LIVERPOOL JOHN MOORES UNIVERSITY

Knowledge of Food Safety and Control

Module Information

2022.01, Approved

Summary Information

Module Code	4503YAUNUT
Formal Module Title	Knowledge of Food Safety and Control
Owning School	Sport and Exercise Sciences
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 4
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

Partner Teaching Institution

Institution Name
Yunnan Agricultural University

Learning Methods

Learning Method Type	Hours
Lecture	62
Online	16
Practical	32

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
JAN-PAR	PAR	January	12 Weeks

Aims and Outcomes

Aims	The aim of this module is to introduce students to food microbiology, food toxicology and the inspection of food microbiology.Food Microbiology requires students to study the morphological and structural characteristics, physiological and biochemical characteristics, growth and reproduction, and the influence of environmental factors on the growth of microorganisms. Students will learn the theory of microbial classification, ecological and genetic variation, and develop and utilize beneficial microorganisms and control harmful microorganisms that cause food spoilage and food-borne food poisoning.As an introduction to food toxicology students will study the safety limits of chemical substances in food, evaluate the safety of food, and establish relevant hygienic standards.

After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Explain the presence of pathogenic and spoilage microorganisms associated with different foods.
MLO2	2	Explain how microorganisms grow, and can be used in a positive manner and also controlled in foods
MLO3	3	Develop practical skills in analytical methods to evaluate the microbial quality and safety levels of food.

Module Content

Outline Syllabus	The biological characteristics of microorganisms, a brief history of microbial development. Microbial morphology and structure. Microbial nutrition and Medium. The influence of environmental factors on the growth of microorganisms. Microbial catabolism and anabolism. Genetic variation and breeding of microorganisms. Microbial ecology. Major microorganisms in food manufacturing and their applications. Microorganisms and food spoilage. Food poisoning and foodborne pathogenic microorganisms.The basic concepts of food toxicology and the general rules of the interaction between food exogenous chemicals and the body. The concept and content of safety evaluation procedure and risk evaluation of food exogenous chemicals. The metabolic process of the body of the main exogenous chemicals in food (natural substances, derivatives, pollutants, additives) and the toxicity harm to the body.Inspection of food microbiology will be largely practical. It will include: isolation and purification of microorganisms in foods; determination of the total number of bacterial colonies in foods; determination of moulds and yeasts in foods; detection of coliform group in foods; inspection of Staphylococcus aureus in foods; and inspection of Salmonella in foods.
Module Overview	
Additional Information	This module is for individuals to understand the development of microbiology, the essential characteristics of microorganisms, the application of microorganisms in food manufacturing, and food safety issues caused by microorganisms. Individuals will also develop the necessary practical skills in food microbiology and think about food safety issues.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Exam	Exam & quizzes Microbiology	32	2	MLO1, MLO2
Presentation	Presentation 10 min	4	0	MLO1

Report	Portfolio - performance & rpt	4	0	MLO3
Test	Toxicology test/exam	30	2	MLO2
Practice	Practical performance	15	0	MLO3
Report	Report	15	0	MLO2, MLO3

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Elizabeth Mahon	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings