

PANIMALAR ENGINEERING COLLEGE

(An Autonomous Institution, Affiliated to Anna University, Chennai)

Bangalore Trunk Road, Varadharajapuram,

Poonamallee, Chennai – 600 123



MANDATORY COURSES

REGULATION-2023

List of Mandatory Courses

Regulation 2023

S. No	COURSE CODE	COURSE TITLE	Category	L/T/P	Contact Hours	Credit	Ext / Int Weightage
Mandatory Courses							
1.	23MC1201	Environmental Science	MC	2/0/0	2	0	0/100
2.	23MC1002	Constitution of India	MC	2/0/0	2	0	0/100
3.	23MC1003	Human Values	MC	2/0/0	2	0	0/100
4.	23MC1004	Energy Studies	MC	2/0/0	2	0	0/100
5.	23MC1005	Essence of Indian Traditional Knowledge	MC	2/0/0	2	0	0/100
6.	23MC1006	Soft Skills and Personality Development	MC	2/0/0	2	0	0/100
7.	23MC1007	Value Education, Human Rights & Legislature Procedure	MC	2/0/0	2	0	0/100
8.	23MC1008	Disaster Management	MC	2/0/0	2	0	0/100

climate change, global warming, acid rain, ozone layer depletion. environment protection act – Air (Prevention and Control of Pollution) act – Water (Prevention and control of Pollution) act – Wildlife protection act – Forest conservation act – enforcement machinery involved in environmental legislation- central and state pollution control boards Public awareness.

UNIT - V HUMAN POPULATION AND THE ENVIRONMENT 6

Population growth, variation among nations – population explosion – family welfare Programme– environment and human health – human rights – value education – HIV / AIDS - women and child welfare – role of information technology in environment and human health - case studies.

TOTAL : 30 PERIODS

COURSE OUTCOME(S):

Upon completion of the course, students will be able to:

- CO1** To recognize and understand the functions of environment, ecosystems, biodiversity and their conservation.
- CO2** To identify the causes, effects and control measures of environmental pollution and to implement the preventive measures.
- CO3** To identify the various types of natural resources, their exploitation, consequences and to apply methodologies for its conservation.
- CO4** To describe and analyse the concept of sustainable development, the fundamental key concepts of various social issues and environmental Acts.
- CO5** To outline the reasons for human population and the role of information technology in environment and human health.

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)..

REFERENCE BOOKS:

1. R.K. Trivedi, 'Handbook of Environmental Laws, Rules, Guidelines, Compliances and Standards', Vol. I and II, Third Edition, Enviro Media.
2. Cunningham, W.P. Cooper, T.H. Gorhani, 'Environmental Encyclopedia', Jaico Publ., House, Mumbai, 2001.
3. Dharmendra S. Sengar, 'Environmental law', Prentice hall of India PVT. LTD, New Delhi, 2007.
4. Erach Bharucha "Textbook of Environmental Studies for Undergraduate Courses" Orient BlackswanPvt. Ltd. (2013).

WEB REFERENCES:

1. <https://www.nationalgrid.com/stories/energy-explained>
2. <https://www.conservationindia.org/articles/human-elephant-conflict>
3. <https://www.sciencedirect.com/topics/earth-and-planetary-sciences/pollutant-monitoring>
4. <https://www.undp.org/sustainable-development-goals>

ONLINE COURSES / RESOURCES:

1. <https://nptel.ac.in/courses/105107213>
2. <https://nptel.ac.in/courses/105107181>
3. <https://nptel.ac.in/courses/103106162>
4. <https://nptel.ac.in/courses/103107212>

State and Local Governments in detail.

- CO5** Compare the decentralization of power between central, state and local self government.
- CO6** Apply the knowledge in strengthening of the constitutional institutions like Election Commission and UPSC for sustaining democracy.

TEXT BOOKS:

1. Durga Das Basu, "Introduction to the Constitution of India ", Prentice Hall of India, New Delhi.
2. R.C.Agarwal, (1997) "Indian Political System", S.Chand and Company, New Delhi.
3. Maciver and Page, " Society: An Introduction Analysis ", Mac Milan India Ltd., New Delhi.
4. K.L.Sharma, (1997) "Social Stratification in India: Issues and Themes", Jawaharlal Nehru University, New Delhi.

