Objectives

To study the design of food process and food plant design, based on the established chemical process designed.

- To discuss the various processing equipment on the basis of unit operations of mechanical processes.

Unit-1. Design and selection of food processing equipment, Refrigeration and Freezing Equipment, Food Dehydration Equipment

Materials of construction-metals, steel, stainless steels, aluminium, copper, plastic, and glass. Fabrication of equipment-strength of construction, Fabrication and installation of equipment, hygienic design of food processing equipment. Refrigeration – refrigeration cycle, compressors, evaporators, condensers, cooling equipment, hydrocooling, vacuum cooling, surface contact cooling, tunnel cooling, vacuum cooling freezing-air freezing, cold surface freezing, liquid freezing. Principles of drying, commercial food drying equipment-sun dryers, solar dryers, bin, silo and tower dryers, tray/cabinet dryers, tunnel dryers, rotary dryers, drum dryers, spray dryers, vacuum and freeze dryers

Unit-2. Mechanical, Thermal processing equipment

Size reduction- cutting, crushing and grinding, size enlargement - agglomeration, homogenization-pressure homogenization, colloid mills, ultrasonic homogenizers, forming-extrusion and forming equipment. Canning-basic canning operations, batch sterilizers-still retorts, batch rotary sterilizers, crateless retorts, retorts for glass and flexible containers, continuous flow sterilizers-direct heating and indirect heating
Text books:


Credit: 2  
45 Hrs

Objectives

- To study the design of food process and food plant design, based on the established chemical process designed.
- To discuss the various processing equipment on the basis of unit operations of mechanical processes.

(1) Heat transfer in parallel and counter flow heat exchangers
(2) Performance on vapor compression refrigeration system
(3) Performance characteristics of centrifugal blower
(4) Performance characteristics of centrifugal pump
(5) Performance on Air conditioning unit
(6) Performance test on solar drying unit
GUJARAT VIDYAPEETH
AHMEDABAD

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

Faculty of Science and Applied Science

Bachelor of Vocational (Food Processing Technology)

Semester-III
(In Force from June-2017)
Objectives

- To highlight the processing methods used in confectionary and culinary industries

Unit-1. Manufacture of Sugar, Bread Cake & Biscuit manufacturing

Sugarcane, gur, khandasari sugar, raw sugar, refined sugar, white sugar, beet sugar. Ingredients, role of ingredients, dough development, molding, proofing, knock-back, baking, packing. Processing of cake and biscuit- Ingredients, role of ingredients, development of batter, baking, packing.

Unit-2. Classification of confectionery, Cocoa processing

Sugar boiled confectionery- crystalline and amorphous confectionery, rock candy, hard candy, lemon drop, china balls, soft candy, lollypop, marshmallows, fondant, fudge, cream, caramel, toffee, lozenges, gumdrops, honeycomb candy. Processing of cocoa, manufacture of chocolate- conching, enrobing, milk chocolate, white chocolate, dark chocolate, cocoa butter, wafer coated chocolate, fat bloom, cocoa powder.

Text books:

Objectives

- To highlight the processing methods used in confectionary and culinary industries

- Process of Sugar
- Cake and Bread Making
- Biscuit Packing.
GUJARAT VIDYAPEETH
AHMEDABAD

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Bachelor of Vocational (Food Processing Technology)

Semester-III
(In Force from June-2017)
GUJARAT VIDYAPEETH : AHMEDABAD
M.D. Gramseva Sankul, Sadra, Dist: Gandhinagar
Faculty of Science and Applied Science
Bachelor of Vocational (Food Processing Technology)
Semester-III
(In Force from June-2017)

FPT-303 FOOD ADULTERATION TESTING

(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)

Objectives

- To enable the students
- To understand different sampling techniques employed in chemical analysis of foods.
- To learn various chemical methods of food analysis.
- To be familiar with adulteration test used for quality control

Unit-1. Food Adulteration, Sampling techniques
Definition, classification – intentional & incidental, health hazards caused by various adulterants and the critical level of metals in various foods, common adulterants in food and their testing. Population and sampling, importance of sampling, types of sampling, sampling plan, preparation of samples, problems in sampling.

Unit-2. Chemical analysis of moisture, carbohydrates and protein, Chemical analysis of fat, vitamin C and minerals
**Text books:**


5. PFA ACT.
Objectives

- To enable the students
- To understand different sampling techniques employed in chemical analysis of foods.
- To learn various chemical methods of food analysis.
- To be familiar with adulteration tests used for quality control

(1) Food Testing
   Chemical
   Moisture
   Carbohydrate
   Protein
   Common
(2) Adulteration
   Food and Their Testing
GUJARAT VIDYAPEETH : AHMEDABAD
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Semester-III
(In Force from June-2017)

FPT-304 FOOD PRODUCT DEVELOPMENT

(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)

Objectives

• To learn various processing aspects of food products having economic importance

Unit-1 :
Detail Techniques of Processing Aspects. Milk and milk Processing
Fruit Product Detail and Write methods of Jack Fruit Products.

Unit-2:
Method of Making peanut butter importance of peanut butter and nutritive value.
New Inovation of Preparation of 5 product development list.

