&ML) 67/CSE(DS) 62/CSE(CS) 69/CSE(IOT) 72/AI&DS	R20COI1101	Constitution of India			
14.	01/Civil Engineering 02/EEE 03/Mechanical Engg 04/ECE 05/CSE 12/IT 33/CSIT 66/CSE(AI&ML) 67/CSE(DS) 62/CSE(CS) 69/CSE(IOT) 72/AI&DS	R20MAC2200	Intellectual Property Rights			
15.	01/Civil Engineering	R20CIV4252	Environmental Impact Assessment			

S No	Program Code/Name	Course Code	Name of the Course
5.110	Course	s relevant to Cou	nder Ethics and Human Values
16			
10.	01/Civil Engineering		
	02/EEE		
	03/Mechanical Engg		
	04/ECE		
	05/CSE		
	12/11 22/CSIT	R20HMS4187	Creative Writing
	$\frac{55}{CSE}$		
	67/CSE(DS)		
	62/CSE(CS)		
	69/CSE(IOT)		
	72/AI&DS		
17.	01/Civil Engineering		
	02/EEE		
	03/Mechanical Engg		
	04/ECE		
	05/CSE		
	12/IT	R20HMS4188	Design Thinking
	33/CSIT		
	66/CSE(AI&ML)		
	67/CSE(DS)		
	62/CSE(CS)		
	69/CSE(101)		
18	12/AIQUS		
10.	02/FFF		
	02/LEE 03/Machanical Enca		
	04/ECE 05/CSF		
	12/IT	DO01D 49 4007	Hammer Walters & Desfression 1 Data in C. D. i
	33/CSIT	R20HMS4297	Human values & Professional Ethics for Engineers
	66/CSE(AI&ML)		
	67/CSE(DS)		
	62/CSE(CS)		
	69/CSE(IOT)		
	72/AI&DS		

S No	Drogram Code/Name	Course Code	Name of the Course			
5.10						
	Courses relevant to Gender, Ethics and Human Values					
19.	01/Civil Engineering					
	02/EEE					
	03/Mechanical Engg					
	04/ECE					
	05/CSE					
	12/IT	R20HMS4298	Science Fiction			
	33/CSIT					
	66/CSE(AI&ML)					
	6//CSE(DS)					
	$\frac{02}{CSE(CS)}$					
	72/AI&DS					
20.	01/Civil Engineering					
	02/EEE					
	03/Mechanical Engg					
	04/ECE					
	05/CSE					
	12/IT	R20HMS3277	Fundamentals of Entrepreneurship			
	33/CSIT	1120111(1002)				
	66/CSE(AI&ML)					
	67/CSE(DS)					
	62/CSE(CS)					
	$\frac{09}{CSE(101)}$					
21	01/Civil Engineering					
<i>2</i> 1.	02/FFF					
	02/Mechanical Enga					
	04/FCF					
	05/CSE					
	12/IT	D20HMC2270	Day to Day Biology			
	33/CSIT	1/20111/1002/0	Day to Day Diology			
	66/CSE(AI&ML)					
	67/CSE(DS)					
	62/CSE(CS)					
	69/CSE(IOT)					
	T2/AI&DS					

S No	Program Code/Name	Course Code	Name of the Course		
5.110			I Name of the Course		
	Courses relevant to Gender, Ethics and Human Values				
22.	01/Civil Engineering				
	02/EEE				
	03/Mechanical Engg				
	04/ECE				
	05/CSE				
	12/11 22/CSIT	R20CIV4292	Building Infrastructure Auditing		
	55/C511 66/CSE(AL&ML)				
	67/CSE(DS)				
	62/CSE(CS)				
	69/CSE(IOT)				
	72/AI&DS				
23.	01/Civil Engineering				
	02/EEE				
	03/Mechanical Engg				
	04/ECE				
	05/CSE				
	12/IT	R22MAC2110	Constitution of India		
	33/CSIT				
	66/CSE(AI&ML)				
	6//CSE(DS)				
	62/CSE(CS)				
	72/AI&DS				
24.	01/Civil Engineering				
	02/EEE				
	03/Mechanical Engg				
	04/ECE				
	05/CSE				
	12/IT	R22MAC2120	Gender Sensitization Laboratory		
	33/CSIT				
	66/CSE(AI&ML)				
	67/CSE(DS)				
	62/CSE(CS)				
	$\frac{09}{CSE(IOT)}$				
	12/AI&DS				

S. No	Program Code/Name	Course Code	Name of the Course			
	Courses relevant to Gender, Ethics and Human Values					
25.	01/Civil Engineering 02/EEE 03/Mechanical Engg 04/ECE 05/CSE 12/IT 33/CSIT 66/CSE(AI&ML) 67/CSE(DS) 62/CSE(CS) 69/CSE(IOT) 72/AI&DS	R22MAC3110	Intellectual Property Rights			
26.	01/Civil Engineering	R22CIV4142	Elements of Earth Quake Engineering			
27.	01/Civil Engineering 02/EEE 03/Mechanical Engg 04/ECE 05/CSE 12/IT 33/CSIT 66/CSE(AI&ML) 67/CSE(DS) 62/CSE(CS) 69/CSE(IOT) 72/AI&DS	R22HMS3233	Fundamentals of Entrepreneurship			
28.	01/Civil Engineering 02/EEE 03/Mechanical Engg 04/ECE 05/CSE 12/IT 33/CSIT 66/CSE(AI&ML) 67/CSE(DS) 62/CSE(CS) 69/CSE(IOT) 72/AI&DS	R22HMS3235	Day to Day Biology			

S No	Program Code/Name	Course Code	Name of the Course
5.110		a relevent to Cou	I Adam Ethics and Human Values
	Course	s relevant to Ger	nder, Ethics and Human Values
29.	01/Civil Engineering		
	02/EEE		
	03/Mechanical Engg		
	04/ECE		
	05/CSE		
	12/IT	R22MED3236	Industrial Design & Ergonomics
	33/CSIT		
	$\frac{60}{CSE(AI&ML)}$		
	62/CSE(DS)		
	62/CSE(CS)		
	72/AI&DS		
30.	01/Civil Engineering		
	02/EEE		
	03/Mechanical Engg		
	04/ECE		
	05/CSE		
	12/IT	R22HMS3234	Creative Writing
	33/CSIT	1122111,100201	
	66/CSE(AI&ML)		
	67/CSE(DS)		
	62/CSE(CS)		
	69/CSE(IOT)		
21	12/AI&DS		
51.	01/Civil Engineering		
	02/EEE		
	04/ECE		
	04/EUE 05/CSE		
	12/IT		
	33/CSIT	R22HMS3236	Design Thinking
	66/CSE(AI&ML)		
	67/CSE(DS)		
	62/CSE(CS)		
	69/CSE(IOT)		
	72/AI&DS		

