



# DhaneKula Institute of Engineering & Technology

(Approved by AICTE, Permanently Affiliated to JNTU, Kakinada)

An ISO 9001- 2015 Certified Institution

Ganguru, Vijayawada - 521 139, Ph. : 8333924842, 8333924843, 9441675588, Mob. : 9491017088  
E-mail : diet.principal@gmail.com, principal@diet.ac.in, website : www.diet.ac.in

Ref: DHAN/IE&T/Establishment of Committees/01

Date: 3/11/22,  
Ganguru.

Sub: Proceedings – Nomination – Coordinators & Members – Women Welfare/Sexual Harassment Eradication Cell – Academic Year 2022-2023.

The following are the faculty members appointed for Women Welfare/Sexual Harassment Eradication Cell for the academic year 2022-2023.

S.No	Name of the Faculty	Position	Department	Contact Number	Email Id
1	Dr P Pavithra Roy	Coordinator	ECE	7842363823	drpavithraroy@gmail.com
2	Ms. Vineela	Member	CE	7893182622	vineela.diet@gmail.com
3	Ms. V. Bindu	Member	EEE	9966489555	bindu.vadlamudi@yahoo.com
4	Dr. M. Aruna Safali	Member	CSE	8501887997	arunasafali.m@gmail.com
5	Mrs.S. Srilakshmi Ramya	Member	IT	9441598376	ramya.sakamudi@gmail.com
6	Ms. D. Bhargavi	Member	BS&H	9490002577	bhargavi091985@gmail.com
7	Dr. M. Aruna Safali	Member	AI & ML	8501887997	arunasafali.m@gmail.com

Note: Each Department is requested to nominate 1 girl student from each year as student members.

  
Principal

 HOD CE  
 HOD EEE  
 HOD ECE  
 HOD CSE  
 HOD BS&H  
 HOD IT  
 HOD AI&ML



**DHANEKULA INSTITUTE OF ENGINEERING & TECHNOLOGY  
GANGURU: VIJAYAWADA – 521 139  
WOMEN WELFARE/SEXUAL HARASSMENT ERADICATION CELL**



**CIRCULAR**

06.03.23

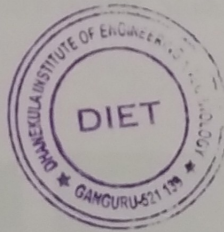
All the HoDs', Staff and II-year students are here by informed that an awareness Program is conducted in association with Inner Wheel Club of Vijayawada East on the eve of Women's day celebrations on 7th March 23. Hence all are requested to attend without fail.

**Name of the Speaker:** Dr. P. Vijayalakshmi, MD, DPM

**Date of Event:** 07.03.23

**Venue:** College Auditorium

**Time :** 11:00am



*[Handwritten Signature]*  
Principal

Copy to all HODs

Department	CE	EEE	ME	ECE	CSE	BS&H	IT	AI&ML
Signature	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>

## REPORT

**Name of the Program:** Awareness Program on “Emotional Balance”

**Date:** 07/03/2023

**Time:** 11 a.m.

**Speaker:** Dr .Vijayalakshmi , MD, DPM

**Venue:** Auditorium, DIET

An awareness program on “Emotional Balance” was conducted in DhaneKula Institute of Engineering and Technology on March 7<sup>th</sup> 2023 by Dr. P.Vijayalakshmi for the all the II year students.

She gave a presentation on how to balance our emotions and thoughts on the opposite sex. How to maintain a good and healthy mind. What should be our attitude when we are at college or in the society. She has taken many real time examples and educated students. She also took a questionnaire session and clarified their doubts. Students were very much benefitted by this session.





**DHANEKULA INSTITUTE OF ENGINEERING & TECHNOLOGY  
GANGURU::VIJAYAWADA – 521 139  
WOMEN WELFARE/SEXUAL HARASSMENT ERADICATION CELL**





# DHANEKULA INSTITUTE OF ENGINEERING & TECHNOLOGY

(Approved by AICTE, New Delhi and Affiliated to JNTU, Kakinada)

An ISO 9001-2015 Certified Institution, Accredited by NAAC

Ganguru, Vijayawada- 521139.

