POST GRADUATE DIPLOMA PROGRAMME
IN SUSTAINABLE DEVLOPMENT
(PGDSD)
Applicable to the Candidates from 2022-2023 Onwards

Overview of the programme

Managing sustainability is one of the most challenging and rapidly growing areas in both the public and private sectors. Securing economic development, social equity and justice, and environmental protection is the goal of sustainable development. Sustainable development encourages us to conserve and enhance our resource base, by gradually changing the ways in which we develop and make use of sound and sustainable technologies.This course is thus designed to fill up these gaps by imparting the knowledge in the field of Sustainable Development and Environment Management

PROGRAMME OBJECTIVES

- To nurture values of social responsibility, professionalism in the delivery of services and capacities in integrating knowledge, attitude and practice.
- To develop required competency and skills for managing the development programmes and projects.
- To empower students and make them capable of applying what has been learned in a wider context of development aspects.
- To acquire the ability to work effectively with others in a multi-cultural environment.
- Make students capable of conducting evaluations and research in the development sector.
- To prepare the students for demonstrating innovative practices in the development sector.
- To enhance employability of students in the development, research and welfare sectors.
- To provide a platform that enhances the creative, entrepreneurial and critical mind of the professionals.

- To inculcate the knowledge base on sustainable development with a view to balance our economic, environmental and social needs, allowing prosperity for now and future generations. To train students to undertake major initiatives in the efficient management of natural resources and the prevention of environmental pollution with focus on Sustainable Development.

PROGRAMME OUTCOMES

- The interdisciplinary programme prepares students to emerge as Development Professionals. The students demonstrate a comprehensive understanding of the dimensions of development. The competencies and skills identified to function in the development sector are demonstrated by the students.
- Transform into original researchers and undertake cutting-edge research and teaching for an in-depth understanding of complex environmental issues.
- Predict the environmental change and provide scientifically sound and socially acceptable solutions.

PROGRAMME SPECIFIC OUTCOMES (PGDSD)

Upon successful completion of the Post Graduate Diploma Programme in Sustainable Development (PGDSD)the students are able to:

- The program aims to train students with the objective of teaching-learning and research to promote the idea of sustainability.
- This objective shall be achieved through developing a foundation on ecological, social, economic, legal, and ethical dimensions of environmental studies on a robust interdisciplinary foundation.
- Develop as sustainability managers to guide manufacturing industries, non-government organizations (national and international), and policy-making bodies.
- Act as a catalyst to bridge the gap between science and society in achieving ecosystem restoration, conservation and management of biodiversity including the well-being of the society at large.

SCHEME OF EXAMINATIONS

(For the Candidates admitted from the academic year 2022 - 2023 onwards)

Sem	Course Code	Title of the Paper	Credit per course	Inst. Hrs/ Wk	Exam Hours	Marks CIA	U.E	Total
I	PGDSD1	Introduction to Sustainable Development	4	6	3	25	75	100
	PGDSD2	Integrated Approaches to Sustainable Development Practice	4	6	3	25	75	100
	PGDSD3	Social Hazards and Environmental Hazards	4	6	3	25	75	100
	PGDSD4	Research Methodology	4	6	3	25	75	100
	PGDSD5	Technology, Environment, and Society	4	6	3	25	75	100
II		**Total**	20					
	PGDSD6	Environmental Risk and Impact Assessment	4	6	3	25	75	100
	PGDSD7	Corporate Social Responsibility	4	6	3	25	75	100
	PGDSD8	Global Environmental Issues on Sustainable Development	4	6	3	25	75	100
	PGDSD9	Ecology: Toward A Sustainable Future	4	6	3	25	75	100
	PGDSD10	Research Project Work Dissertation Viva - Voce	4			 75 25		100
		Total	**20**		**-**	**-**		
		Grand total	**40**					**1000**

PGDSD 1 - INTRODUCTION TO SUSTAINABLE DEVELOPMENT

Course Aim:

The aim of the course is to learn the basic concepts, meaning, scope and definitions of sustainable development. To focus on Sustainable Development Goals 2030.To understand the different measurement and indicators of sustainable development.To review the various issues related to the sustainable development.

Course outcome: at the end of the course the students would be able to:

CO1	Understand the three pillars of sustainability and theories of sustainability	L1; L2
CO2	Understand the concept of sustainable development, theories of sustainability	L2; L3
CO3	Got a knowledge of sustainable development goals 2030 and their target, ranking , government initiatives for sustainable development	L4; L5
CO4	Apply measurement and indicators of sustainable development	L4; L5
CO5	Understand the contemporary issues of sustainable development	L6
L1-Remember; L2- Understand; L3- Apply; L4-Analyze; L5- Evaluate; L6 create		

Pedagogical Methods Adopted:

Lectures, Blended Learning, Flipped Learning, Online Learning, PPT, Discussion, Small Group Exercises, Brain Storming, Assignment, Seminar, Invited Talks / Guest Lectures /Webinars/ Experiential Learning, Participative Learning, Simulated Learning, Peer Group Learning, Facilitated Learning, etc.

Course Content

UNIT – I: Sustainability

Concept, Meaning, and Definitions – Importance of sustainability goals of sustainability – History of sustainability – Three Pillars of Sustainability – Theories of Sustainability: Systems Theory, Popular sustainability theory, and Ideal scientific model - Issues and Challenges relating to sustainability.

UNIT – II: Sustainable Development

Concept, meanings, scope, and definitions of sustainable development – Principle of Sustainable Development – The pillars of sustainable development – Approaches to Sustainable Development: Status Quo Approach, Community Capacity Building Approach, Industrial Sector Approach, Integrated Systems Approach, Human Development Approach, and Green Account Approach.

UNIT – III: Goals of Sustainable Development

Nature of Sustainable Development Goals – 2030 Global Agenda for Sustainable Development – Government Policies and their implications for sustainable development in India – Contribution of International Organizations and NGOs – Government Initiatives for Sustainable Development.