S No	Program Code/Name	Course Code	Name of the Course		
5.110	Courses relevant to Gender, Ethics and Human Values				
20			Ider, Edites and Human Values		
32.	01/Civil Engineering				
	02/EEE				
	03/Mechanical Engg				
	04/ECE				
	05/CSE				
	12/IT 22/CSIT	R22HMS4233	Human Values & Professional Ethics for Engineers		
	$\frac{33}{\text{CSE}(\text{ALP-ML})}$				
	67/CSE(AI&ML)				
	62/CSE(CS)				
	69/CSE(IOT)				
	72/AI&DS				
33.	01/Civil Engineering				
	02/EEE				
	03/Mechanical Engg				
	04/ECE				
	05/CSE				
	12/IT	R22HAS4233	Science Fiction		
	33/CSIT				
	66/CSE(AI&ML)				
	67/CSE(DS)				
	62/CSE(CS)				
	09/CSE(101)				
34	12/AI&DS	R18HAS/101	Professional Practice Law & Ethics		
54.		K1011A0+101	Toressionar Flactice, Law & Ethics		
	04/EUE 66/CSE($\Delta 1.8-MI$)				
	69/CSE(IOT)				
	72/AI&DS				

S. No	Program Code/Name	Course Code	Name of the Course
0.110	Co	urses relevant f	to Environmental Science
1	01/Civil Engineering		
1	02/EEE		
	03/Mechanical Engg		
	04/ECE		
	05/CSE		
	12/11 33/CSIT	R18HAS1102	Environmental Science
	66/CSE(AI&ML)		
	67/CSE(DS)		
	62/CSE(CS) 69/CSE(IOT)		
	72/AI&DS		
2	01/Civil Engineering	R18CIV3202	Environmental Engineering
3	01/Civil Engineering		
	02/EEE		
	03/Mechanical Engg		
	04/ECE 05/CSE		
	05/CSE 12/IT	R20HAS1102	Environmental Science
	33/CSIT	1120111101102	
	66/CSE(AI&ML)		
	67/CSE(DS) 62/CSE(CS)		
	69/CSE(IOT)		
	72/AI&DS		
4	01/Civil Engineering	R20CIV3202	Environmental Engineering
5	01/Civil Engineering	R20CIV32L1	Environmental Engineering Lab
6	01/Civil Engineering	R20CIV4182	Pre Fabricated Structures
7	01/Civil Engineering		
	02/EEE		
	05/Mechanical Engg		
	05/CSE		
	12/IT	R22MAC1110	Environmental Science
	33/CSIT		
	67/CSE(DS)		
	62/CSE(CS)		
	69/CSE(IOT) 72/AL&DS		
8	01/Civil Engineering	R22HAS4241	Environmental Impact Assessment
9	01/Civil Engineering	R22CIV4241	Air pollution
10	01/Civil Engineering	R22C174241	Environmental Impact Assessment
10	vi, orth Engineering	K2211A34241	Environmental impact Assessment

SAMPLE COURSES SYLLABUS COPIES

SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY (An Autonomous Institution under UGC, New Delhi)

B.Tech. - II Year – I Semester

L T P C 3 0 0 0

(R22MAC2110) CONSTITUTION OF INDIA

Course Objectives: Students will be able to:

- Understand the premises informing the twin themes of liberty and freedom from a civil rights perspective.
- To address the growth of Indian opinion regarding modern Indian intellectuals' constitutionalrole and entitlement to civil and economic rights as well as the emergence of nationhood in the early years of Indian nationalism.
- To address the role of socialism in India after the commencement of the Bolshevik Revolutionin 1917 and its impact on the initial drafting of the Indian Constitution.

Course Outcomes: Students will be able to:

- 1. Discuss the growth of the demand for civil rights in India for the bulk of Indians before thearrival 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.
- Unit 1 History of Making of the Indian Constitution- History of Drafting Committee.
- Unit 2 Philosophy of the Indian Constitution- Preamble Salient Features
- Unit 3 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.

Unit - 4 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

Unit - 5 Local Administration: District's Administration head: Role and Importance, Municipalities: Introduction, Mayor and role of Elected Representative, CEO of Municipal Corporation. Panchayat raj: Introduction, PRI: Zila Panchayat. Elected officials and their roles, CEO Zila Panchayat: Position and role. Block level: Organizational Hierarchy (Different departments), Village level: Role of Elected and Appointed officials, Importance of grass root democracy

Unit - 6 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.

Suggested Reading:

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



Sri Indu College of Engineering and Technology (VIII): SHEMGUDA-501 540, Ibrahimpatnam(M), R.R.Dist.

SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY (An Autonomous Institution under UGC, New Delhi)

B.Tech. - II Year – II Semester

L T P C 0 0 2 1

(R22MAC2120) GENDER SENSITIZATION LABORATORY

Course Description

This course offers an introduction to Gender Studies, an interdisciplinary field that asks critical questions about the meanings of sex and gender in society. The primary goal of this course is to familiarize students with key issues, questions and debates in Gender Studies, both historical and contemporary. It draws on multiple disciplines – such as literature, history, economics, psychology, sociology, philosophy, political science, anthropology and media studies – to examine cultural assumptions aboutsex, gender, and sexuality.

This course integrates analysis of current events through student presentations, aiming to increase awareness of contemporary and historical experiences of women, and of the multiple ways that sex and gender interact with race, class, caste, nationality and other social identities. This course also seeks to build an understanding and initiate and strengthen programmes combating gender-based violence and discrimination. The course also features several exercises and reflective activities designed to examine the concepts of gender, gender-based violence, sexuality, and rights. It will further explore the impact of gender-based violence on education, health and development.

Objectives of the Course:

- To develop students' sensibility with regard to issues of gender in contemporary India.
- To provide a critical perspective on the socialization of men and women.
- To introduce students to information about some key biological aspects of genders.
- To expose the students to debates on the politics and economics of work.
- To help students reflect critically on gender violence.
- To expose students to more egalitarian interactions between men and women.