## National Service Scheme (NSS)

### CIRCULAR

Date: 01-04-2023,  
Ganguru.

All the staff and students of DhaneKula Institute of Engineering & Technology are here by informed that our National Service Scheme (NSS) is organizing a Mega Blood Donation Camp in association with Red Cross Society on 13.04.2023 from 9:30AM onwards in our college at Dispensary Room (G27).

Hence interested students can enroll their names with your respective department NSS Coordinators.

G. Raju  
NSS PO 11/4/23

Programme Officer  
National Service Scheme  
DHANEKULA INSTITUTE  
OF ENGINEERING AND TECHNOLOGY  
Ganguru, Vijayawada - 521 139



*[Handwritten Signature]*  
Principal

DHANEKULA INSTITUTE  
OF ENGINEERING AND TECHNOLOGY  
Ganguru, Vijayawada-521 139

Copy to NSS file,  
Copy to HOD's,  
Diploma,  
Circulate to all class rooms

Department	CE	ME	EEE	ECE	IT	CSE & CSM	BS&H	DIPLOMA
Signature	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>	<i>[Signature]</i>

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12-4-23



## EVENT REPORT

Event Name	BLOOD DONATION CAMP
Venue	DISPENSARY ROOM (G27), DIET
Date	13.04.2023
Total Number of participants	61

### Event description:

On 13<sup>th</sup> April, DIET- National Service Scheme (NSS) in association with in association with INDIAN RED CROSS SOCIETY (Krishna District Branch) & Dr.PATTABHI RED CROSS BLOOD BANK (Machilipatnam) has organized a blood donation camp at Dispensary Room (G27), DIET. This program was headed by TSS Balaji garu (Chairman, Red Cross Society), Sankarnadh garu (Secretary, Red Cross Society), Dr.Hanumanth Rao garu and Dr.K.Ravi (Principal, DIET). In this camp about 61 students from various departments are actively participated and donated the blood. At the end of the program, chief guests were felicitated by our college management.

### Event Photographs:





G. Rai  
NSS PO  
17/4/23



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17/4/23  
PRINCIPAL  
PRINCIPAL  
DHANEKULA INSTITUTE  
OF ENGINEERING AND TECHNOLOGY  
Ganguru, Vijavawada-521 139



**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA**  
**KAKINADA–533003, Andhra Pradesh, India**  
**DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING**

## **COURSE STRUCTURE AND SYLLABUS**

**For**

**B.TECH – ELECTRICAL AND ELECTRONICS ENGINEERING**

*(Applicableforbatchesadmittedfrom2020-2021)*



**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA**  
**KAKINADA-533003, Andhra Pradesh, India**





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**DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING**

**I B.Tech – I SEMESTER**

Sl. No	Course Components	Subjects	L	T	P	Credits
1	HSMC	Communicative English	3	0	0	3
2	BSC	Mathematics-I (Calculus and Differential Equations)	3	0	0	3
3	BSC	Mathematics-II (Linear Algebra and Numerical Methods)	3	0	0	3
4	ESC	Programming for Problem Solving Using C	3	0	0	3
5	ESC	Engineering Drawing & Design	1	0	4	3
6	HSMC	English Communication Skills Laboratory	0	0	3	1.5
7	BSC	Electrical Engineering Workshop	0	1	3	1.5
8	ESC	Programming for Problem Solving Using C Lab	0	0	3	1.5
<b>Total Credits</b>			<b>19.5</b>			

**I B.Tech – II SEMESTER**

Sl. No	Course Components	Subjects	L	T	P	Credits
1	BSC	Mathematics-III (Vector Calculus, Transforms and PDE)	3	0	0	3
2	BSC	Applied Physics	3	0	0	3
3	ESC	Data Structures Through C	3	0	0	3
4	ESC	Electrical Circuit Analysis-I	3	0	0	3
5	ESC	Basic Civil and Mechanical Engineering	3	0	0	3
6	BSC	Applied Physics Lab	0	0	3	1.5
7	ESC	Basic Civil and Mechanical Engineering Lab	0	0	3	1.5
8	ESC	Data Structures through C Lab	0	0	3	1.5
9	Mandatory Course	Constitution of India	2	0	0	0
<b>Total Credits</b>			<b>19.5</b>			



