

Board of Studies Meeting – 2021-22

Department of Food science



20th January 2022

Government College for Women (A), Guntur
Andhra Pradesh

Vision and Mission

Vision:

Studying Food in depth as basic human need for qualitative life is the ultimate objective of food Science education, by conceptualizing the student's knowledge and skill in every stage of human life related to his/her physical, physiological, psychological, social and economic dimensions.

Mission :

- Strengthening the skills and potentials of students through scientific principles, knowledge and experience acquired for optimum living.
- Fostering the development of students towards innovative research to augment the quality of life of different age groups, communities and industry in the challenging life scenario.
- Inculcating appreciation towards offering services to the needy.
- Developing managerial & entrepreneurial skills at various levels by exposing them to contemporary educational challenges for improving the quality of education and better employability.

History And Present Status Of The Department :

- The department of Food Science was established and started functioning from the academic year 2021-22, as per the proceedings of the Commissioner, Collegiate Education (APCCE).
- First batch of students admitted in Nov 2021, through online (OAMDC), under the able guidance of Dr. V R Jyotsna Kumari, Principal of the college.
- From the academic year 2020-21, Apprenticeship / Internship / On the job Training were introduced by APSCHE during summer vacation.
- To make the students employable, an Apprenticeship / Internship / On the job training shall be undertaken by the students in the intervening summer vacation between the 2nd and 3rd years.
- During the entire 6th Semester, the student shall undergo Apprenticeship / Internship / On the Job Training. This is to ensure that the students develop hands on technical skills which will be of great help in facing the world of work.

- From the academic year 2020-21, as per APSCHE guidelines, Community project at the end of first year is introduced from the academic year 21-22.
- APSCHE shall issue guidelines for the implementation and assessment of the Apprenticeship / Internship / On the Job Training.

Staff Details :

Sl.No	Name Regular - R; GF-Guest Faculty	Qualifications	Date of Joining In this college	Date of Retirement
1,	Smt. K. Nandini (GF)	M.Sc	10-12-2021	

Smt. B. Dorka Vijaya Kumari, Lec. In Biochemistry as In-Charge of Dept. of Food Science.

Programmes offered by Dept. of Food Science

- *412 : Food Science - Zoology - Biochemistry (Introduced during 2021-22 by APCCE)*
- Program Code : 412
- Subject Code : FS 320

FOOD SCIENCE - FRAMEWORK CBCS (w.e.f. 2021 - 22)

Subject & Course Code	Title of the Course	No. of Hrs/ course	CIA	Sem End Exam	Total Marks	No. of Hrs/ Week	Credits
SEMESTER - I							
1	Food Science & Nutrition	60	30 m	70 m	100 m	4 hrs	4
	Practical - I	30			50 m	2 hrs	1
SEMESTER - II							
2	Human Physiology	60	30 m	70 m	100 m	4 hrs	4
	Practical - II	30	15 m	35 m	50 m	2 hrs	1
	Community Project (Summer Vacation)						4
SEMESTER - III							
3	Food Microbiology & Biochemistry	60	30 m	70 m	100 m	4 hrs	4
	Practical - III	30			50 m	2 hrs	1
SEMESTER - IV							
4	Family Nutrition	60	30 m	70 m	100 m	4 hrs	4
	Practical - IV	30	15 m	35 m	50 m	2 hrs	1
5	Community Nutrition	60	30 m	70 m	100 m	4 hrs	4
	Practical - V	30	15 m	35 m	50 m	2 hrs	1
	Internship (Summer Vacation)						4
SEMESTER - V							
6	Clinical Nutrition & Dietetics	60	30 m	70 m	100 m	4 hrs	4
	Practical - VI	30			50 m	2 hrs	1
7	Technology of Food (Food Processing, Preservation, Packaging, Fermentation & Dairy Technology)	60	30 m	70 m	100 m	4 hrs	4
	Practical - VII						
SEMESTER - VI							
	Internship						

Course – I

Semester – I

B. Sc Food science Semester – I Theory Syllabus w.e.f Nov 2021

Course I: FOOD SCIENCE AND NUTRITION

Subject & Course Code: FS 1320

Course Description:

- Course covers the different food groups , their functions in the body , nutritional importance and concept of nutrition & requirement in maintain health.
- This module provides detailed information about knowledge about the food and nutrition , their importance and application in day to day life.
- Lab sessions provides the external(social) knowledge about the foods like learning their names in different languages,survey on their availability, prices and listing low cost nutritional foods and also provides scientific knowledge like ,labelling. .

