

**Course Title:** Food Fraud Mitigation  
**Course Code:** FQ-601  
**Resource Person:** Nauman Khalid  
**Department:** Food Science and Technology

## School of Food and Agricultural Sciences (SFAS) Vision

SFAS endeavors to be a premier center of excellence, offering innovative, high-quality education and professional programs aimed at achieving academic and research excellence, enriching the lives of individuals and making a difference in the world of academia and industry, and to develop a society of professionals, who can contribute towards the betterment of their respective communities.

## SFAS Mission

SFAS provides an intellectually rich, collaborative, research-focused and dedicated learning environment for students, faculty, and staff, while serving the community at various levels. SFAS at UMT has been established with the aim to integrate recent advances in food sciences/technology and agricultural innovations.

## MS Food Quality Management (Program) Objectives

MS Food Quality Management has the following main objectives;

1. To develop a comprehensive understanding of food quality issues faced by the food industries
2. To provide a comprehensive knowledge of recent tools that are developed to tackle food quality and safety issues
3. To train on various analytical instruments and equipment
4. To develop research and analytical skills for effective evaluation of quality and safety issues
5. To develop effective scientific writing skills for effective dissemination of research outputs.

## Course Objectives

At the completion of the course, a student will be able to:

1. Concepts and terminologies related to food fraud and its prevention
2. Identify potential emerging food fraud issues
3. Develop and implement Vulnerability and threat Assessment and Critical Control Point strategy to prevent exposure to fraudulent activity within food supply chain network
4. Identify and mitigate food fraud vulnerabilities in ingredients, materials, and products
5. Apply mitigation strategies per global best practices to prevent food fraud risk within the food supply chain

6. To enhance awareness of past, existing, and emerging food fraud risks

## Learning Objectives

Sr#	Course Learning Objectives	Link with Program Learning Objectives
1.	To understand the context of food fraud, definitions with examples	To provide a comprehensive knowledge of recent tools that are developed to tackle food quality and safety issues
2.	To understand global initiatives and goals to address food frauds	To provide a comprehensive knowledge of recent tools that are developed to tackle food quality and safety issues
3.	To learn vulnerability assessment tools and different factors in accessing incidences of food fraud	To develop research and analytical skills for effective evaluation of quality and safety issues
4.	To learn potential supply chain vulnerabilities and risk assessment methodologies	To develop research and analytical skills for effective evaluation of quality and safety issues
5.	To learn food fraud controls and actions to deter, detect or mitigate food fraud risks	To provide a comprehensive knowledge of recent tools that are developed to tackle food quality and safety issues

## Learning Outcomes

1. *Improve supply chain resilience through food fraud prevention strategies*
2. *Strengthen procurement and sourcing practices within food industries*
3. *Apply risk-based methodologies to determine significant vulnerabilities to prioritize controls and mitigation strategies*
4. *Manage, control and reduce the risk of food fraud in food industries*

## Teaching Methodology

### Interactive Classes:

1. Use media to increase student engagement and improve learning outcomes.
2. Try adding metaphors to help students remember details.
3. Give students a real-world context with extra projects to reinforce skills.
4. Provide practical practice within your lessons. Making it relatable will do wonders.

### Case based teaching:

### Class Participation

Positive, healthy and constructive class participation will be monitored for each class. Particular emphasis will be given to participation during the presentation sessions. The manner in which the question is asked or answered will also be noted.

### Word of advice

Assignments/ projects are very demanding and time consuming. Since you might be exposed to the real corporate environment, the ensuing reality checks could be demoralizing and frustrating. So you must learn to handle the intra group conflicts and any clash of interests. Unless you start working on the assignments/ projects right away from the very first day you are likely to miss the dead lines.

### Participant Responsibilities:

Student should be responsible enough to practice whatever they have learnt during class sessions. They should also implement it to other subjects as well. They are expected to come prepared in the class.

## Class activities:

### Presentations

After careful analysis, resource person will constitute the groups to achieve balanced heterogeneity among groups, for group assignments/projects and will have the final decision in this regard. Every member of the group is expected to be able to handle all aspects of the assignments. Groups are not allowed to choose presenters for various parts of the presentations; instead resource person will nominate them. Individuals will be judged for their understanding of the topic through question handling. Q/A section of the presentations will weigh heavily for grading of assignments/ projects.