UNIT – IV: Measurement and Indicators of Sustainable Development

Measurement Tool for Sustainable Development: Gross National Happiness (GBH) – Human Development Index (HDI) – Ecological Footprint (EF) – and The Happy Planet Index (HPI); Indicators of Sustainable Development: Indicators for Education – Indicators for Health – Indicators for Economy – Indicators for Gender Equality – Indicators for Zero Hunger.

UNIT – V: Challenges in Sustainable Development

Diversity and Social Exclusion: Concept and implications, human development of the socio-cultural and other ethnic groups of the society; Contemporary Issues of Development – Bottom of the pyramid approach; Understanding the importance of social capital, social mobilization, social security, and population stabilization.

References

1. Agrawal, A N (1995). Indian Economy: Problems of development and planning. pune: Vishwa Prakashan.

2. Baldev Raj Nayar, Globalization and Nationalism: The Changing Balance of India's Economic Policy, 1950–2000 (New Delhi: Sage, 2001)

3. Beckman, M. (1968), Location Theory, Random House, London.

4. Bidyut Mohanty (1993) Urbanization in Developing Countries Basic Services and community Participation, Institute of Social Science, Concept Publishing House.

5. Brahmadanda, P.R. and V.R. Panchmukhi (Eds.) (2001), Development Experience in the Indian Economy: Inter-State Perspectives, Bookwell, Delhi.

6. Dholakia, R.H. (1985), Regional Disparity in Economic Growth in India, Himalaya Publishing House, Bombay.

7. Friedman, J. and W. Alonso (Eds.) (1975), Regional Policy, Readings in Theory and Application, MIT Press, Cambridge, Mass.

8. Glasson, J. (1975), An Introduction to Regional Planning:Concepts,Theory and Practice, Hutchison, London.

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Mapping with programme outcomes										
COS	**Programme outcomes**					**Programme specific outcomes**				
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	3	3	3	3	3	2	3	2
CO2	3	3	3	3	3	3	3	3	3	2
CO3	2	3	2	3	2	2	3	2	3	1
CO4	3	1	2	2	3	1	3	2	2	3
CO5	2	3	2	3	2	3	1	2	3	2

1-Low, 2-Medium, 3-Strong

PGDSD 2 --INTEGRATED APPROACHES TO SUSTAINABLE DEVELOPMENT PRACTICES

Course Aim:

This course helps students to understand integrated approaches to sustainable development. Sustainable development is more inclusive, and ownership is shared with key stakeholders. Needs, Approaches, and strategies of sustainable development are discussed in this course..

Course outcome : at the end of the course the students would be able to :

CO1	Understand the concepts of Developmental Needs of Indian Society	L1 ;L2
CO2	Apply Social Interventions for Sustainable Development	L2 ; L3
CO3	Analyze and evaluate economic interventions	L3 ; L4
CO4	Create a environmental protection measures for waste management	L6
CO5	Integrated Approaches and Model of SustainableDevelopment	L5
L1-Remember ; L2- Understand; L3- Apply; L4-Analyze; L5- Evaluate; L6 create		

Pedagogical Methods Adopted:

Lectures, Blended Learning, Flipped Learning, Online Learning, PPT, Discussion, Small Group Exercises, Brain Storming, Assignment, Seminar, Invited Talks / Guest Lectures /Webinars/ Experiential Learning, Participative Learning, Simulated Learning, Peer Group Learning, Facilitated Learning, etc.

Course content

UNIT – I: Developmental Needs of Indian Society

Poverty – Unemployment - Inadequate Housing - Unsafe Drinking Water - Deficiency of Energy Sources and Supply – Sanitation - Unscientific Waster Management - Lack of Transportation Facilities - Unskilled Work Force and Apathy towards political activities.

UNIT – II: Social Interventions for Sustainable Development

Education - Skill Development - People's Participation in decision making - women empowerment - inclusive society - human rights - tolerance to diversity - reduction of health inequality - social safety net and population control.

UNIT – III: Economic Interventions

Employment Opportunities – Industrialization – Urbanization - Model farming and storing facilities for raw agriculture products - self-help groups – entrepreneurships - people friendly banking and start up supports - Demand and supply management.

UNIT – IV: Environment Protection Measures

Environment Protection Policies - Waste Management - Pollution Control - Reduce the use - Reuse and Recycle - Sustainable Energy - Preservation of Forest and Water Resources.

UNIT – V: Integrated Approaches and Model of Sustainable Development

Rostow's stages of growth - Structural change approaches - Models of community development - Models of Sustainable Livelihood – Innovative models of sustainable development – Public PrivatePartnership – Decentralization of power.

Essential Reading

1. Ghate, P. (2007). *Indian microfinance: The challenges of rapid growth*, New Delhi: SAGE Publications.

2. Green, F.J., & Chambers, B.W. (2006). *The Politics of Participation in Sustainable Development Governance,* University of California: United Nations University Press.

3. Green, G.P., & Haines, A. (2008), *Asset Building and Community Development*, Los Angeles: Sage Publications,

4. Kumari, A. K. (2007). *Understanding Sustainable Development*, Hyderabad: ICFAI University.

5. Soubbotina, & Tatyana, P. (2004). *Beyond Economic Growth: An Introduction to Sustainable Development*, Washington DC: World Bank.

6. World Bank (2003) *World Development Report 2003: Sustainable Development in a Dynamic World: Transforming Institutions, Growth, and Quality of Life*. New York: Oxford University Press.

Recommended Reading

1. Chopra, K., &Gopal, K. (1999). *Operationalising Sustainable Development*, New Delhi: Sage Publications.

2. Hans, C.B., & Christina, V. (2008). *Sustainable Development in International and National Law*, Groningen: Maunsbach Europa Law Publishing.

