

**Department of Home Science**  
**B.Sc. (Prog.) Home Science**  
**Semester -VIII**

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**DISCIPLINE SPECIFIC CORE COURSE**  
**DSC HP 820: STATISTICS AND DATA MANAGEMENT IN HOME SCIENCE RESEARCH**

**CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical		
Statistics and Computer Applications DSC HP 820	4	3	0	1	Studied Semester VI	Nil

**Learning Objectives**

- Introduce students to basic statistical concepts and methods.
- Develop skills to organize, analyze and interpret data.
- Provide the foundation for applying statistical methods in real-world scenarios.
- Equip students with tools for making inferences from data using probability and hypothesis testing.

**Learning Outcomes**

- Understand and apply basic statistical concepts.
- Organize and summarize data using descriptive statistics.
- Understand probability theory and apply it to various problems.
- Conduct hypothesis testing and interpret the results.

**SYLLABUS OF DSC HP 820**

**THEORY**  
**(Credits 3; Hours 45)**

**UNIT I: Introduction to Statistics and Types of Data**

**7 Hours**

In this unit the students will be able to classify data into appropriate types and levels of measurement. They will understand the distinction between descriptive and inferential statistics

- Definition of Statistics
- Types of statistics: Descriptive vs Inferential
- Types of data: Qualitative (Nominal, Ordinal) vs Quantitative (Discrete, Continuous)
- Levels of measurement: Nominal, Ordinal, Interval, Ratio
- Reliability and Validity- Meaning and Significance

## **UNIT II: Data Organization and Summarization**

**6 Hours**

In this unit the students will learn how to collect data effectively. They will be able to construct and interpret various data representations.

- Organizing data: Frequency distributions, Tables and Graphs
- Types of graphs: Histograms, Pie charts, Bar graphs, Line graphs, Frequency polygons
- Percentile and Percentile Ranks

## **UNIT III: Measures of Central Tendency and Dispersion**

**8 Hours**

In this unit students will understand the concept of central tendency and dispersion for different datasets

- Mean, Median, Mode: Properties, Application, appropriateness for data sets
- Range, Interquartile Range, Variance, Standard deviation
- Coefficient of variation
- Interpretation of variability in data

## **UNIT IV: Probability Theory and Basics of Hypothesis Testing**

**8 Hours**

In this unit the students will understand the fundamentals of probability and the structure of hypothesis testing. They will be able to state hypotheses and interpret the results of hypothesis tests.

- Introduction to Probability
- Addition and multiplication rules of probability
- Null and Alternative Hypothesis
- Type I and Type II Errors
- One-tailed vs Two-tailed tests
- Significance level ( $\alpha$ ) and confidence intervals

## **Unit 5: Hypothesis Testing using Statistical Tests**

**16 Hours**

In this unit students will perform hypothesis tests for population means and proportions using appropriate tests.

- Concept of parametric and non-parametric tests
- Z-test for single means
- One-sample and two-sample t-tests for means
- One-way ANOVA
- Correlation and Regression
- Chi-square test
- Non-Parametric tests- Spearman's correlation and Sign test
- Application of statistical procedures in Home Science
  - Tests and procedures suitable for research in the areas of home science
- Introduction to use of computers for statistical analysis - Excel, SPSS, Atlas Ti

**PRACTICAL**  
**(Credit 1; Hours 30)**

- |  |                |
|--|----------------|
| <b>1. Introduction to Statistical Software</b>   | <b>2 Hours</b> |
| <ul style="list-style-type: none"><li>• To familiarize students with tools like Excel for statistical analysis.</li><li>• Activity: Input basic data and perform basic excel functions on it.</li></ul>                                |                |
| <b>2. Construction of Frequency Distributions</b>  | <b>4 Hours</b> |
| <ul style="list-style-type: none"><li>• Organisation of raw data into frequency tables.</li><li>• Activity: Use a given dataset to create grouped and ungrouped frequency tables.</li></ul>  |                |
| <b>3. Diagrammatic Representation of Data</b>  | <b>6 Hours</b> |
| <ul style="list-style-type: none"><li>• To visualize data using bar charts, pie charts, line graphs, histograms and frequency polygons.</li><li>• Activity: Plot diagrams for a dataset and interpret the results.</li></ul>           |                |
| <b>4. Measures of Central Tendency</b>   | <b>4 Hours</b> |
| <ul style="list-style-type: none"><li>• Calculation of mean, median, and mode for grouped and ungrouped data using Excel.</li><li>• Activity: Compare central tendencies of two datasets.</li></ul>                                    |                |
| <b>5. Measures of Dispersion</b>   | <b>4 Hours</b> |
| <ul style="list-style-type: none"><li>• Computation of range, variance, and standard deviation using Excel.</li><li>• Activity: Analyze the spread of two different datasets.</li></ul>  |                |
| <b>6. Area under the curve</b>   | <b>2 Hours</b> |
| <ul style="list-style-type: none"><li>• Calculation of the area under the curve using standard scores.</li></ul>   |                |
| <b>7. Correlation Analysis</b>   | <b>2 Hours</b> |
| <ul style="list-style-type: none"><li>• Measurement of the strength of relationships between two variables.</li><li>• Activity: Calculate Pearson's and Spearman's correlation coefficients.</li></ul>                                 |                |
| <b>8. Hypothesis Testing (One-sample and two sample t-test)</b>  | <b>2 Hours</b> |
| <ul style="list-style-type: none"><li>• To perform a one-sample and two sample t-test and test the significance.</li><li>• Activity: Test a hypothesis about the mean of a single dataset, independent and dependent groups.</li></ul> |                |
| <b>9. Chi-Square Test for Independence</b>   | <b>2 Hours</b> |
| <ul style="list-style-type: none"><li>• To test the independence between categorical variables.</li><li>• Activity: Analyze a contingency table and interpret the test result.</li></ul>   |                |

## **10. Interpretation and Presentation of results**

**2 Hours**

- Compilation of results from statistical analysis into a report/file including visualizations and interpretations.

### **Essential Readings**

- Minium, E. W., King, B. M., (2003). Statistical Reasoning for Psychology and Education. 4<sup>th</sup> Edition, John Wiley and Sons, New York
- Rastogi Veer Bala, (2009). Fundamentals of Biostatistics, 2nd Edition. Ane Books Pvt. Ltd. New Delhi
- Gupta, S.P. (2021) Statistical Methods, 46<sup>th</sup> Edition. Sultan Chand and Sons. New Delhi.
- Agresti, A., Christine Franklin, C. and Klingenberg, B. (2017). Statistics: The Art and Science of Learning from Data, Pearson, Boston

### **Suggested Readings**

- Schmuller, J. (2016). Statistical Analysis with Excel for Dummies, 5th Edition, New York, USA.
- Gupta, S. C. and Kapoor, V. K. (2020). Fundamentals of Mathematical Statistics, 12<sup>th</sup> Edition., Sultan Chand and Sons. New Delhi.
- Ross, Sheldon M. (2010). Introductory Statistics, 3rd Edition, Academic Press.
- Derek Rowntree, (2018). Statistics Without Tears- An Introduction for Non-Mathematicians, Penguin, UK.

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

**DISCIPLINE SPECIFIC ELECTIVE COURSE**  
**DSE HP 8A1: DEVELOPMENTAL ASSESSMENT AND GUIDANCE**

**CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical / Practice		
<b>Developmental Assessment and Guidance DSE HP 8A1</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Studied Semester VII</b>	<b>Nil</b>

**Learning Objectives**

- The main objective of the course is to understand what is developmental delay and it's relationship with milestones. Also, various assessment tools and guidance interventions for children and families will be studied.

**Learning Outcomes**

The students will be able to:

- Understand what is developmental delay and it's relationship with developmental milestones.
- Develop skills to use formal and informal tools and techniques for developmental assessment
- Understand developmental guidance and interventions

**SYLLABUS OF DSE HP 8A1**

**THEORY**  
**(Credits 2; Hours 30)**

**UNIT I: Understanding Developmental Milestones and linking to Developmental delay** **8 Hours**

This unit provides a foundational understanding of developmental stages and key milestones and relationship to developmental delay

- Children with developmental disability
- Understanding developmental Milestones to track Age-appropriate developmental expectations from birth to adolescence.
- Disability milestones- integrating disability and development
- Factors affecting development of children with disability- poverty, stigma, discrimination, low opportunities for education, responsive parenting, violence, access

to services

## **UNIT II: Tools and Techniques for Developmental Assessment**

**10 Hours**

This unit familiarizes students with methods and tools for assessing child development.

- Overview of standardized assessment instruments (e.g., BSID, DASII, Ages and Stages Questionnaires, Wechsler Scales, RPM).
- Using Informal Methods like Checklists, observations, interviews, and anecdotal records.
- Selecting appropriate tools based on the child's age and context.
- Interpreting assessment outcomes and identifying developmental concerns.
- Ethical Considerations- Ensuring confidentiality, cultural sensitivity, and informed consent in assessments.

## **UNIT III: Developmental Guidance and Interventions**

**12 Hours**

This unit equips students with the knowledge to provide guidance and to design interventions for optimal development.

