



**SECOND-YEAR OF BACHELOR OF SCIENCE  
CHEMISTRY OPEN ELECTIVE COURSE  
REVISED SYLLABUS ACCORDING TO CBCS  
NEP2020**

**COURSE TITLE: FOOD SAFETY AND HYGIENE  
SEMESTER-III  
W.E.F. 2024-2025**

**RECOMMENDED BY THE BOARD OF STUDIES IN CHEMISTRY  
AND  
APPROVED BY THE ACADEMIC COUNCIL**

Devrukh Shikshan Prasarak Mandal's

Nya. Tatyasaheb Athalye Arts, Ved. S. R. Sapre Commerce, and  
Vid. Dadasaheb Pitre Science College (Autonomous), Devrukh.  
Tal. Sangameshwar, Dist. Ratnagiri-415804, Maharashtra,  
India

Academic Council Item No:

Name of the Implementing Institute	:	Nya. Tatyasaheb Athalye Arts, Ved. S. R. Sapre Commerce, and Vid. Dadasaheb Pitre Science College (Autonomous), Devrukh. Tal. Sangameshwar, Dist. Ratnagiri-415804,
Name of the Parent University	:	University of Mumbai
Name of the Programme	:	Bachelor of Science
Name of the Department	:	Chemistry
Name of the Class	:	Second Year
Semester	:	Third
No. of Credits	:	02
Title of the Course	:	Food Safety and Hygiene
Course Code	:	CHOE201
Name of the Vertical in adherence to NEP 2020	:	Generic/ Open Elective Courses
Eligibility for Admission	:	Any student admitted to Second Year Degree Programme in adherence to Rules and Regulations of the University of Mumbai and Government of Maharashtra
Passing Marks	:	40%
Mode of Assessment	:	Formative and Summative
Level	:	UG
Pattern of Marks Distribution for SEE and CIA	:	40:60
Status	:	NEP-CBCS
To be implemented from Academic Year	:	2024-2025
Ordinances /Regulations (if any)		

*Nya. Tatyasaheb Athalye Arts, Ved. S. R. Sapre Commerce and Vid. Dadasaheb Pitre Science College, Devrukh (An Autonomous College Affiliated with University of Mumbai)*

## Syllabus for Second Year of Bachelor of Science in Chemistry

(With effect from the academic year 2024-2025)

### SEMESTER-III

**Course Title: Food Safety and Hygiene**

**No. of Credits - 02**

**Type of Vertical: Generic/Open Elective Courses**

**COURSE CODE: CHOE201**

### Learning Outcomes Based on BLOOM's Taxonomy:

After completing the course, the learner will be able to...		
Course Learning Outcome No.	Blooms Taxonomy	Course Learning Outcome
CLO-01	Remember	describe quality and safety aspects of food.
CLO-02	Understand	explain various ways of evaluating and controlling food quality.

**Syllabus for Second Year of Bachelor of Science in Chemistry****(With effect from the academic year 2024-2025)****SEMESTER-III****Course Title: Food Safety and Hygiene****No. of Credits - 02****Type of Vertical: Generic/Open Elective Courses****COURSE CODE: CHOE201**

<b>COURSE CONTENT</b>			
<b>Module No.</b>	<b>Content</b>	<b>Credits</b>	<b>No. of Hours</b>
1	1.1 Introduction to food safety and safe food, naturally-occurring & environmental contaminants, and toxicants. Factors affecting food safety through the supply chain. 1.2 Sources of contaminants- physical, chemical and microbial hazards in foods, principles underlying spoilage-chemical changes caused by microorganisms in: a. Cereals, pulses and their products b. Vegetables and fruits c. Flesh foods, eggs and poultry d. Milk and milk products 1.3 Food adulteration, types of adulteration in common foods, impact on human health and tests to detect common adulterants and ad-mixtures.	01	15
2	2.1 Food safety management systems- Importance and application of food regulation in the Indian and Global context, responsibilities for maintaining and enforcing food safety- FSSAI, CODEX ALIMENTARIUS, HACCP, ISO 22000 series, TQM and codes of GMP. Auditing and accreditation (BIS, QCI, AGMARK etc). 2.2 Principles of food hygiene, personal hygiene, kitchen hygiene and sanitation, waste treatment and disposal, food vending and packaging standards.	01	15
	<b>Total</b>	<b>02</b>	<b>30</b>

### **Access to the Course**

The course is available for all the students admitted for Bachelor of Arts and Commerce faculties.

### **Methods of Assessment**

The assessment pattern would be 40:60, 60% for Semester End Examination (SEE) and 40% for Continuous Internal Assessment (CIA). The structure of the SEE and CIA would be as recommended by the Board of Studies and approved by the Board of Examination and the Academic Council of the college.

### **References:**

1. Singhal, R. S. (1997) Handbook of indices of food quality and authenticity. Cambridge Woodhead Publishing, New York.
2. Langree, K. (1996) Quantity Food Sanitation 5th edition John Wiley and Sons, New York.
3. McSwane, D. (1998) Essentials of Food Safety and Sanitation 1st edition, Prentice – Hall, Inc, New Jersey
4. Roday, S. (1999) Hygiene and sanitation in food industry, Tata McGraw Hill Pub. Co. Ltd.
5. Potter, N. H. (1997) Food Science, 5th edition, New Delhi, CBS Publishers and distributors New Delhi
6. Negi, J. (2004) Food and Beverage Laws: Food Safety and Hygiene, Amar Prakashan New Delhi.
7. Khanna, S. (2003) Food Standards and Safety in a globalised world. The Impact WTO and Codex.
8. McWilliams, M. (2000) Foods Experimental Perspectives, 4th edition, Prentice-Hall, Inc New Jersey.
9. PFA ISI latest guidelines to be referred.