Learning Outcomes:

- 1. Students will have developed a better understanding of important issues related to gender in contemporary India.
- 2. Students will be sensitized to basic dimensions of the biological, sociological, psychological and legal aspects of gender. This will be achieved through discussion of materials derived from research, facts, everyday life, literature and film.
- 3. Students will attain a finer grasp of how gender discrimination works in our society and how tocounter it.
- 4. Students will acquire insight into the gendered division of labor and its relation to politics and economics.
- 5. Men and women students and professionals will be better equipped to work and live together as equals.
- 6. Students will develop a sense of appreciation of women in all walks of life.
- 7. Through providing accounts of studies and movements as well as the new laws that provide protection and relief to women, the textbook will empower students to understand and respond ogender violence.

Unit-I: Understanding Gender

Introduction: Definition of Gender-Basic Gender Concepts and Terminology-Exploring Attitudes towards Gender-Construction of Gender-Socialization: Making Women, Making Men-Preparing for Womanhood. Growing up Male. First lessons in Caste.

Unit – II: Gender Roles and Relations

Two or Many? -Struggles with Discrimination-Gender Roles and Relations-Types of Gender Roles- Gender Roles and Relationships Matrix-Missing Women-Sex Selection and Its Consequences- Declining Sex Ratio. Demographic Consequences-Gender Spectrum: Beyond the Binary

Unit – III: Gender and Labour

Division and Valuation of Labour-Housework: The Invisible Labor- "My Mother doesn't Work." "Sharethe Load."-Work: Its Politics and Economics -Fact and Fiction. Unrecognized and Unaccounted work.-Gender Development Issues-Gender, Governance and Sustainable Development-Gender and Human Rights-Gender and Mainstreaming

Unit – IV: Gender - Based Violence

The Concept of Violence- Types of Gender-based Violence-Gender-based Violence from a Human Rights Perspective-Sexual Harassment: Say No!-Sexual Harassment, not Eve-teasing- Coping with Everyday Harassment- Further Reading: "*Chupulu*".

Domestic Violence: Speaking OutIs Home a Safe Place? -When Women Unite [Film]. Rebuilding Lives. Thinking about Sexual Violence Blaming the Victim-"I Fought for my Life...."

Unit – V: Gender and Culture

Gender and Film-Gender and Electronic Media-Gender and Advertisement-Gender and Popular Literature-Gender Development Issues-Gender Issues-Gender Sensitive Language-Gender and Popular Literature - Just Relationships: Being Together as Equals

Mary Kom and Onler. Love and Acid just do not Mix. Love Letters. Mothers and Fathers. Rosa Parks-The Brave Heart.

<u>Note</u>: Since it is Interdisciplinary Course, Resource Persons can be drawn from the fields of English Literature or Sociology or Political Science or any other qualified faculty who has expertise in this field from engineering departments.

- Classes will consist of a combination of activities: dialogue-based lectures, discussions, collaborative learning activities, group work and in-class assignments. Apart from the above prescribed book, Teachers can make use of any authentic materials related to the topics given in the syllabus on "Gender".
- Essential Reading: The Textbook, "Towards a World of Equals: A Bilingual Textbook on Gender" written by A. Suneetha, Uma Bhrugubanda, Duggirala Vasanta, Rama Melkote, Vasudha Nagaraj, Asma Rasheed, Gogu Shyamala, Deepa Sreenivas and Susie Tharu published by Telugu Akademi, Telangana Government in 2015.

Assessment and grading:

- Discussion & Classroom Participation: 20%
- Project/Assignment: 30%
- End Term Exam: 50%

SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY (An Autonomous Institution under UGC, New Delhi)

B.Tech. - III Year – I Semester

L T P C 3 0 0 0

(R22MAC3110) INTELLECTUAL PROPERTY RIGHTS

UNIT – I: Introduction to Intellectual property:

Introduction, types of intellectual property, international organizations, agencies and treaties, importance of intellectual property rights.

UNIT – II: Trade Marks:

Purpose and function of trademarks, acquisition of trade mark rights, protectable matter, selecting, and evaluating trade mark, trade mark registration processes.

UNIT – III: Law of copy rights :

Fundamental of copy right law, originality of material, rights of reproduction, rights to perform the work publicly, copy right ownership issues, copy right registration, notice of copy right, international copy right law. Law of patents: Foundation of patent law, patent searching process, ownership rights and transfer

UNIT – IV: Trade Secrets:

Trade secrete law, determination of trade secrete status, liability for misappropriations of trade secrets, protection for submission, trade secrete litigation. Unfair competition: Misappropriation right of publicity, false advertising.

UNIT – V: New development of intellectual property:

New developments in trade mark law; copy right law, patent law, intellectual property audits. International overview on intellectual property, international – trade mark law, copy right law, international patent law, and international development in trade secrets law.

TEXT BOOKS & REFERENCES:

- Intellectual property right, Deborah. E. Bouchoux, Cengage learning.
- Intellectual property right Unleashing the knowledge economy, prabuddha ganguli, Tate McGraw Hill Publishing company ltd.,

SRI INDU COLLEGE OF ENGINEERING & TECHNOLOGY (An Autonomous Institution under UGC, New Delhi)

B.Tech. - III Year – II Semester

L T P C 3 0 0 0

(R22MAC1110) Environmental Science

Course Objectives:

- Understanding the importance of ecological balance for sustainable development.
- Understanding the impacts of developmental activities and mitigation measures.
- Understanding the environmental policies and regulations

Course Outcomes:

• Based on this course, the Engineering graduate will understand /evaluate / develop technologies on the basis of ecological principles and environmental regulations which in turn helps in sustainable development

UNIT-I

Ecosystems: Definition, Scope, and Importance of ecosystem. Classification, structure, and function of an ecosystem, Food chains, food webs, and ecological pyramids. Flow of energy, Biogeochemical cycles, Bioaccumulation, Biomagnification, ecosystem value, services and carrying capacity, Field visits.

UNIT-II

Natural Resources: Classification of Resources: Living and Non-Living resources, **water resources:** use and over utilization of surface and ground water, floods and droughts, Dams: benefits and problems. **Mineral resources:** use and exploitation, environmental effects of extracting and using mineral resources, **Land resources:** Forest resources, **Energy resources:** growing energy needs, renewable and non renewable energy sources, use of alternate energy source, case studies.