3. Pierre, A., Shukla, P.R., &Prederic, G. (2000). *India's Energy: Essays on Sustainable Development*, New Delhi: Manohar Publications.

4. Rattan, V. (1997). *Women and Child Development & Sustainable Human Development*, New Delhi: S Chand & Co.

5. Sathyanarayan, B. (1998). *Social Sciences and Planning for Sustainable Development*, Bombay: Himalaya Publications.

Mapping with programme outcomes										
COS	**Programme outcomes**					**Programme specific outcomes**				
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	3	3	3	3	3	2	3	2
CO2	3	3	3	3	3	3	3	3	3	2
CO3	2	3	1	3	2	2	3	2	3	1
CO4	3	1	2	2	3	1	3	2	2	3
CO5	1	3	2	3	2	3	1	2	3	2

1-Low, 2-Medium, 3-Strong

PGDSD3- SOCIAL HAZARDS AND ENVIRONMENTAL HAZARDS

Course Aim:

The aim of the course is to learn about the basic concepts and meaning of Social Hazards and Environmental Hazards. To differentiate the Social Hazards and Environmental Hazards. To focus on the various types of Social Hazards and Environmental Hazards. To focus on the Man-Made Disasters of Environment

Course outcome : at the end of the course the students would be able to :

CO1	Understand the concept of social hazards, globalization and water scarcity and sanitation.	L1; L2
CO2	Analyze a relationship between poverty and gender	L2; L4
CO3	Understand the introduction to the environmental hazards	L3; L5
CO4	Understand the Classification of natural like cloud bust, forest fire, volcano eruption.	L4; L5
CO5	Analyses the factor that influence for manmade hazards	L5; L6
L1-Remember ; L2- Understand; L3- Apply; L4-Analyze; L5- Evaluate; L6 create		

Pedagogical Methods Adopted:

Lectures, Blended Learning, Flipped Learning, Online Learning, PPT, Discussion, Small Group Exercises, Brain Storming, Assignment, Seminar, Invited Talks / Guest Lectures /Webinars/ Experiential Learning, Participative Learning, Simulated Learning, Peer Group Learning, Facilitated Learning, etc.

Course content:

UNIT – I: Introduction to Social Hazards

Concept and Meaning of Social Hazard - Force Migration, Development Induced Displacement – Capturing the enormousness of the problem and the historical negligence – The impact on disadvantaged group and tribal population; Globalization, development and

the impact on traditional water sources – Water scarcity and Sanitation: An incomplete paradigm in public health.

UNIT – II: Poverty and Gender

Conceptualizing poverty – Social, Political, Economic and Cultural forms of deprivations – The obscene inequalities between the rich and the poor and its reproduction – Ill health and diseases, random urbanization and slums, human trafficking etc. Gender: Social construction of gender and its public and private life – Gender-specific impacts of both development and underdevelopment – Self-Help group, Women Empowerment programs: An radical approach.

UNIT – III: Introduction to Environment Hazards

Concept of Hazard, Disaster, Risk, Vulnerability, Exposure and Response – Distinction between natural hazards and anthropogenic environmental disturbances, Hybrid Hazards.

UNIT – IV: Environmental Hazards

Classification, Causes and Distribution – Geological Hazards: Earthquakes – a plate tectonic perspective and seismic zonation; Volcanoes – types and geographical distribution; Mass movement; Hydrological Hazards: Floods, Droughts, Water Contamination; Arsenic problem; Tsunami; Cyclones and Hurricanes; Cryosphere – distribution, melting of snow, ice and ice-sheets, avalanches, Glacial Lake Outburst Floods (GLOF); Atmospheric/Climate Hazards: Extreme weather events, Cloud-bursts, Landslides; Lake or Dam break/breach; Global Climate change driven environmental hazards.

UNIT – V: Man-made Hazards

Biophysical Hazards: Frost Hazards in agriculture, epidemics, wildfires; Technological Hazards: Nature and significance; Modelling of Hazards: Hill slopes and landslides; Disasters and Hazard Management: Human and ecological impacts - Risk and vulnerability analysis – Role of GIS and remote sensing in surveillance, monitoring, risk assessment, estimation of losses and planning.

References

1. Dreze, Jean, Amartya Sen and Athar Hussain. 1993. *Political Economy of Hunger*, New Delhi: Oxford University Press.

2. Bogumil, Terminski. 2015. *Development Induced Displacement and Resettlement: causes, consequences and socio-legal context*, Stuttgart, Germany: Ibidem Press.

3. Das, Madhuparna. 2011. *Water Scarcity and Gender Dynamics in a Slum in Delhi*, in *Indian Anthropologist*, Vol. 41, No. 2, pp. 91-98.

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10. Jindra, Michael. 2014. "The Dilemma of Equality and Diversity", in *Current Anthropology*, Vol. 55, No. 3. 316-334.

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15. Shearer, Allan W. and David A. Mouat. 2009. “The Uncertainties of Regional Development and Their Possible Effects on Natural Resources Management”, in Shearer et al. (ed), *Land Scenarios: The Environmental Consequences of* Development. London: CRC Press, 17-27.

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22. Yunus, Muhammad. 2008. *Creating a World without Poverty,* New York: Public Affairs.

Suggested Readings

1. Allen, S.K., Linsbauer, A., Randhawa, S.S., Huggel, C., Rana, P. and Kumari, A. 2016. Glacial lake outburst flood risk in Himachal Pradesh, India: an integrative and anticipatory approach considering current and future threats. *Natural Hazards*, 84: 1741-1763.

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3. Bartak, R., Page, D., Sandhu, C., Grischek, T., Saini, B., Mehrotra, I., Jain, C.K. and Ghosh, N.C. 2015. Application of risk-based assessment and management to riverbank filtration sites in India. *Journal of Water and Health*, **13**: 174-189.

