

Liverpool John Moores University

Title: Food Biotechnology
Status: Definitive
Code: **6084TEF** (120009)
Version Start Date: 01-08-2019

Owning School/Faculty: Sports Studies, Leisure and Nutrition
Teaching School/Faculty: Sports Studies, Leisure and Nutrition

Team	Leader
Katie Lane	Y
Leo Stevenson	

Academic Level: FHEQ6
Credit Value: 24
Total Delivered Hours: 50
Total Learning Hours: 240
Private Study: 190

Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	36
Practical	12

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Presentation	AS1	Individual Presentation	50	
Exam	AS2	Seen and Unseen	50	2

Aims

Students will evaluate biotechnical methods used to analyse food for technical and nutritional purposes. Students will investigate and analyse current issues surrounding food biotechnology including enzymes, bio-fermentation and genetic engineering in food production

Learning Outcomes

After completing the module the student should be able to:

- 1 Critical analysis of the use of biotechnology and its application to the food industry
- 2 Evaluate and debate the contribution of biotechnology to food production and analysis methods
- 3 Organise, plan and perform a poster presentation of a given food biotechnology topic

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Individual Presentation	3	
Seen and Unseen	1	2

Outline Syllabus

Study the techniques of enzymic methods for food analysis; Study the techniques of immunoassay methods for food analysis; Study the techniques of electrophoresis methods; The use of enzymes in syrup production; Methods for the conversion of glucose to fructose; Enzyme immobilisation techniques; High fructose corn syrup production, technical, economic and nutritional aspects; Bio-fermentation of Quorn mycoprotein; The development and use of genetically modified chymosin; techniques for the genetic modification of plants; GM case studies; the genetic modification of tomatoes; The development of herbicide and pesticide resistant crops; The benefits and concerns of golden rice; Latest developments in GM technology; The contribution of biotechnology to food production including waste products; The factors influencing the developments in biotechnology in food production.

Learning Activities

Mainly centred around lectures with a small practical element.

Notes

Mainly centred around lectures with a small practical element.