UNIT-III

Biodiversity And Biotic Resources: Introduction, Definition, genetic, species and ecosystem diversity. Value of biodiversity; consumptive use, productive use, social, ethical, aesthetic and optional values. India as a mega diversity nation, Hot spots of biodiversity. Field visit. Threats to biodiversity: habitat loss, poaching of wildlife, man-wildlife conflicts; conservation of biodiversity: In-Situ and Ex-situ conservation. National Biodiversity act.

UNIT-IV

Environmental Pollution and Control Technologies: Environmental Pollution:

Classification of pollution, **Air Pollution:** Primary and secondary pollutants, Automobile and Industrial pollution, Ambient air quality standards. **Water pollution:** Sources and types of pollution, drinking water quality standards. **Soil Pollution:** Sources and types, Impacts of modern agriculture, degradation of soil. **Noise Pollution:** Sources and Health hazards, standards, **Solid waste:** Municipal Solid Waste management, composition and characteristics of e-Waste and its management. **Pollution control technologies:**Wastewater Treatment methods: Primary, secondary and Tertiary.

Overview of air pollution control technologies, Concepts of bioremediation. **Global Environmental Issues and Global Efforts:** Climate change and impacts on human environment. Ozone depletion and Ozone depleting substances (ODS). Deforestation and desertification. International conventions / Protocols: Earth summit, Kyoto protocol, and Montréal Protocol. NAPCC-GoI Initiatives.

UNIT-V

Environmental Policy, Legislation & EIA: Environmental Protection act, Legal aspects Air Act- 1981, Water Act, Forest Act, Wild life Act, Municipal solid waste management and handling rules, biomedical waste management and handling rules, hazardous waste management and handling rules. EIA: EIA structure, methods of baseline data acquisition. Overview on Impacts of air, water, biological and Socio-economical aspects. Strategies for risk assessment, Concepts of Environmental Management Plan (EMP). Towards Sustainable Future: Concept of Sustainable Development Goals, Population and its explosion, Crazy Consumerism, Environmental Education, Urban Sprawl, Human health, Environmental Ethics, Concept of Green Building, Ecological Foot Print, Life Cycle assessment (LCA), Low carbon life style.

TEXT BOOKS:

- 1 Textbook of Environmental Studies for Undergraduate Courses by Erach Bharucha for University Grants Commission.
- 2 Environmental Studies by R. Rajagopalan, Oxford University Press.

REFERENCE BOOKS:

- 1. Environmental Science: towards a sustainable future by Richard T. Wright. 2008 PHL Learning Private Ltd. New Delhi.
- 2. Environmental Engineering and science by Gilbert M. Masters and Wendell P. Ela. 2008 PHI Learning Pvt. Ltd.
- 3. Environmental Science by Daniel B. Botkin & Edward A. Keller, Wiley INDIA edition.
- 4. Environmental Studies by Anubha Kaushik, 4th Edition, New age international publishers.
- 5. Text book of Environmental Science and Technology Dr. M. Anji Reddy 2007, BS Publications.
- 6. Introduction to Environmental Science by Y. Anjaneyulu, BS. Publications.



Sri Indu College of Engineering and Technology (Vill): SHENGUDA-501 540, Ibrahimpatnem(M), R.R.Dist

Awareness Programs

SNO	List of Programs
1	Drug Menace Awareness Programm
2	Awareness Programme on "Elimination of Violence against women"
3	Awareness Programme on "Gender issues in an ageing society"
4	Awareness Programme on "Cervical Cancer"
5.	International Day of Anti Violence Against Women
6.	FIT INDIA



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Sti Indu College of Engineering and Technology (VIII): SHERIGUDA-501 540, Ibrahimpatnem(M), R.R.Dist.

Awareness Programme on "DRUG MENACE"









PRINCTPAL Stillings of Engineering and Technology (VIII): SHENGUDA-501 510, Ibrahimpatnem(M), R.R.Dist









Sti Insta College of Engineering and Technology (Vill): SHERIGUDA-501 510, Ibrahimpatnam(M), R.R.Dist.

22 | Page





INTERNATIONAL DAY OF ANTI VIOLENCE AGAINST WOMEN 2021







WOMEN'S EMPOWERMENT CELL

In Association with

CSI STUDENTS FORUM

Organizes AWARENESS PROGRAM

ON

INTERNATIONAL DAY OF ANTI VIOLENCE AGAINST WOMEN

Sri Indu College of Engineering and Technology

Date: 25.11.2021 Time: 2.00pm- 4.00pm

Event 1: Inter department Poster Presentation on "STOP VIOLENCE AGAINST WOMEN" Event 2: Students Seminar on "SELF PREVENTION FOR WOMEN AGAINST VIOLENCE" Coordinators HOD/CSE

Dr. P. Epsiba & Mr.A.Sandeep/CSE

Dr. T. Charan Singh









Sri Indu College of Engineering and Technology

(Vill): SHEMGUDA-501 510, Ibrahimpatnem(M), R.R.Dist.

25 | Page

















RINCIPAL

Sti Indu College of Engineering and Technology (Vill): SHENGUDA-501 540, Ibrahimpatnem(M), R.R.Dist.

Awareness Programme on "Cervical Cancer"





Sri Indu College of Engineering and Technology (VIII): SHERIGUDA-501 540,

Ibrahimpatnem(M), R.R.Dist

27 | Page

Student Presentations Programme on Gender equality





PRINCIPAL

Sri Indu College of Engineering and Technology (Vill): SHEINIGUDA-501 540, Ibrahimpatnem(M), R.R.Dist.

28 | Page







PRINCTPAL Sri Indu College of Engineering and Technology (Vill): SHEMGUDA-501 540, Ibrahimpatnam(M), R.R.Dist.





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Sti Indu College of Engineering and Technology (VIII): SHENGUDA-501 540, (Ibrahimpatnam(M), R.R.Dist.

FIT INDIA











RINCIPAL Sri Indu College of Engineering and Technology (VIII): SHERIGUDA-501 540, Ibrahimpatnem(M), R.R.Dist.

PROFESSIONAL LAW AND ETHICS











PRINCIPAL

Sti Insta College of Engineering and Technology (VIII): SHERIGUDA-501 540, Ibrahimpaenam(M), R.R.Dist.

