CENTRE FOR FUTURES STUDIES

UG - GENERIC ELECTIVE COURSES

S.No.	Semester	Course Code	Course Title	Nature	No. of Credits	No. of Hours
1.	IV	21CFSG04G1	Future Trends in Green Marketing and Consumerism	Generic Elective Course	3	3
2.	IV	21CFSG04G2	Environment and Gender	Generic Elective Course	3	3
3.	V	21CFSG05G1	Natural Resources Management	Generic Elective Course	3	3
4.	V	21CFSG05G2	Green Technology Concepts and Life Cycle Analysis	Generic Elective Course	3	3

FUTURE TRENDS IN GREEN MARKETING AND CONSUMERISM

(COURSE CODE - 21CFSG04G1)

Credits: 03 **Maximum Marks: 100**

CFA: 40 ESE:60

Course Objectives

The course is aimed

- To impart knowledge about Green Marketing and its importance to the environment from the perspective of consumers, businesses and other stakeholders.
- To provide sufficient knowledge of the current state of the environment resulting from past and current practices of human consumption.
- To analyze and discuss issues pertaining to the planning, development and implementation of Green Marketing strategies to enhance the positive effects of human consumption on the environment.

Learning Outcomes

The students will be able to understand:

- The importance of green marketing for sustainable development
- The various issues in green marketing management and the steps involved in the innovation process
- The effective marketing strategies to enhance the human consumption

UNIT – 1: GREEN MARKETING

Introduction to green marketing - Need for green marketing - Green marketing stakeholders - Ethics and Social Responsibility for Green Marketing - Influences and Significance of Ethics for Green Marketing

UNIT – 2: STRATEGIC GREEN PLANNING

Green Marketing planning - Incorporating green perspective into the mission statement - Integrating a green mission into objectives, strategy and marketing tactics - The interaction between strategy and the environment

UNIT – 3: THE ENVIRONMENT AND CONSUMPTION

Interaction between the environment and consumption - Influences of households on

energy consumption - Consumer decision-making process - Identify marketing actions designed to influence the supply and demand for energy - Sustainable marketing action designed to influence purchase decisions

UNIT - 4: CREATING VALUE WITH GREEN MARKETING INNOVATIONS

Product and process innovation frameworks - idea generation - preliminary assessment - business case preparation - product development - test market and validation – commercialization - follow-up - Green Marketing innovators - Green Marketing adoption

UNIT - 5: FUTURE TRENDS IN GREEN MARKETING AND SUPPLY CYCLE STRATEGIES

Implementation of Green Marketing strategies - Marketing sustainable product lines - Marketing sustainable consumption - Diagnosing the elements of sustainable supply cycles - Benefits of sustainable supply cycles - Sustainable logistics - Green Marketing future trends - Career opportunities in Green Marketing

REFERENCES

1. Esty, Daniel and Andrew Winston, (2009), Green to Gold: How Smart Companies Use Environmental Strategy to Innovate, Great value, and Build Competitive Advantage, John Wiley & Sons, New Jersey, NJ.
2. Grant, John, (2007), The Green Marketing Manifesto, John Wiley & Sons, New Jersey, NJ.
3. Polonsky, M. J. (2001), "Re-evaluating Green Marketing: A Strategic Approach," Business Horizons, 44 (5), 21-30.
4. Prakash, Aseem (2002), "Green Marketing, Public Policy, and Managerial Strategies", Business Strategy and Environment, 11 (5), 285-297.
5. Peattie, Ken, (2001), "Towards Sustainability: The Third Age of Green Marketing", Marketing Review, 2 (2), 129-146.
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8. Stephen W. McDaniel, David H. Rylander, (1993) "Strategic Green Marketing", Journal of Consumer Marketing, Vol. 10 (3), 4 —10.

ENVIRONMENT AND GENDER

(COURSE CODE - 21CFSG04G2)

Credits: 03 **Maximum Marks: 100**

CFA: 40 ESE:60

Course Objectives

The course is aimed

- To impart knowledge about the relationship between gender and environment
- To understand contemporary environmental issues and women resistance to environmental destruction
- To provide students with the opportunity to relate course content to their daily lives, future studies and careers

Learning outcomes

The students will be able to

- Propose and evaluate possible solutions to environmental problems according to gender
- Identify the men and women contribution in conservation of natural resources
- Respond creatively and reflectively to the challenges posed by these issues on gender perspective

