Course Title: Sustainable Consumption and Production

Course code: PPM 207	**No. of credits:** 2	**Total Lectures:** 23-07-0	**Learning hours:** 30

Pre-requisite course code and title (if any): None

Department: Policy and Management Studies

Course coordinator: Dr. Shruti Sharma	**Course instructor:** Dr. Anand Jaiswal

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Course type: Elective	**Course offered in:** Semester 3

Course Description:

The course intends to provide an awareness of how environmental degradation due to the production and use of goods and services could be reduced. It would provide insights into how production and consumption could be made more efficient by using fewer resources and generating less waste and pollution. It would raise awareness of how individuals and communities must collaborate to contribute to sustainable development. Further, it would educate the students on quantifying and assessing sustainability.

Course objectives:

The objectives are to:

- Impart knowledge of sustainable production and consumption, significance, indicators, and challenges with respect to achieving the SDGs
- Enable the evaluation and analysis of business models for sustainability
- Analyse green design options and processes and develop an understanding of sustainable decision making
- Perform sustainability assessments of various products and processes to understand the available tools and compare them from a sustainability perspective.
- Provide an overall understanding of sustainability accounting and financing.

Course Contents

Module	Topics	L	T	P
1.	**Introduction to Sustainable Production and Consumption:** Links with Sustainable Development Goals, Challenges, and Opportunities for sustainable production and consumption in emerging economies, Key Indicators of Sustainability. Sustainable production through the lens of social, economic, and environmental sustainability.	4	0	0
2.	**Business through sustainable production and consumption:** Models for sustainable business, Practical Case Discussions on sustainable business, Sustainable value chain, Environmental externalities	6	0	0
3.	**Green Design and Decision making:** Sustainable product design, Principles, Labels and Certification, Green Ads, and Greenwashing. Multi-Criteria Decision-making methods	4	3	0
4.	**Sustainability Assessment:** Life Cycle Assessment methods. Life Cycle Sustainability Assessment, Greenhouse Gas accounting, Detailed hands-on training on assessment and accounting tools. Circular economy-based business models-case discussions	4	4	0
5.	**Sustainable financing and accounting:** Methods and Models for Life Cycle Costing, Overview on carbon credit frameworks, Financing options for sustainable businesses.	5	0	0
	Total	**23**	**7**	**0**

Evaluation criteria:

- Test 1 – Minor Examination – 20%
- Test 2 – Group Project – 20%
- Test 3 – Individual Project – 20%
- Test 4 – Major Examination – 40%

Learning outcomes:

By the end of the course, the students should be able to:

- Build on the concept of sustainable consumption and production and discuss its role in sustainable development
- Incorporate sustainable production and consumption principles in the Businesses and Design and

Develop sustainable business models.

- Evaluate green design and improve the decision-making capabilities concerning green products.
- Perform sustainability assessment for products and processes to take better decisions.
- Evaluate financing from the perspective of sustainable development.

Pedagogical approach:

- The course will primarily be taught through class discussions, case analyses, assignments, and presentations.

Materials

Suggested readings

1. Sustainable Consumption and Production in the Proposed Sustainable Development Goals- A paper from the Inter-Agency Coordination Group (IACG) of the 10-Year Framework of Programmes on SCP (10YFP). June 2014. Available at: www.unep.org/10yfp/Portals/ 50150/10YFP%20IACG.pdf.
2. UNEP, 2015. Sustainable Consumption and Production Indicators for the Future SDGs. Available at: http://www.scpclearinghouse.org/upload/publication_and_tool/file/440.pdf
3. Simonen, Kathrina. Life cycle assessment. Routledge, 2014.
4. Kibert, C. J. (2016). Sustainable construction: green building design and delivery. John Wiley & Sons.
5. Jolliet, O., Saade-Sbeih, M., Shaked, S., Jolliet, A., & Crettaz, P. (2015). Environmental Life Cycle Assessment (1st ed.). CRC Press. https://doi.org/10.1201/b19138
6. Dhillon, B. (1989). Life cycle costing: techniques, models, and applications. Routledge.
7. Thompson, Simon. Green and sustainable finance: Principles and practice. Vol. 6. Kogan Page Publishers, 2021.

Additional Information: The course framework and modules were designed and conceptualized by Dr. Ann Francis

Student responsibilities:

Attendance, Participation in the class exercise and case discussions, to read relevant student material before attending the class.

Course Reviewer(s):

1. Dr. Rajeev Agrawal, Associate Professor, Department of Mechanical Engineering, MNIT, Jaipur.
2. Dr. Vasanth Kamath, Associate Professor, Department of Management, TA Pai Management Institute.
3. Vandana C Padmanabhan, Lead (Engg. & Technology), Community Design Agency, Mumbai.