GOVERNMENT DEGREE COLLEGE FOR WOMEN (A)
GUNTUR

DEPARTMENT OF BIOCHEMISTRY

CERTIFICATE COURSE
2023-24

Government College for Women
Sambasiva Pet, Guntur-522001
(NAAC Accredited B++ Grade Institution)
Phone: (Off) 0863 – 222093, Fax: 0862-2230149

Department of Biochemistry

A Certificate course on Food Adulteration

Course details

- Number of participants-19
- Duration of the course-30 hours

Criteria of assessment-

- summative: at the end of the course

No of credits-2

Eligibility criteria to get the certificate

- 75 % attendance
- Attending Summative Assessment
- Securing minimum of 40% marks.

The course is conducted in offline mode

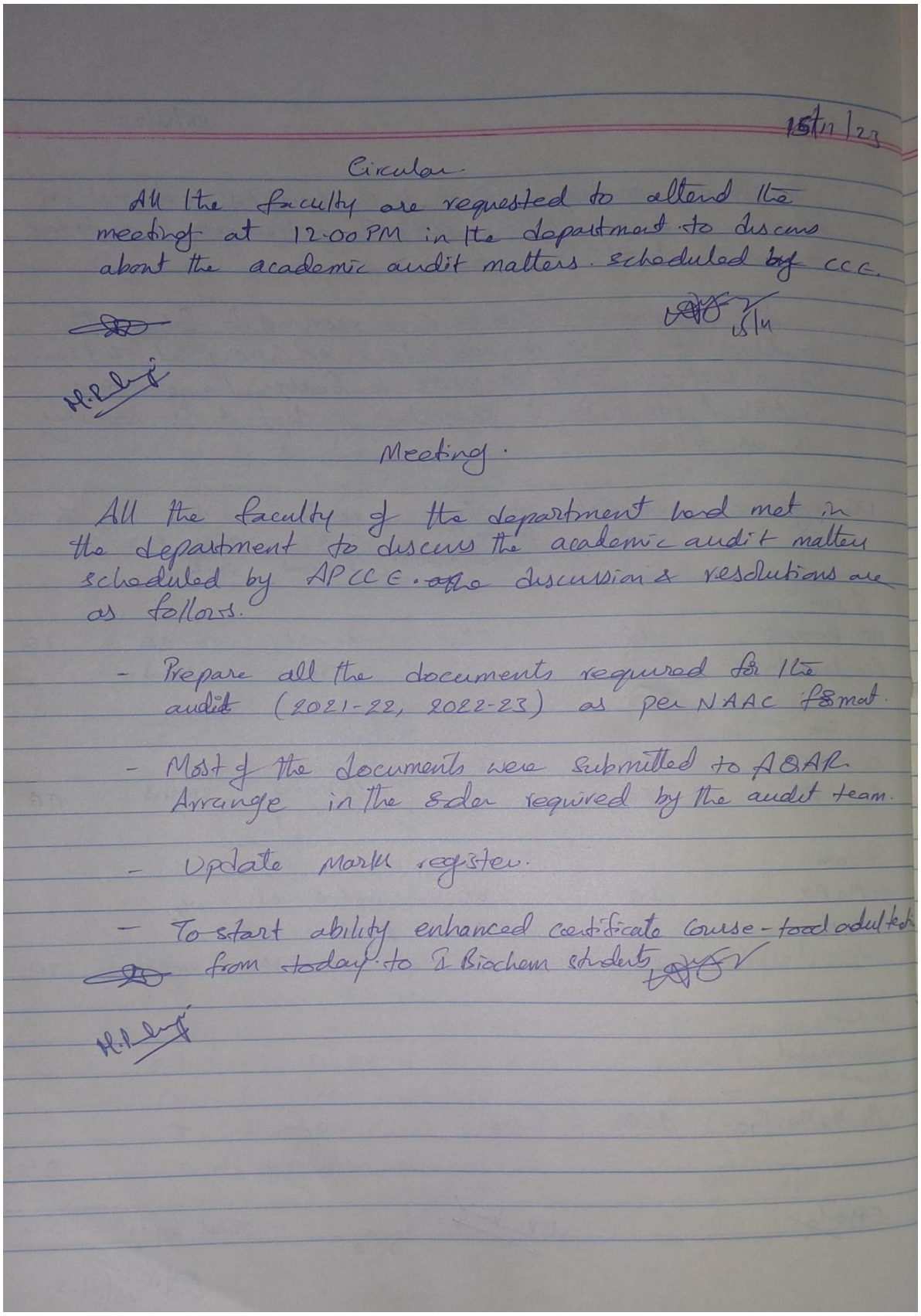
Offline: Timings: 4 PM To 5 PM

Venue: Biochemistry Lab, Government College for Women (A), Guntur

Course starting date: 15-11-2023

Course ending date: 15-12-2023

DEPARTMENTAL MINUTES COPY



15/11/23

Circular

All the faculty are requested to attend the meeting at 12.00 PM in the department to discuss about the academic audit matters scheduled by CCE.

15/11

H.O.D

Meeting:

All the faculty of the department had met in the department to discuss the academic audit matters scheduled by APCCE. The discussions & resolutions are as follows.

