

Semester VIII

B.A (Prog.) with Apparel Design and Construction (ADC) as Major

Category-II

DISCIPLINE SPECIFIC CORE COURSE
DSC-14-ADC: SUSTAINABILITY IN TEXTILE AND FASHION INDUSTRY

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit distribution of the course			Eligibility Criteria	Prerequisite of the course
		Lecture	Tutorial	Practical/ Practice		
Sustainability in Textile and Fashion Industry	4	3	1	0	Class XII	NIL

LEARNING OBJECTIVES

- To understand sustainability in the context of textile and fashion industry.
- To evaluate the environmental and social impact of materials.
- To explore sustainable production practices.
- To examine ethical considerations in textile and fashion.
- To assess consumer behavior and promote sustainable fashion choices.

LEARNING OUTCOMES

After completing this course, the learner will be able to:

- Define and articulate the principles of sustainability within the textile and fashion industry.
- Evaluate and compare the environmental and social impact of different textile materials.
- Apply principles of sustainable production, incorporating circular economy concepts and zero-waste design into textile and fashion manufacturing processes.
- Critically analyse and assess ethical considerations in the fashion supply chain, including fair labour practices, social responsibility, and human rights issues.
- Analyse the consumer behaviour related to sustainability and develop effective strategies for promoting sustainable fashion choices.
- Apply acquired knowledge and skills to propose and develop sustainable practices within a real-world context.

SYLLABUS OF DSC-14

THEORY
(Credits 3; Hours 45)

UNIT 1: Introduction to Sustainability in Textile and Fashion

15 Hours

The unit covers the definition and importance of sustainability, and key standards and organizations influencing sustainable practices in textiles and fashion.

- Sustainability – definition and importance, Sustainable Development Goals, pillars of sustainability
- Key terms related to sustainability - Circular economy, Life cycle assessment, Life cycle costing, water footprint, carbon footprint, Higg's Index.
- Environmental laws and regulations in India, Important International agreements on environment
- Organizations and campaigns promoting sustainability - Greenpeace, Earth Day Network, Ethical Fashion Forum, United Nations, Fair Trade, World Wildlife Fund (WWF), Zero Discharge of Hazardous Chemicals (ZDHC), Sustainable Apparel Coalition (SAC), Detox Campaign, Revolution Blue Sign etc.

UNIT 2: Sustainability Challenges in Textile and Fashion Industry

15 Hours

The unit examines environmental challenges in the textile industry, including energy use, water, pollution, waste, fast fashion, overconsumption, and ethical labour practices.

- Environmental impacts in textile and apparel supply chain: Greenhouse gas emissions, water consumption and pollution, effect on ocean ecosystem, micro-fibres in water bodies, waste accumulation (overconsumption, fast fashion), deforestation and soil degradation
- Unethical labour practices in the fashion supply chain – Sweatshops, Lack of fair labour practices (child labour, low wages, discrimination, workers' exploitation, health & safety risk).

UNIT 3: Circular Economy and Sustainability Strategies

15 Hours

The unit provides insights into adopting environmentally conscious practices within the textile and fashion industry.

- Sustainable fibres, fabrics, dyes and auxiliaries in textile supply chain.
- Sustainable design solutions – Zero waste production, multifunctional garments, designing sustainable clothing that enables: low-impact care and extended use.
- Consumer responsibility - Adoption of slow fashion and fashion brands promoting sustainability, Adoption of green laundry practices, upcycling and recycling of textiles, 7 R's of waste management: reduce, reuse, recycle, refuse, repurpose, recover, rethink
- Government sponsored Eco-labelling schemes - Blue Angel, Eco Mark (JPN), Environmental Choice (CND), White Swan (Nordic Countries), EU, Eco-Mark (India), Green Label (Singapore), ISO 14000 Certification and standards.
- Private labelling schemes - eco-tex, Oeko-Tex (textiles and clothing), Global Organic Textile Standards, Green Seal, Bra Miljval, Britta Steilmann Collection, Fair trade labelling etc.
- Fair trade and corporate social responsibility in textile and clothing manufacturing.

TUTORIALS (Credits 1; Hours 15)

Tutorial classes will involve:

- Q&A sessions/ Group discussions/ Problem Solving exercises with the Students
- Presentation of project/ research activity by students
- Any other scholastic work related to application of conceptual understanding of the subject.
- Evaluation and feedback by the teacher

Essential Readings

- Fletcher, K. (2013). *Sustainable fashion and textiles: Design journeys*. Routledge.
- Gupta, N. & Sekhri, S. (2022). *Sustainable Laundry: Challenges and Solutions*. First Edition, Eliva Press. ISBN : 978-1636484808
- Gwilt, A., & Rissanen, T. (2012). *Shaping sustainable fashion: Changing the way we make and use clothes*. Routledge.
- Pratibhan, M. Ed. (2017). *Sustainability in Fashion & Apparels (Challenges & Solutions)*. Woodhead Publishing
- Muthu, S. S., & Gardetti, M. A. (Eds.). (2020). *Sustainability in the Textile and Apparel Industries: Consumerism and Fashion Sustainability*. Springer Nature Switzerland AG. ISBN - 978-3030385316

Suggested Readings

- Asadi, J. (2021). *International Environmental Labelling Vol.3 Fashion: For All People who wish to take care of Climate Change*. Top Ten Award International Network, ISBN – 978-1777335656
- Debnath, S. (2016). *Sustainable Fibres for Fashion Industry: Volume 1* (pp. 89-108). Singapore: Springer.
- Muthu, S. S. (Ed.). (2014). *Roadmap to sustainable textiles and clothing: Eco-friendly raw materials, technologies, and processing methods*. Springer.
- Jacques, P. (2020). *Sustainability: The basics*. Routledge.
- Mahapatra N. N. (2015); *Textiles & Environment*. Woodhead Publishing

Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time