

**Add On Course**  
**On**  
**“THE HIDDEN DANGERS: UNDERSTANDING FOOD ADULTERATION**  
**AND ITS IMPACT ON HEALTH”**  
**Chemistry Department**  
**Session: 2024-2025**

➤ **Course Objectives:**

This course aims to provide students with a comprehensive understanding of food adulteration, including its causes, effects, and regulatory measures. By the end of the course, students will be able to:

1. **Identify and Analyze Adulterants:** Recognize common types of adulterants in various food products and understand their sources and impact on food quality and safety.
2. **Understand Legal and Regulatory Frameworks:** Gain knowledge of national and international regulations and standards related to food safety and adulteration, including the role of governmental and non-governmental agencies in enforcing these standards.
3. **Implement Detection Methods:** Learn and apply different scientific techniques and methodologies for detecting adulterants in food, including chemical, physical, and biological testing methods.
4. **Evaluate Health Implications:** Assess the potential health risks and long-term effects of consuming adulterated food products on consumers and populations.
5. **Develop Prevention Strategies:** Formulate and recommend strategies for preventing food adulteration, including best practices for food production, handling, and consumer awareness.
6. **Promote Ethical Practices:** Encourage ethical considerations and practices in the food industry to ensure the integrity of food products and protect consumer health.

➤ **Course Outcomes:**

Upon successful completion of this course, students will be able to:

1. **Detect Adulteration:** Accurately identify and analyze various types of food adulterants using established detection methods and technologies.
2. **Interpret Regulations:** Effectively interpret and apply national and international food safety regulations and standards to ensure compliance and safeguard consumer health.
3. **Assess Risks:** Evaluate the potential health risks associated with different types of adulterants and their impact on consumer safety and public health.
4. **Design Prevention Strategies:** Develop and propose effective strategies for preventing and controlling food adulteration within food production and supply chains.
5. **Implement Quality Assurance:** Apply quality assurance techniques to monitor and maintain the integrity of food products, ensuring adherence to safety standards and ethical practices.
6. **Educate Stakeholders:** Communicate findings and recommendations on food adulteration to stakeholders, including food producers, regulatory bodies, and consumers, to promote awareness and preventive measures.
7. **Conduct Research:** Conduct research on emerging trends and technologies related to food adulteration, contributing to the advancement of food safety practices and innovations.
8. **Solve Real-World Problems:** Utilize critical thinking and problem-solving skills to address and resolve practical issues related to food adulteration in various contexts.

➤ **Course Curriculum:**

<b>Topic</b>	<b>No. of Classes</b>	<b>Hours</b>
1. Introduction to Food Adulteration	1	2
2. Types of Adulterants and Contaminants	1	2
3. Detection Methods and Techniques	2	4
4. Food Safety Regulations and Standards	1	2
5. Impact of Adulteration on Health	1	2
6. Prevention and Control Strategies	2	4
7. Ethical and Legal Considerations	2	4
8. Practical Applications and Lab Work	2	4
9. Emerging Trends and Technologies	2	4
10. Research and Project Work	2	4
11. Review and Case Studies	2	4
12. Preparation of Project Report	2	4
<b>Total</b>	<b>20</b>	<b>40 Hrs</b>