



# **ST. ANNE'S COLLEGE OF ENGINEERING AND TECHNOLOGY**

(Approved by AICTE, New Delhi. Affiliated to Anna University, Chennai)

**Accredited by NAAC**

ANGUCHETTPALAYAM, PANRUTI – 607 106.

**ACADEMIC YEAR**  
**2024-2025**



# ST. ANNE'S COLLEGE OF ENGINEERING AND TECHNOLOGY

(Approved by AICTE, New Delhi. Affiliated to Anna University, Chennai)

Accredited by NAAC

ANGUCHETYPALAYAM, PANRUTI – 607 106.

**7.1.9 b- Sensitization of students and employees of the institution to the constitutional obligations: values, rights, duties and responsibilities of citizens**

## INDEX

SL.NO	DESCRIPTION
1	Courses Offered

*R. Arakiadass*  
8.4.25

Dr.R.AROKIADASS, M.E., Ph.D.,  
Principal,  
St.Anne's College of Engineering & Technology,  
ANGUCHETYPALAYAM,  
Siruvathur-(Post), Panruti-(T.k),  
Cuddalore-(Dist), Pin: 607 110.



# ST. ANNE'S COLLEGE OF ENGINEERING AND TECHNOLOGY

Approved by AICTE, New Delhi. Affiliated to Anna University, Chennai

Accredited by NAAC

ANGUCHETTYPALAYAM, PANRUTI - 607 106

GE3791

HUMAN VALUES AND ETHICS

L T P C 2 0 0 2

## COURSE DESCRIPTION

This course aims to provide a broad understanding about the modern values and ethical principles that have evolved and are enshrined in the Constitution of India with regard to the democratic, secular and scientific aspects. The course is designed for undergraduate students so that they could study, understand and apply these values in their day to day life.

### COURSE OBJECTIVES:

- To Create awareness about values and ethics enshrined in the Constitution of India
- To Sensitize students about the democratic values to be upheld in the modern society.
- To Inculcate respect for all people irrespective of their religion or other affiliations.
- To Instil the scientific temper in the students' minds and develop their critical thinking.
- To Promote sense of responsibility and understanding of the duties of citizen.

### UNIT I DEMOCRATIC VALUES 6

Understanding Democratic values: Equality, Liberty, Fraternity, Freedom, Justice, Pluralism, Tolerance, Respect for All, Freedom of Expression, Citizen Participation in Governance – World Democracies: French Revolution, American Independence, Indian Freedom Movement.

Reading Text: *Excerpts from John Stuart Mills' On Liberty*

### UNIT II SECULAR VALUES 6

Understanding Secular values – Interpretation of secularism in Indian context - Disassociation of state from religion – Acceptance of all faiths – Encouraging non-discriminatory practices.

Reading Text: *Excerpt from Secularism in India: Concept and Practice by Ram Puniyani*

### UNIT III SCIENTIFIC VALUES 6

Scientific thinking and method: Inductive and Deductive thinking, Proposing and testing Hypothesis, Validating facts using evidence based approach – Skepticism and Empiricism – Rationalism and Scientific Temper.

Reading Text: *Excerpt from The Scientific Temper by Antony Michaelis R*

### UNIT IV SOCIAL ETHICS 6

Application of ethical reasoning to social problems – Gender bias and issues – Gender violence – Social discrimination – Constitutional protection and policies – Inclusive practices.

Reading Text: *Excerpt from 21 Lessons for the 21st Century by Yuval Noah Harari*

### UNIT V SCIENTIFIC ETHICS 6

Transparency and Fairness in scientific pursuits – Scientific inventions for the betterment of society - Unfair application of scientific inventions – Role and Responsibility of Scientist in the modern society.

Reading Text: *Excerpt from American Prometheus: The Triumph and Tragedy of J Robert Oppenheimer by Kai Bird and Martin J. Sherwin*

TOTAL : 30 PERIODS

### REFERENCES:

- P.1 The Nonreligious: Understanding Secular People and Societies, Luke W. Galen Oxford University Press, 2016.
- P.2 Secularism: A Dictionary of Atheism, Bullivant, Stephen, Lee, Lois, Oxford University Press, 2016.
- P.3 The Oxford Handbook of Secularism, John R. Shook, Oxford University Press, 2017 108
- P.4 The Civic Culture: Political Attitudes and Democracy in Five Nations by Gabriel A. Almond and Sidney Verba, Princeton University Press.
- P.5 Research Methodology for Natural Sciences by Soumitro Banerjee, IISc Press, January 2022

### WEB RESOURCES

W1: <https://nptel.ac.in>

Name of the Staff : B. Arun Kumar

Department of the Staff : ECE



Department of the Student : ECE

Semester : 07

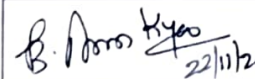


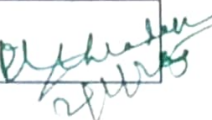
Subject Code & Name : GE 3791 & Human values and Ethics