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**II B.Tech – I Semester**

Sl. No	Course Components	Subjects	L	T	P	Credits
1	BSC	Mathematics– IV	3	0	0	3
2	PCC	Electronic Devices and Circuits	3	0	0	3
3	PCC	Electrical Circuit Analysis –II	3	0	0	3
4	PCC	DC Machines and Transformers	3	0	0	3
5	PCC	Electro Magnetic Fields	3	0	0	3
6	PCC	Electrical Circuits Lab	0	0	3	1.5
7	PCC	DC Machines and Transformers Lab	0	0	3	1.5
8	PCC	Electronic Devices and Circuits lab	0	0	3	1.5
9	SC	Skill oriented course - Design of Electrical Circuits using Engineering Software Tools	0	0	4	2
10	MC	Professional Ethics & Human Values	2	0	0	0
<b>Total Credits</b>			<b>21.5</b>			

**II B.Tech – II Semester**

Sl. No	Course Components	Subjects	L	T	P	Credits
1	ESC	Python Programming	3	0	0	3
2	PCC	Digital Electronics	3	0	0	3
3	PCC	Power System-I	3	0	0	3
4	PCC	Induction and Synchronous Machines	3	0	0	3
5	HSMC	Managerial Economics & Financial Analysis	3	0	0	3
6	ESC	Python Programming Lab	0	0	3	1.5
7	PCC	Induction and Synchronous Machines Lab	0	0	3	1.5
8	PCC	Digital Electronics Lab	0	0	3	1.5
9	SC	Skill oriented course- IoT Applications of Electrical Engineering Lab	0	0	4	2
<b>Total Credits</b>			<b>21.5</b>			
		Minors Course*	4	0	0	4
		Honors Course*	4	0	0	4



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**III B.Tech – I Semester**

Sl. No	Course Components	Subjects	L	T	P	Credits
1	PCC	Power Systems-II	3	0	0	3
2	PCC	Power Electronics	3	0	0	3
3	PCC	Control Systems	3	0	0	3
4	OEC	Open Elective- I/ Job Oriented Elective-I	3	0	0	3
5	PEC	Professional Elective - I	3	0	0	3
6	PCC	Control Systems Lab	0	0	3	1.5
7	PCC	Power Electronics Lab	0	0	3	1.5
8	SC	Soft Skill Course:Employability Skills	2	0	0	2
9	MC	Environmental Science	2	0	0	0
10	PROJ	Summer Internship 2 Months (Mandatory) after second year (to be evaluated during V semester)	0	0	0	1.5
<b>TotalCredits</b>			<b>21.5</b>			
		Minors Course*	4	0	0	4
		Honors Course*	4	0	0	4

**III B.Tech – II Semester**

Sl. No	Course Components	Subjects	L	T	P	Credits
1	PCC	Microprocessors and Microcontrollers	3	0	0	3
2	PCC	Electrical Measurements and Instrumentation	3	0	0	3
3	PCC	Power System Analysis	3	0	0	3
4	PEC	Professional Elective - II	3	0	0	3
5	OEC	Open Elective –II/ Job Oriented Elective-II	3	0	0	3
6	PCC	Electrical Measurements and Instrumentation Lab	0	0	3	1.5
7	PCC	Microprocessors and Microcontrollers Lab	0	0	3	1.5
8	PCC	Power Systems and Simulation Lab	0	0	3	1.5
9	SC	<b>Skill Advanced Course:</b> Machine Learning with Python	2	0	0	2
10	MC	Research Methodology	2	0	0	0
<b>Total Credits</b>			<b>21.5</b>			
		Minors Course*	4	0	0	4
		Honors Course*	4	0	0	4