UNIT - I: ENVIRONMENT AND GENDER

Environment – Meaning, Definition – Components - Gender and Nature - Women's Dependency on Eco System – Gender and Management of Natural Resources - Depletion of Natural Resources –Need for Sustainable Development

UNIT - II: RURAL - URBAN ENVIRONMENT AND WOMEN

Women and Rural Environment - Medical plants - Livestock Management - Gender and Agriculture - Food Security - Awareness on Drainage and Sanitation - Urbanization and increasing density - Solid and Liquid Waste - Disposal of waste - Solid waste Management - Methods - Role of women in waste management

UNIT - III: WOMEN'S RESISTANCE TO ENVIRONMENTAL DESTRUCTION

Joint Forest Management - CHIPKO Movement –Green belt Movement - Narmada Bacho – Silent Valley Movement - Tehri Dam Conflict - Women's Knowledge and Enterprise in food and Nutrition - Reclaiming Women's Environmental Rights

UNIT – IV: ENVIRONMENTAL IMPACTS ON HEALTH

Environmental Problems –Impacts on Women's Health –Physical and Mental health Issues - Heart Disease in Women – Reproductive Hazards- Remedial Measures to Improve the health status of Women

UNIT V: GENDER AND CONSERVATION OF NATURAL RESOURCES

Professional (Govt) Management Systems and Gender - Proportion of Professional Women in biodiversity management - Conservation: Botanical gardens - Gene banks - Home gardens - Community Biodiversity Conservation - Gender and Agro biodiversity - Role of Women in seed preservation - Community biodiversity projects.

REFERENCES

1. M.S.Swaminathan. (1998). "Gender Dimensions in Biodiversity Management". Konarkpublisherspvt ltd, New Delhi.
2. P.K.Rao. (2000) "Sustainable Development – Economics and Policy". Blackwell, New Delhi.
3. Promillakapur (ed). (2000). "Empowering Indian Women". Publication Division, Government of India, New Delhi.
4. RadhaKumar.(1993). "The History of Doing". Kali for Women, New Delhi.
5. Ronnie Vernooy, (Ed). (2006). "Social and gender Analysis Natural Resource Management: Learnning studies and lessons from Aisa". Sage, New Delhi.
6. Swarup, Hemlata and Rajput, Pam. (2000). Gender Dimensions of Environmental and Development Debate: The Indian Experience". In SturatS.Nagel, (ed). "India's Development and Public Policy". Ashgate, Burlington.
7. Vandana Shiva and Moser, Ingunn (eds). (1995). "Bio Politics: A Feminist and Ecological Reader on Biotechnology". Zed Books LTD, London
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10. Venkateshwara, Sandhay. (1995). "Environment, Development and the Gender Gap". Sage Publications, New Delhi.

NATURAL RESOURCES MANAGEMENT

(COURSE CODE - 21CFSG05G1)

Credits: 03 **Maximum Marks: 100**

CFA: 40 ESE:60

Course Objectives

The course is aimed to help the students

- To understand the importance of natural resources and strategies for its sustainable management.
- To Develop a fair understanding the natural resource conservation and consumption
- To learn to community and other approaches towards natural resource management

Learning Outcomes

The students will be able to

- To understand the importance of natural resources
- To develop water and land resource management strategies
- To know about the management of Bio resources
- To familiar with the human approaches towards sustainable resource management**.**

UNIT - I: INTRODUCTION

Natural Resource – Meaning - Importance of the Environment and Natural Resources - A brief account of natural resources and their utilization and conservation in India - Sustaining the Environment - Resource Conservation

UNIT – II: BIORESOURCES MANAGEMENT

Forestry - trees and their growth-products and benefits - management of pest and disease - Aquaculture – fisheries - Wildlife management - habitat requirements of wildlife - The human impact on wildlife – Sustaining wildlife - Recent trends in wildlife management

UNIT – III: LAND AND WATER RESOURCES MANAGEMENT

Locations of minerals and their importance - Soil Resources - Erosion- Land use and management issues - Range management - Conservation Practices - Water use plans - Integrated water resources management- Water allocation, markets, pricing and conservation.

UNIT- IV: ENERGY RESOURCES

Renewable and Non renewable sources of energy and their management- Fossil fuel management - coal, oil, natural gas - Solar energy – applications for rural and urban energy subsidy - Wind Energy- prospects and limitations - Wave, Tidal, Geothermal energy - Bio-energy - biodiesel production and its importance.