- Parental Guidance for supporting parents in understanding and fostering developmental milestones.
- Importance and approaches to Early Intervention for children with developmental delays.
- Strategies for including children with special needs into mainstream settings.
- Collaborating with educators, health professionals, and social workers and exploring community support systems

### **PRACTICAL (Credit 2; Hours 60)**

1. Observational study of children with disabilities in their life setting
2. Study tests, assessment protocols and developmental norms- Ages & Stages Questionnaire, DASII, DAT, WISC, WPPSI, PORTAGE, Disability Screening Schedule, Ravens Progressive Matrices, Seguin form board
3. Specific Learning Disability Screening Questionnaire by Dr. Uday Kumar Sinha (English) any other
4. Autism - M-chat
5. Social emotional assessment- Self concept inventory, Vineland Social Maturity Scale, DAS scale, CAT, TAT, HOME inventory, any other
6. Workshops and visits for understanding Early Intervention services
7. Participate in or organize a workshop focused on developing skills in guidance and counseling for children and their caregivers. Include activities such as reflective listening and building trust
8. Short placements in organisations working with children with disability

### **Essential Readings**

- Bayley, N. (2005). *Bayley Scales of Infant and Toddler Development*. The Psychological Corporation.
- Beaty, J. J. (2013). *Observing development of the young child* (8th ed.). Pearson.
- Capuzzi, D., & Stauffer, M. D. (2016). *Foundations of counseling and psychotherapy: Evidence-based practices for a diverse society* (2nd ed.). Pearson.
- Chopra, G. (2024). *Parenting Support for Parents of Children with Disabilities*. UNICEF.

- Greenspan, S. I., & Meisels, S. J. (1996). *The Early Intervention Guidebook for Families and Professionals*. Brookes Publishing.

### **Suggested Readings**

- Guralnick, M. J. (2011). *The Developmental Systems Approach to Early Intervention*. Brookes Publishing.
- Kinra, A.K. (2008). *Guidance and counselling*. New Delhi: Dolley Kindersley.
- Kline, P. (2000) *The Hand book of Psychological testing*, 2nd edition, Routledge Taylor and Francis Group
- Rogoff, B. (2003). *The Cultural Nature of Human Development*. Oxford University Press.
- Sheridan, M. (2014). *From Birth to Five Years: Children's Developmental Progress*. Routledge.
- Sparrow, S. S., Cicchetti, D. V., & Balla, D. A. (2005). *Vineland Adaptive Behavior Scales*. Pearson.

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**DISCIPLINE SPECIFIC ELECTIVE COURSE**  
**DSE HP 8A2: CHILD RIGHTS IN INDIA**

**CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical/ Practice		
<b>Child Rights In India DSE HP 8A2</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Studied Semester VII</b>	<b>Nil</b>

**Learning Objectives**

- To understand the meaning of child rights and rights-based approach to providing services and programmes for children
- To identify groups of children who are in need of care and protection and situational analysis of the child in India
- To acquire knowledge of constitutional and legal provisions in India for care and protection of the children.

**Learning Outcomes**

- Students will acquire a conceptual understanding of child rights.
- The students will acquire knowledge of vulnerable groups of children in India and status of children in India.
- Students will learn about constitutional and legal provisions in India for care and protection of the children.

**SYLLABUS OF DSE HP 8A2**

**THEORY**  
**(Credits 2; Hours:30)**

**UNIT I: Understanding Child Rights**

**8 Hours**

- Definitions of a child
- Concept and models of child rights
- Reasons of exclusion
- Situational analysis of children in India
- Understanding Child Rights from Indian perspective
- Child protection

## **UNIT II: Children in Need of Care and Protection**

**12 Hours**

- Street and working children
- Child-trafficking and child abuse
- Abandoned and destitute children
- Children in conflict with law
- Others- minorities, children of sex workers, prisoners, Children in conflict zones

## **UNIT III: Legislative and Social Protection for Children**

**10 Hours**

- Constitutional provisions for children in India & National policies, programs
- Laws for children (CLPRA, POCSO, HAMA, GAWA, JJ acts)
- UNCRC, NCPCR
- Role of family, community, state and child herself in protecting rights
- Services for children-institutional and non-institutional

### **PRACTICAL (Credit 2; Hours: 60)**

1. Visits to institutions working for vulnerable children.
2. Survey on child rights awareness
3. Exploring and analysis of child rights issues through audio-visual sources and workshops.
4. Interaction with children in difficult circumstances.
5. Preparing stories and awareness materials on child rights
6. Case profile of a child in difficult circumstances.
7. Programme planning

### **Essential Readings**

- Bajpai, A. (2006). Child rights in India: Law, policy and practice. New Delhi: Oxford University Press.
- Chopra, G. (2015). Child rights in India: Challenges and Social Action. New Delhi: Springer.
- Chopra, G. (2021). Child Protection in India: From Silos to System. S. Puri, 2021 (ed.) *Children in India: Opportunities and challenges*. Nova Science Publishers, Inc.
- Ministry of Women and Child Development, (2013). *National Policy for Children, 2013*. Gazette of India, Part 1, Section 1. Govt of India.

### **Suggested Readings**

- Bhargava, V. (2005). Adoption in India: Policies and experiences. New Delhi: Sage.
- Indian Journal of Social Work
- Virani, P. (2000). Bitter chocolate: Child Sexual abuse in India. New Delhi: Penguin
- Weiner, M., Burra, N., Bajpai, A. (2007). Born unfree: Child labour, Education, and the state in India. New Delhi: Oxford University Press.

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**DISCIPLINE SPECIFIC ELECTIVE COURSE**  
**DSE HP 8A3: AGING AND ELDERLY**

**CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical		
<b>Aging and Elderly DSEHP 8A3</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Studied in Semester VII</b>	<b>Nil</b>

**Learning Objectives**

- To review the physical, cognitive, and social changes associated with aging.
- To examine the dimensions of well-being and mental health among the elderly.
- To evaluate the impact of aging on social relationships, work, and retirement.
- To explore the ethical, social, and policy issues related to aging populations.

**Learning Outcomes**

The students will be able to:

- Identify and analyze the physical, cognitive, and social changes associated with aging
- Recognise the impact of aging on social relationships, work, and retirement.
- Describe the ethical, social, and policy issues related to aging populations.

**THEORY**  
**(Credits 2; Hours 30)**

**UNIT I: Understanding Aging**

**10 Hours**

This unit will introduce key concepts to understand the dimensions of aging with emphasis on the elderly in India

- Perspectives on Aging: Developmental, Social, Cultural and Medical approaches
- Ageism, Cultural perspectives and Longevity
- Demographic Profile of the Elderly in India: Indicators and Implications
- Aging in the Digital World

**UNIT II: Psychosocial Dimensions of Aging**

**10 Hours**

This unit reviews the developmental changes among the elderly and explores the challenges to health and well-being

- Changing physical, social and cognitive capacities and processes

- Work, career transitions and retirement
- Health, wellbeing and quality of life
- Coping with Loss: Loneliness, grief, and depression

### **UNIT III: Ethical and Legal Issues in Aging**

**10 Hours**

This unit assesses the social, legal and ethical issues in the care of the elderly along with the available provisions India

- Systems of Care: Familial and extra familial support
- Constitutional provisions and legislation; Policies and programmes
- Safety, neglect, violence and abuse of the elderly
- Palliative and end-of-life care

### **PRACTICAL (Credit 2; Hours: 60)**

1. To explore the psycho-social constructs of aging from older adults across diverse settings.
2. Interview of young adults and families to understand views on care of the elderly
3. Case profile of an older Adult: Managing everyday life, health and social interactions; Retirement and life transitions; Routines and recreational activities of the elderly
4. Visits to organizations working with the elderly
5. To visit an old age facility/retirement home to understand the provisions and services.
6. Survey of retirement policies among govt and private sector in India (retirement age, benefits, pension and re-employment)
7. Psychometric tests: World Health Organization Quality of Life – Older Adults (WHOQOL-OLD), Life Satisfaction Index (LSI)
8. Documentation of articles and social media posts on elderly

### **Essential Readings**

- Boll, T., Ferring, D., & Valsiner, J. (Eds.). (2018). *Cultures of care in aging*. IAP Information Age Publishing.
- Cavanaugh, C. J., & Fields, F. B. (2015). *Adult development and aging* (7th ed.). Cengage Learning.
- Gawande, A. (2014). *Being mortal: Ageing, illness, medicine and what matters in the end*. New York, NY: Henry, Holt and Company.
- Shankardass, M. K. (2020) (Ed.). *Aging issues and responses in India*. New Delhi: Springer
- Srivastava, S., & Sudha, K. R. (2016). *Textbook of human development*. S. Chand & Company.

### **Suggested Readings**

- Austrian, S. S. (2013). *Developmental theories through the life cycle*. Columbia University Press.
- Bjorklund, B. R. (2015). *The journey of adulthood* (8th ed.). Pearson.
- Feldman, R. S. (1997). *Development across the life span*. Prentice Hall.
- Giridhar, G., Sathyanarayana, K. M., Kumar, S., James, K. S., & Alam, M. (Eds.). (2014). *Population Ageing in India*. Cambridge: Cambridge University Press.
- Kerschner, H. K., & Silverstein, N. M. (2018). *Introduction to senior transportation:*

- Enhancing community mobility and transportation services*. Routledge
- Sasser, J. R., & Moody, H. R. (2018). *Gerontology: The basics*. Routledge.
  - Steinberg, L., & Bornstein, M. H. (2010). *Life span development: Infancy through adulthood*. Wadsworth/Cengage Learning.