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**IV B.Tech – I Semester**

Sl. No	Course Components	Subjects	L	T	P	Credits
1	PEC	Professional Elective – III	3	0	0	3
2	PEC	Professional Elective – IV	3	0	0	3
3	PEC	Professional Elective – V	3	0	0	3
4	OEC	Open Elective- III/Job Oriented Elective-III	3	0	0	3
5	OEC	Open Elective-IV /Job Oriented Elective-IV	3	0	0	3
6	HSMC	Universal Human Values-2: Understanding Harmony	3	0	0	3
7	SC	<b>Skill Advanced Course</b> Machine Learning with PythonLab	0	0	4	2
8	PROJ	Industrial / Research Internship 2 Months (Mandatory) after third year (to be evaluated during VII Semester)	0	0	3	3
<b>Total Credits</b>			<b>23</b>			
		Minors Course*	4	0	0	4
		Honors Course*	4	0	0	4

**IVB.TechIISemester**

Sl. No	Course Components	Subjects	L	T	P	Credits
1	Major Project	Project work, seminar and internship in industry (6 Months)	--	--	--	12
<b>Total Credits</b>			<b>12</b>			

**HSMC:** Humanities and Social Science  
Including Management Courses  
**BSC** : Basic Science Courses  
**ESC:** Engineering Science Courses  
**PCC:** Professional Core Courses

**PEC** : Professional Elective Courses  
**OEC** : Open Elective Courses  
**PROJ** : Internship, Seminar, Project Work  
**MC** : Mandatory Courses  
**SC** : Skill Oriented Courses



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<b>II Year I Semester</b>		<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
		<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>PROFESSIONAL ETHICS &amp; HUMAN VALUES</b>					

**Preamble:**

This course is a mandatory course introduced to impart the Ethics and Human Values to the students in engineering education.

**Course Objectives:**

- To create an awareness on Engineering Ethics and Human Values.
- To instill Moral and Social Values and Loyalty
- To appreciate the rights of others
- To create awareness on assessment of safety and risk

**UNIT -I****Human Values:**

Morals, Values and Ethics-Integrity-Work Ethic-Service learning – Civic Virtue – Respect for others –Living Peacefully –Caring –Sharing –Honesty –Courage-Cooperation– Commitment – Empathy –Self Confidence Character –Spirituality.

**Learning outcomes:**

1. Learn about morals, values & work ethics.
2. Learn to respect others and develop civic virtue.
3. Develop commitment
4. Learn how to live peacefully

**UNIT -II****Engineering Ethics:**

Senses of ‘Engineering Ethics-Variety of moral issued –Types of inquiry –Moral dilemmas – Moral autonomy –Kohlberg’s theory-Gilligan’s Theory-Consensus and controversy –Models of professional roles-Theories about right action-Self-interest -Customs and religion –Uses of Ethical theories –Valuing time –Cooperation –Commitment.

**Learning outcomes:**

1. Learn about the ethical responsibilities of the engineers.
2. Create awareness about the customs and religions.
3. Learn time management
4. Learn about the different professional roles.

**UNIT -III****Engineering as Social Experimentation:**

Engineering As Social Experimentation –Framing the problem –Determining the facts – Codes of Ethics –Clarifying Concepts –Application issues –Common Ground -General Principles –Utilitarian thinking respect for persons.

**Learning outcomes:**

1. Demonstrate knowledge to become a social experimenter.
2. Provide depth knowledge on framing of the problem and determining the facts.
3. Provide depth knowledge on codes of ethics.
4. Develop utilitarian thinking



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#### **UNIT -IV**

##### **Engineers Responsibility for Safety and Risk:**

Safety and risk –Assessment of safety and risk –Risk benefit analysis and reducing risk- Safety and the Engineer-Designing for the safety-Intellectual Property rights (IPR).

Learning outcomes:

1. Create awareness about safety, risk & risk benefit analysis.
2. Engineer's design practices for providing safety.
3. Provide knowledge on intellectual property rights.

#### **UNIT- V**

##### **Global Issues:**

Globalization –Cross-culture issues-Environmental Ethics –Computer Ethics –Computers as the instrument of Unethical behavior –Computers as the object of Unethical acts – Autonomous Computers-Computer codes of Ethics –Weapons Development -Ethics and Research –Analyzing Ethical Problems in research.