33 | Page

INTERNATIONAL WOMEN'S DAY CELEBRATIONS on 08-03-2022



Sti Indu College of Engineering and Technology (VIII): SHEINGUDA-501 540, Ibrahimpatnem(M), R.R.Dist

IMPLEMENTATION OF NATIONAL EDUCATION POLICY (NEP) 2020 INTO CURRICULUM

A number of initiatives have been taken by the Institution on the Action Plan organized under 5 different themes.

- 1) Learner Centric Education
- 2) Digital/ online Learning & Credit Transfer system
- 3) Academic research and Internationalization
- 4) Industry Institute Collaboration
- 5) Indian Knowledge Systems

The New Education Policy (NEP) has also provided a clear direction for imparting IKS in the higher education curriculum. This helps the learner to know and understand their own systems and traditions which are imperative for any real development and progress. Also it helps the learner to think independently and originally with Indian frameworks and models for solving the problems of present day.

The motivation is to equip with the knowledge and understanding related to:

- 1. Indian Knowledge Systems: Origin, Evolution and Ontological Approach
- 2. Indian Knowledge Approaches- Time, Language, Environment, Management
- 3. Sciences of Life and Mind
- 4. Self-Exploration and Self-Knowledge for Personal Effectiveness

Our Initiatives:

- 1. Participated in awareness programmes conducted by Ministry of Education (MoE)
- 2. Initiated club activities (Language Club, Art Club, Innovata Club, Spoken Tutorial Club,
- S-Hub) with the objectivity of IKS and functionaries of the club.
- 3. Offering online courses in regional languages.

4. Conducting Yoga day celebrations and Monthly second and fourth Saturday's yoga classes are being offered to students and faculty members.

5. Life skill management programmes are also offers to the students.

Multidisciplinary / interdisciplinary

In Today's technological world of globalization, skills play more important role in real-life than mere knowledge. Multidisciplinary and Holistic Approach in the institution aims to develop following skills and overall personality building among students.

Critical ability: With multiple discipline knowledge, a student will become able to think beyond the horizon of single discipline and can think about the logical connections between different ideas.

Self-governance: With the choice of their own subjects, students will become able to set their priorities and knowledge landscape for a disciplined learning.

Problem Solving: Quick and Effective solution to a problem, is the skill that the employers searching in the current time. The knowledge of different subjects in multidisciplinary approach will develop the logical and analysis skills in students to handle difficult situations.

Communication: Knowledge is the confidence and an effective communication is the result of wide knowledge. With multidisciplinary and holistic learning students will be able to share ideas, express their feelings and contribute to national progress.

Our institution offers flexible and innovative curricula that includes credit-based courses and projects in the areas of community engagement and service, environmental education, and value-based towards the attainment of a holistic and multidisciplinary and interdisciplinary education. Incubation center and innovate clubs were set up in the Institution level to enhance the interdisciplinary research culture and more efforts will be put for bridging industry-academic gaps for innovation and technology advancements.

The detailed curriculum course structure provides scope for constitution of india, gender sensitization, Intellectual property rights, open elective subjects which includes interdisciplinary subjects in the field of outside the parent discipline/branch of engineering and also industry training/ internship/ industry oriented mini-projects/skill development courses etc.

Academic bank of credits (ABC):

Academic Bank of Credits (ABC) is an effective virtual/digital storehouse that contains the complete details of the credits earned by individual students throughout their learning journey. It will enable students to open their accounts and give multiple options for entering and leaving colleges. There will be "multiple exits" & "multiple entries" points during the higher education tenure & credits will be transferred through the ABC seamlessly.

ABC can be considered as an authentic reference to check the credit record of any student at any given point in time. Thus, the concept of ABC is fuel to boost the efficiency of faculty and help students hold a multi-disciplinary educational approach. The idea is to make students "skillful professionals" and help their overall growth.

Functions of Academic Bank of Credit (ABC)

The Academic Bank will be accountable for opening, closing, and validating the academic accounts of students.

It will carry out tasks such as credit accumulation, credit verification, credit transfer/redemption of students.

The courses include online and distance mode courses offered by the government and institutes.

The validity of these academic credits earned by students will be up to seven years and students can redeem these credits.

The credits can be redeemed and students can seek admission directly in the second year at any university.

The validity will be up to seven years, hence, students will have to rejoin within seven years.

Importance of Academic Bank of Credit (ABC)

Increases the student's freedom in choosing their courses and academics.

Enables the student to drop out in any year and then exchange the credits earned so far with a certificate/diploma if they are eligible.

They can redeem the credits and rejoin the same or any other institute in the future and continue their education.

Types of Courses

Online & offline – both types of courses are included in the scheme. Some of the important ones include National Schemes such as–

NPTEL

SWAYAM

V-LAB

Spoken Tutorial

Thus, the ABC will cover almost all types of courses including distance learning courses to help students of every possible stream.

Impact of ABC

The inter-disciplinary & multi disciplinary approach is the need of the hour. With the Academic Credit Bank, HEIs will be able to help students learn subjects of their choice and become "skill-oriented" graduates.

Creating a student-centric learning ecosystem

Innovative techniques of teaching

Implement best practices for choice-based learning

Develop skills along with academic merit

Prepare students to be future-ready

Credit Transfer System of MOOC Against Open Elective And Professional Electives

The credit transfers of MOOC (Offered by SWAYAM/NPTEL / COURSERA etc.,) against Open Elective (**3-I**, **3-II**) and Professional Elective (**4-I**, **4-II**). These rules shall be applicable from Academic Year 2020-2021.

- 1. The student shall be required to submit an **Application form/UNDERTAKING** for final approval for credit transfer of MOOC against open elective along with the photocopy of MOOC completion certificate to chairperson through HOD before the allotment of open elective (**3-I**, **3-II**) and professional electives (**4-I**, **4-II**) to the UG/PG students.
- 2. Only those registered MOOC courses are allowed for Credit Transfer which have credits more than or equal to the credits assigned to Open Elective course or the MOOC course should be of minimum 4/8/12 weeks duration. The student can also

choose to register and complete more than one MOOC of same or different subject areas. However, the total number of weeks of all such individual courses should be more than or equal to 4/8/12 and should either belong to SWAYAM-NPTEL OR otherwise COURSERA. However, the candidates have to submit MOOC certificate/certificates to acquire the total number of credits offered against the elective subject.