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**DISCIPLINE SPECIFIC ELECTIVE COURSE**  
**DSE HP 8B1: FOOD PROCESSING**

**CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical/ Practice		
Food Processing DSE HP 8B1	4	2	0	2	Studied Semester VII	Studied Food Science DSE HP 3B1

**Learning Objectives**

- To provide a foundational understanding of food processing, including its definition, classification, and the importance of primary, secondary, and tertiary processing methods.
- To gain knowledge of various methods of food processing and preservation across different food categories such as fruits, vegetables, milk, cereals, fats, oils, and meat, with emphasis on their principles and applications.
- To equip students with practical skills in food processing and preservation techniques, and understanding food processing operations through industry visits.

**Learning Outcomes**

- Students will acquire understanding of food processing methods enabling them to produce safe, nutritious, and shelf-stable food products.
- Students will be able to evaluate, compare and critically assess the application of different processing methods for specific food products in industrial applications.
- Students will develop hands-on proficiency in processing diverse food products for small scale enterprises.

**SYLLABUS OF DSE HP 8B1**

**THEORY**  
**(Credits 2; Hours 30)**

**UNIT I: Introduction to Food Processing**

**6 Hours**

This unit provides an introduction to food processing, its definition and types

- Definition, and classification of food processing including primary, secondary and tertiary food processing.
- Significance, scope, present scenario and future prospects of food processing in India

## UNIT II: Methods of Food Processing or Plant-based Foods

12 Hours

This unit provides knowledge of food processing methods used to process plant-based food products

Primary, secondary, tertiary and minimal processing methods for

- **Fruits and vegetable processing-** Drying, dehydration, canning, sterilization, processing with salt and sugar
- **Processing of cereals-** milling, parboiling, malting and processing of breakfast cereals (flaked, puffed, expanded products)
- **Processing of fats and oils-** Extraction, refining-degumming, neutralization, bleaching deodorization. Hydrogenation, winterizing and fractionation, interesterification, plasticizing and tempering.

## UNIT III: Methods of Processing for Animal Sourced Food Products

12 Hours

This unit provides knowledge of food processing methods used to process animal-sourced food products

- **Milk and milk products processing** – Pasteurization, homogenization, sterilization, production of important milk products
- **Meat, fish, poultry and egg processing-** Processing of meat products: dried, smoked, salted products and sausages. Poultry processing and poultry products. Egg processing and preservation.

### PRACTICAL (Credits 2; Hours 60)

1. Identification of the food items on the basis of primary, tertiary and secondary processing. **4 Hours**
2. Processing of fruits and vegetables by salt/sugar **12 Hours**
3. Processing of by fruits and vegetables drying/dehydration and freezing **16 Hours**
4. Processing of cereals (malting/flaking/puffing/ value added cereal or millet products) **8 Hours**
5. Demonstration of processing of milk and milk products (curd/butter/buttermilk/ghee processing) **8 Hours**
6. Evaluation of preserved meat/poultry products. **4 Hours**
7. Visit to food processing industry **8 Hours**

### Essential Readings

- Manay, N.S., & Shadaksharaswamy, M. (2008). *Food-Facts and Principles, Third Edition*. New Age International (P) Ltd. Publishers, New Delhi.
- Mathur, P. (2018). *Food Safety and Quality Control*. Orient BlackSwan Pvt. Ltd., Hyderabad.
- Potter, N.N., & Hotchkiss, H.J. (1996). *Food Science, Fifth Edition*. CBS Publication, New Delhi.
- Srilakshmi, B. (2014). *Food Science, 6th Edition*. New Age International Ltd., Delhi.
- Suri, S., & Malhotra, A. (2014). *Food Science Nutrition and Safety*. Delhi: Pearson India Ltd.

### Suggested Readings

- Raina, U., Kashyap, S., Narula, V., Thomas, S., Suvira, V.S., & Chopra, S. (2010). *Basic Food Preparation: A Complete Manual, Fourth Edition*. Orient Black Swan Ltd.
- Sethi, M., & Rao, E.S. (2011). *Food science- Experiments and applications, Second Edition*. CBSpublishers & Distributors Pvt Ltd.
- Sivashankar, B. (2002). *Food Processing and Preservation*. PHI learning Pvt. Ltd.

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### DISCIPLINE SPECIFIC ELECTIVE COURSE DSE HP 8B2: FOOD SERVICE MANAGEMENT

#### CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course(if any)
		Lecture	Tutorial	Practical/ Practice		
Food Service Management DSE HP 8B2	4	2	0	2	Studied Semester 7	Studied Foundation of Food Science and Nutrition DSC HP 205

#### Learning Objectives

- To understand the basic concepts of Food Service Management.
- To develop skills in menu planning and quantity food production for various food service organizations within specific budgets.

#### Learning Outcomes

- Acquire fundamental knowledge of menu planning and resource management in a food service establishment.
- Develop understanding of recipe standardization and quantity food production.
- Develop insight for maintaining hygiene and food safety at institutional kitchens.

#### SYLLABUS OF DSE HP 8B2



**(Credits 2; Hours 30)**

**THEORY**

**UNIT I: Basic Concepts of Food Service System**

**4 Hours**

In this unit, the students will be able to understand the basics of management and food service for a food establishment.

- Principles of Management
- Functions of Management
- Types of food service systems

## **UNIT II: Food Production Cycle**

**12 Hours**

In this unit, the students will learn the components of food production cycle to run a food service unit.

- Menu Planning: Importance of menu, Factors affecting menu planning, Types of menu
- Food purchase and receiving
- Storage
- Quantity food production: Standardization of recipes, Recipe adjustment and portion control, Techniques of quantity food production
- Food service
- Food safety in the food production process

## **UNIT III: Management of Resources in a Food Service Establishment**

**11 Hours**

In this unit, students will understand the fundamentals of space, personnel and financial management.

- Layout planning and Equipment: Types of kitchen areas, Flow of work, Factors affecting selection of equipment
- Personnel Management: Functions of a personnel manager, Components of staffing system: Recruitment, Selection, Orientation, Appraisal, Absenteeism, Motivation theories and application
- Financial Management: Importance, Budgets and budgeting process, Cost concepts

## **UNIT IV: Establishing a Food Service Unit**

**3 Hours**

In this unit, the students will understand how to set up a food service unit.

- Identifying resources, Developing project plan, Determining investments
- Regulations to set up a food service business

## **PRACTICAL (Credit 2; Hours 60)**

### **1. Introduction to Food Management**

**4 Hours**

- Market survey for food items available in retail, wholesale and online markets

### **2. Quantity Food Production**

**32 Hours**

- Standardization of 2 healthy recipes
- Scaling up to larger amounts
- Setting up a food stall

### **3. Planning Cyclic Menus**

**20 Hours**

- Planning cyclic menus for nursery school
- Planning nutritious freshly cooked lunch for MNC employees
- Planning cyclic menus for college canteens/hostel

#### **4. Promoting Good Hygiene and Sanitation Practices**

**4 Hours**

- Developing tools to promote good hygiene practices at food service units

#### **Essential Readings**

- Payne- Palacio J and Theis M (2011) Food service Management: Principles and Practices. 12th ed. Pearson Education., Chapter 11, pg 308-334
- Sethi M (2005) Institutional Food Management, New Age International Publishers, chapter 6, pg 153-165
- West B and Wood L (1988) Food Service in Institutions 6th Edition, Chapter 9, Pg 311-367.
- Desai V (2011) The Dynamics of Entrepreneurial Development and Management, Himalya Publishing House Pvt. Ltd., Mumbai. Chapter 45-48, pg 612-685

#### **Suggested Readings**

- Knight J B and Kotschevar LH (2000) Quantity Food Production Planning & Management 3rd edition, John Wiley & Sons.
- Kotas R and Jayawardardene C (1994) Profitable Food and Beverage Management, Hodder & Stoughton Publications.
- Roday S (2003) Food Hygiene and Sanitation, Tata McGraw Hill Publication Ltd.
- Taneja S and Gupta SL (2001) Entrepreneurship Development. Galgotia Publishing
- Dessler Gary (2007) Human Resource Management 11th edition Prentice Hall New Jersey
- Basic Food Safety Training Manual Catering ([http://www.fssai.gov.in/home/capacity building/e-library/training-manual.html](http://www.fssai.gov.in/home/capacity_building/e-library/training-manual.html))
- Street Food Vendor Training on Food Safety and Hygiene ([http://www.fssai.gov.in/home/capacity building/e-library/training-manual.html](http://www.fssai.gov.in/home/capacity_building/e-library/training-manual.html))

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

**DISCIPLINE SPECIFIC ELECTIVE COURSE**  
**DSE HP 8B3: NUTRITION FOR SPORTS PERFORMANCE**

**CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course title & Code	Credits	Credit distribution of the course			Eligibility Criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical/ Practice		
Nutrition for Sports Performance DSE HP 8B3	4	2	0	2	Studied Semester VII	Studied Nutritional Biochemistry DSE HP 5B1

**Learning Objectives**

- To learn the concept of fitness, role of macronutrient and micronutrients in enhancing sports performance, application of nutrition in training, competition and recovery period
- Gain knowledge regarding general metabolic principles, bioenergetic for the working muscle during exercise.
- To understand the hydration guidelines associated with safety and performance of the athletes

**Learning Outcomes**

Students will be able to

- Understand concepts of fitness, its assessment and different approaches to improve fitness
- Exhibit an understanding of the role of nutrients in performance enhancement in Sports, and strategize its application in training, competition and recovery period
- Effectively plan hydration strategies and sports groups -specific diets for athletes for recreational and competitive athletes in different phases of training and competition.

