

# DISCIPLINE SPECIFIC ELECTIVES (DSEs)

## Semester-V

### OPTION-I

#### HSC520D1A: (F. Sc. N/D.CLN) - NUTRITIONAL BIOCHEMISTRY

(CREDITS: THEORY-4, PRACTICAL-2)

#### THEORY (4 CREDITS)

##### Unit 1 Introduction to Biochemistry

- Definition, objectives, scope and inter-relationship between biochemistry and other Biological sciences
- Definitions, classification, structure and general properties of:
  1. Monosaccharide's-glucose, fructose, galactose, ribose
  2. Disaccharides - maltose, lactose, sucrose
  3. Polysaccharides - dextrin, starch, glycogen

##### Unit 2 Lipids

- Definitions and classification of lipids
- Composition and properties of fats
- Rancidity and oxidation of fats
- Essential and Non-essential fatty acids

##### Proteins

- Definition, classification, structure of amino acids
- Essential and non-essential amino acids
- Elementary information about primary, secondary and tertiary structure of proteins

##### Unit 3 Enzymes and Nutrient Transport

- Definition, classification
- Factors affecting enzyme activity
- Introduction to co-enzymes
- Transport of nutrients across the cell membrane:
  1. Active transport
  2. Passive transport
  3. Facilitative diffusion

##### Unit 4 Vitamins

- Classification and biochemical role of
  1. Fat soluble vitamins - A and D.
  2. Water soluble vitamins - B1, B2, niacin, pyridoxine, folic acid, B12 and C

##### Minerals

- Biological role and occurrence of inorganic elements - iron, calcium, phosphorous, Iodine, selenium and zinc

#### PRACTICAL (2 CREDITS)

1. Titration estimation of Ascorbic Acid
2. Qualitative analysis of
  - Monosaccharides
  - Disaccharides and
  - Polysaccharides
3. Qualitative analysis of proteins
4. Determination of free fatty acids in oil sample

#### RECOMMENDED READINGS

- Hawk PB, Oser BL and Summerson WH (1954). *Practical Physiological Chemistry*, Mcgraw Hill, New York.
- Sundararaj P and Siddhu A (2006). *Qualitative Tests and Quantitative Procedures in Biochemistry*. Elite Publishing House Pvt. Ltd., New Delhi.
- Lehninger A L, Nelson D L and Cox M M (2009). *Principles of Biochemistry*, 6th Ed. CBS Publishers and Distributors
- Murray R.K, Granmer D K, Mayes P A and Rodwell V W (2009). *Harper's Biochemistry*, 28th Ed, Lange Medical Book

# **DISCIPLINE SPECIFIC ELECTIVES (DSEs)**

## **Semester-V**

### **OPTION-II**

#### **HSC520D1B: COMMUNICATION FOR DEVELOPMENT**

**(CREDITS: THEORY-4, PRACTICAL-2)**

#### **THEORY (4 CREDITS)**

##### **Unit 1. Concept of Development Communication**

- Concept of development, characteristics of developing countries
- Measuring development- Indices of measuring development
- Models of Development- Dominant Paradigm, Basic Needs Model

##### **Unit 2. Development Communication and Paradigms of Development**

- Development Communication- concept
- Characteristics, differences between Communication and Development communication
- Press theories: Normative: Authoritarian and Psychological - Bullet Theory

##### **Unit 3. Development Communication and Traditional Media**

- Traditional Media: Definition and characteristics, role in development communication
- News reporting: definition of news, ingredients and qualities of news
- Radio news
- Radio and development

##### **Unit 4. Development Communication and Modern Media**

- Television: Programs; role in development communication
- Cinema: role in development communication.
- ICTs and scope in development communication.

#### **PRACTICAL (2 CREDITS)**

- Analysis of development indicators
  1. National perspective
  2. International perspective
- Analysis of media for development communication
  1. Print Media
  2. Radio or television
  3. Internet
- Designing media for development communication (Choose any available media)

#### **RECOMMENDED READINGS**

- Narula, Uma (1994) Development Communication, New Delhi, Hariand Publication
- Servaes, Jan (2008). Communication for Development and Social Change, New Delhi, Sage Publication
- Paulo Mefalopulos. Development Communication Sourcebook- Broadening the boundaries of communication, The World Bank, 2008

# DISCIPLINE SPECIFIC ELECTIVES (DSEs)

## Semester-V

### OPTION-III

#### **HSC520D1C: PROCESSES IN APPAREL DESIGN**

(CREDITS: THEORY-4, PRACTICAL-2)

