

**Maulana Abul Kalam Azad University of Technology, West Bengal**  
*(Formerly West Bengal University of Technology)*  
**Syllabus for M. Sc. Dietetics & Nutrition**  
**(Effective for Academic Session 2018-2019)**

**Fourth Semester**

**MDN 401 : ENTREPRENEURSHIP IN FOOD SERVICE**

**Course learning outcome:**

Student will be able to

1. Understand their requirement and will utilize their resources accordingly.
2. Expertise to function in food service system
3. Gain practical experience to serve people including nutritional value

**Contents:**

**Space and Equipment**

a) Layout planning:

- Preliminary preparation-Information gathering , Menu analysis, Determining type of service
- Determining: basic units and equipment
- Steps in planning: Prospectus, planning team
- Design development.- Types of kitchen areas , Flow of work and work area relationship

b) Determining equipment needs

- Types of Equipments
- Features of equipments
- Factors affecting selection of equipments
- Equipment needs for different situations

***Food service & Management***

a) Floor, kitchen planning & equipments

b) Food economics, Global Institutions and the WTO,

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- c) World food systems: food security, food self- sufficiency and the role of trade.
- d) Financial Management & Budgeting
- e) Personnel Management & staffing pattern
- f) Criteria for selection of Dietitian & food handlers

***Food Hygiene Sanitation and Safety***

***Importance of hygiene and sanitation in food service units***

- a) Sanitation measures for Food , Personnel and Unit Hygiene, Training techniques for food service personnel in Sanitation.
- b) Safety- Issue in food safety, worker safety and security, types, safety techniques, 3 Es of Safety
- c) Quality assurance, risk analysis
- d) Food regulation and standards / New Food Bill 2006
- e) Quality standards-HACCP, ISO, FSSAI,

***Planning the set up:***

- a) Identifying sources
  - Facility available and equipments needed
  - Menu and pre-costing
  - Manpower required
  - Utilities
- b) Developing Project plan and Determining investments
- c) Feasibility assessment
- d) Project Proposal

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- Sethi Mohini (2005) Institution Food Management New Age International Publishers
- Kazarian E A ( 1977) Food Service facilities Planning 3<sup>rd</sup> Edition Von Nostrand Reinhold New York
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- Taneja S and Gupta SL ( 2001) Entrepreneurship development, Galgotia Publishing

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**MDN 402: NUTRITION COMMUNICATION FOR HEALTH PROMOTION AND ITS APPLICATIONS:**

**Course learning outcome:**

The students will:

1. gather knowledge with the process of planning and management of public health nutrition programmes.
2. impart an understanding of the concept of nutrition monitoring and nutrition surveillance.

**Content:**

**Extention education-**

Definition,parameters,function types role

**Dietary guidelines for nutrition and health related concerns-**

National and international guidelines and their role in nutrition promotion. Critical appraisal of the current guidelines.

**Nutrition and behaviour inter-relationship-**

Food and health behaviour, models/ theories of health behaviour, food choices, strategies for intervention at the ecological and individual level Concept and objectives of communication for behaviour change

Planning of communication strategies for social and behaviour change programme, Communication needs analysis, stakeholders in nutrition promotion, developing nutrition education plan, identifying communication strategies/ approaches for nutrition and health promotion (e.g. social marketing), designing nutrition and health messages, selecting communication channels, developing and field testing of communication materials, designing training strategies for trainers and their capacity building.

Implementing social and behaviour change communication intervention: an overview

Evaluation of social and behaviour change communication programmes

**Nutrition Advocacy**

Meaning, types, tools and techniques and advocacy planning. Role of advocacy in nutrition policy formulation, preparation of policy briefs.

**Ethics in nutrition and health communication**

Significance of ethics in nutrition and health communication

Ethical Principles and concerns

**References:**

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Vir S.C. (Ed). (2012) Nutrition-Health education and communication for improving women and child nutrition. Public Health and Nutrition in Developing Countries (Part II). Woodhead Publishing India Pvt. Ltd. USAID. Effective At-Scale Nutrition Social and Behavior Change Communication. Multi-Sectoral Nutrition Strategy 2014–2025 Technical Guidance Brief.

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**Practical:**

**MDN 483:PRACTICAL EXPOSURE TO MICROBIOLOGY AND PACKAGING**

**Food Microbiology:**

**Morphology and Structural Features of Various Micro-organisms**

Simple staining

Differential staining

**Various Techniques and Instruments Used in Microbiology**

Sterilization and Disinfection

Filtration, biosafety cabinets

**Isolation of Microorganisms**

Pure Culture Technique

Standard Plate Count Method

**Microbiological Analysis For**

Water (Most Probable Number)

Milk (Methylene Blue Reduction Test)

Curd and probiotic count

Adulteration test for various food products.

**Food Packaging**

- Introduction to food packaging: Functions of food packaging, Packaging environment. Characteristics of food stuff that influences packaging selection.
- Packaging Systems and methods: Vacuum Packaging, Controlled atmospheric packaging, Modified atmospheric packaging, Aseptic Packaging, Retort processing, Microwave packaging, Active Packaging, intelligent packaging, Edible packaging, Shrink and stretch packaging.
- Packaging material and their properties: Glass, Paper and paper board, Corrugated fibre board (CFB), Metal containers: Tin Plate and Aluminum, Composite containers, Collapsible tubes, Plastic Films, Laminations, Metalized films, Co extruded films, Testing of packaging material.

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- Packaging of fresh and processed foods: Packaging of Fruits and vegetables, Fats and Oils, Spices, meat, Poultry and sea foods, Dairy Products, Bakery, beverages, Dehydrated and frozen foods. Liquid and powder filling machines
- Packaging Design & Environmental Issues in Packaging: Coding and marking including bar coding; Packaging Laws and regulations, safety aspects of packaging materials; sources of toxic materials and migration of toxins into food materials; Environmental & Economic issues, recycling and waste disposal.

**Teaching, learning activity and assessment task:**

- **Class Lectures**
- **Board work**
- **Presentation/Demonstration by teachers and students**
- **Class room discussion through books, journals and case studies**
- **Chart, posters, models preparations according to the requirements of the topic**
- **Industry exposure (Food processing unit, Food technology Lab., Hotels, Food laboratory, Sports academy etc)**
- **Report preparation on different health sector visit (Community outreach programme)**
- **Internship and diet survey**
- **Assignment/Projects on different Nutrition & Dietetics Topics**
- **Class room open book surprise tests**
- **Quiz**
- **According to requirement to support the assignment/project special practical class can be arranged**