**SYLLABUS OF DSE HP 8B3**

**THEORY**  
**(Credits 2; Hours 30)**

**UNIT 1- Overview of Physical Fitness and Health-related Benefits**

**6 Hours**

In this Unit, students will be acquainted with the basic concepts of health-related physical fitness

- Introduction to physical activity, physical fitness and exercise
- Assessment of health and skill related fitness
- Benefits of physical fitness and approaches to improve Physical fitness

- Assessment of Energy Expenditure in Sports: Energy Balance and Energy Availability

## **UNIT II: Sports Nutrition**

**6 Hours**

This Unit deals with the importance of fuel, nutrients and hydration for sports performance.

- Introduction to Sports Nutrition: Integrated Approach
- Fuel systems and continuum of energy
- Macronutrient recommendations for sports performance
- Micronutrient requirements for sports performance
- Hydration status- assessment and importance
- Fluid replacement guidelines and monitoring

## **UNIT III: Nutrition for Sports Performance**

**12 Hours**

This Unit deals with the nutritional inputs during various phases of training and competition and dietary supplements

- Nutrition for Pre competition, during and post competition
- Overview of Dietary Supplements and Ergogenic Aids

## **UNIT IV Nutrition for Special Conditions in Sports**

**6 Hours**

In this Unit, nutrition for special conditions will be dealt with and an overview of emerging trends in research and practice of Sports Nutrition will be given.

- Specific nutrition for weight category sports and sports requiring aesthetics: Addressing eating disorders and disordered eating in athletes.
- Women athletes, adolescent athletes, athletes with diabetes, vegetarian athletes, vegetarian athletes, RED-S, Special Olympics and Paralympics
- An overview of emerging Trends and Research in Sports Nutrition, ethics and Professional Practice

## **PRACTICAL (Credits 2; Hours 60)**

- |   |                 |
|---|-----------------|
| 1. PARQ assessment and interpretation   | <b>4 Hours</b>  |
| 2. Assessment of health related physical fitness  | <b>4 Hours</b>  |
| 3. Planning a day's diet for a fitness trainee  | <b>4 Hours</b>  |
| 4. Planning a training day's diet for athletes training for ultra-endurance, endurance, strength events, team events and skill based events | <b>20 Hours</b> |
| 5. Planning/monitoring a weight loss diet during the training phase   | <b>4 Hours</b>  |
| 6. Planning a diet for carbohydrate loading for an ultra-endurance athletes   | <b>6 Hours</b>  |
| 7. Planning a pre-, and post-competition meal for 5 main sports groups  | <b>6 Hours</b>  |
| 8. Planning hydration strategies before, during and after an event  | <b>4 Hours</b>  |
| 9. Survey of sports supplements   | <b>4 Hours</b>  |
| 10. Planning an education module for special groups of athletes : Diabetes, special needs   | <b>4 Hours</b>  |

## Essential Readings

- Burke, L.M. and Deakin, V. (2002) *Clinical Sports Nutrition, 2nd edition*, Publishers McGraw Hill.
- Hickson, J.F. and Wolinsky, I. (1997) *Nutrition for exercise and Sport. 2nd ed.* CRC Press,
- ILSI, NIN & SAI. (2017) *Nutritional recommendations for high performance athletes 2<sup>nd</sup> ed.*
- Lal, P.R. (2009). *Handbook of Sports Nutrition*. Friend's Publication, Delhi, India.
- Mahan, L. K. and Escott Stump, S. (2016) *Krause's Food & Nutrition Therapy. 15th ed.* Saunders-Elsevier.

## Suggested Readings

- Austin, K. G. and Seebhar, B. (2021) *Performance Nutrition for Athletes*, Human Kinetics
- Bushman, B. (2017) *ACSM's Complete Guide to Fitness & Health 2nd Edition*, Published by ACSM.
- Benardo, D. (2011) *Advanced Sports Nutrition-2nd Edition*.
- Fik, H. H. and Alan E. Mikesky (2015) *Practical Application in Sports and Nutrition*. Fourth Edition. Jones & Bartlett Learning, Burlington, MA
- Fink, H. H. and Mikesky, A. E. (2017) *Practical Applications in Sports Nutrition 5<sup>th</sup> Edition*.
- Ryan, M. (2020) *Sports Nutrition for Endurance Athletes (3rd Edition)*. VeloPress
- McArdle, W.D., Katch, F. I. and Katch, V.L. (2020) *Sports and Exercise Nutrition (5th Edition)*. Wolters Kluwer

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**DISCIPLINE SPECIFIC ELECTIVE COURSE**  
**DSE HP 8C1: PROGRAMME MANAGEMENT & EVALUATION**

**CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>Programme Management &amp; Evaluation DSE HP 8C1</b>	4	2	0	2	<b>Studied semester VII</b>	<b>Nil</b>

**Learning Objectives**

- To develop the skills to assess needs, conduct problem analysis, and set program goals, objectives, and indicators.
- To understand the concepts, components, and frameworks of monitoring and evaluation.
- To understand the scope, purpose, and types of program evaluation, including participatory approaches.
- To acquire skills in report writing, data management, and documentation for effective presentation of evaluation findings.

**Learning Outcomes**

- Develop comprehensive program goals, objectives, and strategies based on problem analysis and needs assessments.
- Articulate the core components and approaches to monitoring and evaluation of development programs.
- Differentiate between various types and purposes of program evaluation and apply appropriate tools and techniques.
- Create well-structured evaluation reports, demonstrating effective data management and documentation skills.

## **SYLLABUS OF DSE HP 8C1**

### **THEORY (Credit 2; Hours 30)**

#### **UNIT I: Planning Development Programmes 10 Hours**

This unit focuses on the foundational aspects of planning development programs, including the types, nature, and characteristics of plans. It covers program planning models, principles, and the Theory of Change, highlighting the importance of clear goals, objectives, and indicators. It also explores the steps in planning, such as problem analysis, needs assessment, goal setting, and strategic interventions, alongside the significance of stakeholder participation and building partnerships.

- Programme Planning models and principles
- Theory of change, program goals, objectives and indicators
- Results based management and importance of framework
- Steps in planning – problem analysis and need assessment, goal setting, strategizing interventions, and programme logistics.
- Stakeholder participation; networking and synergizing partnerships

#### **UNIT II: Monitoring and Implementation of Development Programmes 8 Hours**

This unit delves into the key concepts of monitoring and evaluation (M&E), highlighting their components, approaches, and frameworks in the context of development programs. It covers strategies for effective program implementation and the role of Management Information Systems (MIS) in facilitating feedback. The unit emphasizes the importance of monitoring progress, adjusting strategies, and ensuring programs remain aligned with their goals. Meaning and concept of monitoring and evaluation

- Components, approaches and frameworks for monitoring and evaluation of development programme
- Logic Model
- Programme implementation, strategies and approaches
- Feedback systems and role of Management Information Systems (MIS)

#### **UNIT III: Programme Evaluation 12 Hours**

This unit explores the scope, purpose, and types of program evaluation, with a focus on tools and techniques for conducting assessments. It includes participatory monitoring and evaluation methods and examines frameworks and indicators used for evaluating sustainability, empowerment, and impact. The unit also looks at the role of organizational dynamics in evaluation, the importance of incorporating beneficiary and stakeholder perspectives, and the essential skills of data management, report writing, and documentation.

- Scope, purpose and uses of evaluation
- Types of evaluation- summative Vs Formative, Internal Vs external
- Tools and techniques for conducting evaluation



- Evaluation approaches and Evaluation Designs- Goal free evaluation
- Methods & tools for M&E and Participatory M&E
- Frameworks and indicators in evaluating sustainability, empowerment and impact on individuals' communities and institutions.
- Beneficiary and stakeholder's perspectives about evaluation

### **PRACTICAL (Credit 2; Hours 60)**

- Understand various M&E methods used for various development programmes- national & international.
- Design, implement and evaluate intervention programmes for different target groups of urban and rural communities.
- Evaluate and prepare project proposals for- process documentation, monitoring and evaluation reports for development programmes.
- Understand ICT mediated qualitative and quantitative data
- Data visualization and Mapping
- Creating and managing Dashboards
- Report writing and documentation of M&E projects

### **Essential Readings**

- Connell, J. L. (2019). *Sustainability and impact in development: Evaluating long-term outcomes*. Routledge.
- Green, L. W. (2016). *Introduction to evaluation*. Sage Publications.
- Holzer, J. (2012). *Participatory monitoring and evaluation: A guide for NGOs*. Praxis Institute.
- Patton, M. Q. (2010). *Developmental evaluation: Applying complexity concepts to enhance innovation and use*. Guilford Press.
- White, H., Sabarwal, S., & Kumari, S. (2014). *Impact evaluation in practice*. World Bank Group.

### **Suggested Readings**

- Cracknell, B.E. (2000). *Evaluating Development Aid-Issues Problems and Solutions*. New Delhi: Sage Publications.
- Kumar, S (2002). *Methods for Community Participation: A Complete Guide for Practitioners*. New Delhi: Vistaar Publications.
- Kusek, Jody, Z. & Ray, C. (2004). *Ten Steps to a Results-Based Monitoring and Evaluation System: A Handbook for Development Practitioners*. World Bank
- Reidar, D. (2004). *Evaluating Development Programmes and Projects*. New Delhi: Sage Publications.
- Worthen, B.R.; Sanders, J.R.; Fitzpatrick, J.L. (1997). *Program Evaluation*. USA: Longman Publishers.
- Alex, G; Derek, B. (2000) *Monitoring and Evaluation for AKIS Projects: Framework and Options*. World Bank

- Mikkelsen, C. (1995). *Methods for Development Work and Research*. New Delhi: Sage Publications.
- International Planned Parenthood (IPPF). (2009). *Putting the IPPF Monitoring and Evaluation Policy into Practice: A Handbook on Collecting, Analyzing and Utilizing Data for Improved Performance*. London, UK.
- Saunders, R.P. (2015). *Implementation Monitoring and Process Evaluation*. New Delhi: Sage Publications.