### Team Discussions:

During class, each student will work in a team on discussion questions. Teams will be assigned questions, allowed ten minutes for Internet research, and permitted five minutes to present their results. Points are earned by active participation with your team.

**STUDENTS ARE REQUIRED TO READ AND UNDERSTAND ALL ITEMS OUTLINED IN THE PARTICIPANT HANDBOOK**

### Class Policy:

Be On Time

You need to be at class at the assigned time. After 10 minutes past the assigned time, you will be marked absent.

### Mobile Policy

TURN OFF YOUR MOBILE PHONE! It is unprofessional to be texting or otherwise.

### Email Policy

READ YOUR EMAILS! You are responsible if you miss a deadline because you did not read your email. Participants should regularly check their university emails accounts regularly and respond accordingly.

## **Class Attendance Policy**

A minimum of 80% attendance is required for a participant to be eligible to sit in the final examination. Being sick and going to weddings are absences and will not be counted as present. You have the opportunity to use 6 absences out of 30 classes. Participants with less than 80% of attendance in a course will be given grade 'F' (Fail) and will not be allowed to take end term exams. International students who will be leaving for visa during semester should not use any days off except for visa trip. Otherwise they could reach short attendance.

## **Withdraw Policy**

Students may withdraw from a course till the end of the 12<sup>th</sup> week of the semester. Consequently, grade W will be awarded to the student which shall have no impact on the calculation of the GPA of the student. A Student withdrawing after the 12<sup>th</sup> week shall be automatically awarded "F" grade which shall count in the GPA.

## **Moodle**

UMT –LMS (Moodle) is an Open Source Course Management System (CMS), also known as a learning Management System (LMS). Participants should regularly visit the course website on MOODLE Course Management system, and fully benefit from its capabilities. If you are facing any problem using moodle, visit <http://oit.ugt.edu.pk/moodle>. For further query send your queries to [moodle@ugt.edu.pk](mailto:moodle@ugt.edu.pk)

## **Harassment Policy**

Sexual or any other harassment is prohibited and is constituted as punishable offence. Sexual or any other harassment of any participant will not be tolerated. All actions categorized as sexual or any other harassment when done physically or verbally would also be considered as sexual harassment when done using electronic media such as computers, mobiles, internet, emails etc.

## **Use of Unfair Means/Honesty Policy**

Any participant found using unfair means or assisting another participant during a class test/quiz, assignments or examination would be liable to disciplinary action.

## Plagiarism Policy

All students are required to attach a “Turn tin” report on every assignment, big or small. Any student who attempts to bypass “Turn tin” will receive “F” grade which will count towards the CGPA. The participants submit the plagiarism report to the resource person with every assignment, report, project, thesis etc. If student attempts to cheat “Turn tin”, he/she will receive a second “F” that will count towards the CGPA. There are special rules on plagiarism for final reports etc. all outlined in your handbook.

## Communication of Results

The results of quizzes, midterms and assignments are communicated to the participants during the semester and answer books are returned to them. It is the responsibility of the course instructor to keep the participants informed about his/her progress during the semester. The course instructor will inform a participant at least one week before the final examination related to his or her performance in the course.



## Course Outline

**Course code:** FQ-601

**Course title:** Food Fraud Mitigation

Program	MS Food Quality Management
Credit Hours	3
Duration	16 weeks
Prerequisites (If any)	Food Safety and Quality Management Food Legislation
Resource Person Name and Email	Dr. Nauman Khalid <a href="mailto:nauman.khalid@umt.edu.pk">nauman.khalid@umt.edu.pk</a>
Counseling Timing (Room#)	6:30 pm to 8:45 pm STD 502
Contact no.	
Web Links:- (Face book, Linked In, Google Groups, Other platforms)	

**Chairman/Director Programme**

**Signature.....Date.....**

**Dean's signature.....**

**.....Date.....**

## Grade Evaluation Criteria

Following is the criteria for the distribution of marks to evaluate final grade in a semester.