Course Objective :

- To impart basic knowledge about food and its scientific aspects.
- To understand nutrition and its impact on health.
- To gain basic knowledge about nutrients present in food their digestion and functions .
- To be able to organize the lab results, discuss the obtained results on the basis of their knowledge and write a formal lab report.

Learning Outcomes :

The course will give students a basic understanding and scientific knowledge about the food and nutrition , their importance and application in day to day life and thereby prepare them for more advanced studies in food science and nutrition.

Having successfully completed this course, you will be able to:

- Discuss about different food groups and their functions in the body and nutritional importance.
- Understand concept of nutrition and its importance to maintain health.
- Discuss the different cooking techniques advantages and disadvantages.
- Evaluate the importance of nutrients and their functions.
- Determine various samples in the laboratory and writing reports.

Course Assessment/Methods of Evaluation: Student understanding will be evaluated with a combination of comprehensive of the subjects covered, as well as in formal written test, which includes an Internal assessment for 30 marks and External evaluation for 70 marks.

Course –I**Semester – I****B. Sc Food Science Semester – I Theory Syllabus w.e.f Nov 2021****Course I: Food science and Nutrition****Subject & Course Code: FS 1320****60 hours (4 hrs/ week)****Skill Development****Unit – I Food Science :**

16hrs

- Introduction to Food Science- Definition of Food Science, Food
- Classification of Food- ICMR classification, Classification based on Functions- Body building, Energy Yielding, Protective & Regulation; Classification based on physiological, Sociological & Psychological foods; basic seven Functions of food; social, psychological functions)
- Food Pyramid , Food exchange list,
- Cooking methods – Definition, Classification : Dry methods-Boiling, Steam, Stewing, Frying, Baking, Roasting, Broiling, Braising - definition, advantages & disadvantages
- Changes during Cooking- nutritional and structural changes.

UNIT-II Introduction to Nutrition and Macro Nutrients:

10hrs

- Relationship between Food, Nutrition, Health and Disease
- Introduction and scope of Nutrition, Macro Nutrients – Classification, functions, digestion, absorption, dietary sources of Carbohydrates, Lipids, Proteins

UNIT – III Micro nutrients- Vitamins:

12hrs

- Vitamins – Classification, ;
- Functions, dietary sources of the following
 - Fat soluble vitamins – A, D, E and K
 - Water soluble vitamins – Thiamine (B₁), Riboflavin (B₂), Niacin (B₃), Folic acid and Vitamin C.
- Minerals – classification, ;
- Functions ,dietary sources of the following
 - Macro minerals – Calcium & Phosphorous, Sodium and Potassium
 - Micro minerals or Trace elements – Iron, Iodine and Zinc

UNIT - IV Energy :

10hrs

- Energy value of foods – Determination of gross energy value of foods using Bomb calorimeter,
- Physiological energy value of foods.
- Differences between physiological and gross fuel value
- Basal Metabolism – Factors affecting Basal Metabolic Rate,
- Thermic effect of food.

UNIT – V Water and Non Nutrient constituents of Food :

12hrs

- Water – Functions, regulation of water balance, Dehydration, Electrolyte balance.
- Non nutrient constituents of foods and their importance
 - Phytochemicals – Curcumin, Lycopene, Flavonoids
 - Antioxidants – Vitamin C, E and Carotenoids
 - Detoxifying agents – Anthocyanins, Chlorophylls

---X---

Course – II

Semester – II

B. Sc Food Science and Semester – II Theory Syllabus w.e.f Nov 2021

Course II: Human physiology

60 hours (4 hrs/ week)

Subject & Course Code: FS 2320

UNIT-I (12 Hours)

- Cell - Structure and functions
- Tissues - Structure and functions
- Digestive system - Anatomical consideration – structure & functions,
- Brief study of the organization of the digestion, absorption and assimilation of food.

UNIT-II (12 Hours)

- Blood, RBC, WBC, Platelets and Lymph.
- Blood coagulation, blood grouping and Rh factor.
- Circulatory system - Heart structure and functions - cardiac cycle.