Learning outcomes:

1. Develop knowledge about global issues.
2. Create awareness on computer and environmental ethics
3. Analyze ethical problems in research.
4. Give a picture on weapons development.

##### **Course outcomes:**

Students will be able to:

- Identify and analyze an ethical issue in the subject matter under investigation or in a relevant field
- Identify the multiple ethical interests at stake in a real-world situation or practice
- Articulate what makes a particular course of action ethically defensible
- Assess their own ethical values and the social context of problems
- Identify ethical concerns in research and intellectual contexts, including academic integrity, use and citation of sources, the objective presentation of data, and the treatment of human subjects
- Demonstrate knowledge of ethical values in non-classroom activities, such as service learning, internships, and field work
- Integrate, synthesize, and apply knowledge of ethical dilemmas and resolutions in academic settings, including focused and interdisciplinary research.

##### **Text Books:**

- 1) "Engineering Ethics includes Human Values" by M.Govindarajan, S.Natarajan and, V.S.Senthil Kumar-PHI Learning Pvt. Ltd-2009
- 2) "Engineering Ethics" by Harris, Pritchard and Rabins, CENGAGE Learning, India Edition, 2009.
- 3) "Ethics in Engineering" by Mike W. Martin and Roland Schinzinger –Tata McGraw-Hill–2003.
- 4) "Professional Ethics and Morals" by Prof.A.R.Aryasri, DharanikotaSuyodhana-Maruthi Publications.
- 5) "Professional Ethics and Human Values" by A.Alavudeen, R.KalilRahman and M. Jayakumaran, Laxmi Publications.
- 6) "Professional Ethics and Human Values" by Prof.D.R.Kiran-"Indian Culture, Values and Professional Ethics" by PSR Murthy-BS Publication



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<b>III Year –I SEMESTER</b>		<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
		<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>ENVIRONMENTAL SCIENCE</b>					

*Course Objectives:*

The objectives of the course are to impart:

- Overall understanding of the natural resources.
- Basic understanding of the ecosystem and its diversity.
- Acquaintance on various environmental challenges induced due to unplanned anthropogenic activities.
- An understanding of the environmental impact of developmental activities.
- Awareness on the social issues, environmental legislation and global treaties.

### UNIT I

Multidisciplinary nature of Environmental Studies: Definition, Scope and Importance – Sustainability: Stockholm and Rio Summit–Global Environmental Challenges: Global warming and climate change, acid rains, ozone layer depletion, population growth and explosion, effects. Role of information technology in environment and human health.

Ecosystems: Concept of an ecosystem. - Structure and function of an ecosystem; Producers, consumers and decomposers. - Energy flow in the ecosystem - Ecological succession. - Food chains, food webs and ecological pyramids; Introduction, types, characteristic features, structure and function of Forest ecosystem, Grassland ecosystem, Desert ecosystem, Aquatic ecosystems.

### UNIT II

Natural Resources: Natural resources and associated problems.

Forest resources: Use and over – exploitation, deforestation – Timber extraction – Mining, dams and other effects on forest and tribal people.

Water resources: Use and over utilization of surface and ground water – Floods, drought, conflicts over water, dams – benefits and problems.

Mineral resources: Use and exploitation, environmental effects of extracting and using mineral resources.

Food resources: World food problems, changes caused by non-agriculture activities-effects of modern agriculture, fertilizer-pesticide problems, water logging, salinity.

Energy resources: Growing energy needs, renewable and non-renewable energy sources use of alternate energy sources.

Land resources: Land as a resource, land degradation, Wasteland reclamation, man induced landslides, soil erosion and desertification; Role of an individual in conservation of natural resources; Equitable use of resources for sustainable lifestyles.

### UNIT III

Biodiversity and its conservation: Definition: genetic, species and ecosystem diversity- classification - Value of biodiversity: consumptive use, productive use, social-Biodiversity at national and local levels. India as a mega-diversity nation - Hot-spots of biodiversity - Threats to biodiversity: habitat loss, man-wildlife conflicts. - Endangered and endemic species of India – Conservation of biodiversity: conservation of biodiversity.

