

# The Hong Kong Polytechnic University

## Subject Description Form

<b>Subject Code</b>	ABCT3408
<b>Subject Title</b>	SENSORY EVALUATION OF FOOD
<b>Credit Value</b>	2
<b>Level</b>	3
<b>Pre-requisite</b>	Basic Statistics (AMA1006)
<b>Objectives</b>	This subject aims to develop students' understanding of the fundamentals upon which food sensory evaluation is based. Emphasis is placed on the methods for sensory tests, statistical analysis and interpretation of the testing results. The facilities required for sensory tests, forming of test panels and factors influencing the test will be introduced to students. The opportunity to integrate theory into practice will also be provided through laboratory works and a mini-project.
<b>Intended Learning Outcomes</b>	Upon completion of the subject, students will be able to: (a) understand the fundamental requirements and procedures of food sensory evaluation; (b) select the appropriate test methods when presented with a practical problem; (c) apply statistical principles to food sensory evaluation; (d) demonstrate practical proficiency in a food sensory evaluation laboratory; (e) appreciate the importance of teamwork, problem solving and critical thinking
<b>Subject Synopsis/ Indicative Syllabus</b>	<p><u>Introduction</u> <span style="float: right;">4 hours</span>          Definition of sensory evaluation; basic tastes; human senses and sensory perception; threshold; psychophysics</p> <p><u>Arrangements for Sensory Evaluation</u> <span style="float: right;">2 hours</span>          Test controls: environment and test room design; product controls: sample preparation and presentation; panelist controls; factors influencing measurements: psychological and physiological errors</p> <p><u>Statistical Analysis</u> <span style="float: right;">4 hours</span>          Mean; mode; median; range and dispersion, variance and standard deviation; normal distribution; z score, Student's <i>t</i> test; ANOVA; multiple comparisons test; testing hypothesis; level of significance; type I and II errors.</p> <p><u>Methods for Sensory Evaluation</u> <span style="float: right;">14 hours</span>          Classification of test methods; discrimination tests: paired-comparison, duo-trio and triangle tests; affective tests: qualitative (interview and focus group) and quantitative tests (paired preference and acceptance tests); descriptive analysis: Favor Profile<sup>®</sup>, Texture Profile<sup>®</sup>, Quantitative Descriptive Analysis<sup>®</sup>, Spectrum<sup>™</sup> Descriptive Analysis</p> <p><u>Applications of Sensory Analysis in the Food Industry</u> <span style="float: right;">2 hours</span>          Quality control; storage stability testing; product development and consumer acceptance testing.</p>
<b>Teaching/Learning Methodology</b>	Interactive lectures and guided readings are used to facilitate communication between lecturer and students, and also to enhance students in comprehending the taught topics. External speaker(s) from the local food industry is/are invited to give seminar(s) on their current practices of food sensory evaluation in Hong Kong. Tutorials are designed to assist students to re-think the previous learning process for consolidating the key concepts. Hands-on laboratory is used to supplement the lectures and to develop students'

practical proficiency and capability in conducting different kinds of food sensory evaluation. For problem-based learning, students are required to form groups, design and implement the whole set of food sensory evaluation on their own. Group project presentation is used to strengthen their communication skills and teamwork.

**Assessment Methods in Alignment with Intended Learning Outcomes**

Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)					
		a	b	c	d	e	
Quiz	20	√	√	√			
Laboratory reports	10	√	√	√	√	√	
A group project presentation + A group report	40	√	√	√	√	√	
Examination	30	√	√	√			
<b>Total</b>	<b>100 %</b>						

Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:

Students are assessed by both Continuous Assessment and Examination components. Continuous Assessment is based on a quiz (20%), laboratory reports (10%) and a group project presentation and report (40%). The group project is used to assess students' abilities to integrate and apply the knowledge acquired as well as their skills in problem-solving and critical thinking. The quiz and final examination are used to assess the knowledge acquired by students from lectures and other learning outcomes expected.

**Student Study Effort Required**

Class contact:	
▪ Lecture	20 Hrs.
▪ Seminar /Tutorial	2 Hrs.
▪ Laboratory	6 Hrs.
Other student study effort:	
▪ A group project presentation + A group report	56 Hrs.
▪ Lab reports	6 Hrs.
<b>Total student study effort</b>	<b>90 Hrs.</b>

**Reading List and References**

Essential  
 Meilgaard MC, Civille GV & Carr BT. Sensory Evaluation Techniques (4th ed.); CRC Press 2007

Supplementary  
 Lawless HT. Sensory Evaluation of Food: Principles and Practices; Chapman & Hall 1999  
 O'Mahony M. Sensory Evaluation of Food: Statistical Methods and Procedures; M Dekker 1986  
 Larmond E. Laboratory Methods for Sensory Evaluation of Food; Agriculture Canada