Period From : AUGUST 2024 to DECEMBER 2024

### To be Signed at the end of the each Assessment

Assessment Report	CIA - I	CIA - II	
Assessment Date	28.9.2024	20.11.2024	
Report Due on	30.9.2024	21.11.2024	
Signature - HoD of Students with Date	 4/10	 23/11/24	

### To be Signed at the end of the Semester

Staff in - charge	HoD of Staff	HOD of Students	Principal
 22/11/24	 21/11/24	 21/11/24	 22/11/24

## Time Table

PERIOD DAY	1	2	3	4	5	6	7	8
Monday								
Tuesday								
Wednesday								
Thursday								
Friday								

## Unit Completion Details

Unit No.	Unit Description	Start Date	Finish Date	No. of Hours
1	Democratic values	19.8.24	3.9.24	9
2	Secular values	9.9.24	23.9.24	6
3	Scientific Values	23.9.24	14.10.24	9
4	Social Ethics	16.10.24	06.11.24	9
5	Scientific Ethics	05.11.24	08.11.24	9

B. Ann Kya  
12/11/24  
Subject In-Charge

HoD of Students  
Principal



**ST. ANNE'S COLLEGE OF ENGINEERING AND TECHNOLOGY**  
 Approved by AICTE, New Delhi. Affiliated to Anna University, Chennai  
 Accredited by NAAC  
 ANGUICHETTYPALAYAM, PANRUTI - 607 106

### Course Outcome:

CO No	Course Outcome	Knowledge Level
CO 1	Identify the importance of democratic, secular and scientific values in harmonious functioning of social life	K2
CO 2	Practice democratic and scientific values in both their personal and professional life	K2
CO 3	Find rational solutions to social problems.	K3
CO 4	Behave in an ethical manner in society	K3
CO 5	Practice critical thinking and the pursuit of truth	K2

### CO - PO Mapping

Program Outcome	Course Outcome				
	CO 1	CO 2	CO 3	CO 4	CO 5
PO 1	-	-	-	-	-
PO 2	-	-	-	-	-
PO 3	-	-	-	-	-
PO 4	-	-	-	-	-
PO 5	-	-	-	-	-
PO 6	2	2	2	2	2
PO 7	-	-	-	-	-
PO 8	3	3	3	3	3
PO 9	-	-	-	-	-
PO 10	-	-	-	-	-
PO 11	-	-	-	-	-
PO 12	1	1	1	1	1
PSO1	-	-	-	-	-
PSO2	-	-	-	-	-
PSO3	-	-	-	-	-

Regulation 2021: 1 - Low, 2 - Medium, 3 - High, -/- No Correlation

### Teaching Aids (Should be written in Log Book)

BB- Black Board	OHP- Over Head Projector	PPT - Power Point	L1 - Lecture 1
T - Tutorial	A1- Assignment 1	T1 - Text Book 1	R1 - Reference Book 1
M - Model and Demo	V- Video Lecture	A- Animation	

## OBJECTIVES:

- To introduce the basic concepts of environment, ecosystems and biodiversity and emphasize on the biodiversity of India and its conservation
- To impart knowledge on the causes, effects and control or prevention measures of environmental pollution and natural disasters
- To facilitate the understanding of global and Indian scenarios of renewable and non-renewable resources, causes of their degradation and measures to preserve them
- To familiarize the concept of sustainable development goals and appreciate the interdependence of economic and social aspects of sustainability, recognize and analyze climate changes, concept of carbon credits and the challenges of environmental management
- To evaluate and endorse sustainability practices and develop a broader understanding on green materials, energy cycles and analysis of the role of sustainable urbanization

## UNIT I ENVIRONMENT AND BIODIVERSITY

Definition, scope and importance of environment, need for public awareness, Eco-system and Energy flow, ecological succession, Types of biodiversity, genetic, species and ecosystem diversity, values of biodiversity, India as a mega-diversity nation, hot spots of biodiversity, threats to biodiversity, habitat loss, poaching of wildlife, man-wildlife conflicts, endangered and endemic species of India, conservation of biodiversity in situ and ex situ

## UNIT II ENVIRONMENTAL POLLUTION

Causes, Effects and Preventive measures of Water, Soil, Air and Noise Pollution, Social, Hazardous and E-Waste management (case studies on Occupational Health and Safety Management system (OHSAS)), Environmental protection, Environmental protection act

## UNIT III RENEWABLE SOURCES OF ENERGY

Energy management and conservation, New Energy Sources, Need of new sources, Different types new energy sources, Applications of Hydrogen energy, Ocean energy resources, Tidal energy conversion, Concept, origin and power plants of geothermal energy

## UNIT IV SUSTAINABILITY AND MANAGEMENT

Development, GDP, Sustainability, concept, needs and challenges-economic, social and aspects of sustainability from unsustainability, sustainability, millennium development goals, and protocols, Sustainable Development Goals, targets, indicators and intervention areas, Climate change (Global), Regional and local environmental issues and possible solutions-case studies, Concept of Carbon Credit, Carbon Footprint, Environmental management in industry, A case study

