ROBERT GORDON UNIVERSITY ABERDEEN

MODULE DESCRIPTOR

Module Title

Food Analysis, Authenticity & Safety

Reference	PLM304	Version	1
Created	February 2023	SCQF Level	SCQF 11
Approved	March 2023	SCQF Points	30
Amended	August 2021	ECTS Points	15

Aims of Module

To enable the students to critically evaluate the principles, applications and limitations of instrumental analysis in Food, Authenticity and Food Safety and to select and implement a range of appropriate analytical techniques to solve a given analytical problem.

Learning Outcomes for Module

On completion of this module, students are expected to be able to:

1	Critically appraise key factors related to the quality/safety/authenticity of food.
2	Critically evaluate the appropriateness of the different techniques available for sampling, preparation and analysis for an analytical problem related to the quality/safety/authenticity of food.
3	Critically review the results and conclusions from an analytical group project related to quality/safety/authenticity of food.

Indicative Module Content

Implications of toxins in food and animal feed. Evaluation and regulation of food and drink; Food-borne pathogens in animals and plants; bacteria and mycotoxins; nitrates, nitrites and N-nitroso-compounds; Polycyclic aromatic hydrocarbons; pesticides, herbicides and fungicides; Food additives; Dioxins; Polychlorinated biphenyls; Health and Safety issues; relevant legislation. Analysis of lipids, carbohydrates, proteins, minerals and vitamins. Food crime including counterfeit products and profiling of distilled alcoholic beverages. Solution of an analytical problem appropriate to Food (or beverage) Analysis, Authenticity & Safety requiring a combination of Laboratory techniques.

Module Delivery

Full-time - The module is delivered by formal lectures with some external speakers, and 5 days of laboratory work. Part-time - Must attend the laboratory analytical problem solving exercise and attend formal lectures or work through learning material on Moodle.

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Indicative Student Workload	Full Time	Part Time
Contact Hours	70	70
Non-Contact Hours	230	230
Placement/Work-Based Learning Experience [Notional] Hours	N/A	N/A
TOTAL	300	300
Actual Placement hours for professional, statutory or regulatory body		

ASSESSMENT PLAN

If a major/minor model is used and box is ticked, % weightings below are indicative only.

Component 1

Type:	Practical Exam	Weighting:	100%	Outcomes Assessed:	1, 2, 3
Description:	Demonstrate competent laboratory planning and analysis of an abused or common food toxin or contaminant and individual performance in a PowerPoint and oral presentation.				

MODULE PERFORMANCE DESCRIPTOR

Explanatory Text

The grade represents Component 1 (PE1). A minimum of Module Grade D is required to pass the module. Non-submission of either component will result in an NS grade.

Module Grade	Minimum Requirements to achieve Module Grade:
A	A
B	B
C	C
D	D
E	E
F	F
NS	Non-submission of work by published deadline or non-attendance for examination

Module Requirements

Prerequisites for Module	None, in addition to the course entry requirements.
Corequisites for module	None.
Precluded Modules	None.

INDICATIVE BIBLIOGRAPHY

1	NEILSON, S.S.S. 2017. Food Analysis. New York: Springer.
2	PICO, Y. 2012. Chemical Analysis of Food, Techniques and Applications. Academic Press. Elsevier. E-book
3	PICO, Y. 2007. Food Toxicants Analytical Techniques, Strategies and Developments. Elsevier
4	NOLLET, L and TOLDRA, F. 2015. Handbook of Food Analysis, Vol 1 and 2. CRC Press. E-book
5	PRITCHARD, F.E., 2007. Quality assurance in Analytical Chemistry Laboratory. New York: Wiley.
6	SKOOG, W. CROUCH, S. WEST, D and HOLLER, F. 2021. Skoog and West. Fundamentals of Analytical Chemistry. Tenth edition. Cengage Learning