

WSP-NAAFS Module Synopsis

Module 1 - Food Product Design

The aim of this module is for students to gain a deeper understanding of the approach by which consumers' needs; identified through design thinking process are translated into innovative and commercially viable products. There is also an analysis of the innovation process with emphasis on factors such as constraints of time, cost and manufacturing issues.

Module 2 - Consumer and Sensory Studies (revised)

Sensory Evaluation is a very important tool for product development. Food manufacturers are recognising the value of using consumer and sensory studies to measure product acceptability, differences, improvements and opportunities. These basics of sensory evaluation and techniques have been taught to students in modules like Food Design and Product Development or equivalent in the diploma programmes.

This module aims to provide deeper and broader knowledge and practical tools in experimental design and sensory analysis. Case studies combined with hands-on sessions using statistical methods needed for sensory and consumer insight work will be used to reinforce understanding in this field.

Module 3 - Data Analytics (New)

One of the key industries where data analytic skills are important is the Manufacturing industry where such skills and knowledge are required to make logical correlations and informed decisions. This course provides an opportunity to not only gain theoretical knowledge in data analytics, but also exposure participants to business perspectives and learn the best industry practices. This is an introductory course to the key areas of analytical processes, including how data is created, stored, accessed, and how an organization works with data and processes data to enable effective and useful analytics. Through this course, the participants will develop skills which will make them more productive and be seen as valuable assets to their organization.

Module 4 - Food Legislation

This module exposes students to the practical issues with regard to the regulatory issues in the commercialisation of new food products for key markets. Students will apply the knowledge to evaluate ingredients, products and process for compliance with national and international regulations.

Module 5 - Sustainable Food Manufacturing

This module analyses the sustainability issues in food manufacturing. Students will be exposed to novel technologies and processes for converting food wastes to value-added products. The concepts and application of Lean Six-Sigma System will be introduced and applied to improve food processes in order to eliminate waste, decrease variation, enhance product quality and increase productivity.

Module 6 - Applied Food Packaging

This module offers opportunities to integrate their knowledge of food chemistry with packaging design and materials science. Students will gain competency in applying food packaging knowledge into the shelf life assessment of food products in accordance with performance, economics, and brand value for the company.

Module 7 - Food Operations Management

This module aims to provide students with an insight into the roles and functions of food operations management in a holistic manner. Blended learning will be adopted to facilitate students' understanding in project management, risk management, selection and management of technology, design of work systems and facilities planning.

Module 8 - Applied Food Analysis

This module aims to provide an overview of the strategies in the selection of appropriate instrumental techniques. Through case studies, students will apply the strategies in method development, validation and estimation of measurement uncertainty.

Module 9 - Advanced Food Microbiology and Biotechnology (Revised)

This module enables students to take on responsibility in maintaining the quality and safety of food. Students will acquire both biochemical and microbiological techniques to detect and identify pathogens and spoilage microorganisms in different foods. Students will be introduced to cell-based meat and alternative protein as well as operating of bioreactor systems and interpretation of key processing parameters and materials impacting the quality of finished products in bioreactor systems.

Module 10 - Food Safety Management System

This module emphasizes auditing techniques using the key concepts of different food safety management systems like ISO22000, British Retail Consortium (BRC) and crisis management programme. Students will work on case studies to deepen their understanding of safety management including current Good Manufacturing Practices (cGMP) and Hazard Analysis Critical Control Point (HACCP) system.

Module 11 - Capstone Project

The capstone project, designed by the company mentor and SP facilitator, allows trainees to apply their knowledge, analytical and trouble-shooting skills specific to his/her area of work. Through the project, students will develop a better understanding of the complex process of safe food production.