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**DISCIPLINE SPECIFIC ELECTIVE COURSE**  
**DSE HP 8C2: CORPORATE COMMUNICATION & PUBLIC RELATIONS**

**CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>Corporate Communication &amp; Public Relations DSE HP 8C2</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Studied Semester VII</b>	<b>Nil</b>

**Learning Objectives**

- To introduce students to the principles and practices of corporate communication and public relations.
- To develop an understanding of how organizations communicate with internal and external stakeholders.
- To explore tools, techniques, and strategies for effective PR campaigns.
- To train students in creating and implementing corporate communication plans, with a focus on crisis management and digital media.

**Learning Outcomes**

Upon completing this course, students will be able to:

- Understand the principles, scope, and significance of corporate communication and public relations.
- Analyze the role of communication in maintaining organizational image and relationships.
- Develop effective communication strategies tailored to various stakeholders.
- Design and evaluate PR campaigns for organizations and brands.
- Apply communication techniques during crises and manage reputation risks.
- Utilize digital platforms to enhance corporate and public relations efforts.
- Exhibit skills in creating corporate communication tools such as press releases, newsletters, and reports.

## **SYLLABUS OF DSE HP 8C2**

### **THEORY (Credit 2; Hours 30)**

#### **UNIT I: Introduction to Corporate Communication**

**12 Hours**

This unit focuses on the fundamentals of corporate communication, highlighting its role in managing brand image, reputation and crisis through effective strategies and best practices. Furthermore, it explores the use of communication tools for effective communication and trust building, while emphasizing the significance of ethics and professionalism in this field.

- Definition and significance of corporate communication
- Components: internal communication and external communication
- Role of corporate communication in brand image and reputation management
- Crisis communication: strategies and best practices
- Building resilience and trust through effective communication
- Monitoring online reputation and handling misinformation
- Communication tools: corporate presentations, newsletters, and reports
- Ethics and professionalism in corporate communication

#### **UNIT II: Public Relations (PR): Principles and Practices**

**10 Hours**

Unit 2 focuses on PR as a strategic tool for managing organizational relationships, along with definitions, objectives and functions of PR. It provides a systematic approach to designing PR campaigns, supported by insights from real-world cases. Additionally, this unit highlights the role of digital PR and how organisations leverage it to their advantage.

- Definition, scope, and objectives of PR
- Functions of PR: media relations, CSR initiatives, event management
- Steps to creating a PR campaign: research, planning, execution, and evaluation
- Case studies: successful PR strategies
- Role of PR in managing organizational crises
- Digital PR: blogs, social media platforms, and SEO integration

#### **UNIT III: Communication Strategies and Media**

**8 Hours**

This unit provides an overview of communication channels and strategies in the corporate and PR space. It discusses significance of media planning, role of social media in PR, and various writing techniques for PR. Unit 3 also incorporates the significance of content marketing and storytelling to enhance corporate communication.

- Media planning: Selecting appropriate channels for different audiences
- Writing for PR: Press releases, newsletters, and digital content
- Social media in PR: Trends, tools, and influencer collaborations
- Content marketing and storytelling in corporate communication

## **PRACTICAL** **(Credit 2; Hours 60)**

- Corporate Communication Tools- Draft press releases, newsletters, and social media posts for mock campaigns.
- PR Campaign Design- Create a comprehensive PR campaign plan, including research, target audience, and execution strategy.
- Crisis Simulation- Role-play scenarios to manage organizational crises and draft a response strategy.
- Digital Media Project- Design and implement a mock PR campaign using social media platforms.
- Case Study Analysis- Analyze successful corporate communication or PR campaigns and present key learnings.
- Field Visit and Documentation- Visit PR agencies or corporate communication departments; submit a report based on the visit.

### **Essential Readings**

- Cornelissen, J. (2020). *Corporate Communication: A Guide to Theory and Practice*. Sage Publications.
- Broom, G. M., & Sha, B.-L. (2013). *Cutlip & Center's Effective Public Relations*. Pearson.
- Newsom, D., Turk, J., & Kruckeberg, D. (2012). *This is PR: The Realities of Public Relations*. Wadsworth.
- Wilcox, D. L., & Cameron, G. T. (2014). *Public Relations: Strategies and Tactics*. Pearson.

### **Suggested Readings**

- Tench, R., & Yeomans, L. (2017). *Exploring Public Relations and Corporate Communication*. Pearson.
- Gregory, A. (2020). *Planning and Managing Public Relations Campaigns*. Kogan Page.
- Relevant PR case studies and resources from PRSA and CIPR.

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**DISCIPLINE SPECIFIC ELECTIVE COURSE**  
**DSE HP 8C3: HEALTH & ENVIRONMENT COMMUNICATION**

**CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>Health and Environment Communication DSE HP 8C3</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Studied semester VII</b>	<b>Nil</b>

**Learning Objectives**

- To understand the role of communication in health promotion and behaviour change, focusing on nutrition and public health issues.
- To explore the concepts of sustainable development and the role of communication in promoting environmental sustainability.
- To examine the impact of socio-economic, cultural, and geographic factors on health and environmental issues.
- To analyze effective strategies for health and environmental communication, including media's role, SBCC campaigns, and innovative approaches.

**Learning Outcomes**

- Explain the role of communication in health promotion, with a focus on nutrition, malnutrition, and public health challenges.
- Identify and evaluate communication strategies for improving food security, nutrition outcomes, and addressing health inequities in India.
- Demonstrate knowledge of sustainable development concepts, goals, and the relationship between environmental, population, and development issues.
- Assess the impact of socio-economic, cultural, and geographic factors on health and environmental changes.

**SYLLABUS OF DSE HP 8C3**

**THEORY**  
**(Credit 2; Hours 30)**

**UNIT I: Understanding Health: In the Context of Behaviour Change**

**10 Hours**

This unit explores the role of communication in health promotion, focusing on nutrition and behaviour change among children, adolescents, and women. It covers public health challenges like malnutrition and addresses various social detriments of health. The unit also examines

communication strategies and community-based efforts to improve food security and nutrition outcomes in India.

- Role of Communication in Health: Global and Indian overview of health communication, its objectives, Concepts of Community and Public Nutrition with a focus on Children, Adolescents, and women, Importance and Challenges for interventions
- Public Health Aspects of Malnutrition- Life cycle approach to understanding the nutritional, Awareness building to service delivery, Nutrition support programs and initiatives, ICDS, Food & Nutrition Security- Policy and challenges in India, Behaviour change initiatives for improving nutrition indicators –selected case studies
- Social Detriments of Health, Reproductive and Mother and Child Health- Importance for SDGs, health indicators, appraisal of interpersonal communication in health, Communitization of health

## **UNIT II: Understanding Environment and Sustainable Development: In the context of Behaviour Change** **10 Hours**

This unit focuses on the role of communication in promoting sustainable practices. It covers sustainable development concepts, key pillars, and the link between environment, population, and development. It also explores the impact of climate change, environmental risks, and socio-economic factors on environmental change.

- Role of Communication in Environmental Issues: Focus on environmental communication and its role in promoting sustainable practices.
- Sustainable Development: Concept, Key Pillars, Approaches, Action and Agenda. Linkage between environment population and development, Impact of lifestyles and changing consumption patterns on the environment. Environmental legislations and policies, International environmental agreements/protocols.
- Sustainable Development Goals: Goals, Targets, Indicators, India's present situation, Strategies towards SDGs attainment, Sustainable Development Goal Index (SDGI), Changes in the environment- types, hazards and risks.
- Factors affecting changes in the environment: socio, economic, cultural and geographic. Climate Change; Sustainable Development Communication,

## **UNIT III: Effective Strategies for Health and Environmental Communication** **10 Hours**

This unit focuses on strategies for addressing health and environmental issues through Behaviour Change communication. It examines national and international agendas on air pollution, health promotion strategies, including SBCC campaigns, and asserts approaches like Entertainment Education and the Positive Deviance.

- Present and future thrusts of national and international environment communication agenda: Case of Air Pollution and Water Crisis, Networking, Lobbying, and Mobilizing pressure groups, citizen's action, and people's, synergizing inter-sectoral partnerships for Climate Change; Sustainable Development advocacy and action, and campaigns,

Impact of media in influencing environmental protection, climate change sensitization and sustainable development

- Role of media in promoting health, strategies used in health promotion, Strategizing health advocacy and SBCC campaigns- elements, tools, and techniques, Synergizing inter-sectoral partnerships for health advocacy and action, social marketing, participatory training and campaigns of health communication, Innovative Approaches in Health Communication: Entertainment Education, Incentives for Health Communication and Positive Deviance Approach.