Marks Evaluation	Marks in percentage
Quizzes:	10%
Mid Term Exam:	10%
Case Studies	20%
End Term Exam:	20%
Project/Case study	40%
Total:	100%

## Recommended Textbooks and Papers:

1. Spink, J. W. (2019). Food Fraud Prevention: Introduction, Implementation, and Management: Springer New York.
2. Kennedy, S. (2016). Food Protection and Security: Preventing and Mitigating Contamination During Food Processing and Production. Elsevier.
3. Spink, J., Ortega, D. L., Chen, C., & Wu, F. (2017). Food fraud prevention shifts the food risk focus to vulnerability. *Trends in Food Science & Technology*, 62, 215-220.
4. van Ruth, S. M., Huisman, W., & Luning, P. A. (2017). Food fraud vulnerability and its key factors. *Trends in Food Science & Technology*, 67, 70-75.
5. Spink, J., Chen, W., Zhang, G., & Speier-Pero, C. (2019). Introducing the food fraud prevention cycle (FFPC): A dynamic information management and strategic roadmap. *Food Control*, 105, 233-241.
6. Spink, J. W. (2019). The current state of food fraud prevention: overview and requirements to address 'How to Start?' and 'How Much is Enough?'. *Current Opinion in Food Science*, 27, 130-138.

## Course: Food Fraud Mitigation

Course code: FQ-601

No	Topics to be covered in the course	Learning Objective of this topic	Expected Outcomes from Students	Teaching Method	Assessment Criteria	Deadlines and Homework
1	What is Food Fraud? Definition and types of Food Fraud Food Fraud History	To understand the context of food fraud To understand global initiatives and goals to address food frauds	Improve understanding of food fraud concepts with reference to international domains and local domain	Lecture slides as well as case study	Class Participation	Within a Week
2	Food Fraud Related to GFSI Fraudulent Foods Important Factors for Fraud	To understand the context of food fraud To understand global initiatives and goals to address food frauds	Improve understanding of food fraud with context of quality standards, and how standards correlate with food frauds	Lecture slides as well as case analysis	Presentation Class participation	Within a Week
3	Guest Lecture I					Within a Week
4	FSMA and other regulatory requirements regarding Food Fraud	To learn vulnerability assessment tools and different factors in accessing incidences of food fraud	Improve understanding of food fraud with context of quality standards, and how standards correlate with food frauds	Case study Lecture Discussion	Class participation	Within a Week
5	Food Fraud Media Monitoring & Early Warning Systems	To learn potential supply chain vulnerabilities and risk assessment methodologies internet. To learn vulnerability assessment tools and different factors in accessing incidences of food fraud	Improve supply chain resilience through food fraud prevention strategies	Case study Lecture Book	Case studies with reference to FSMA and EU	Within a Week
6	Food Frauds Prevention Model – general objectives / potential suggestions	To learn potential supply chain vulnerabilities and risk assessment methodologies	Improve supply chain resilience through food fraud prevention strategies	Lecture Research paper	Case studies with reference to scientific papers	Within a Week

7	<b>Revision</b>	<b>Midterm</b>				Within a Week
8	Food Fraud Prevention and HACCP system	To learn food fraud controls and actions to deter, detect or mitigate food fraud risks To learn vulnerability assessment tools and different factors in accessing incidences of food fraud	Apply risk-based methodologies to determine significant vulnerabilities to prioritize controls and mitigation strategies	Case study Lecture Group Discussion	Class participation	Within a Week
9	Guest Lecture 2					Within a Week
10	Food Fraud Industrial Prevention	To learn food fraud controls and actions to deter, detect or mitigate food fraud risks	Strengthen procurement and sourcing practices within food industries	Lecture	Quiz	Within a Week
11	Guest Lecture 3			Lecture		Within a Week
12	GFSI-defined audit requirements regarding Food Fraud	To learn food fraud controls and actions to deter, detect or mitigate food fraud risks.	Manage, control and reduce the risk of food fraud in food industries	Lecture	Class Participation	Within a Week
13	Students Presentations	To estimate student learning and progress in food fraud mitigation	To develop communication skills and effective communication on industrial floors	Class Participation	Presentation and Viva	Within a Week
14	Project Assessment	To evaluate student's critical ability to access and estimate food frauds and prevention strategies	Develop and effective plan and strategy to evaluate food frauds and mitigation tool in any food industry	Class Participation	Presentation and Viva	Within a Week
15	Final Examination	Application of all the concepts learned in food fraud mitigation		On campus examination	Paper and Viva	Within a Week