Course Title: Research Methodology and Scientific Writing  credits:3

Unit I (A) Introduction – types (exploratory and conclusive), process of research, language, philosophy, ethics, patent laws, copy right and cyber laws
(B) Sampling – statistical terms, probability and non-probability, criteria for selecting sample procedure, characteristics of good sampling procedure.
(C) Measurement – construct validity, reliability, levels of measurement

Unit II (A) Survey research-types of surveys, selecting survey method, constructing the survey, Interviews, advantages and disadvantages of survey methods
(B) Scaling, general issues
(C) Qualitative and unobtrusive measures

Unit III (A) Research Design –introduction, types
(B) Experimental Design – introduction, classifying experimental designs, factorial Designs, randomized block design, covariance design, hybrid experimental design
(C) Quasi-experimental design- non equivalent groups design, regression-discontinuity design, other quasi-experimental designs

Unit IV (A) Analysis of results conclusion validity, data presentation, descriptive statistics as per subject specialization
(B) Data presentation – tabular and graphical

Unit V (A) Scientific writing- steps for better writing, flow of information, organization of material, footnotes and references
(B) Writing of: Research paper, article, report, thesis, proposal
(C) Oral presentation

References:
1. Trochim M.K William, Research methods, Biztantra, New Delhi
Course Title: Advances in Textiles

Credits:3

Unit I: Overview of textile industry-
- Global textile scenario
- Indian textile scenario
- Present statistics
- Future projections

Unit II(A) Innovations in production and manufacture of:
- Textile fibers (elastane/spandex, nano fibers)
- Yarns
- Fabrics

(B) Exploration/analysis of current trends in textiles and fiber development focusing on new technologies and materials

(C) Innovations in dyeing and finishing

Unit III Ecological concerns and eco-friendly textile manufacture and processing

Unit IV Smart/intelligent textiles and technical textiles (agrotech, buildtech, clothtech, geotech, Indutech, medtech, mobiltech, hometech, oekotech, packtech, protech, sporttech)

Unit V Most recent researches in fibers, yarns, fabrics, dyes and finishes.

References:
1. www.teonline.com
2. www.innovationintextiles.com
3. www.wikipedia.org/textile.industry
Course title: Advances in Clothing and Fashion  

credits: 3

Unit I  Overview of clothing consumption practices:  
- global scenario  
- Indian scenario  
- present statistics  
- future projections

Unit II(A) Modern approach to wearable clothing (special pockets, connector cables, colour changing fabrics)  
(B) Functional Clothing - design of clothing, researches conducted in clothing design for situations regarding thermal or impact protection, accommodation of mobility, or facilitation of bodily functions, consideration of garments used for those with special needs.  
(C) Clothing Ergonomics – human characteristics in physical constitution and factors To design applicable clothing

Unit III Advances in Apparel Production

Unit IV 3D pattern making

Unit V Special topics in clothing- exploration of current conceptualization and research methods in the areas of clothing, apparel technology, fashion, accessories

References:  
2.  www.wikipedia.org/wiki/Clothing-technology  