### UNIT IV

Environmental Pollution: Definition, Cause, effects and control measures of Air pollution, Water pollution, Soil pollution, Noise pollution, Nuclear hazards. Role of an individual in prevention of pollution. - Pollution case studies, Sustainable Life Studies. Impact of Fire Crackers on Men and his well being.



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Solid Waste Management: Sources, Classification, effects and control measures of urban and industrial solid wastes. Consumerism and waste products, Biomedical, Hazardous and e – waste management.

### **UNIT V**

Social Issues and the Environment: Urban problems related to energy -Water conservation, rain water harvesting-Resettlement and rehabilitation of people; its problems and concerns. Environmental ethics: Issues and possible solutions. Environmental Protection Act -Air (Prevention and Control of Pollution) Act. –Water (Prevention and control of Pollution) Act - Wildlife Protection Act -Forest Conservation Act-Issues involved in enforcement of environmental legislation. -Public awareness. Environmental Management: Impact Assessment and its significance various stages of EIA, preparation of EMP and EIS, Environmental audit. Ecotourism, Green Campus – Green business and Green politics.

The student should Visit an Industry / Ecosystem and submit a report individually on any issues related to Environmental Studies course and make a power point presentation.

### **Text Books:**

1. Environmental Studies, K. V. S. G. Murali Krishna, VGS Publishers, Vijayawada
2. Environmental Studies, R. Rajagopalan, 2<sup>nd</sup> Edition, 2011, Oxford University Press.
3. Environmental Studies, P. N. Palanisamy, P. Manikandan, A. Geetha, and K. ManjulaRani; Pearson Education, Chennai

### **Reference Books:**

1. Text Book of Environmental Studies, Deeshita Dave & P. Udaya Bhaskar, CengageLearning.
2. A Textbook of Environmental Studies, Shaashi Chawla, TMH, New Delhi
3. Environmental Studies, Benny Joseph, Tata McGraw Hill Co, New Delhi
4. Perspectives in Environment Studies, Anubha Kaushik, C P Kaushik, New AgeInternational Publishers, 2014





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<b>IV Year –I SEMESTER</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>C</b>
	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>
<b>UNIVERSAL HUMAN VALUES-2: UNDERSTANDING HARMONY</b>				

**Course objective:** To develop a holistic perspective based on self-exploration about themselves (human being), family, society and nature/existence, to understand (or developing clarity) of the harmony in the human being, family, society and nature/existence, to strengthen self-reflection and to develop the commitment and courage to act.

### UNIT-1:

Course Introduction - Need, Basic Guidelines, Content and Process for Value Education

- 1) Purpose and motivation for the course, recapitulation from Universal Human Values-I
- 2) Self-Exploration–what is it? - Its content and process; ‘Natural Acceptance’ and Experiential Validation- as the process for self-exploration
- 3) Continuous Happiness and Prosperity- A look at basic Human Aspirations
- 4) Right understanding, Relationship and Physical Facility- the basic requirements for fulfilment of aspirations of every human being with their correct priority
- 5) Understanding Happiness and Prosperity correctly- A critical appraisal of the current scenario
- 6) Method to fulfill the above human aspirations: understanding and living in harmony at various levels. Include practice sessions to discuss natural acceptance in human being as the innate acceptance for living with responsibility (living in relationship, harmony and co-existence) rather than as arbitrariness in choice based on liking-disliking.

### UNIT- 2:

Understanding Harmony in the Human Being - Harmony in Myself!

- 1) Understanding human being as a co-existence of the sentient ‘I’ and the material ‘Body’
- 2) Understanding the needs of Self (‘I’) and ‘Body’ - happiness and physical facility
- 3) Understanding the Body as an instrument of ‘I’ (I being the doer, seer and enjoyer)
- 4) Understanding the characteristics and activities of ‘I’ and harmony in ‘I’
- 5) Understanding the harmony of I with the Body: Sanyam and Health; correct appraisal of Physical needs, meaning of Prosperity in detail
- 6) Programs to ensure Sanyam and Health. Include practice sessions to discuss the role others have played in making material goods available to me. Identifying from one’s own life. Differentiate between prosperity and accumulation. Discuss program for ensuring health vs dealing with disease.