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Mapping with programme outcomes										
COS	**Programme outcomes**					**Programme specific outcomes**				
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	3	3	3	3	3	2	3	2
CO2	3	3	3	3	3	3	3	3	3	2
CO3	2	3	1	3	2	2	3	2	3	1
CO4	3	1	2	2	3	2	3	2	2	3
CO5	2	3	2	3	2	3	1	2	3	2

1-Low, 2-Medium, 3-Strong

PGDSD4- RESEARCH METHODOLOGY

Course Aim:

The aim of the courseisto learn the meaning and definition of research. To know the social research and its importance. To realize the important concept relating to Quantitative Research Methods. To realize the important concept relating to Qualitative Research Methods. To understand the Sources and methods of Data collection. To study the application of computer in Social Work research with special reference to SPSS and Interpretation of study findings.

Course outcome: at the end of the course the students would be able to:

CO1	Define a concept of social work research	L1; L2
CO2	Understand and apply a qualitative research methods	L2 ; L3
CO3	Understand and apply a quantitative method	L2; L3
CO4	Application of statistical test	L4; L5
CO5	Create a Research report and publication	L6
L1-Remember; L2- Understand; L3- Apply; L4-Analyze; L5- Evaluate; L6 create		

Pedagogical Methods Adopted:

Lectures, Blended Learning, Flipped Learning, Online Learning, PPT, Discussion, Small Group Exercises, Brain Storming, Assignment, Seminar, Invited Talks / Guest Lectures /Webinars/ Experiential Learning, Participative Learning, Simulated Learning, Peer Group Learning, Facilitated Learning, etc.

Course Content

UNIT – I: Social Work Research

Concept, definition and objectives - Differentiate social research and social work research - Scientific enquiry - Scope and nature - basic elements of scientific method - Research

paradigms: quantitative and qualitative - Philosophical dimensions of research - Epistemological and Ontological considerations.

UNIT – II: Quantitative Research Methods

Basic Steps in quantitative research: Concepts, theoretical and operational definition, role of theory in research, variables, and measurement. Hypothesis- definition, types, sources and significance. Review of literature: importance and methods. Quantitative Research Designs: cross sectional, longitudinal, comparative, evaluative, action research, experimental. Quasi-experimental design. Single subject designs in social work, group design. Sampling: Concepts, types, sampling frame and logic. Methods and tools of Data Collection: Structured Interview, Self-completion Questionnaire, Structured Observation. Reliability and validity of tools. Data Analysis- procedure, tools and software. Advantages and disadvantages.

UNIT – III: Qualitative Research Methods

The Process of Qualitative Research. Qualitative Research Designs: Narrative, Case Study, Ethnography, Phenomenology, Grounded Theory, Hermeneutics. Methods of data collection: Observation, life histories, in-depth/unstructured interviews, group interviews and focus group discussions, case studies. Analysis of Qualitative Data: procedure, types (Thematic analysis, Content Analysis), tools and CAQDAS. Advantages and disadvantages.

UNIT – IV: Statistics for Social Work

Introduction- Scope and Limitations – Measures of Central Tendency – Descriptive statistics: Averages, Dispersion, Skewness and Kurtosis (only concept and applications, No calculations)- Inferential Statistics: Testing of Hypothesis: Chi-square test, Student's t test, ANOVA- Correlation and Regression-Factor Analysis. (Concept and application only, no calculations).

UNIT – V: Writing and Publication

Major components of a research report, Report Writing: Format – Style – Content - Qualities of a good research report – Communicability – Appendix, Bibliography, Footnotes, etc. – Rules of Report Writing - applications of APA format. Writing an article for publication. Dissemination of Study. Formulation of research proposal meaning and major steps of a research proposal -ethical considerations in research.

References:

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15. Richard, G., et al, (2003) Scaling Procedure –Issues and applications, Sage, Thousand Oaks

16. Rubin & Bobbie (1993) Research Methods for Social Work, Brooks/Cole Publishing Company, California

17. Schutt, Russel, K, (1995) Investigating Social world, Sage, London

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19. Slife, Brent, D., and Richard N. Williams (1995), What's Behind the Research: Discovering Hidden Assumptions in the Behavioral Sciences, Sage, Thousand Oaks.

20. Wilkinson & Bandarkar (1984) Methodology and Techniques of Social Research, Himalaya, Bombay

21. Young, Pauline V & Calvin F. Schmid (1979), Scientific Social Surveys and Research, Prentice Hall, New Delhi.

Mapping with programme outcomes										
COS	**Programme outcomes**					**Programme specific outcomes**				
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	3	3	3	3	3	2	3	2
CO2	3	3	3	3	3	3	3	3	3	2
CO3	2	3	2	3	2	2	3	2	3	1
CO4	3	1	2	2	3	1	3	2	2	3
CO5	1	3	2	3	2	3	1	2	3	2

1-Low, 2-Medium, 3-Strong

PGDSD5 - TECHNOLOGY, ENVIRONMENT, AND SOCIETY

Course Aim:

The aim of the course is a study of the relationship between technology and environment with the aim to understand the role and contribution of different types of economic and social mechanisms that the contemporary societies have been able to evolve to shape the technological changes in the direction of sustainable development and to achieve ecological and social justice.

Course outcome: At the end of the course the students would be able to:

CO1	Relationship of technology with environment in societies in the countries of technologically advanced and developing world	L1; L2
CO2	Understand the various types of technology and it's function	L2; L3
CO3	Developments in science and technology for sustainable development	L3;L4
CO4	Environmental policy and its environmental costs; Technology transitions and environmental technology innovations for ecological and social justice	L4; L5
CO5	Impacts of social movements on ecological and social justice in India; corporate responsibility movement;	L6
L1-Remember; L2- Understand; L3- Apply; L4-Analyze; L5- Evaluate; L6 create		

Pedagogical Methods Adopted:

Lectures, Blended Learning, Flipped Learning, Online Learning, PPT, Discussion, Small Group Exercises, Brain Storming, Assignment, Seminar, Invited Talks / Guest Lectures /Webinars/ Experiential Learning, Participative Learning, Simulated Learning, Peer Group Learning, Facilitated Learning, etc.