- Prepare all the documents required for the audit (2021-22, 2022-23) as per NAAC format.
- Most of the documents were submitted to AQAR. Arrange in the order required by the audit team.
- Update Marks register.
- To start ability enhanced certificate course - food adulteration from today to I Biochem students

H.O.D

Certificate Course on Food Adulteration

Objectives of the Course

Food adulteration refers to the process through which the quality of food is lowered. It includes the addition of ingredients to modify different properties like colour, appearance, taste, weight, volume, and shelf life of food products for economic advantage. The competitive nature of the food industry due to consumer's extensive demand for variety and low-cost food products has stimulated this issue further. The perishable nature, heterogeneity, and huge production of certain food items have always been tempting for dishonest traders; the similarity and diversity of animal species, stock limitation, and market price pressure also encourage them to perform intentional adulteration.

Diarrhea, nausea, allergic reaction, diabetes, cardiovascular disease, etc., are frequently observed illnesses upon consumption of adulterated food. Some adulterants also show carcinogenic, clastogenic, and genotoxic properties.

Some commonly used food adulterants are: Anatta is added to give a yellow tinge to butter, vanaspati is added to pure ghee and butter, washing powder is regularly added to add volume to ice cream, urea, Starch and washing powder is added, wood powder is added to both turmeric and coriander, while red chillies are mixed with Red colour dye, Sudan Red III colour and brick dust, chicory is mixed with the powder etc.

Risks of Food Adulteration

- It can trigger stomach problems, liver or kidney failure alongside other health ailments
- Consumption of mislabelled food products can often lead to intake of unwanted allergens leading to severe allergic reactions
- The addition of artificial flavours to multiple food items can lead to headaches, dizziness, fatigue, and much more.
- Adulteration also impacts the nutritional value of the product thus leading to deficiency of important nutrients in our body

The objective of the course is to study different types of food adulterants and various methods to detect the adulterants.

Course outcomes

After successful completion of the course, students will be able to:

CO1: Get basic knowledge on various foods and about adulteration.

CO2. Understand the adulteration of common foods and their adverse impact on health

CO3. Comprehend certain skills of detecting adulteration of common foods.

CO4. Be able to extend their knowledge to other kinds of adulteration, detection and remedies.

Syllabus

UNIT-I – Common Foods and Adulteration: (07hrs)

Common Foods subjected to Adulteration - Adulteration – Definition – Types; Poisonous substances, Foreign matter, Cheap substitutes, Spoiled parts. Adulteration through Food Additives – Intentional and incidental. General Impact on Human Health.

UNIT-II – Adulteration of Common Foods and Methods of Detection: (09hrs)

Means of Adulteration, Methods of Detection, Adulterants in Milk, Oil, Grain, Sugar, Spices and condiments, Processed food, Fruits and vegetables.

Unit III – Food Additives: (14hrs)

Introduction, need of food additives in food processing. Characteristics and classification of food additives – anti oxidant, emulsifying agents, chelating agents, thickening agents, coloring agents, non-nutritive sweeteners, anti-caking agents, leavening agents.

Reference e Books and Websites:

1. A firstcourseinFoodAnalysis–A.Y.Sathe,NewAgeInternational(P)Ltd.,1999

2. Food Safety, case studies–Ramesh.V.Bhat,NIN,1992

3. https://old.fssai.gov.in/Portals/0/Pdf/Draft_Manuals/Beverages and confectionary.pdf

4.https://cbseportal.com/project/Download-CBSE-XII-Chemistry-Project-FoodAdulteration#gsc.tab=0

5. https://www.fssai.gov.in/

6. https://indianlegalsolution.com/laws-on-food-adulteration

Student Enrollment List

SNO	Regd No	Name of the Students	Class
1	23403001	A Navya	BSc Biochemistry
2	23403002	B Aparna	BSc Biochemistry
3	23403003	B Delores	BSc Biochemistry
4	23403004	K Chandini	BSc Biochemistry
5	23403005	G Lakshmi Vijayendra	BSc Biochemistry
6	23403006	G Meghana	BSc Biochemistry
7	23403007	K Reshma	BSc Biochemistry
8	23403008	K Reethika	BSc Biochemistry
9	23403009	K Pavani Sai	BSc Biochemistry
10	23403010	M Navyateja	BSc Biochemistry
11	23403011	M Sameera	BSc Biochemistry
12	23403012	P Tejeswari	BSc Biochemistry
13	23403013	P Sowmya	BSc Biochemistry
14	23403014	S Naga Divya	BSc Biochemistry
15	23403015	A Vijaya Bharathi	BSc Biochemistry
16	23403016	CH Keerthana	BSc Biochemistry
17	23403017	B Divya	BSc Biochemistry
18	23403018	G Poojitha	BSc Biochemistry
19	23403019	R Metilda	BSc Biochemistry