Text books:


Objectives

- To learn various processing aspects of food products having economic importance

1. Manufacture of bread, biscuit and different types of cake.
2. Manufacture of different milk products.
3. Manufacture of jack fruit products.
4. Preparation of mayonnaise.
5. Preparation of peanut butter.
6. Preparation of potato chips and tapioca chips.
7. Preparation of RTS.
GUJARAT VIDYAPEETH
AHMEDABAD

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Faculty of Science and Applied Science

Bachelor of Vocational (Food Processing Technology)

Semester-III
(In Force from June-2017)
Students will go for the 15 days filed work or internship any food industries related organization during the semester.

Students will be given a case study during the internship and they have to submit a report thereon at the end of the semester, on dates announced by the department. The guidelines for training will be provided by the department.

A team consisting of internal & external experts will evaluate the record and conduct the viva-voice at the end of semester.
GUJARAT VIDYAPEETH
AHMEDABAD

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

Faculty of Science and Applied Science

Bachelor of Vocational (Food Processing Technology)

Semester-III
(In Force from June-2017)
GUJARAT VIDYAPEETH : AHMEDABAD
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Faculty of Science and Applied Science
Bachelor of Vocational (Food Processing Technology)
Semester-III
(In Force from June-2017)

ENG-301: 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)

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Adopted from Microbiology Department
UNIT-1 P C Software : પેઝેન્સ્શન સોફ્ટવેર

1.1 Introduction to Presentation Software: - પેઝેન્સ્શન સોફ્ટવેરનો પરીપ્રવાય

   Need for a Presentation - પેઝેન્સ્શનનની જરૂરીયાત

   What can you create in Presentation Software પેઝેન્સ્શન સોફ્ટવેર દર્શાવતી જાણ

   કયારે, Presentation Technique (4P) - પેઝેન્સ્શનની ટ૆કનિક

   Facilities available in Presentation Software - પેઝેન્સ્શન સોફ્ટવેરમાં ઉપલબ્ધ

   વિશ્લેષણાત્મક

1.2 Presentation Wizard - પેઝેન્સ્શન વિજાર્ડ

   Empty Presentation - એમ્પટી પેઝેન્સ્શન, From Template - ફસોમ ટેમ્પલેટ,

   Open Existing Presentation - ઓપન એક્સટસ્ટ પેઝેન્સ્શન

1.3 Presentation Views - પેઝેન્સ્શન વ્યુ

   Normal / Outline / Slide sorter / Slide show / Notes Page / Handout Page

1.4 To create Presentation
To add slide - નવી સલયાઈડ ઉમેરવી, To delete slide - સલયાઈડ ડીલીટ કરવી

Save the presentation - પ્રેઝ્નેશન સેવ કરવું

1.5 Slide show - સલયાઈડ શો, Custom Animation - કસનમ એવનમ્યુશન, Interaction - ઇન્ટરએક્શન,

Slide Transition - સલયાઈડ ટ્રાન્સેશન
EC-301: Computer (Practical)

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

1. P C Software: Spreadsheet Software - સપ્પ્રેડશનીન સસોફનવપ્રેર

2. Introduction to Spreadsheet - સપ્પ્રેડશનીન નસો પરરીચય

3. Anatomy of a Spreadsheet - સપ્પ્રેડશનીન ભયાગસો (આકકવત સયાથપ્રે)

4. Working with a Spreadsheet
   Opening A New Spreadsheet - નવી સસ્પ્રેડશનીન ઓપન કરવની, Save A File - ફયાઈલ સપ્રેવ કરવની, Adding, Deleting and Naming Sheets શનીન ઉમપ્રેરવની / શનીન ડરીલનીન કરવની / શનીનનપ્રે નયામ આપવજમાં,
   Moving cell contents - સપ્પ્રેલનની મયાહહિતની અનય સથયાન ઉપર લઈ જવની, Cut, Copy & Paste – કન / કસો અનપ્રે પપ્રેસનસો ઉપયસોગ, Find and Replace – ફયાઈનડ અંપ્રે રરીપલ આપે,
   Undo and Redo Buttons – અન ડજ અનપ્રે રરી ડજ બનનસ, Addressing – સથયાનયામ
   Relative address – સધુમાં સથયાનયામ, Absolute address – નિરાંકરણે સથયાનયામ, Mixed Address –નિષ્ણાતસકલ, Custom List – અને અપ્રે અપો અપો લેખન

Spreadsheet Formatting – સસ્પ્રેડશનીન ફસોમર્મેન કરવની

Spreadsheet Page Settings & Printing – સસ્પ્રેડશનીનમયામાં પપ્રેજ સપ્રેનસ્ટીંગ અનપ્રે વપનનસ્ટીંગ
Objectives:

This course will enable the students to:

- Augment the biochemistry knowledge acquired at the postgraduate level
- Understand the mechanisms adopted by the human body for regulation of metabolic pathways
- Get an insight into interrelationships between various metabolic pathways
- Become proficient for specialization in nutrition

Unit I:

- Chemistry and nucleic acid and metabolism and amino acid

UNIT II:

- Classification of enzymes, properties, kinetics of enzymes action, inhibitors, activators, co-enzymes & isoenzymes,
- Structure of chromosomal replication.
EC-101: FOOD BIO-CHEMISTRY (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)

Objectives:

- Estimation on DNA
- Estimation of RNA
- Isolation of DNA from bacteria and animal tissues.
- Separation of amino acid by TLC
- Estimation of Amino acid
- Determination of the following chemical constant of fats and oils: Saponification value, Iodine value, Peroxide value, Acid value, R.M. value
- Enzyme kinetics with reference to the determinations of optimum pH and temperature.