Credit Equivalence				
S. No.	Course Duration	Credit Equivalence for Transfer of Credits		
UG / PG				
1	4 Weeks	1 Credit		
2	8 Weeks	2 Credits		
3	12 Weeks	3 Credits		

3. While transferring the credit from MOOC against open elective or professional elective, the student can opt following combinations of MOOC with the approval of coordinator and head of the department.

I) for	3 credits:	a)	12 Weeks (1)	(or)
		b)	8 Weeks (1) + 4 Weeks (1)	(or)
		c)	4 Weeks (1) + 4 Weeks (1) + 4 Weeks (1)	

II) for 2 Credits:	b)	8 Weeks (1)	(or)
	c)	4 Weeks (1) + 4 Weeks (1)	

4. Credit transfer shall not be allowed, if the contents and topic of the MOOC which is identical (20% overlapping is permissible) to any of the courses including Open Elective courses offered by any department for UG/PG students. It is the responsibility of the HOD to verify and recommend the courses requested by students is satisfying criteria 2.

5. Scores of the MOOC courses completed by the students on permitted platforms satisfying all above conditions are valid till **2** years. Only such MOOC courses/Scores will be considered for credit transfer.

6. If the MOOC course in which the student is interested does not fall in the parent discipline of the student and belongs to other Engineering disciplines existing at Basic Sciences/Humanities/Management, the Departmental coordinator will seek opinion of

concerned HoD to verify the matching of content of MOOC with that of Open Elective courses/Professional Elective courses offered.

7. If the above mentioned conditions are fulfilled, the Departmental Interdisciplinary coordinator will recommend the case to coordinator, Interdisciplinary Courses for final approval and accordingly notify to the students. After getting approval from HoD, the student may register for the MOOC course he/she can be allowed for and complete the same as per the requirements for credit transfer.

8. The coordinator, Interdisciplinary Courses, will consolidate the lists from all departments and submit the same for final approval. Chairperson will submit the list to Principal / Chairman. the final list will be forwarded to the Controller of Examination for further action.

9. The department/institution is not responsible for the registration of online MOOC. The candidates have to pay for registration of such courses.

10. Alternatively for online MOOC courses, the candidates have a choice to opt a subject from open/professional electives. The credit grade point mapping framework could be awarded based on the score as per the table 1.

Range of Score	Grade point	Grade	
≥90	10	Ο	
80 to 89	9	A+	
70 to 79	8	A	
60 to 69	7	B+	
50 to 59	6	В	
40 to 49	5	С	
0 to39	0	F	

Table 1Grade point Mapping

Outcomes:

Branch wise Staff and Students received MOOC certificates

SWAYAM NPTEL COURSES

S.No	BRANCH	STAFF	STUDENTS	TOTAL
1	ECE	17	2	18

2	AI&ML		9	9
3	CYBER SECURITY	1	3	4
4	IOT		2	2
5	CSE		1	1
6	ME	3		3
7	CIVIL		1	1
8	H & S	4		4
	TOTAL	24	18	42

COURSERA COURSES

S.No	Branch	STAFF	STUDENTS	TOTAL
1	ECE	297	458	755
2	CSE	68	490	558
3	IT	8	115	123
4	EEE	19	191	210
5	MECH	4	203	207
6	CIVIL		178	178
7	1ST YEAR (HS)	65	536	601
	TOTAL	461	2171	2632

SWAYAM NPTEL COURSES

S.No	Course Name	Name	Role	Final Score	Certificate Type
	ECE				
1	Computer Networks and Internet Protocol	PRATHYUSHA V	faculty	81	Silver
2	Introduction To Internet Of Things	P RAMESH	faculty	66	Elite
3	Cloud Computing	P Epsiba	faculty	80	Silver
4	Python for Data Science	P Epsiba	faculty	69	Elite

5	Computer Networks and Internet Protocol	Swathi Singanaboina	faculty	75	Silver
6	Computer Networks and Internet Protocol	SANDHYA BOLLA	faculty	69	Elite
7	Introduction To Internet Of Things	D SANDHYA RANI	faculty	55	Successfully completed
8	Computer Networks and Internet Protocol	K SRAVANI	faculty	64	Elite
9	Computer Networks and Internet Protocol	POLAGONI SRINIVAS	faculty	65	Elite
10					
11	Introduction To Internet Of Things	SWETHA P	faculty	57	Successfully completed
12	Computer Networks and Internet Protocol	PASULA MAMATHA	faculty	68	Elite
13	Computer Networks and Internet Protocol	UDAYASRI PABBU	faculty	52	Successfully completed
14	Computer Architecture	ARUKONDA VENU	faculty	55	Successfully completed
15	Introduction To Industry 4.0 And Industrial Internet Of Things	SWETHA P	faculty	54	Successfully completed
16	Computer Networks and Internet Protocol	KANUGU RAM MOHAN RAO	faculty	55	Successfully completed
17	Computer Architecture	Prashant Pise	faculty	65	Elite
18	Problem Solving Through Programming In C	GUJJETI SHRAVANI	student	56	Successfully completed
19	Introduction To Internet Of Things	IDIKUDA MANI RAJ	student	60	Elite
	CYBERSECURITY				
1	The Joy of Computing using Python	K SHWETHA	faculty	64	Elite
2	The Joy of Computing using Python	K Laxmi Narasimha Reddy	student	73	Elite
3	The Joy of Computing using Python	VALLAKONDA HYNDAVI	student	71	Elite
4	Ethical Hacking	Runku Madhava Rao	student	53	Successfully completed
	CSE AI&ML	-	-	-	

1	The Joy of Computing using Python	DEVULAPALLY NEERAJA	student	82	Elite+Silver
2	The Joy of Computing using Python	BEEREDDY NIKHILA	student	82	Elite+Silver
3	The Joy of Computing using Python	UDIGIRI RISHIKA	student	75	Elite+Silver
4	The Joy of Computing using Python	Akshay Kumar Kona	student	79	Elite+Silver
5	The Joy of Computing using Python	BEMAGONI BHARGAVI	student	85	Elite+Silver
6	The Joy of Computing using Python	DIVYA BETHI	student	75	Elite+Silver
7	Python for Data Science	DIVYA BETHI	student	75	Elite+Silver
8	The Joy of Computing using Python	SONAGANTI HARSHITHA	student	68	Elite
9	The Joy of Computing using Python	GAJJI CHAKRAPANI	student	86	Elite+Silver