### **PRACTICAL (Credit 2; Hours 60)**

- SBCC Campaigns for health/nutrition: Pulse Polio Campaign, RRE Campaign, POSHAN Abhiyan, Surakshit Matritva Abhiyan
- SBCC Campaigns for Climate change and sustainable development: WWF, 350, Connect4Climate.
- Analysing India's National Strategies for Climate Change Adaptation and Mitigation
- Analysis and interpretation of health and environment-related data and indicators
- Development of SBCC tool kit on any issue related to Health or Climate change and sustainable development concerning:
  - i. Communication Principles
  - ii. Socio-economic context
  - iii. Message design
  - iv. Channel Selection
  - v. Audience targeting and segmentation
  - vi. Developing Feedback mechanism

### **Essential Readings**

- Thompson, T., & Parrott, R., (2015). *The Handbook of Health Communication*. Routledge.
- O'Neill, M., (2011). *Communication and Environment: A Critical Perspective*. Wiley-Blackwell.
- Eldredge, L., et al., (2016). *Planning Health Communication Campaigns*. Sage Publications.
- Cox, R., (2010). *Environmental Communication and the Public Sphere*. Sage Publications.

### **Suggested Readings**

- Green, L., & Kreuter, M., 2005. *Health Program Planning: An Educational and Ecological Approach*. McGraw-Hill.
- Stibbe, A., 2009. *The Handbook of Environmental Communication*. Routledge.
- Harper, J., 2007. *Communicating Sustainability: A Critical Perspective*. Sage.
- Stokols, D., et al., 2003. *Health and Environment: A Cross-Cultural Perspective*. Wiley.



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**DISCIPLINE SPECIFIC ELECTIVE COURSE**  
**DSE HP 8D1: TEXTILE PROCESSING**

**CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical / Practice		
Textile Processing DSE HP 8D1	4	2	0	2	Studied DSC HP 307: Fundamental of Textiles	Nil

**Learning Objectives**

- To understand the theories and mechanisms of textile colouration.
- To study the application of various dyes and auxiliaries for dyeing and printing of textiles.
- To gain knowledge of various kinds of finishing processes on textile fabrics.

**Learning Outcomes**

- Understand the chemistry, and application of various dyes for dyeing of textiles.
- Learn the methods and styles of textile printing using various dye classes,
- Learn about various types of mechanical and chemical finishes applied to textiles.

**SYLLABUS OF DSE HP 8D1**

**THEORY**  
**(Credits 2; Hours 30)**

**UNIT I: Dyeing**

**14 Hours**

This unit will provide students with an in-depth understanding of the chemistry and application of various dye classes on different fibre substrates

- Theory of dyeing
- Chemistry and application of various dye classes: Direct, Reactive, Vat, Azoic, Sulphur, Acid, Basic, Disperse
- Dyeing auxiliaries
- Principles of colour measurement: Colour theory, OD, K/S, Colour coordinates
- Colour fastness: Wash, Light, Rub, Perspiration

## **UNIT II: Printing**

**10 Hours**

This unit will focus on the various printing methods and techniques, along with their application to different textile substrates.

- Methods of printing: Block, Roller, Screen (flat bed, rotary)
- Styles of printing: Direct, Resist, Discharge, Transfer, Digital, Flock
- Printing with various classes of dyes on different fibres
- Finishing and after treatment of printed goods: Ageing, Steaming, Baking, washing-off

## **UNIT III: Finishing**

**6 Hours**

In this unit the students will learn about the chemistry and function of various finishes applied to textiles.

- Classification of finishes
- Preparatory finishes: For Cellulosic, Proteins and Synthetic fibres
- Finishes affecting appearance and texture
- Finishes for enhancing performance characteristics

### **PRACTICAL (Credits 2; Hours 60)**

#### **1. Preparatory Finishing: Cellulosic and Protein fibres**

- Desizing
- Scouring
- Bleaching
- Mercerisation

#### **2. Dyeing**

- On cotton using direct, reactive, azo and vat
- On wool and silk using acid, basic and reactive
- On acrylic using basic dyes

#### **3. Printing with blocks and screens**

- Direct style of Printing on cotton
- Discharge printing on cotton using direct dyes
- Resist Printing on cotton using azo dyes

#### **4. Colour fastness measurement**

- Wash fastness
- Crock/Rub fastness
- Perspiration fastness

## 5. Colour measurement

- Optical Density
- K/S
- $L^*a^*b^*$
- $L^*c^*h^*$

### Essential Readings

- Trotman, E. R. (1984) *Dyeing and Chemical Technology of fibres*, Sixth edition, England: Charles Griffin and Company Ltd.
- Rastogi, D. and Chopra, S.(Eds.) (2017)*Textile science*, India: Orient Black Swan Publishing Limited
- Miles, L.W.C. (1994) *Textile Printing*, 2nd ed., West Yorkshire: Society of Dyers and Colorists, England.
- Sekhri S. (2022) Textbook of Fabric Science: Fundamentals to finishing, 4th ed., PHI Learning Pvt. Ltd. Delhi

### Suggested Readings

- Aspland J. R., (1997) *Textile Dyeing and Colouration*, NC: AATCC.
- Clarke, W. (1977) *An Introduction to Textile Printing*, London: Butterworth and Co. Ltd.
- Shenai, V.A. (1987) *Chemistry of Dyes and Principles of Dyeing*, Vol II, Bombay: Sevak Publications.
- Shore, John (Ed) (1990) *Colorants and Auxiliaries: Organic Chemistry and Application Properties*, Vol. 1 & 2, West Yorkshire: Society of Dyers and Colorists, England.

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**DISCIPLINE SPECIFIC ELECTIVE COURSE**  
**DSE HP 8D2: APPAREL PRODUCTION**

**CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical/ Practice		
<b>Apparel Production DSE HP 8D2</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Studied DSE HP 5D1: Pattern Making and Construction for Women's Wear or DSE HP 5D2: Designing for Children's Wear</b>	<b>Nil</b>

**Learning Objectives**

- To gain an understanding of the structure, operations, and key functional areas within the garment industry.
- To learn the processes involved in garment production, spanning pre-production, production, and post-production stages.
- To become familiar with the materials, machinery, tools, and equipment used in garment manufacturing.

**Learning Outcomes**

- Explain the steps involved in pre-production, production, and post-production of garments.
- Use drafting techniques to develop patterns and produce finished garments.
- Utilize sewing machines, cutting tools, and other production equipment effectively.
- Identify common garment defects and suggest corrective actions using quality control methods.

## **SYLLABUS OF DSE HP 8D2**

### **THEORY (Credits 2; Hours 30)**

#### **UNIT I: Overview of Apparel Industry and Pre-production Processes 9 Hours**

This unit introduced the student to major sectors of apparel industry, focusing on pre-production processes like pattern making, sampling, and fabric sourcing. It covers tech-packs, production systems, and the role of time and motion studies in enhancing productivity.

- Major sectors of apparel industry: Design, production, marketing, and retail
- Pre-Production Processes: Recording measurements, developing patterns, sourcing fabrics
- Specification sheets/tech-packs, and planning and controlling production workflows.
- Production systems
- Time and Motion Study in Apparel Production

#### **UNIT II: In-production Processes in Apparel Production 15 Hours**

This unit helps students understand in-production processes in garment manufacturing, including marker-making, fabric spreading, cutting, and fusing. It also explores stitching tools, techniques, and machine mechanisms, emphasizing efficiency and quality control.

- Marker Making: planning, production, and methods to optimize fabric usage and efficiency
- Fabric Spreading: various methods for spreading fabric
- Cutting: methods and tools used for fabric cutting, ticketing, and bundling processes.
- Fusing: advantages, requirements, processes, equipment, methods, and quality control techniques for fusing.
- Stitching: Types of sewing machines, machine bed and feed mechanism, sewing needles types, sewing threads, stitch and seam types and seam defects and remedies

#### **UNIT III: Post-production Processes in Apparel Production 6 Hours**

This unit covers key post-production processes, focusing on quality evaluation of garment components. It also explores finishing techniques such as trimming, pressing, packing, and shipment preparation for market-ready products.

- Evaluating the Quality and Fit of Garment Components: fit and quality of various garment components such as necklines, collars, sleeves, cuffs, plackets, pockets, seams, hemlines, darts, pleats, gathers, flares, tucks, yokes, and waistbands.
- Garment Finishing: trimming, stain removal, cleaning, dry-cleaning, pressing, checking, folding, packing, warehousing, and transportation.

### **PRACTICAL (Credit 2; Hours 60)**

1. Developing patterns in bodices with yoke variations, dart clusters, graduated darts, parallel darts, asymmetric darts, radiating darts etc.

2. Drafting of shirt collar, shawl collar, peter pan collar on altered neckline
3. Sleeve variations with shirtmaker, bishop, and leg-o-mutton
4. Construction of samples
  - Kurta placket
  - Zipper attachment
  - Patch and In-seam pocket
5. Construction of Blouse/Kurta/Top
6. Construction of one lower garment

### Essential Readings

- Aldrich, W. (2008) Metric Pattern Cutting for Women's Wear, ISBN 10: 1405175672 / ISBN 13: 9781405175678, Wiley Blackwell Publication.
- Armstrong, H. J. (2014). Pattern making for fashion design (5th ed.). Dorling Kindersley, New Delhi.
- Brown, P. and Rice, J. (2014). Ready to Wear Apparel Analysis. Fourth Edition. Pearson Education, India.
- Cooklin, G., Hayes (Ed.), McLoughlin J. (Ed.). (2006). Introduction to Clothing Manufacture. Second Edition. Blackwell Scientific Publication, U.K.
- Tyler, D.J. (2008). Carr and Latham's technology of clothing manufacture (4th ed.). Blackwell, U.K.