### UNIT-3:

Understanding Harmony in the Family and Society- Harmony in Human Relationship

- 1) Understanding values in human-human relationship; meaning of Justice (nine universal values in relationships) and program for its fulfillment to ensure mutual happiness; Trust and Respect as the foundational values of relationship
- 2) Understanding the meaning of Trust; Difference between intention and competence
- 3) Understanding the meaning of Respect, Difference between respect and differentiation; the other salient values in relationship
- 4) Understanding the harmony in the society (society being an extension of family): Resolution, Prosperity, fearlessness (trust) and co-existence as comprehensive Human Goals
- 5) Visualizing a universal harmonious order in society- Undivided Society, Universal Order- from family to world family. Include practice sessions to reflect on relationships in family, hostel and institute as extended family, real life examples, teacher-student relationship, goal of education etc. Gratitude as a universal value in relationships. Discuss with scenarios. Elicit examples from students’ lives.



**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA**  
**KAKINADA–533003, Andhra Pradesh, India**  
**DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING**

**UNIT-4:**

Understanding Harmony in the Nature and Existence - Whole existence as Coexistence

- 1) Understanding the harmony in the Nature
- 2) Interconnectedness and mutual fulfilment among the four orders of nature recyclability and self regulation in nature
- 3) Understanding Existence as Co-existence of mutually interacting units in allpervasive space
- 4) Holistic perception of harmony at all levels of existence. Include practice sessions to discuss human being as cause of imbalance in nature (film “Home” can be used), pollution, depletion of resources and role of technology etc.

**UNIT-5:**

Implications of the above Holistic Understanding of Harmony on Professional Ethics

- 1) Natural acceptance of human values
- 2) Definitiveness of Ethical Human Conduct
- 3) Basis for Humanistic Education, Humanistic Constitution and Humanistic Universal Order
- 4) Competence in professional ethics: a. Ability to utilize the professional competence for augmenting universal human order b. Ability to identify the scope and characteristics of people friendly and eco-friendly production systems, c. Ability to identify and develop appropriate technologies and management patterns for above production systems.
- 5) Case studies of typical holistic technologies, management models and production systems
- 6) Strategy for transition from the present state to Universal Human Order: a. At the level of individual: as socially and ecologically responsible engineers, technologists and managers b. At the level of society: as mutually enriching institutions and organizations
- 7) Include practice: Exercises and Case Studies will be taken up in Practice (tutorial) Sessions eg. To discuss the conduct as an engineer or scientist etc.

**TEXT BOOKS:**

- 1) Human Values and Professional Ethics by R R Gaur, R Sangal, G P Bagaria, Excel Books, New Delhi, 2010

**REFERENCE BOOKS:**

- 1) Jeevan Vidya: Ek Parichaya, A Nagaraj, Jeevan Vidya Prakashan, Amarkantak, 1999.
- 2) Human Values, A.N. Tripathi, New Age Intl. Publishers, New Delhi, 2004.
- 3) The Story of Stuff (Book).
- 4) The Story of My Experiments with Truth - by Mohandas Karamchand Gandhi
- 5) Small is Beautiful - E. F Schumacher.
- 6) Slow is Beautiful - Cecile Andrews.
- 7) Economy of Permanence - J C Kumarappa .
- 8) Bharat Mein Angreji Raj - PanditSunderlal .
- 9) Rediscovering India - by Dharampal .
- 10) Hind Swaraj or Indian Home Rule - by Mohandas K. Gandhi.
- 11) India Wins Freedom - Maulana Abdul Kalam Azad.
- 12) Vivekananda - Romain Rolland (English).
- 13) Gandhi - Romain Rolland (English).

**Course outcome:** Students will be able to discuss a holistic perspective based on self-exploration about themselves (human being), family, society and nature/existence, to explain (or developing clarity) of the harmony in the human being, family, society and nature/existence, to strengthen self-reflection and to judge the commitment and courage to act.