#### **THEORY (4 CREDITS)**

##### **Unit 1 Introduction to pattern making**

- Importance of taking body measurements
- Importance of patterns and pattern information
- Methods of pattern making

##### **Unit 2 Preparatory steps for garment construction**

- Fabric grain-□Preparatory steps- preshrinking, straightening and truing
- Layouts for patterns- general guidelines, basic layouts- lengthwise, partial lengthwise, crosswise, double fold, open, combination fold
- Pinning, marking and cutting
- Layouts for fabrics- Unidirectional, bold and large prints, plaids, stripes and checks, various widths of fabrics

##### **Unit 3 Seams and finishing of raw edges**

- Types of seams- Plain and its finishing, flat, ridge, decorative
- Additional seam techniques: clipping, notching, grading, trimming, easing, under stitching, stay stitching, trimming a corner.
- Crossway strips-importance and applications
- Finishing of hemlines

##### **Unit 4 Garment components, Design & Fit**

- Classification and application of sleeves, cuffs, collars, necklines, plackets, pockets, yokes, trims and accessories
- Designing for different figure types
- Fit: Fitting area, fitting guidelines, fitting procedure

#### **PRACTICAL (2 CREDITS)**

1. Development and identification of seams, plackets, fasteners, edge finishing (binding, facing), pleats and gathers
2. Development of bodice, and various sleeves and collars for self
3. Construction of kameez-shalwar for self
4. Construction of pheran / kurta for self

#### **RECOMMENDED READINGS**

- *Armstrong, H.J., 2009, Pattern Making for Fashion Design, Harper Collins Publishers Inc., New York.*
- *Stamper, A.A., S. H. Sharp and L.B. Donnell, 1986, Evaluating Apparel Quality, Fairchild Publications, America*
- *Liechty, E.G., Potterberg, D.N., Rasband, J.A., 2010, Fitting and Pattern Alteration: A Multimethod Approach, Fairchild Publications, New York.*

# DISCIPLINE SPECIFIC ELECTIVES (DSEs)

## Semester-V

### OPTION-IV

#### HSC520D1D: CHILDREN WITH DISABILITIES

(CREDITS: THEORY-4, PRACTICAL-2)

#### THEORY (4 CREDITS)

##### Unit 1 Introduction to Childhood Disabilities

- Definition and models of disability
- Classifying disabilities
- Social construction of disability
- Demography of children with disabilities

##### Unit 2 Common Childhood Disabilities - I

- Identification, characteristics and etiology with reference to
  1. Locomotor disability
  2. Visual disability
  3. Auditory and speech disability

##### Unit 3 Common Childhood Disabilities - II

- Identification, characteristics and etiology with reference to
  1. Intellectual disability.
  2. Autism
  3. Learning Disability

##### Unit 4 Children with Disabilities and Society

- Families of children with disability
- Prevention and management of different disabilities
- Educational practices- Special education and inclusion
- Policy and law

#### PRACTICAL (2 CREDITS)

1. Visits to organizations working with children with disabilities
2. Observing children with disabilities in families and Institutions
3. Planning developmentally appropriate material for children with disabilities
4. Psychometric tests (Ravens Progressive matrices testing IQ of children with Disabilities)

#### RECOMMENDED READINGS

1. Chopra,G., (2012). *Early Detection of Disabilities and persons with disabilities in the community*. New Delhi: Engage publications
2. Chopra,G., (2012). *Stimulating Development of Young Children with Disabilities at Anganwadi and at Home: A Practical Guide*. New Delhi: Engage publications.
3. Sharma, N. (Ed)(2010). *The Social Ecology of Disability-Technical Series -3Lady Irwin College*. Delhi: Academic Excellence
4. Mangal, S. K. (2007).*Exceptional children: An introduction to special education*. New Delhi: Prentice Hall of India
5. Jangira, N.K.(1997) "*Special Educational Needs of Children and Young Adults: An Unfinished Agenda,*" *Education and Children with Special Needs: From Segregation to Inclusion*, Ed. Seamus Hegarty, Mithu Alur, Thousand Oaks: Sage Publications Inc.
6. Karna, G. N. (1999). *United Nations and rights of disabled persons: A study in Indian perspective*. New Delhi: A.P.H. Publishing Corporation.
7. Mani, R. (1988). *Physically handicapped in India*. Delhi: Ashish Publishing House.
8. Mastropieri, M. A., & Scruggs, T. E. (2004). *The inclusive classroom: Strategies for effective instruction*. NY: Pearson