Course Content

UNIT – I: Relationship of technology with environment in societies in the countries of technologically advanced and developing world; Technology as a curse or blessing; Technology and human evolution; Technology as a driver of environmental and social change; Environmental justice.

UNIT – II: Types of technology; Appropriate technology; Levels of technology; Technology innovations as a solution for environmental problems; Technological impacts/innovation and technology adoption effects of environmental policies.

UNIT – III: Developments in science and technology for sustainable development; Social and environmental impacts of technologies for energy, transportation, climate change, handling of toxics, agriculture, water, forests, etc.

UNIT – IV: Environmental policy and its environmental costs; Technology transitions and environmental technology innovations for ecological and social justice; Policy tools for integrated technologies and technology innovations for sustainable development.

UNIT – V: Impacts of social movements on ecological and social justice in India; corporate responsibility movement; Appropriate technology movement, industrialization, urbanization, and globalization, Tutorials based on the theory.

Suggested Readings

1. Charles, H. 2011. Environment and Society: Human Perspectives on Environmental Issues, 5th Edition Routledge.

2. Agarwal, B. 1986. Cold Hearths and Barren Slopes: The Wood-fuel Crisis in the Third World. London: Zed Books.

3. Elliot, D. 2003. Energy, Society and Environment, Technology for a Sustainable Future, Routledge

4. Jasanoff, S. 2002. New Modernities: Reimagining Science, Technology and Development, In Environmental values.

5. Jasanoff, S. 2003. Technologies of Humility: Citizen participation in governing science, In Minerva.

6. Juma, C. and Konde, V. 2002. Technical change and sustainable development: developing country perspectives. In *American Association for the Advancement of Science (AAAS) Annual Meeting and Science Innovation Exposition, Boston, USA* (pp. 14-19).

7. Magnus, B., Davidson, D.J. (Eds). 2018. Environment and Society: Concepts and Challenges (Palgrave Studies in Environmental Sociology and Policy). Palgrave Macmillan.

8. Makofske, W.J. & Karlin, E.F. 1995. Technology and Global Environmental issues, Addison Wesley Longman, Toronto.

9. Mawdsley, E. 2004. India's middle classes and the environment. *Development and Change*, *35*:79-103.

10. Kaku, M. 2012. Physics of the Future: How Science Will Shape Human Destiny and Our Daily Lives by the Year 2100, Penguin UK

11. Paul, R., Hintz, J. & Moore, S.A. 2014. Environment and Society: A Critical Introduction, 2nd Edition, Wiley-Blackwell

12. Ruttan,V.W. 2000. Technology, Growth, and Development: An Induced Innovation Perspective, Oxford University Press, New York.

13. Visvanathan S. 2000. Environmental values, Policy and conflict in India, Carnegiecouncil.org

Mapping with programme outcomes										
COS	**Programme outcomes**					**Programme specific outcomes**				
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	3	3	3	3	3	2	3	2
CO2	3	3	3	3	3	3	3	3	3	2
CO3	1	3	1	3	2	2	3	2	3	1
CO4	3	1	2	2	3	1	3	2	2	3
CO5	2	3	2	3	2	3	1	2	3	2

1-Low, 2-Medium, 3-Strong

PGDSD6 - ENVIRONMENTAL RISK AND IMPACT ASSESSMENT

Course Aim:

The aim of this paper is an introduction to EIA, a systematic process that examines the environmental consequences of development actions, in advance. This process is firmly on the agenda of all environmental agencies as a result of introduction of legislations in various countries.

Course outcome: at the end of the course the students would be able to :

CO1	Defining environmental risk from different perspectives	L1; L2
CO2	EIA regulations in India,Risk Assessment v/s Environmental Impact Assessment	L2; L3
CO3	Establishing the Environmental baseline - Impact prediction, evaluation, and mitigation	L3;L4
CO4	Cumulative Effects Assessment. Examine the EIA draft 2020 in India.	L; L5
CO5	Issues and problems of Environment Impact Assessment in India and Global perspective	L6
L1-Remember ; L2- Understand; L3- Apply; L4-Analyze; L5- Evaluate; L6 create		

Pedagogical Methods Adopted:

Lectures, Blended Learning, Flipped Learning, Online Learning, PPT, Discussion, Small Group Exercises, Brain Storming, Assignment, Seminar, Invited Talks / Guest Lectures /Webinars/ Experiential Learning, Participative Learning, Simulated Learning, Peer Group Learning, Facilitated Learning, etc.

Course Content

UNIT-I: Introduction

Defining environmental risk from different perspectives – Principles and procedures – Nature and purpose of environmental impact assessment (EIA) – Characteristics of Big Project.

UNIT –II: Issues and Regulations of EIA

Current issues in EIA - Worldwide spread of EIA - EIA regulations in India - Risk Assessment v/s Environmental Impact Assessment - Life cycles Assessment - Strategic Environmental Assessment.

UNIT-III: Process and Methods of EIA

Stages, Scoping, Alternatives, Impact Identification, Establishing the Environmental baseline - Impact prediction, evaluation, and mitigation - Criteria and standards for assessing significant Impact–Cost-Benefit Analysis and valuation of Environmental Impacts - Public Participation, presentation and review - EIA monitoring and auditing.

UNIT-IV: Practice of EIA

Air quality Assessment; Water Impact Assessment; Social Impact Assessment; Ecological Impact Assessment; Landscape and Visual Impact Assessment; Environmental Impact of surface and underground mining of metals, minerals, and fossil fuels. Cumulative Effects Assessment. Examine the EIA draft 2020 in India.