### Suggested Readings

- Glock, R. E., & Kuntz, G. I. (2009). *Apparel manufacturing: Sewn product analysis*. (4th ed.). Pearson Education, New Delhi.
- Stamper, Sharp and Donnell, (1991), *Evaluating Apparel Quality* (2nd edition), Fairchild Publications, New York.
- Dunham, G. R., (2021) *The Fitting Book: Make Sewing Pattern Alterations and Achieve the Perfect Fit You Desire*, ISBN: 9783033083745, Gina Renee Designs Publication, India.
- Azad, N., (2019), *Sewing Technology*, Neelkanth Publishers Pvt. Ltd. India.
- Aggarwal, J., Yadav, S., & Sonee, N. (2024). *Manual for B.Sc. Home Science Pattern Making and Apparel Construction*. Elite Publishing House, New Delhi. ISBN 978-81-95556-78-6.
- MacDonald, Nora M. (2010), *Principles of Flat-Pattern Design*, Fairchild Books, New York.
- Reader's Digest (Eds.). (2002). *New complete guide to sewing: Step-by-step techniques for making clothes and home accessories*. Reader's Digest, New York.

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**DISCIPLINE SPECIFIC ELECTIVE COURSE**  
**DSE HP 8D3: FASHION RETAILING AND MARKETING**

**CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Pre-requisite of the Course (if any)
		Lecture	Tutorial	Practical		
<b>Fashion Retailing And Marketing DSE HP 8D3</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Studied Semester VI</b>	<b>Nil</b>

**Learning Objectives**

- To understand the fundamentals of fashion retailing and merchandise planning.
- To study core marketing principles, including product and brand management.
- To gain insights into pricing and promotional strategies in the fashion retail industry.

**Learning Outcomes**

- Knowledge of merchandising activities in a retail setup
- Develop and apply effective Merchandise Planning, Assortment Management, and Inventory Control techniques in a retail setting
- Knowledge of Product Planning and development, and Brand Management Strategies.
- Skill to deliver the customer value through Integrated Marketing Communication strategy.
- Design customer driven Marketing Mix strategy.

**SYLLABUS OF DSE HP 8D3**

**THEORY**  
**(Credits 2; Hours 30)**

**UNIT I: Introduction to Fashion Retailing**

**6 Hours**

In this unit, students will explore the retail environment, its emerging trends, and various types of retail formats. They will also learn the importance of visual merchandising in driving customer engagement and enhancing sales.

- Overview of Retail Environment and Emerging Trends
- Classification of Retail Institutions and Formats
- Visual Merchandising in Retail



## **UNIT II: Merchandise Planning and Management**

**6 Hours**

This unit focuses on the core concepts of merchandising, types of merchandise, and effective planning techniques. Students will understand how to create assortment plans and set appropriate inventory levels to meet market demands.

- Concept of Merchandising
- Merchandise Categories: Staple, Fashion, and Seasonal
- Assortment Planning
- Setting Product Availability and Inventory Levels

## **UNIT III: Fundamentals of Marketing Management**

**6 Hours**

In this unit, students will gain knowledge of the foundational principles of marketing. They will understand the importance of the 4P's of marketing and learn to segment and target markets effectively.

- Importance and Scope of Marketing
- Core Elements of Marketing: The 4P's
- Market Segmentation and Targeting

## **UNIT IV: Product and Brand Management**

**7 Hours**

This unit introduces students to product lifecycle management, brand management concepts, and positioning strategies. Emphasis is placed on developing strong brands and differentiating products in competitive markets.

- Product Mix, Product Classification & Lifecycle
- Brand Management
  - Brand Attributes, Identity, and Image
  - Branding Strategies
  - Product Positioning and Differentiation in Competitive Markets

## **UNIT V: Pricing and Promotion Strategies**

**6 Hours**

In this unit, students will understand various pricing strategies and promotional techniques to improve market reach. They will also learn about integrated marketing communications and its role in product success.

- New Product Pricing Strategies
- Product Mix Pricing Strategies
- Integrated Marketing Communication Strategy
- Development And Managing Advertising Programs
- Sales Promotion and Personal Selling

## **PRACTICAL**

**(Credits 2; Hours 60)**

### **1. Demographic Analysis of the Indian Market**

- Study and analyze the demographics and psychographics of the Indian market to understand consumer preferences, purchasing behaviour, and market segmentation.

### **2. Branding and Positioning Strategies**

- **Case Study Analysis:** Select a renowned fashion brand and evaluate its branding (focusing on brand identity, attributes etc.) and its positioning strategies in the Indian market.
- **Create a Brand Strategy:** Develop a comprehensive branding framework for a hypothetical brand, including logo, tagline, and positioning statement, highlighting its unique selling propositions (USP) and differentiation strategies.
- **Competitor Analysis:** Compare and contrast the branding and positioning strategies of two competing brands.

### **3. Visual Merchandising and Customer Engagement**

- **Store Visit and Analysis:** Observe and document the visual merchandising strategies of a retail store, assessing its impact on customer engagement and sales.
- **Design and Develop:** Create a visual merchandising display concept for a fashion retail store, incorporating elements like layout, color schemes, and product placement.

### **4. Promotion and Communication Strategies**

- **Promotion Analysis:** Examine the influence of promotional activities, such as advertising campaigns, discounts, and offers, on consumer behaviour and purchase decisions.
- **Develop a Communication Strategy:** Create a promotional plan for a hypothetical fashion brand, integrating both traditional media (print, television) and social media platforms targeting a specific demographic.

### **5. Retail Trends and Innovation**

- **New Retail Formats:** Study and analyze how brands use new retail formats such as pop-up stores, concept stores, and hybrid stores to attract customers.
- **Channels Effectiveness:** Compare the effectiveness of two marketing channels (e.g., e-commerce vs. social commerce) for driving sales / Explore the use and impact of marketing channels such as influencer marketing, social commerce, e-commerce, mobile apps, and loyalty programs.

### **6. Merchandise Planning and Assortment Development**

- Develop an assortment plan for a specific product category for a retail store, focusing on branding and positioning to align with target consumer preference

## Essential Readings

- Levy, M, Weitz, B.A. and Pandit, A. (2008) *Retailing Management*, Delhi: Tata McGraw Hill Education Private Limited.
- Kotler, P., Keller, K.L., Koshy, A. and Jha, M. (2012) *Marketing Management* 14<sup>th</sup> ed.: Pearson.
- Pegler, M. (2006) *Visual Merchandising and Display*, New York: Fairchild Publications Inc.
- Clark, J. (2014) *Fashion Merchandising Principles and practice*, Suffolk: Lavenham press Ltd.

## Suggested Readings

- Diamond, J., Diamond, E. and Litt, S.D. (2006) *Fashion Retailing- A Multi- Channel Approach*: Bloomsbury Publishing Inc.
- Jain, J.N. and Singh, P.P. (2007) *Modern Marketing Management- Principles and Techniques*. New Delhi: Regal Publications.
- Kunz, I. and Grace 3<sup>rd</sup> ed. (2009) *Merchandising*, New York: Fairchild publications, Inc.
- Posner, H. (2015) *Marketing Fashion –Strategy, Branding and promotion*, 2<sup>nd</sup> ed., Laurence King Publishing.
- Robbins, P.S. and Dcenzo, A. D. (2005). *Fundamentals of management- essential concepts and Applications* 5<sup>th</sup> ed. : Pearson education Inc, Dorling kindersley (India) pvt. ltd.
- Belch, E. G. and Belch, A.M. (2003). *Advertising and Promotion- An integrated marketing communications perspective* 6th ed.: Tata McGraw-Hill publishing company ltd.
- Poloian, G.L. (2009). *Multichannel Retailing* : Fairchild Books-New York.

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**DISCIPLINE SPECIFIC ELECTIVE COURSE**  
**DSE HP 8E1: CAPACITY BUILDING FOR SUSTAINABLE DEVELOPMENT**

**CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course Title & Code	Credits	Credit distribution of the Course			Eligibility Criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical		
<b>Capacity Building for Sustainable Development DSE HP 8E1</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Studied Semester 7</b>	<b>NIL</b>

**Learning Objectives**

- To impart an understanding of conceptual framework, scope and importance of capacity building and organizational capacity development.
- To build proficiency in designing and implementing capacity building initiatives for sustainable development.

**Learning Outcomes**

- Develop an understanding of the concepts related to capacity building and its role in sustainable development.
- Acquire skills to design, develop and implement capacity building initiatives for sustainable development.
- Critically analyze interventional strategies of organizational capacity development

**SYLLABUS OF DSE HP 8E1**

**THEORY**

**(Credits2; Hours 30)**

**UNIT I: Conceptual framework and Organizational learning**

**10 Hours**

This unit introduces the students to the concepts of capacity building for sustainable development, its evolution, elements, process and approaches.

- Capacity Development- Concept, evolution and process
- Organizational Capacity Development- Approaches and elements

**UNIT II: Interventional Strategies for sustainable development**

**14 Hours**

This unit focuses on contemporary professional practices in capacity building including training need assessment, methodologies, developing ICT material and evaluation.

- Training Need Assessment (TNA)
- Training methodologies
- ICT for sustainable development
- Training Evaluation

### **UNIT III: Institutionalizing capacity building programmes**

**6 Hours**

This unit highlights the approaches adopted by National level capacity building programmes.