S. No	Course Name	Name	Role	Final Score	Certificate Type
	CSE IOT				
1	The Joy of Computing using Python	SAYAMONI SAI KIRAN	student	71	Elite
2	The Joy of Computing using Python	baikani vamshi	student	69	Elite
	CSE				
1	Programming In Java	N Jeevita	student	73	Elite
	MECHANICAL				
1	Engineering/Architectural Graphics - part I - Orthographic projection	LAKKOJU RAVI	faculty	69	Elite
2	Engineering/Architectural Graphics - part I - Orthographic projection	KOLLAPURAM VIJAYA KUMAR	faculty	61	Elite
3	Engineering/Architectural Graphics – part II	KOLLAPURAM VIJAYA KUMAR	faculty	79	Elite+Silver

	– Isometric and Axonometric Drawings				
	CIVIL				
1	Safety in Construction	Manikanta Bachu	Student	67	Elite
	H&S				
1	Soft Skill Development	K S RANADHEER KUMAR	faculty	53	Successfully completed
2	Soft Skill Development	S R GOLSMAIR SHALINE	faculty	57	Successfully completed
3	Soft Skill Development	Kothagattu Sai kumar	faculty	51	Successfully completed
4	Soft Skill Development	NIMMAGADDA SHARMILEE	faculty	61	Elite

Skill development:

Skill Development is the process of identification of the skills gap in onboard students and providing skilling training & employment benefits to them. Skill development programs aim to acknowledge the ability of the students and extend their support by serving them with the proper guidance, infrastructure, opportunities, and encouragement that help them achieve their career ambitions. Education and skills are essential for everyone, and they both walk hand in hand in everyone's career journey. Therefore, SICET is continuously making efforts to provide skill development to the students from first year onwards with our skilling partners.

The benefits of Skill Development include increased employability skills, improved performance, improved accuracy & quality, improved communication, complies with rules & regulations, improved recruitment & career opportunities, and development.

S. No	Professional Bodies/ Academics/MoU with Industries	Recognition Status
1	TASK	Active
2	Edify Educational Services Pvt. Ltd	Active
3	IMARTICUS Learning Pvt Ltd	Active
4	Surya Tech Solutions	Active

Our Skilling partners are:

5	Global Vision Consultancy	Active
6	Kodnest Technology	Active
7	Netalla Innovations Private Limited	Active
8	BYTE XL India Private Limited	Active
9	Yash Technologies Private Limited	Active
10	Coding Ninjas	Active
11	Talent Serve India Private Limited	Active
12	Verzeo	Active
13	SAP India Pvt Ltd	Active
14	Eleation	Active
15	VDL Auto Products	Active
16	JERS Industries	Active
17	Amazee Global Venture Inc.	Active
18	MANAC	Active
19	TLC Group	Active

Through our MOU partners we train the students on various platforms, modern tools, emerging technologies and industry specific skillsets.

Also, we are making the students and faculty to enroll in AICTE upskilling schemes like.,

- Kaushal Augmentation and Restructuring Mission of AICTE (KARMA)
- AICTE Youth Undertaking Visit for Acquiring Knowledge (YUVAK)
- Smart India Hackathon
- AICTE Internships in India
- AICTE Training and Learning (ATAL) Academy
- AICTE Students Learning Assessment PARAKH
- AICTE-<u>National Education Alliance for Technology (NEAT)</u>
- AICTE-SWAYAM-NOC

During the academic year 2021-22 the college has taken an initiative on conducting various skill enhancement programmes are:

- 1. Resume Building
- 2. Communication skills
- 3. Personality development Courses
- 4. CRT Programme

5. Advance JAVA

- 6. Python Programming
- 7. Sketch with IOT Applications
- 8. Programming in C, C++
- 9. Machine Learning Services
- 10. Aneka 4.0
- 11. CNC Programming and Machining
- 12. Drone Development

And many more.

Appropriate integration of Indian Knowledge system

The New Education Policy (NEP) has also provided a clear direction for imparting IKS in the higher education curriculum. This helps the learner to know and understand their own systems and traditions which are imperative for any real development and progress. Also it helps the learner to think independently and originally with Indian frameworks and models for solving the problems of present day.

The motivation is to equip with the knowledge and understanding related to:

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Our Initiatives:

1. Participated in awareness programmes conducted by Ministry of Education (MoE)

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Focus on Outcome based education (OBE)

The Outcomes of Learning or 'learning outcomes' are what the student should be able to do at the end of a learning experience. Learning experiences in formal higher education programs are learning units, which can be a few hours of self/classroom learning activity, a one-semester course, or a formal program of four years. the term Outcome-Based Education (OBE) to shift the focus from what is taught to what is learned. OBE approaches education by making decisions about the curriculum and instruction that are driven by the exit learning outcomes that the students should display at the end of a program or a course. OBE gives priority to ends, purposes, learning, accomplishments, and results. The learning outcomes at the end of a course/activity in a program are identified by the concerned PAC. The course outcomes (COs) are best written by following a structure identified in the framework of Revised Bloom's taxonomy.

In OBE the key to the alignment is that the components in the teaching system, especially the teaching methods used and the assessment tasks are aligned to the learning activities assumed in the intended outcomes.

- 1. Defining Curriculum Objectives and Intended Learning Outcomes.
- 2. Designing Assessment Tasks.
- 3. Selecting Teaching and Learning Activities.
- 4. Reviewing your Program-level Outcomes.
- 5. Writing Intended Learning Outcomes.
- 6. Choosing an Appropriate Outcome-based Assessment Tool and Method



process for defining the Vision and Mission of the Department and PEOs of the program

The Vision and Mission Statements of the department was defined by involving the stakeholders inlines of the institutional Mission & Vision statements. The following key components were reviewed and their competency indicators are also incorporated for drafting for defining department vision, mission and PEO statements.

- Quality Education
- Professional Career
- Higher Education
- Innovation and Creativity
- Lifelong Learning.
- Industry needy and Societal Conciouness

The blockdiagram ratifies the top down approach for the development of Department vision, mission and PEOs and the detailed articulation process is involed to finalize the statements of the program.