UNIT-V: Environment Audit

Issues and problems of Environment Impact Assessment in India and Global perspective – Environmental Management Audit – Compliance Audit – Site Property Audit – Environmental Assessment Audit.

Suggested Readings

1. Blaikie, P., Cannon, T., Davis, I. and Wisner, B. 2003. At Risk: Natural Hazards, People's Vulnerability and Disasters(2nd Ed.). Abington: Routledge.

2. Brown, K. 2015. Resilience, Development and Global Change. London: Routledge

3. Glasson, J. and Therivel, R. 2013. Introduction To Environmental Impact Assessment. Routledge.

4. Morris. P. &Therivel. R., 2001, Methods of environmental impact assessment, 2 nd Ed. Spon Press, New York, With a chapter on GIS and EIA by A.R. Bachiller& G. Wood, p. 381- 401.

5. Grumbine, R.E. and Pandit, M.K., 2013. Threats from India's Himalaya dams. Science, 339:36-37.

6. Pandit, M.K. and Grumbine, R.E., 2012. Potential effects of ongoing and proposed hydropower development on terrestrial biological diversity in the Indian Himalaya. Conservation Biology, 26: 1061-1071.

7. Petts, J. 1999. Handbook Of Environmental Impact Assessment. Vol. 1, Blackwell Science.

Mapping with programme outcomes										
COS	**Programme outcomes**					**Programme specific outcomes**				
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	3	3	3	3	3	2	3	2
CO2	3	3	3	3	3	3	3	3	3	2
CO3	2	3	1	3	2	2	3	2	3	1
CO4	3	1	2	2	3	1	3	2	2	3
CO5	1	3	2	3	2	3	1	2	3	2

1-Low,2-Medium, 3-Strong

PGDSD7 - CORPORATE SOCIAL RESPONSIBILITY

Course Aim:

The aim of the course is to have a basic understanding the concepts and various parameters involved in CSR. To widen the perspectives of students with corporate transition and stakeholders' responsibilities in CSR. To provide a vivid picture of global and national practices of CSR and roles and responsibilities of HR and social work professionals.

Course outcome:At the end of the course the students would be able to :

CO1	Defining CSR, Corporate Social Responsibility	L1; L2
CO2	Understand the theories of CSR	L2;L3
CO3	Role of NGO in CSR activity	L4;L5
CO4	Understand the model of CSR	L2; L4
CO5	Create a developmental of CSR	L6
L1-Remember; L2- Understand; L3- Apply; L4-Analyze; L5- Evaluate;L6 create		

Pedagogical Methods Adopted:

Lectures, Blended Learning, Flipped Learning, Online Learning, PPT, Discussion, Small Group Exercises, Brain Storming, Assignment, Seminar, Invited Talks / Guest Lectures /Webinars/ Experiential Learning, Participative Learning, Simulated Learning, Peer Group Learning, Facilitated Learning, etc.

Course content

UNIT – I: Corporate Social Responsibility

Defining CSR – Components of CSR – Key drivers CSR – History and Evolution of CSR in the Indian and International context – CSR policies and Governance – Laws and Regulations.

UNIT – II: Theories of CSR

Theories of CSR – A.B Carroll; Wood; and stake holders' theories – The triple bottom line approach – Stakeholder engagement – Standards and Codes – SA 8000, the Global Compact, GRI, etc. as well as international standards including ISO 26000.

UNIT – III: Stakeholder Engagement

Role of NGOs in developing CSR – Interaction in a multi-stakeholder context, Community involvement, investment and evaluation; Human Resource Management – Labor security and human rights.

UNIT – IV: Implementation of CSR

Managing the responsive corporation – Model of CSR implementation; CSR strategy – organizational structure, Action planning, performance goals, timelines and targets, performance accountability, alignment of strategy and culture – CSR reporting.

UNIT – V: CSR and Development

CSR solutions to poverty – creating livelihoods through skilling persons in the community – health care under CSR – creating health care infrastructure – Sustainable sanitation solutions – Delivering better education through CSR partnerships.

References

1. Agarwal, S. (2008). *Corporate social responsibility in India*. Los Angeles: Response.

2. Baxi, C. (2005). *Corporate social responsibility: Concepts and cases: The Indian experience*. New Delhi, India: Excel Books.

3. Bhattacharya, D. *Corporate social development: A Parading shift.* New Delhi: Concept publishing company

4. Crane, A. (2008). *Corporate social responsibility: Readings and cases in a global context*. London: Routledge.

5. Visser, W. (2011). *The age of responsibility CSR 2.0 and the new DNA of business*. Chichester, West Sussex: John Wiley & Sons.

6. Visser, W. (2007). *The A to Z of corporate social responsibility a complete reference guide to concepts, codes and organisations*. Chichester, England: John Wiley & Sons.

7. Werther, W., & Chandler, D. (2006). *Strategic corporate social responsibility: Stakeholders in a global environment*. Thousand Oaks: SAGE Publications.

Mapping with programme outcomes										
COS	**Programme outcomes**					**Programme specific outcomes**				
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	3	3	3	3	3	2	3	2
CO2	3	3	3	3	3	3	3	3	3	2
CO3	2	3	1	3	2	2	3	2	3	1
CO4	3	3	2	2	3	2	3	2	2	3
CO5	2	3	2	3	2	3	2	1	3	2

1-Low, 2-Medium, 3-Strong

PGDSD8 - GLOBAL ENVIRONMENTAL ISSUES ON SUSTAINABLE DEVELOPMENT

Course Aim:

The aim of the course is to some of the important environmental issues that have become a matter of global policy making, international negotiations and trade disputes. It will also provide an understanding of the links between environment, property regimes, trade and information economies.

