GUJARAT VIDYAPEETH
AHMEDABAD

M.D. Gramseva Sankul, Sadra, Dist: Gandhinagar

Faculty of Science and Applied Science

Bachelor of Vocational (Food Processing Technology)

Semester-IV
(In Force from June-2017)
FPT-401  FATS AND OIL PROCESSING TECHNOLOGY

Objectives

- To enable the students
- To understand various aspects of oil processing technology employed in food industry.
- To learn various chemical and packaging of oils.

Unit-1. Introduction, Packing and Storage

Fats and oils, classification, properties, uses in food industry, shortenings, recent processing techniques. Packing, packaging materials, factors to be considered during packing, antioxidants, storage.

Unit-2. Processing of Oil, Oil Extraction from Oil Seeds, Fat Characterization

Steps involved in oil processing, oil extraction, methods of oil extraction, oil refining, hydrogenation, winterization, deodorizing, bleaching. Major and minor oil seeds, sources, examples. Extraction of oil from oil seeds, hydrogenated vegetable oils, margarine. Importance of fat analysis, refractive index, melting point, solid fat index, cold test, smoke, flash and fire points, iodine value, saponification number, acid value and free fatty acids, polar components in frying fats, lipid oxidation, peroxide value, Thiobarbituric acid test, Schaal Oven test, active oxygen method.
Text books:


5. Lawson, G. L, Food oils and fats

6. Fereidoon Shahidi, Functional properties of proteins and lipids

7. Clyde, E. Stauffer, Fats and oils
Objectives

- To enable the students
- To understand various aspects of oil processing technology employed in food industry.
- To learn various chemical and packaging of oils.

(1) Processing of Oil
(2) Packaging Techniques
(3) Storage Techniques
(4) Visit of Various related institutes.
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Semester-IV
(In Force from June-2017)
Objectives

- To give a general outline about the principles, structure and composition, economic importance and storage of different cereals, pulses and their products

Unit-1. Rice, Wheat, Millets


Unit-2. Breakfast cereals Pulses

Definition, Nutritive value of breakfast cereals, and classification of breakfast cereals: uncooked breakfast cereals and ready to eat cereals: processing of ready –to-eat cereals (Batch cooking, continuous cooking and extrusion cookers) and products (flaked cereals, puffed cereals, shredded products, granular products). Introduction, composition, processing, utilization of pulses, toxic constituents of pulses, important pulses- Bengal gram, red gram, black gram, green gram, moth bean, lentil, horse gram, field bean, pea, khesari dhal, cluster bean, cow pea, kidney bean, soyabean- processing, fermented products of soyabean.
Text books:

1. David Dendy A.V, etal; Cereals and Cereal Products: Technology and Chemistry. - 2000
Objectives

• To give a general outline about the principles, structure and composition, economic importance and storage of different cereals, pulses and their products.

(1) Nutritative value with added of Swaminathan
(2) Breakfast
(3) Cereals
(4) Continuous Cooking
(5) Extraction
(6) Related products with syllabus.
Objectives

(1) To Learn organic Processing
(2) To know the importance of organic processing
(3) To be innovative in exploring various conventional products.

(1) Organic Farming
- Characteristics of organic food
- Food is grown without Pesticides
- Synthetic growth hormone
- Petroleum based Hormones
- Cloring
- Food is processed without Artificial color and flavor
- Artificial Presentatives
- Irradiation
- GMOS.

(2) Conventional Farming
- Biopesticides
- Organix Manares
- Vermitechnology
- Vermiculture
- Advantage of organic farming
- Limitations of Organic Farming

(3) Certification of organic products & Research findings on organic food

Text Book:
- Palmer Sharron-2006 organic food, today’s
- Yenger David 2008, Got Organic Dietition
- Organic Gardening
- Food Safety and Organic Agriculture
- Vermi Composting
- Organic food http://www.onri.org/Achter/
Objectives

(1) To Learn organic Processing
(2) To know the importance of organic processing
(3) To be innovative in exploring various conventionel products.

(1) Vermi Technology
(2) Vermi Craftwise
(3) List of Organic Products
(4) Pesticides.
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Semester-IV
(In Force from June-2017)
Objectives

- To know the importance of milk as an agricultural commodity
- To be innovative in exploring various traditional and nontraditional milk products

Unit-1. Introduction, Indigenous Dairy Products


Unit-2. Milk Processing, Butter and Cream, Cheese, Ice cream and condensed milk

Text books:

1. Godbole, N.N; Milk – The Most Perfect Food ; Biotechnology books, 2007
4. Spreer E and Mixa, A; Milk and Dairy Product Technology; Marcel Dekker, 2005
6. Sukumar De; Outlines of dairy technology; Oxford University Press; 2001
Objectives

- To analyze the chemical constituents of milk as an agricultural commodity
- To be innovative in exploring various traditional and nontraditional milk products

1. Analysis of milk
   - Estimation of acidity
   - Estimation of lactose
   - Estimation of protein by Sorenson formol titration
   - Estimation of milk fat
   - Adulteration testing- starch, cane sugar, water