REFERENCE BOOKS:

1. Sharma, Brij Kishore, " Introduction to the Constitution of India:, Prentice Hall of India, New Delhi.
2. U.R.Gahai, "Indian Political System ", New Academic Publishing House, Jalaendhar.
3. R.N. Sharma, "Indian Social Problems ", Media Promoters and Publishers Pvt. Ltd

WEB REFERENCES:

1. www.hss.iitb.ac.in/en/lecture-details
2. www.iitb.ac.in/en/event/2nd-lecture-institute-lecture-series-indian-constitution

ONLINE COURSES / RESOURCES:

1. nptel.ac.in/courses/109104074/
2. nptel.ac.in/courses/109104045/
3. nptel.ac.in/courses/101104065/

2. Bajpai. B. L , , New Royal Book Co, Lucknow, Reprinted, 2004.
3. Bertrand Russell Human Society in Ethics & Politics.

REFERENCE BOOKS:

1. Corliss Lamont, Philosophy of Humanism.
2. Gaur. R.R. , Sangal. R, Bagaria. G.P, A Foundation Course in Value Education, Excel Books, 2009.
3. Gaur. R.R. , Sangal. R , Bagaria. G.P, Teachers Manual Excel Books, 2009.

WEB REFERENCES:

1. https://www.researchgate.net/publication/32961939_Values_for_Human-toHuman_Reference
2. <https://www.grainesdepaix.org/en/resources/peace-dictionary/human-values>

ONLINE COURSES / RESOURCES:

1. <https://www.udemy.com/course/human-values-and-professional-ethics/>
2. <https://nptel.ac.in/courses/109104068>

TEXT BOOKS:

1. Jose Goldenberg, Thomas Johanson, and Reddy, A.K.N., Energy for Sustainable World, WileyEastern, 2005.
2. Charles E. Brown, World Energy Resources, Springer Publication, New York, 2002.
3. Culp, A.W., Principles of Energy Conversion, McGraw Hill New York, 2004.

REFERENCE BOOKS:

1. Bukhootsow, B., Energy Policy and Planning, Prentice Hall of India, New Delhi, 2003.
2. TEDDY Year Book, The Energy Research Institute (TERI), 2011.
3. International Energy Outlook, EIA Annual Publication, 2011.

Mohanta and Vipin KumarSingh, Pratibha Prakashan 2012.

REFERENCE BOOKS:

1. ScienceinSanskrit”, SamskritaBhartiPublisher, ISBN13:978-8187276333, 2007.
2. NCERT, “Position paper on Arts, Music, Dance and Theatre”, ISBN 81-7450494-X,200.
3. Narain,“ExaminationsinancientIndia”,AryaBookDepot,1993.
4. M. Hiriyanna, “Essentials of Indian Philosophy”, Motilal Banarsidass Publishers, ISBN 13:978-8120810990, 2014.

WEB REFERENCES:

1. <https://www.aec.edu.in/knowledge/>
2. https://www.wipo.int/wipo_magazine/en/2011/03/article_0002.html

2. Soft skills by MJP Publishers

REFERENCE BOOKS:

1. Basic Managerial Skills for All by E.H. McGrath S.J

WEB REFERENCES:

1. <https://www.shrm.org/hr-today/news/all-things-work/pages/hiring-for-soft-skills.aspx>
2. <https://www.investopedia.com/terms/s/soft-skills.asp>

ONLINE COURSES / RESOURCES:

1. <https://business.udemy.com>
2. <https://www.coursera.org/courses?query=soft%20skills>

23MC1007	VALUE EDUCATION, HUMAN RIGHTS & LEGISLATURE PROCEDURE	L	T	P	C
		2	0	0	0

COURSE OBJECTIVE:

- To enable the students to inculcate values, morals and virtues to become erudite human being.

UNIT - I INTRODUCTION TO HUMAN VALUES 6

Value Education, Definition, Concept and Need for Value Education. The Content and Process of Value Education. Basic Guidelines for Value Education. Self-exploration as a means of Value Education. Happiness and Prosperity as parts of Value Education.