Course outcome: at the end of the course the students would be able to :

CO1	Understand the concept of Climate Change	L1; L2
CO2	Approaches to understanding the bio diversity	L2; L3
CO3	Understand the Global Environment Issues in Industry	L4; L5
CO4	Analyze the; policies relating to sustainable energy use through select case studies (e.g., Germany, the Netherlands, Brazil, India)	L5
CO5	International Conventions and Protocols	L6
L1-Remember; L2- Understand; L3- Apply; L4-Analyze; L5- Evaluate; L6 create		

Pedagogical Methods Adopted:

Lectures, Blended Learning, Flipped Learning, Online Learning, PPT, Discussion, Small Group Exercises, Brain Storming, Assignment, Seminar, Invited Talks / Guest Lectures /Webinars/ Experiential Learning, Participative Learning, Simulated Learning, Peer Group Learning, Facilitated Learning, etc.

Course Content:

UNIT – I: Climate Change

Key concerns in the climate change debate, scientific and political conflicts concerning their impacts on natural resources, food production etc. and the techno-economic measures being used to reduce greenhouse emissions.

UNIT – II: Biodiversity

Approaches to understanding of biodiversity – case studies of strategies for conservation and sustainable use of biological resources – case studies of conflicts between conservation and local community practices – link between conservation – local knowledge and intellectual property and issues of biopiracy.

UNIT – III: Energy

The energy sector and environment including historical studies of coal and pollution in selection countries; policies relating to sustainable energy use through select case studies (e.g., Germany, the Netherlands, Brazil, India) and their implications for global and local economies. Nuclear energy as an environmentally friendly/degrading source of energy, again through select case studies (e.g., France, England, India and China).

UNIT – IV: Global Environment Issues in Industry

Business – Environment Debate: Ozone Depletion and Environment Change - International Business - Globalization and Sustainable Development – Environmental Management Norms and Certification – International Environmental Management Systems – Kyoto Protocol (1997) – Paris Agreement (2016) – Clean Development Mechanism (CDM).

UNIT – V: International Conventions and Protocols

The treaties and conventions guiding the use of resources – Disposal of waste and international cooperation in the fields of conservation and sustainability – Regional and international frameworks for regulating trade in wastes, especially toxics – Policies and environmental activism around trade in toxic waste such as asbestos, PVCs, lead, mercury, electronic wastes and other chemicals.

Suggested Readings

1. Chasek, P.S. 2018. Global Environmental Politics. Routledge.

2. Ehrilch, P., et al. 1983. Long Term Biological consequences of Nuclear War, Stanford University.

3. Gunster, S. 2017. This changes everything: Capitalism vs the climate.

4. Howes, R., Skea, J. & Whelan, B. 1997. Clean & Competitive? Motivating Environmental Performance in Industry

5. Kareiva, P.M., McNally, B.W., McCormick, S., Miller, T. & Ruckelshaus, M. 2015. Improving global environmental management with standard corporate reporting. *Proceedings of the National Academy of Sciences*, **112**: 7375-7382.

6. Kemp, D.D. 1990. Global Environmental issues: A climatologized approach, Taylor and
7. Francis, London.

8. Klein, N. 2014. This Changes Everything: Capitalism versus the Climate. Simon & Schuster, New York.

9. Makofske, W.J. and Karlin, E.F. 1995. Technology and Global Environmental issues, Addison Wesley, Longman, Toronto.

10. Martinez-Alier, J. and Muradian, R. (eds). 2015. Handbook of Ecological Economics, Edward Elgar.

11. Russo, M. V. 1999. Environmental Management: Readings and Cases, ed., Houghton Mifflin Company, Boston, NY.

12. Smith, P. and Warr, K. 1991. Global Environmental issues, Hodder and Stoughton, London. Susskind, L. et. al. (eds). 2002. Trans-boundary Environmental Negotiation: New Approaches to Global Cooperation.

13. Toman,M. (ed). 2002. Climate change, Economics and Policy, Cambridge University Press.

14. Welford,R.2000. Corporate Environmental Management: Towards Sustainable Development, Book 3, Earthscan Publications Ltd, London.

Mapping with programme outcomes										
COS	**Programme outcomes**					**Programme specific outcomes**				
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	3	3	3	3	3	2	3	2
CO2	3	3	3	3	3	3	3	3	3	2
CO3	2	3	2	3	2	2	3	2	3	1
CO4	3	2	2	2	3	2	3	2	2	3
CO5	1	3	2	3	2	3	1	2	3	2

1-Low, 2-Medium, 3-Strong

PGDSD9 - ECOLOGY: TOWARD A SUSTAINABLE FUTURE

Course Aim:

The aim of the course is to focuses on the long-term well-being of the planet Earth and its myriad diversity of inhabitants and their habitats. This course is aimed at exploring the dilemma of the imperatives of economic development and criticality of conserving natural resources not only for the sake of preserving diversity of the living world including its varied ecosystem services, but also for the sake of inter-generational equity in the world dominated by the human enterprise.

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Course outcome: at the end of the course the students would be able to :

CO1	Evolution of Sustainable Development	L1; L2
CO2	Roots of Environmental Crisis	L2 ; L3
CO3	Restructuring Human Systems for Sustainability	L3; L4
CO4	Critical Thinking about Environmental Issues and Solutions	L5 ; L4
CO5	Toward Sustainability, New paradigms in economic and developmental planning.	L6
L1-Remember; L2- Understand; L3- Apply; L4-Analyze; L5- Evaluate; L6 create		

Pedagogical Methods Adopted:

Lectures, Blended Learning, Flipped Learning, Online Learning, PPT, Discussion, Small Group Exercises, Brain Storming, Assignment, Seminar, Invited Talks / Guest Lectures /Webinars/ Experiential Learning, Participative Learning, Simulated Learning, Peer Group Learning, Facilitated Learning, etc.