- Approaches to land to lab and lab to land transfer

### **PRACTICAL (Credit 2; Hours 60)**

1. Critical analysis of capacity building programmes through Case Studies and live projects
2. Training Need Assessment (TNA)
3. Training Methodologies
4. ICT Material for Sustainable Development
5. Training Evaluation
6. Design and development of capacity building programmes
7. Implementation of capacity building programmes

### **Essential Readings**

- Bamberger, M., & Chevalier, J. (2010). *The Capacity Building Handbook: A Guide for Practitioners in Sustainable Development*. GIZ.
- Horton, D., & Mackay, R. (2003). *Developing Effective Capacity Building Programs*. Oxford University Press.
- James, V. U. (2018). *Capacity Building for Sustainable Development*. CAB International.
- Swanson, R. A., & Holton, E. F. (2001). *Foundations of Human Resource Development*. Berrett-Koehler Publishers.
- Williams, T., & Goodwin, T. (2015). *Capacity Development for Organizational Learning*. Routledge.

### **Suggested Readings**

- Blumenthal, B. (2003). *Investing in Capacity Building: A Guide to High-Impact Approaches*. Routledge.
- Bemmerlein-Lux, F., & Bank, P. (2011). *Lessons Learnt & Tools Applied: A Working Book on Capacity Building Approaches in India*. GIZ.
- Hamel, G., & Prahalad, C. K. (1994). *Competing for the Future*. Harvard Business Review Press.
- Kenny, S., Clarke, M. (Eds.) (2010). *Challenging Capacity Building: Comparative Perspectives*. Palgrave Macmillan UK.

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**DISCIPLINE SPECIFIC ELECTIVE COURSE**  
**DSE HP 8E2: PRODUCT DESIGN AND APPLICATION**

**CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course Title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical		
<b>Product Design and Application DSE HP 8E2</b>	<b>4</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>Studied Semester 7</b>	<b>NIL</b>

**Learning Objectives**

- Understand the basic concepts, scope and significance of product design.
- Develop creative and innovative thinking skills to design user-friendly, inclusive and interactive products.
- Gain knowledge of the New Product Development (NPD) process
- Build skills for the successful promotion of the product in the market.

**Learning outcomes**

- Provide students with an understanding of product design principles and real-world challenges.
- Encourage creativity and innovation for designing user-friendly and inclusive products.
- Providing insights regarding the New Product Development (NPD) process, from idea generation to market launch.
- Equip students with the skills to select materials, develop prototypes, and perform cost analysis for efficient design.

**SYLLABUS OF DSE HP 8E2**

**THEORY**  
**(Credits 2; Hours 30)**

**UNIT I: Introduction to Product Design**

**8 Hours**

This unit covers the concept, scope, importance, approaches, and challenges of product design, along with success factors, design philosophies, and the role of product designers.

- Introduction to Product design: Concept, scope, importance and challenges
- Different approaches to Product design
- Factors for the success of products
- Design philosophies of famous designers

- Role of Product Designers

## **UNIT II: Creativity and Innovative thinking**

**6 Hours**

This unit covers concept of creativity, innovation in product design, and human-centric design approaches like ergonomics, inclusive, and interactive design.

- Theories and models of creativity
- Techniques of developing creativity
- Role of innovation in product design
- Application of human factors and ergonomics (user-centric design, Inclusive design and Interactive design).

## **UNIT III: Product Development Process**

**10 Hours**

This unit outlines the stages of new product development, including idea generation, material selection, prototyping, cost-value analysis, and legal aspects like intellectual property rights.

- Stages of New Product Development (NPD): Idea generation, concept development, market analysis, Feasibility study
- Detailed study of Materials
- Prototyping
- Cost-value Analysis for effective design
- Intellectual Property (IPR) and other legal considerations.

## **UNIT IV: Product Launch and Marketing**

**6 Hours**

This unit highlights product launch strategies, including packaging, advertising, branding, post-launch review, and real-life case studies.

- Introducing the product to the market
- Packaging, Advertising and branding.
- Post-Launch Review and feedback for Improvements
- Real-Life Examples and Projects

### **PRACTICAL (Credits 2; Hours 60)**

1. Case study of selected products-success and failure stories
2. Techniques of creativity
3. Study of selected materials: properties and functions
4. Design Tools and Software: CAD, graphic design tools, 3D printing etc.
5. Product-Life cycle mapping of any consumer product
6. Designing and Prototyping of a product (as per the stages of product development)
7. Simulation of Product Launch: Group activity for launching a product (pricing, promotional strategies and distribution channels)
8. Use of Technology in product design and development

### **Essential Readings**

- Salvendy, G. (Ed.). (2021). *Handbook of human factors and ergonomics* (5th ed.). John Wiley & Sons, Inc.
- Petrov, V. (2019). *Theory of inventive problem solving: Level 1*. Springer Series.

- Ulrich, K. T., & Eppinger, S. D. (2019). *Product design and development* (7th ed.). McGraw-Hill Education.
- Sawyer, R. K. (2012). *Explaining creativity: The science of human innovation* (2nd ed.). Oxford University Press.
- Crawford, M. C., & Di Benedetto, C. A. (2011). *New products management* (11th ed.). McGraw-Hill Education.

### **Suggested Readings**

- Sherman, B., & Bently, L. (2019). *The making of modern intellectual property law*. Cambridge University Press.
- Kotler, P., & Keller, K. L. (2016). *Marketing management* (15th ed.). Pearson Education.
- W.S. Green & P.W. Jordan (Eds) (1999). *Human factors in product design: Current practice and future trends* (pp.206-217). London: Taylor & Francis.
- Cross, N. (2011). *Design thinking: Understanding how designers think and work*. Bloomsbury Academic.
- Doren, Harold V. (1954). *Industrial Design – A Practical Guide to Product Design and Development*. New York: McGraw-Hill Book Company.

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**DISCIPLINE SPECIFIC ELECTIVE COURSE**  
**DSE HP 8E3: FACILITIES AND SERVICES MANAGEMENT**

**CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE**

Course Title & Code	Credits	Credit Distribution of the Course			Eligibility Criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical		
Facilities and Services Management DSE HP 8E3	4	2	0	2	Studied Semester 6	NIL

**Learning Objectives**

- To understand the evolution, nature and scope of facilities and service management in various organizations.
- To prepare operational and strategic facilities management plan for attaining business efficiency.

**Learning Outcomes**

- Understand the nature and scope of facilities and service management.
- Develop an understanding of operations management and maintenance.
- Gain knowledge about the strategies of facilities and service management.
- Have a practical understanding regarding the management of services in various organizations.

**SYLLABUS OF DSE HP 8E3**

**Theory**  
**(Credit 2; Hours 30)**

**UNIT I: Introduction to Facilities and Service Management**

**8 Hours**

This unit introduces facilities and service management, focusing on scope, classification, competencies, and emerging trends.

- Nature and scope of facilities and services
- Classification and characteristics of facilities and services
- Role and core competencies of facility managers
- Emerging trends in facility management

**UNIT II: Operations and Maintenance**

**8 Hours**

This unit focuses on facility operations, covering building systems, maintenance types, management practices, and health, safety, and security standards.

- Overview of building systems and their components
- Types of maintenance
- Facility management practices and processes
- Health, safety and security standards

### **UNIT III: Service Management and Quality Parameters**

**6 Hours**

This unit covers service management, understanding and measuring service quality, applying service quality models, and managing specialist services.

Understanding and measuring service quality

- Service quality models and their applications
- Managing specialist services

### **UNIT IV: Strategies in Facility Management**

**8 Hours**

This unit focuses on strategic planning, technology integration, and sustainable practices in facility management to enhance efficiency and long-term viability.

- Strategic planning for facility management
- Technology integration in facility management
- Sustainable facility management practices

### **PRACTICAL (Credit 2; Hours 60)**

1. Analysing service management through case studies
2. Care and maintenance of different surfaces
3. Surveying hard and soft services across varied industries/institutions
4. Designing OSHA safety and health checklists
5. Field visits to evaluate facility management operations
  - Observe and analyze facility management practices in malls, hospitals, hotels, restaurants, etc.
6. Customer journey mapping for enhanced service delivery
  - Understand user experiences and propose strategies for improvement
7. Drafting professional service contracts for cleaning or maintenance
8. Designing customized facility inspection checklists

### **Essential Readings**

- Atkin, B., & Brooks, A. (2021). *Total facility management* (4th ed.). Wiley-Blackwell.
- Cotts, D. G., Roper, K. O., & Payant, R. P. (2021). *The facility management handbook* (5th ed.). AMACOM
- Alexander, K. (Ed.). (2013). *Facilities management: Theory and practice*. Routledge.
- Whitman, M. E., & Mattord, H. J. (2022). *Principles of information security* (7th ed.). Boston, MA: Cengage Learning.
- Stevenson, W. J. (2020). *Operations management* (14th ed.). New York, NY: McGraw-Hill Education.

### **Suggested Readings**

- Roper, O. K., & Payant, P. R. (2014). The facility management handbook (4th ed.). AMACOM.
- Barrett, P., & Baldry, D. (2009). Facilities management: Towards best practice (2nd ed.). Wiley-Blackwell.
- International Facility Management Association. (2020). IFMA facility management handbook. IFMA Press. <https://www.ifma.org/>
- Oakland, J. S. (2018). Total quality management and operational excellence: Text with cases (4th ed.). Routledge.
- Petrov, V. (2019). Theory of inventive problem solving: Level 1. Springer Series.

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