

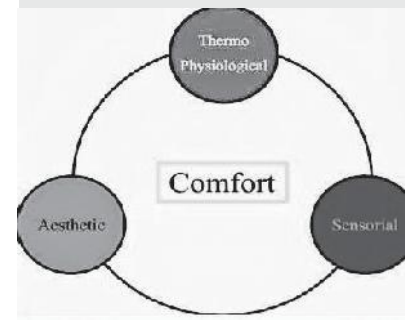
16TF401 CLOTHING COMFORT

Hours Per Week :

L	T	P	C
3	-	-	3

Total Hours :

L	T	P	WA/RA	SSH/HSH	CS	SA	S	BS
45	-	-	15	15	-	-	-	10



Course Description and Objectives:

This course offers the importance of comfort for selection of clothing and its measurement techniques and principles, physics of human comfort and related permeability tests to water and air. Objective of this course is to sensitize the required comfort properties for human clothing intern useful for designing clothing for specific applications.

Course Outcomes:

The student will be able to:

- know the clothing comfort and its types.
- describe the test methods related to thermal comfort.
- compare fabric parameters affecting tactile comfort sensation.
- understand physics of human thermal comfort.
- explain the concepts related to physiological aspects of clothing comfort.

SKILLS:

- ✓ *Analyze and correlate the testing results of FAST and KESF to comfort.*
- ✓ *Identify the tests required to understand thermal, tactile and physiological comfort.*
- ✓ *Correlate garment fitting according to comfort.*
- ✓ *Select the clothing for specific person at specific condition.*

ACTIVITIES:

- *List out comfort aspect of clothing used for swim wear/ ski wear/ military wear.*
- *Collect specifications of clothing for swim wear/ ski wear/military wear.*
- *Designing a garment by considering thermal comfort for specific conditions.*
- *Designing a garment by considering tailorability and drapability for normal wear.*
- *Survey on physiological comfort and its relation with comfort and garment design.*

UNIT - 1**L-9**

CLOTHING COMFORT : Comfort - Introduction to clothing comfort, types and definition, human clothing system, comfort perception and preferences, Need and selection of clothing, Components of clothing comfort, Clothing Comfort and wearer's attitude.

UNIT - 2**L-9**

THERMAL COMFORT : Physics of human thermal comfort - Physical phenomena affecting thermal comfort, Effect of fabric properties of heat transfer, Moisture vapor permeability, Liquid moisture permeability – Absorbency, Wettability, Waterproof, Contact angle, Moisture management; Air permeability – Factors influencing air permeability.

UNIT - 3**L-10**

TACTILE COMFORT : Human tactile responses, Fabric parameter affecting tactile comfort sensations, Fabric handle attributes for expressing tactile comfort, Assessment of fabric handle characteristics using kawabata (KES) system and Fabric Assurance by Simple Testing (FAST).

UNIT - 4**L-9**

PHYSIOLOGICAL AND FITTING COMFORT : Concept related to physiological aspects of clothing comfort, Factors affecting garment fit and comfort – Air gap thickness, Garment ventilation, Fluctuating microclimate in loose-fit garment, Garment fit and pressure sensation.

UNIT - 5**L-8**

PHYSIOLOGICAL COMFORT : Concept of physiological comfort, Neuro physiological comfort, Basis of sensory perceptions, Measurement techniques, Mechanical stimuli and thermal stimuli.

TEXT BOOKS:

1. A Das and E Alagiruamy, "Science in clothing comfort", 1st edition, Wood head Publishing Ltd., 2010.

REFERENCE BOOKS:

1. H. M. Behery, "Effect of Mechanical and Physical Properties on Fabric Hand" – Wood head Publishing Ltd., 1995.
2. Li .Y, "The science of Clothing Comfort", Textile Progress 31:1
3. R.M Laing and G.G. Sleivert, "Clothing, Textile and Human Performance", Textile Progress 31:1.