UNIT-III (12 Hours)

- Respiratory system - Basic anatomy of the respiratory system, process of respiration, transport and exchange of oxygen and carbon dioxide in the body.
- Endocrine glands - Structure and function of pituitary, thyroid, islets of Langerhans and adrenal gland.

UNIT-IV (12 Hours)

- Reproductive system - Anatomy of the male and female reproductive organs. Menstrual cycle.
- Sense organs - Structure and function of eye, ear, nose, tongue and skin.

UNIT-V (12 Hours)

- Excretory system - Excretory organs - structure of kidney and functions, formation of urine, composition of urine.
- Muscles - physiology of muscular action.
- Central nervous system - Physiology of the nerve cell, parts of the central nervous system and function.

---X---

GOVT. DEGREE COLLEGE FOR WOMEN (AUTONOMOUS), GUNTUR

Department of Food science

Minutes of Board of studies meeting

Date: 20/1/2022

Board of studies meeting in Food science subject was held on the AN of 20th Jan2022.

Mrs. B. Dorka Vijaya Kumari, Chairman of BOS of Food science, did welcome all the members. After a brief introduction, the agenda items were placed and they were discussed thoroughly item-wise as below.

1. Syllabus, Model Question papers, Blue prints for I&II semesters:

Syllabus, Model QPs, Blue Prints from semester I &II was viewed and thoroughly discussed. The syllabus was framed following the guidelines of APSCHE.

The above were approved and recommended for Academic Council for Approval.

2. Practicals : Practical syllabus was discussed. The practical exam is proposed to conduct at the end of each semester (semester end practical), with external examiner for even semester exams.**3. Internal assessment:**

As per the guidelines of Academic Council,, it was resolved that internal assessment component per Semester will be for 30 marks & External exam for 70 marks.

It was resolved to recommend the above for academic council.

4. Choice based credit system:

Since the College was conferred autonomy (2014-15) with CBCS system, it was proposed to follow CBCS and also to follow the framework of courses according to APSCHE guidelines. Student can opt 2nd language, Life skill & Skill development courses.

The Credits followed as per the framework given, and recommended for its approval in Academic Council.

5. Panel of paper setters and examiners:

The members of BOS had a glance on panel for paper setters and examiners. And it was approved and recommended to the academic council.

6. **Certificate courses :** Proposed to plan for Certificate courses and try to implement from this academic year based on feasibility

7. **Project work / Apprenticeship / Internship / On the job Training :**

Project work / Apprenticeship / Internship / On the job Training in respective field will be organized as per the Guidelines of APSCHE and as usual for the final year students. They were approved by BoS members and resolved to recommend the academic council.

8. **Department activities & Extension activities:**

Our department is planning to conduct activities like celebration of important days, exhibition, Quiz, group discussions etc.

It is also resolved to conduct extension activities.





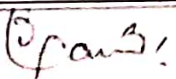

The above were approved by BoS members, resolved and recommended to the academic council.


9. **Workshops / Seminars / Guest Lectures :**

It is proposed to organize Workshops, seminars and guest lectures by eminent personalities in relevant topics / fields. This was approved by BoS and resolved to recommend the same to the academic council.

CERTIFICATE

This is to certify that the framework of the Courses, credits, syllabi, model question papers, blue prints, practical exam pattern, Continuous Internal Assessment and mid semester exams, Practicals / Trainings / project work, certificate courses, workshops, guest lectures, seminars, department activities, extension activities, teaching learning material, panel of examiners and paper setters were approved after thorough discussion in Board of Studies meeting of Food Science which was held on AN of 20-01-2022 at GCW(A), Guntur and recommend the same for the approval in academic council.

S.No	Name	Designation in BoS	Signature
1.	Mrs. B. Dorka Vijaya Kumari	Chairman	 20/1/22
2.	Mrs. K. Nandini	Member	
3.	Dr. J. Rajeswari	University Nominee	
4.	Dr. B. Babitha	Subject Expert	
5.	Dr. G. Anitha	Subject Expert	G. Anitha 20/1/2022
6.	V. Chakrapani	Industry Nominee	
7.	Ms. Nandini	Alumni	
8.	Ms. Nithya	Student Nominee	


Dr. V. R. Jyotsna Kumari
Principal
GOVT. COLLEGE FOR WOMEN (A)
GUNTUR.