The process involved in defining the Vision, Mission of the Department

The various dimensions of mission statements are articulated based on realistic and not too broad or too specific parameters which can quantify the outcome of the department vision.



Initially Vision, Mission of the Institute was considered for framing the Vision and Mission of the Department.

- Inputs of internal stakeholder were taken through SWOC analysis. Students through class coordinator and faculty through department meetings.
- External stakeholders give input through one to one meeting, during group meetings, during visit to the institution/organizations etc.
- The Program Assessment Committee (PAC) collects the above and submits to the Department Committee and after discussing in detail, the draft will be sent to the Department Advisory Committee (DAC) for their inputs for improvement.
- The Department Committee finalizes the Vision and Mission statements and submits to the college academic committee for their inputs.
- Finally, the Vision and Mission were framed by a Department Committee and published to all their stakeholders.



During every Academic year, before starting of the semester after completing the subject allocation to the faculties, well defined Course Outcomes were collected from individual subject handlers. The collective COs of all subjects will be reviewed and redefined by the Programme Assessment Committee (PAC) during the brainstorming session to evaluate the relevance of COs are specific, measurable and achievable. In advance lesson plan, lecture modules, Question Bank are to be prepared, and the strength of correlations were considered based on Cognitive, Affective domain levels for the proper mapping of course contents and Questions with COs and Revised Bloom's Taxonomy (RBT) Levels. CO-PO mapping is done based on the correlation using performance indicators chart and competence levels as per the AICTE Examination reformation procedure. Also, an orientation session and brainstorming sessions are regularly conducted for the faculty members to create awareness on the same.

Assessment and Attainment methods

Assessment is one or more processes which is carried out by the institution, that identify, collect and prepare data to evaluate the achievement of course outcomes and program outcomes. Attainment is the action or fact of achieving a standard result towards accomplishment of desired goals. Primarily attainment is the standard of academic attainment as observed by test and/or examination result. Assessment methods are categorized into two as direct method and indirect method to access CO's and PO's. The direct methods display the student's knowledge and skills from their performance in the continuous internal assessment tests, semester examinations and supporting activities such as seminars, assignments, case study, group discussion, online quiz, mini project etc., These methods provide a sampling of what students know and/or can do and provide strong evidence of student learning. The indirect method done through surveys and interviews, it asks the stakeholders to reflect their views on student's learning. The institute assesses opinions or thoughts about graduate's knowledge or skills by different stakeholders.

Assessment tools are categorized into two methods to assess the program outcomes and program specific outcomes as Direct method and Indirect method.



Actions taken based on the results of evaluation of each of the Cos, POs & PSOs

he proper identification of gap in the program are assessed by reviewing and analyzing the attained POs & PSOs during course of study for batch wise. The necessary actions were taken for the identified parameters and on needy basis those will be bridged as a content beyond value added courses, bridge courses, Refresher, skill development courses with various modes. The following procedure is adopted to identify the curriculum gap and after getting the PO & PSO attainments the least contributing and un covered key components are identified and those grey areas are addressed as a program gaps. Then top down process is initiated to identify the narrow downed, more specific topics and COs were recommended to bridge the gaps by PAC & DAC during brainstorming sessions.



IKS

The New Education Policy (NEP) has also provided a clear direction for imparting IKS in the higher education curriculum. This helps the learner to know and understand their own systems and traditions which are imperative for any real development and progress. Also it helps the learner to think independently and originally with Indian frameworks and models for solving the problems of present day.

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Distance education/online education

Online Mode of education providing flexible learning opportunities and way for creative teaching-learning and empowers student-centered education by overcoming separation of teacher and learner using the internet, e-Learning Materials and full-fledged programme delivery through the internet using technology assisted mechanisms and resources. Our institution offers value added and skill development courses through online mode apart from regular curriculum, also shares e-learning materials. The various types of online courses are recommended to students through mentors. Some of the important ones include National Schemes such as–

- NPTEL
- SWAYAM
- V-LAB
- Spoken Tutorial
- Infosys Campus Connect
- Company specific training etc.,
- NITTTR
- IIRS
- ATAL Academy

The main advantages of online modes are

- Convenient learning mode
- Better interaction
- Effective pedagogy
- Web-proctored exams
- Networking opportunities

E-Resources

The library provides IP enabled access to a large number of full texts on line journal databases from the various publishers.

• E-

Journals,

1. J-Gate

2. DELNET

3. e-Shodh Sindhu N-List

- 4. Open Source E journals
- E-Books 1. Sri Indu Ebook Management Software

2. e-ShodhSindhu N-List

- MOOCs
- NPTEL
- DSpace Institutional digital library Software
- SONET Video Lectures
- Institutional Membership of Indian National Digital Library (NDL)

E-Resources

NPTEL(NATIONAL PROGRAMME ON TECHNOLOGY AND ENHANCED LEARNING)

C		Video lectui	res	Text of video lectures		PDF material
5.	Name of the Department	No. of	No. of	No. of	No. of	No. of
No	Department	Courses	Lectures	Courses	Lectures	Courses
1	ECE	44	1739	38	1474	10
2	CSE, IT	44	1577	39	1434	22
3	EEE	22	688	36	1394	6
4	MECHANICAL	14	459	21	777	28
5	AE	4	80	6	224	-
6	CIVIL	17	684	44	1669	17
7	H&S,	4	60	36	1431	5
	TOTOAL	149	5287	220	8403	88

DEPARTMENT WISE

SONET (SOCIETY FOR NETWORKING FOR EXCELLENCE IN TECHNICAL EDUCATION)

S.No.	Name of the Department	No. of Courses	No. of Lectures
1	ECE	7	128
2	CSE/IT	7	75
3	EEE	4	61
	TOTAL	18	264

E-CONTENT (E-Journals, E-books and CDs/DVDs)

	Name of the	J-GATE	DELNET	E-BOOKS	CDs/
S.No.	Department	E-Journals	E-Journals	Callibre and N- List	DVDs
1	CSE& IT Related Branches	882	113	5937	882
2	ECE	361	68	2594	393
3	EEE	233		2374	101
4	MECHANICAL	539	85	2203	211
5	CIVIL	262	79	5601	41
6	H & S	154		10479	379
7	Technology		34	4203	-
8	MBA		215	24297	72
9	OTHERS			2239	-
	TOTAL	2431	537	57553	2328