UNIT – V: ECONOMICS OF NATURAL RESOURCES

Systems approach in natural capital management - Fundamentals of renewable and nonrenewable resource economics - Valuation of natural resources - Environmental accounting - Decision making under uncertainty and option value – Understanding the Stakeholders approach- Subsistence groups– Governments- Academic institutions- Conflicts and competing uses

REFERENCES

1. Craig, J.R., Vaughan. D.J. & Skinner. B.J. 1996. Resources of the Earth: Origin, Use, and Environmental Impacts (2nd edition). Prentice Hall, New Jersey.
2. Freeman, A.M. 2001. Measures of value and Resources: Resources for the Future. Washington DC.
3. Freeman, A.M. 2003. Millennium Ecosystem Assessment: Conceptual Framework. Island Press.
4. Ginley, D.S. & Cahen, D. 2011. Fundamentals of Materials for Energy and Environmental Sustainability. Cambridge University Press.
5. Klee, G.A. 1991. Conservation of Natural Resources. Prentice Hall Publication.
6. Natural Resource Management: Need for 21st Century/Sunit Gupta and Mukta Gupta.1998,
7. Community-Based Natural Resource Management: Issues and Cases from SouthAsia by Ajit Menon, Praveen Singh, Esha Shah, Sharachchandra Lélé, Suhas Paranjapeand K.J.Joy, SAGE, 2007
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GREEN TECHNOLOGY CONCEPTS AND LIFE CYCLE ANALYSIS

(COURSE CODE - 21CFSG05G2)

Credits: 03 **Maximum Marks: 100**

CFA: 40 ESE: 60

Course Objectives

The course is aimed

- Enable the students to acquire the knowledge and skills needed to address concepts of sustainability and cleaner production
- To understand the concept of life cycle analysis (LCA) and the basic principles of the methods.

Learning Outcomes

The students will be able to

- Thorough understanding of the concepts of sustainability and cleaner production, and the challenges that engineers face in applying these concepts in an industrial and societal context.
- Critically analyse environmental emissions and develop simple methodologies to reduce these emissions.

UNIT- I : GREEN TECHNOLOGY

Green Technology – Concepts - Principles - System Approach - An Introduction to Sustainability Concepts and Life Cycle Analysis - Material flow and waste management - Risk and Life Cycle framework for Sustainability

UNIT - II : GREEN TECHNOLOGIES FOR ENERGY PRODUCTION

Energy – Uses - Various Technologies Available for Energy Production - Cost Comparison of a Few Typical Systems for Power Generation - Sources of Energy Production Already in Use - Alternative Methods Ready for Use

UNIT - III : GREEN TECHNOLOGIES FOR SPECIFIC APPLICATIONS

Green Buildings – Guidelines - The Energy Conservation - Building Code (ECBC) - Green Hotels and Hospitals - Green Technologies for Transport - Green Roads - The Changing Scenario in Cities - 'Green' Infrastructure for Municipal Services

UNIT – IV: LIFE CYCLE ANALYSIS

LCA Methodology - Historical Development of LCA - Goal Definition - Life Cycle Inventory - Life Cycle Impact Assessment, Life Cycle Interpretation - LCA Software tools - ISO Framework for LCA - Life Cycle Inventory and Impact Assessments; Procedure for Life Cycle Impact Assessment - Factors for Good LCA Study. Benefits and Drawbacks LCA

UNIT - V: SUSTAINABILITY

Sustainable development – Concept - underlying principle - types and growth of the idea indicators of sustainability - models of sustainable development - Sustainable Development Scenario – Global and National - Design for Sustainability - Environmental Design for Sustainability: Economic - Environmental and Social Performance Indicators

REFERENCES

1. Anastas, P.T. & Warner, J.C. 1998. Green Chemistry: Theory & Practice. Oxford University Press.
2. Arceivala, S.L. 2014. Green Technologies: For a Better Future. Mc-Graw Hill Publications.
3. Background and Future Prospects in Life cycle Assessment-Walter Klopffer, Springer, 2014.
4. Environmental Life- Cycle Assessment- Marry an Curran, McGraw Hill. 1996.
5. Green Technologies and Environmental Sustainability edited by Ritu Singh, Sanjeev Kumar
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7. Life Cycle Assessment Handbook-A Guide for Environmentally Sustainable Products-Mary Ann Curran, John Wiley & Sons, Inc. Hoboken, New Jersey, 2012.
8. Life cycle Assessment Inventory Guidelines and Principles-B.W. Vigon, C.L. Harrison and U.S.E.P.A. Risk Reduction Engineering Laboratory, Lewis Publishers 1994.
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