

Sem	Course code	CORE I SUSTAINABLE FASHION AND TEXTILES	Total Marks:100		Hours Per Week	Credits
I	21PBGCT101			CIA : 50	ESE :50	6

**Course Objectives:**

1. To impart knowledge on environmental management systems
2. To educate the students about the basic concepts of sustainability in textiles and fashion
3. To enable the students to learn about the various tools in assessing sustainability

**Course Outcomes (CO): On completion of the course, students should be able to**

CO 1	Identify the need for sustainable fashion and textiles	K1 – K6
CO 2	Develop knowledge on sustainable textiles	
CO 3	Analyze the environmental aspects in processing of textiles	
CO 4	Create sustainable fashion products	
CO 5	Interpret the tools in assessing sustainability	

**K1 :Remember; K2 :Understand; K3 :Apply; K4 :Analyze; K5 :Evaluate; K6 :Create**

**Unit – I :**

**Sustainability in textiles and fashion**

Sustainability - definition, introduction; necessity for sustainable products, importance of sustainable textiles; environmental and social impacts of the textile, clothing and fashion industry; environmental requirements in textiles and garment industries – general parameters and restrictions, reasons.

**Unit – II :**

**Sustainable textiles**

Sustainable textiles - different fibres and its impacts on the environment; Natural fibres - types - organic, ecotextiles, recycled and biodegradable; Sustainable natural fibres - organic cotton, organic linen, bamboo, jute, hemp, soysilk, alpaca, tencel, ramie; manmade fibres – fibres from natural polymers, synthetic polymers and inorganic materials.

**Unit – III :**

**Eco processing**

Environmental aspects of textile processing – eco processing – eco dyeing – eco finishing, green



Dr. N. RAMAN  
PRINCIPAL  
KONGU ARTS AND SCIENCE COLLEGE  
(AUTONOMOUS)  
NANJANAPURAM ERODE - 638 107

chemistry; lifecycle analysis – supply chain – traditional supply chain management and green supply chain management.

**Unit – IV :**

**Eco fashion**

Sustainable fashion – definition, importance; eco design – clean by design, sustainability in fashion retailing, fashion logistics, green consumers; eco fashion designers – responsibilities of designers in linking sustainable strategy with the process of design and production.

**Unit – V :**

**Tools for sustainability**

Tools in assessing sustainability – Life Cycle Assessment (LAC), Carbon Foot Print, Water Foot Print, Resources utilization - water, energy, chemicals; Assessment of social responsibility; New tools, standards and test methods – SteP, The Higg Index, The Sustainable Apparel Index, Dystar, Texan lab, RSC, REACH, CPSIA, GOTS, Chemical tests for heavy metals and ecological toxicity, eco-textile testing and complete biodegradable tests and composting.

**TEXT BOOK**

- |   |  |
|---|--|
| 1 | Green Apparels – A Sustainable Way of Apparel Manufacturing, Edited by Parthiban M., Sri Krishnan M.R., Kandhavadiivu.P., Woodhead Publishing India Pvt. Ltd., New Delhi (2018). |
|---|--|

**REFERENCE BOOKS**

- |   |  |
|---|--|
| 1 | Biodegradable and Sustainable Fibres, Blackburn.S., Wood Head Publishing Ltd., Cambridge (2005).     |
| 2 | Sustainable Fashion and Textiles: Design Journey, Fletcher, K., Earthscan Publications, U.K. (2008). |
| 3 | Sustainable Development in Textiles, Miraftab.M., Woodhead Publishing Ltd., Cambridge (2007).        |

**Web Resources**

- |   |   |
|---|---|
| 1 | <a href="https://nptel.ac.in/courses/109/105/109105136/">https://nptel.ac.in/courses/109/105/109105136/</a>                 |
| 2 | <a href="https://www.seidentravel.eu/pdf/SustainableFashion.pdf">https://www.seidentravel.eu/pdf/SustainableFashion.pdf</a> |

Course Designed By

Verified By

Approved By HOD



**Dr. N. RAMAN**  
**PRINCIPAL**  
**KONGU ARTS AND SCIENCE COLLEGE**  
**(AUTONOMOUS)**  
**NANJANAPURAM, ERODE - 638 107.**

Dr.N.Radhika	Dr.S.Manjula	Dr.S.Manjula
--------------	--------------	--------------

**QUESTION PAPER PATTERN**

SECTION – A	SECTION – B	SECTION – C
10 x 1 = 10 Marks (Multiple choice, Four options) Two questions from each unit	5 x 5 = 25 Marks (Either or choice) Two questions from each unit	5 x 8 = 40 Marks Question Number 16 to 19 (Either or choice) Question Number 20 is Compulsory (Case Study)

**Mapping of COs with POs and PSOs:**

PO/PSO CO	PO							PSO					
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	
CO1	S	S	S	S	S	S	S	S	S	S	S	S	M
CO2	S	S	S	S	S	S	S	S	S	S	S	S	M
CO3	S	S	S	S	S	S	S	S	M	S	S	S	S
CO4	S	S	S	S	S	S	S	S	S	S	S	S	S
CO5	S	S	S	S	S	S	S	S	S	S	S	S	M

S-Strong, M-Medium, L-Low

*Joh*  
 HEAD OF THE DEPARTMENT  
 DEPARTMENT OF COSTUME DESIGN AND FASHION  
 KONGU ARTS AND SCIENCE COLLEGE  
 (AUTONOMOUS)  
 ERODE - 638 107.



*J*  
 Dr. N. RAMAN  
 PRINCIPAL  
 KONGU ARTS AND SCIENCE COLLEGE  
 (AUTONOMOUS)  
 NANJANAPURAM, ERODE - 638 107.