UNIT - II FOSTERING VALUES 6

Meaning and Significance Values in the Classroom Value from the Pupil's Perspective Approaches to Values Education Fostering Value among Students

UNIT - III FOSTERING VALUES 6

Concept of Human Rights -Evolution of Human Rights Right to Life, Liberty and Dignity Right to Equality - Right against Exploitation Cultural and Educational Rights -Economic Rights Political Rights - Social Rights

UNIT - IV HUMAN RIGHTS OF WOMEN AND CHILDREN 6

Social Practice and Constitutional Safeguards (i) Female Feticide and Infanticide (ii) Physical assault and harassment (iii) Domestic violence (iv) Conditions of Working Women

UNIT - V JUDICIARY: STRUCTURE, ORGANIZATION AND FUNCTIONING 6

Judiciary –Judiciary Structure-fundamental laws-Civil courts

TOTAL : 30 PERIODS

COURSE OUTCOME(S):

Upon completion of the course, students will be able to:

- CO1** Inculcate values in education.
- CO2** Inculcate the education system on values.
- CO3** Impart human rights.
- CO4** Learn the basic knowledge on law on human rights.
- CO5** Learn and practice value based education incorporating law in the human life.

TEXT BOOKS:

1. The Constitution of India by Dr.B.R.Ambedkar
2. World Community Service Centre, 'Value Education', Vethathiri Publications, Erode, 2011.

REFERENCE BOOKS:

1. Human Values by Dr. Kshitiz Jain
2. Human Values in Indian Literature and Culture by Santigopal Das.

WEB REFERENCES:

1. <https://www.grainesdepaix.org/en/resources/peace-dictionary/human-values>
2. www.ijedr.org/papers/IJEDR1804078.pdf

ONLINE COURSES / RESOURCES:

1. <https://www.udemy.com/course/human-values-and-professional-ethics/>
2. <https://www.aicte-india.org/press-releases/universal-human-values-unique-course-aicte>

23MC1008	DISASTER MANAGEMENT	L	T	P	C
		2	0	0	0

COURSE OBJECTIVE:

- To provide students an exposure to disasters, their significance and types.
- To ensure that students begin to understand the relationship between vulnerability, disasters, disaster prevention and risk reduction.
- To gain a preliminary understanding of approaches of Disaster Risk Reduction (DRR).
- To enhance awareness of institutional processes in the country.
- To develop rudimentary ability to respond to their surroundings with potential disaster response in areas where they live, with due sensitivity.

UNIT - I INTRODUCTION TO DISASTERS 6

Definition: Disaster, Hazard, Vulnerability, Resilience, Risks – Disasters: Types of disasters –Earthquake, Landslide, Flood, Drought, Fire etc -Classification, Causes, Impacts including social, economic, political, environmental, health, psychosocial, etc.- Differential impacts- in terms of caste, class, gender, age, location, disability - Global trends in disasters: urban disasters, pandemics, complex emergencies, Climate change-Dos and Don'ts during various types of Disasters.

UNIT - II APPROACHES TO DISASTER RISK REDUCTION (DRR) 6

Disaster cycle - Phases, Culture of safety, prevention, mitigation and preparedness community based DRR, Structural- nonstructural measures, Roles and responsibilities of- community, Panchayati Raj Institutions / Urban Local Bodies (PRIs/ULBs), States, Centre, and other stake-holders Institutional Processes and Frame work at State and Central Level State Disaster Management Authority (SDMA) Early Warning System–Advisories from Appropriate Agencies.

UNIT - III INTER-RELATIONSHIP BETWEEN DISASTERS AND DEVELOPMENT 6

Factors affecting Vulnerabilities, differential impacts, impact of Development projects such as dams, embankments, changes in Land-use etc.- Climate Change Adaptation- IPCC Scenario and Scenarios in the context of India-Relevance of indigenous knowledge, appropriate technology and local resources.

UNIT - IV DISASTER RISK MANAGEMENT IN INDIA 6

Hazard and Vulnerability profile of India, Components of Disaster Relief: Water, Food, Sanitation, Shelter, Health, Waste Management, Institutional arrangements (Mitigation, Response and Preparedness), Disaster Management Act and Policy - Other related policies, plans, programmes and legislation– Role of GI Sand Information Technology Components in Preparedness, Risk Assessment, Response and Recovery Phases of Disaster–Disaster Damage Assessment.

ONLINE COURSES / RESOURCES:

1. <https://nptel.ac.in/courses/105106831>
2. <https://www.coursera.org/specializations/natural-disaster-and-climate-change-risk-assessment>
3. <https://ndma.gov.in>
4. <https://nidm.gov.in>
5. <https://www.undrr.org>
6. <https://www.ipcc.ch>