## UNIT V SUSTAINABILITY PRACTICES

Zero waste and R concept, Circular economy, ISO 14000 Series, Material life cycle assessment, Environmental Impact Assessment, Sustainable habitat, Green buildings, Green materials, Energy efficiency, Sustainable energy, Non-conventional Sources, Energy Cycles, carbon cycle, emission and sequestration, Green Engineering, Sustainable urbanization, Socio-economic and technological change


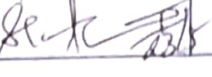
## OUTCOMES:

- To recognize and understand the functions of environment, ecosystems and biodiversity and their conservation
- To identify the causes, effects of environmental pollution and natural disasters and contribute to the preventive measures in the society
- To identify and apply the understanding of renewable and non-renewable resources and contribute to the sustainable measures to preserve them for future generations
- To recognize the different goals of sustainable development and apply them for suitable technological advancement and societal development
- To demonstrate the knowledge of sustainability practices and identify green materials, energy cycles and the role of sustainable development


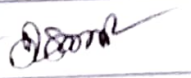

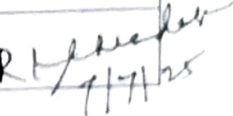
TOTAL : 30 PERIODS

Name of the Staff : Mrs. S. Remya  
 Department of the Staff : CHEMISTRY  
 Department of the Student : ECE  
 Semester : IV  
 Subject Code & Name : GE3451 / ESS  
 Period From : Feb - 2025 to MAY 2025

## To be Signed at the end of the each Assessment

Assessment Report	CIA - I	CIA - II	
Assessment Date	3/4/25	13/5/25	
Report Due on	4/4/25	14/5/25	
Signature - HoD of Students with Date	 4/4	 13/5	

## To be Signed at the end of the Semester

Staff in - charge	HoD of Staff	HOD of Students	Principal
			 7/7/25

## Time Table

PERIOD DAY	1	2	3	4	5	6	7	8
Monday								
Tuesday								
Wednesday						ESS (ECE)		
Thursday						ESS (ECE)		
Friday								

## Unit Completion Details

Unit No.	Unit Description	Start Date	Finish Date	No. of Hours
1	Environment and Biodiversity	26/2/25	20/3/25	6
2	Environmental Pollution	22/3/25	11/4/25	6
3	Renewable Sources of energy	16/4/25	23/4/25	6
4	Sustainability and management	23/4/25	9/5/25	6
5	Sustainability: practices.	9/5/25	12/5/25	6

S.A. J  
Subject In-Charge

HOD of Students

Principal

Total Hrs = 30

### TEXT BOOKS:

1. Anubha Kaushik and C. P. Kaushik's "Perspectives in Environmental Studies", 6th Edition, New Age International Publishers 2018
2. Benny Joseph, 'Environmental Science and Engineering', Tata McGraw-Hill, New Delhi, 2016
3. Gilbert M. Masters, 'Introduction to Environmental Engineering and Science', 2nd edition, Pearson Education, 2004
4. Allen, D. T. and Shonnard, D. R., Sustainability Engineering: Concepts, Design and Case Studies, Prentice Hall
5. Bradley, A. S., Adebayo, A. O., Maria, P. Engineering applications in sustainable design and development. Cengage Learning
6. Environment Impact Assessment Guidelines, Notification of Government of India, 2006
7. Mackenthun, K. M., Basic Concepts in Environmental Management, Lewis Publication, London, 1998

### REFERENCES:

1. R.K. Trivedi, 'Handbook of Environmental Laws, Rules, Guidelines, Compliances and Standards', Vol I and II, Enviro Media 38 Edition 2010
2. Cunningham, W. P. Cooper, T. H. Gorham, 'Environmental Encyclopedia', Jaco Publ., House, Mumbai, 2001
3. Dharmendra S. Sengar, 'Environmental law', Prentice hall of India PVT LTD, New Delhi, 2007
4. Rajagopalan, R., 'Environmental Studies-From Crisis to Cure', Oxford University Press, Third Edition, 2015
5. Erach Bharucha "Textbook of Environmental Studies for Undergraduate Courses" Orient Blackswan Pvt Ltd 2013

### CO-PO & ISO MAPPING

CO	PO										PSO					
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
1	2	1	-	-	-	2	3	-	-	-	-	-	-	-	-	-
2	3	2	-	-	-	3	3	-	-	-	-	2	-	-	-	-
3	3	-	1	-	-	2	2	-	-	-	-	2	-	-	-	-
4	3	2	1	1	-	2	2	-	-	-	-	2	-	-	-	-
5	3	2	1	-	-	2	2	-	-	-	-	1	-	-	-	-
Avg.	2.8	1.8	1	1	-	2.2	2.4	-	-	-	-	1.8	-	-	-	-

1-low, 2-medium, 3-high, '-'- no correlation