Subject Description Form

Subject Code	FSN4424 (ABCT4424)
Subject Title	Food Product Development
Credit Value	3
Level	4
Pre-requisite	FSN3419 / ABCT3419 Food Engineering and Processing I Laboratory FSN4421 / ABCT4421 Food Engineering and Processing II Laboratory
Objectives	This subject aims to promote students' abilities to apply their knowledge of food chemistry, microbiology, food safety, food analysis, nutrition, processing and packaging in the design and development of a new food product from market concept to practical prototype.
Intended Learning Outcomes	Upon completion of the subject, students should be able to: a) Understand the food development cycle and key steps in new product development as well as the global trends in food development; b) Understand the basics of project management and the evaluation of market needs; c) Integrate multidiscipline knowledge required to develop a new food product from concept to prototype or pilot-scale production with inclusion of a critical analysis of the quality, safety, shelf-life, packaging, labelling and cost of the product; d) Analyse data collected during the development phase of a new food product; e) Demonstrate entrepreneurial spirit and skills as well as competency to develop a new food product proposal and produce a report to professional standards as a team
Subject Synopsis/ Indicative Syllabus	Introduction – an overview of food product development and global trends for food development New food product brief – assign groups and identify group leader by group members, discuss market trends, develop a product concept and product concept refinement. Prototype development and time line considerations – discuss and define food ingredients, food processing, shelf-life, safety tests and nutritional labelling; Define key milestones and time line in the food product development project; make a real food product and perform sensory evaluation; require group discussion and teamwork

<table>
<tr><td>Teaching/Learning Methodology</td><td>Students will be assigned to product developing teams. Each team will develop the new product concept and finally make it a real food product. Each team member will be responsible for one key aspect and give an oral report on the related aspect. Lectures/ seminars will be given by course instructor(s) and invited speakers with rich experiences in business, food industries or the government. The rest of hours are mainly for group-based discussions and hands-on practice in the laboratory. Written progress record (a logbook with laboratory notes), final written and oral progress reports will be evaluated periodically. Good projects will be encouraged to attend national or world-wide competitions.</td></tr>
<tr><td>Assessment Methods in Alignment with Intended Learning Outcomes</td><td>
<table>
<tr><td>Specific assessment methods/tasks</td><td>% weighting</td><td>a</td><td>b</td><td>c</td><td>d</td><td>e</td></tr>
<tr><td>1. Attendance</td><td>5%</td><td>√</td><td></td><td></td><td></td><td></td></tr>
<tr><td>2. Quiz</td><td>15%</td><td>√</td><td>√</td><td></td><td>√</td><td></td></tr>
<tr><td>3. Project</td><td>80%</td><td>√</td><td>√</td><td>√</td><td>√</td><td>√</td></tr>
<tr><td>Total</td><td>100 %</td><td colspan="5"></td></tr>
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Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:

1. Students are assessed by both Continuous Assessment based on attendance of classes, a quiz, and a group project.
2. Attendance - Students are expected to attend all the classes
3. The quiz is used to assess the knowledge acquired by students from lectures and other learning outcomes expected.
4. For project, each group needs to prepare progress records, lab reports, one final written report and one oral presentation. The progress records and lab reports will be assessed through a logbook with laboratory notes and three brief oral progress reports reflect efficient planning, organization and execution of the project as a group. They are evaluated in the form of group-based assessment. The group project is used to assess students' abilities to integrate and apply the knowledge acquired in development of a new food product.</td></tr>
<tr><td rowspan="3">Student Study Effort Required</td><td colspan="2">Class contact:</td></tr>
<tr><td>▪ Lecture/Seminar/Tutorial</td><td>18 Hrs.</td></tr>
<tr><td>▪ Lab</td><td>21 Hrs.</td></tr>
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	Other student study effort:	
	▪ Project execution, written and oral reports	82 Hrs.
	Total student study effort	121Hrs
Reading List and References	1. Methods for Developing New Food Products: by F. Aramouni and K. Deschenes. 2015. 2. New Food Product Development: From Concept to Marketplace, Third Edition, Gordon W. Fuller, CRC Press, 2016.	