Number of students completed the course List

S. No.	Registration Number	Name	Score	Credits
1	23403001	A.Navya	38	2
2	23403002	B. Aparna	32	2
3	23403003	B. Delores	29	2
4	23403004	k. Chandini	44	2
5	23403005	G.Lakshmi Vijayendra	22	1
6	23403006	G. Meghana	22	1
7	23403007	K. Reshma	30	2
8	23403008	K. Reethika	32	2
9	23403009	K. Pavani Sai	32	2
10	23403010	M. Navya Teja	37	2
11	23403011	M. Sameera	28	2
12	23403012	P. Tejeswari	42	2
13	23403013	P. Sowmya	43	2
14	23403014	S. Naga Divya	45	2
15	23403015	A.Vijaya Bharathi	34	2
16	23403016	Ch. Keerthana	37	2
17	23403017	B. Divya	21	1
18	23403018	G. Poojitha	25	2
19	23403019	R. Metilda	21	1

Attendance sheet

SNO	Regd No	Name of the Student	15/11/23	16/11/23	17/11/23	18/11/23	20/11/23	21/11/23	22/11/23	23/11/23	24/11/23	25/11/23	27/11/23	28/11/23
1	23403001	A Navya	P	P	P	P	P	P	P	P	P	P	A	P
2	23403002	B Aparna	A	P	P	P	A	P	P	P	P	P	P	P
3	23403003	B Delores	P	P	P	P	P	P	P	A	P	A	P	P
4	23403004	K Chandini	P	P	P	P	P	P	P	A	P	A	P	P
5	23403005	G Lakshmi Vijayendra	P	P	P	P	A	P	P	A	P	P	P	P
6	23403006	G Meghana	P	P	P	A	P	A	P	P	P	A	P	P
7	23403007	K Reshma	P	P	P	P	P	P	P	A	P	P	P	P
8	23403008	K Reethika	P	P	P	P	A	P	P	P	P	P	A	P
9	23403009	K Pavani Sai	P	P	P	A	A	P	P	P	P	P	P	P
10	23403010	M Navyateja	P	P	P	P	A	P	P	A	P	P	P	P
11	23403011	M Sameera	P	P	P	P	P	A	P	P	P	P	P	A
12	23403012	P Tejeswari	P	P	A	P	P	P	P	P	P	A	P	P
13	23403013	P Sowmya	P	P	P	P	P	P	A	P	P	P	P	P
14	23403014	S Naga Divya	P	P	P	P	P	P	A	P	P	P	A	P
15	23403015	A Vijaya Bharathi	P	P	P	P	P	A	P	P	A	P	P	P
16	23403016	CH Keerthana	P	P	P	A	P	P	P	P	A	P	P	P
17	23403017	B Divya	P	P	P	P	P	P	P	P	P	P	P	P
18	23403018	G Poojitha	P	P	A	P	P	P	A	P	P	P	P	P
19	23403019	R Metilda	P	P	P	P	P	A	P	P	P	P	P	P

SNO	Regd No	Name of the Student	29/11/23	30/11/23	1/12/2023	2/12/2023	4/12/2023	5/12/2023	6/12/2023	7/12/2023	8/12/2023	11/12/2023	12/12/2023	13/12/23	14/12/23	15/12/23
1	23403001	A Navya	P	P	P	P	P	P	P	P	A	P	P	P	P	P
2	23403002	B Aparna	P	P	P	P	P	P	P	P	P	P	P	A	P	P
3	23403003	B Delores	P	P	P	P	P	P	P	P	A	P	P	P	P	P
4	23403004	K Chandini	P	P	P	A	P	P	P	A	P	P	P	P	P	P
5	23403005	G Lakshmi Vijayendra	A	A	P	P	P	P	P	P	P	P	P	P	P	P
6	23403006	G Meghana	P	P	P	P	P	P	P	P	P	P	P	A	A	P
7	23403007	K Reshma	P	P	P	P	A	P	P	P	P	P	P	P	P	P
8	23403008	K Reethika	P	P	P	P	A	P	P	P	P	P	P	P	P	P
9	23403009	K Pavani Sai	P	P	P	P	P	P	A	P	P	P	P	P	P	P
10	23403010	M Navyateja	P	P	P	P	P	P	A	P	P	P	P	P	P	P
11	23403011	M Sameera	P	P	A	P	P	P	P	P	P	P	P	P	P	P
12	23403012	P Tejeswari	P	P	P	P	A	P	P	P	P	P	P	P	P	P
13	23403013	P Sowmya	P	P	P	P	P	P	P	A	P	P	P	P	P	P
14	23403014	S Naga Divya	P	P	P	P	P	P	P	P	P	P	P	A	P	P
15	23403015	A Vijaya Bharathi	P	P	P	A	P	P	P	A	P	P	P	P	P	P
16	23403016	CH Keerthana	P	P	P	P	P	P	P	P	P	P	P	P	A	P
17	23403017	B Divya	P	P	P	P	P	P	P	P	P	A	P	P	P	P
18	23403018	G Poojitha	P	P	P	P	P	P	P	P	P	P	P	P	A	P
19	23403019	R Metilda	P	P	P	P	P	A	P	A	P	P	P	P	P	P

Outcomes- After completing the course, the students got basic knowledge about the adulteration of common foods and their adverse impact on health. They able to extend their knowledge to other kinds of adulteration, detection and remedies