Course Content

UNIT-1: Evolution of Sustainable Development

Evolution of sustainable development as the central paradigm of addressing the Earth's environmental crisis and human poverty - United Nations and the World Commission on Environment and Development

UNIT II: Roots of Environmental Crisis

Socio-economic systems are characterized by resource overconsumption resulting in habitat destruction - Resource depletion and degradation - Cumulative failure of nations and societies to manage and restore degraded resources/ecosystems.

UNIT III: Restructuring Human Systems for Sustainability

Human population stabilization - Management of natural resources – land, water, air, and vegetation - Efficient use of resources through renewable energy and recycling, restoration of natural systems, managing resource sustainability - India's water problems - Declining per capita water availability - Irrigation problems and agriculture distress - Climate change, water availability and farmer suicides in India - Climate change and biodiversity loss, species extinctions and shrinking protected/conservation areas.

UNIT-IV: Critical Thinking about Environmental Issues and Solutions

Humans as part of the problem and also part of the solution: case studies to understand the problems and sustainable solutions under the carrying capacity framework of the environment, e.g., Vehicular pollution in Delhi, and administrative and technological instruments to solve it - Burning of agriculture waste (parali) in neighbouring states ofHaryana and Punjab - Solid waste generation in urban centers such as Delhi and their management - Landfills in the urban environment: Sewage management.

UNIT-V: Toward Sustainability

New paradigms in economic and developmental planning - Emerging technologies and innovations for a sustainable world - Indian traditional cultural practices of recycling and reuse - Ethics as the cornerstone of sustainable living - Mahatma Gandhi's' philosophy of 'greed versus need'.

References:

Locke, D. C., Myers, J., & Herr, E. L. (Eds.). (2001). The handbook of counselling. Sage Publications.

Herr, E. L. (2001). The handbook of counselling. SAGE.

Hersen, M. (2004) Comprehensive handbook of psychological assessment. Volumes I to IV.

Hohenshil, T. H., & Getz, h. (2001). The Handbook of Counselling. Hammill Institute on Disabilities. SAGE in association with the Council for Educational Diagnostic Services.

Mcmahon, M., & Patton, W. (2002). Using qualitative assessment in career counselling. International Journal for Educational and Vocational Guidance, 2(1), 51-66.

Porter, L. S., Astacio, M., &Sobong, L. C. (1997). Telephone hotline assessment and counselling of suicidal military service veterans in the USA. Journal of advanced nursing, 26(4), 716-722.

Roth, D. L., Stewart, K. E., Clay, O. J., Van der Straten, A., Karita, E., & Allen, S. (2001). Sexual practices of HIV discordant and concordant couples in Rwanda: effects of a testing and counselling programme for men. International journal of STD & AIDS, 12(3), 181-188

Suggested Readings

1. Gadgil, M.& Guha, R. 2001. Ecology and Equity: The use and abuse of nature in contemporary India, Delhi, Penguin.
2. Meadows, D.H. 2013. Club of Rome (1972) The Limits to Growth; a report for the Club of Rome's project on the predicament of mankind. Earth Island, London, UK.

3. Owen, O.S. & Chiras, D.D. 1995. Natural resource conservation: management for a sustainable future (No. Ed. 6). Prentice-Hall International, Inc.

4. Pandit, M.K., 2017. Life in the Himalaya: an ecosystem at risk. Harvard University Press; Chapter 10; pp.261-285.

5. Robinson, J. 2004. Squaring the circle? Some thoughts on the idea of sustainable development. Ecological Economics, 48:369-384.

6. Ruckelshaus, W. D. 1989. Toward a sustainable world. Scientific American, 261:166-175.

7. Tietenberg. T. 2003, Environmental and Natural Resource Economics. Pearson Education, New York.

8. Wals, A. E. (ed). 2007. Social learning towards a sustainable world: Principles, perspectives, and praxis. Wageningen Academic Pub.

9. Wright, R. T.&Nebel, B. J. 2004. Environmental science (8thEdn.). Prentice Hall. India Ltd.

Mapping with programme outcomes										
COS	**Programme outcomes**					**Programme specific outcomes**				
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	3	3	3	3	3	2	3	2
CO2	3	3	3	3	3	3	3	3	3	2
CO3	2	3	1	3	2	2	3	2	3	1
CO4	3	1	2	2	3	1	3	2	2	3
CO5	2	3	2	3	2	3	1	3	3	2

1-Low, 2-Medium, 3-Strong

PGDSD10 - RESEARCH PROJECT WORK

Description

A learner should prepare and submit a dissertation, under the guidance of a faculty The learner is to engage meaningfully in the process of problem formulation, review of literature related to the study, preparing the research proposal, choosing an appropriate research strategy and developing instruments of data collection, collecting the data, processing, analyzing and interpreting the data and preparing the research report.

The length of the research report may be between 60-75 pages and not exceed 100 pages

Objectives

- To enhance research attitude among the students.
- To enhance the students to find out the problem and equips them to carry out research in a scientific manner.
- To provide them complete knowledge about research methodology and reporting.
- To enable the students to learn the operational functions, analysis of data and interpretation of results.

Assessment/Evaluation & Viva Voce

PROJECT REPORT EVALUATION (Both Internal & External)

External – 100 Marks

i.	Plan of the project	-	15
ii.	Execution of the plan	-	45

Methodology, Data / Organisation of Materials / Hypothesis, Testing etc and **presentation of the report**

iii.	Individual Initiative	-	15
iv.	Viva Voce	-	25

TOTAL **- 100 marks**

References

1. Anderson, J., Poole, M. E., &Durston, B. H. (1970). Thesis and assignment writing. J. Wiley and Sons, Australasia.19

2. American Psychological Association. (2019). Publication Manual of the American Psychological Association, Sixth Edition in https://www.apastyle.org/manual/index