2. Processing of ice cream

3. Manufacture of paneer
4. Manufacture of Rasgulla

5. Processing of gulab jamun
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Semester-IV
(In Force from June-2017)

ENG-401: English
(Syllabus of theoretical portion) (In force from June, 2017)
Total Mark: 100 = External Evaluation: 60 Marks +
Internal Evaluation: 40 Marks)
(Total Teaching Hours = 30, Credit = 02 + 00)

Adopted from Microbiology Department
EC-401 Computer

(Syllabus of theoretical portion) (In force from June, 2017)
Total Mark: 100 = External Evaluation: 60 Marks + Internal Evaluation: 40 Marks)
(Total Teaching Hours = 30, Credit = 02 + 00)

1. Formula & Functions – સસૂત્ર અને વવિધનેય

Copy and Paste of Formula – સસૂત્રનની કકોપની અને પનેસસ

What is a Function ? Various types of Function : વવિધ અંદરે શશ? વવિધ અને વવિધ પ્રકાર

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2. Charts - એકીક્રત છાયાચિત્ર

Need for a chart and facilities available in Spreadsheet to make a chart

છાયાચિત્ર બનાવવાની જરૂરરીયના બાજુરા અને સ્પ્રેડશીટમાં છાયાચિત્ર બનાવવા માધ્યમની ઉપલબ્ધ ઉપયોગકૃત સંખ્યાક્રમો

Chart Types છાયાચિત્ર પ્રકારો : Column Chart - કૉલં છાયાચિત્ર, Line Chart - લાઈન છાયાચિત્ર,
3. Network Fundamental

3.1 What Is a Network?  નેટવર્ક શું છે?

3.2 The Concept of Networking -  નેટવર્કનો વિચાર

3.3 Benefits of Computer Network -  કંપયૂટર નેટવર્કના લાભ

3.4 Types of Networks: LANs, MANs and WANs -  નેટવર્કના પ્રકાર

3.5 Network Topology -  નેટવર્ક ટોપોલોજી (રીટ, સ્ટાર, બસ, મેશ)
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EC-401 Computer-Practical  

(Syllabus of practical portion) (In force from June, 2017)  
Total Mark: 100 = External Evaluation: 60 Marks +  
Internal Evaluation: 40Marks)  
(Total Teaching Hours = 45, Credit = 00 + 02)  

1. Assessment of nutritional status: 24 hour dietary recall, anthropometry, clinical assessment  

2. Development of low cost nutritious recipes for population groups vulnerable to nutritional deficiencies  

3. Planning and preparation of diets/dishes for individuals suffering from:  
- Febrile disorders  
  - Diarrhoea, constipation  
  - Underweight, overweight/ obesity  
  - Diabetes and Cardiovascular diseases  

Internet  

1 What is internet? , History, Internet uses  

2 Introduction of World Wide Web –  

3 Web Browser: Internet Explorer –  

4 URL –  

5 Search Engine, Usage of Google –  

- ઇનસરનનેસ શશશ છને?, ઇવતહનાક, ઈનસરનના ઉપયકોગકો  
- વિરડર વિનાઈડ વિનેબનકો પરરચય  
- વિનેબ બનાઉઝર  
- યશવનફકોમર રરીકકોકર લકોકટસર  
- કચર એનજીન, Google નકો ઉપયકોગ  
- નિખન ઓપરેટિંગ સિસ્ટમ તરરીક ubuntu-12.04
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**EC-402: Public Nutrition**  
(Syllabus of theoretical portion) (In force from June, 2017)  
Total Mark: 100 = External Evaluation: 60 Marks +  
Internal Evaluation: 40 Marks)  
(Total Teaching Hours = 30, Credit = 02 + 00)

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**Objectives :**

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**Unit 1**

Concept and scope of public nutrition  
Assessment of nutritional status: methods and application, Direct methods - anthropometry, biochemical and clinical examination,  
Indirect methods - dietary surveys, vital statistics, Common nutritional deficiencies,  
Etiology, prevalence, clinical features, prevention and management of nutritional deficiencies  
• PEM, Micronutrient deficiencies such as Vitamin A deficiency, Nutritional Anemias, Iodine Deficiency Disorders

**Unit 2**

Introduction to Diet Therapy  
Basic concepts of diet therapy  
Therapeutic modifications of the normal diet  
**Common diseases/disorders**  
Etiology, clinical features and nutritional management of:  
Febrile disorders and HIV-AIDS  
• Diarrhoea, constipation  
Underweight, overweight and obesity  
Diabetes and Cardiovascular diseases

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**Text Book :**

Objectives

1. Assessment of nutritional status: 24 hour dietary recall, anthropometry, clinical assessment

2. Development of low cost nutritious recipes for population groups vulnerable to nutritional deficiencies

3. Planning and preparation of diets/dishes for individuals suffering from:
   - Febrile disorders
     - Diarrhoea, constipation
   - Underweight, overweight/ obesity
   - Diabetes and Cardiovascular diseases