Course Syllabus

1.	**Program of Study**	Bachelor of Science Program Bachelor of Arts Program Bachelor of Business Administration Program Bachelor of Nursing Science Program
	Faculty/Institute/College	Mahidol University International College
2.	**Course Code**	ICNS 211
	Course Title	Introduction to Food Science and Technology
3.	**Number of Credits**	4 (4-0-8) (Lecture/Lab/Self-Study)
4.	**Prerequisite *(s)***	none
5.	**Type of Course**	General Education Course
6.	**Session**	2nd trimester
7.	**Conditions**	**-**

8. Course Description

Most significant types of foods, their chemical, biochemical, physical properties and microbiological nature; overview of food production and distribution chain from raw material utilization, processing, preservation to finished products, storage and distribution.

9. Course Objective *(s)*

After successful completion of this course, students should be able to

9.1 explain/define terms relevant to food production/manufacturing.
9.2 state examples of macro and micronutrients present in foods.
9.3 describe the structure, chemistry and significance of macronutrients found in food.
9.4 describe the structure, chemistry and deficiency diseases of micronutrients found in food.
9.5 state examples of different food groups.
9.6 describe the various types of food additives used in food production and preservation.

9.7 state the components of a balanced diet.
9.8 describe some basic food analysis techniques.
9.9 describe the consequences of poor food hygiene.
9.10 state some of the advantages and disadvantages of genetic engineering.
9.11 describe techniques used in the creation of genetically altered bacteria, plants and animals.

10. Course Outline

Week	**Topic**	Hour			**Instructor**
		Lecture	**Lab**	**Self-Study**	
1	Unit I: Terms and definitions	4	0	8	Valeeratana S.
2	Unit II: Fundamental Chemistry	4	0	8	Valeeratana S.
3	Unit III: Macronutrients	4	0	8	Valeeratana S.
4	Unit IV: Micronutrients	4	0	8	Valeeratana S.
5	Unit V: Food Groups and Processing	4	0	8	Valeeratana S.
6	Mid-term	-	-	-	Valeeratana S.
7	Unit VI: Additives	4	0	8	Valeeratana S.
8	Unit VII: Balanced diets	4	0	8	Valeeratana S.
9	Unit VIII: Food Analysis	4	0	8	Valeeratana S.
10	Unit IX: Basic Food Hygiene	4	0	8	Valeeratana S.
11	Unit X: Genetic Engineering	4	0	8	Valeeratana S.
	Total	44	0	88	Valeeratana S.
Final Examination					

11. Teaching Method *(s)*

11.1 Lecture
11.2 Self study.

12. Teaching Media

12.1 Powerpoint presentation.
12.2 Texts and teaching materials

13. Measurement and evaluation of student achievement

Student achievement is measured and evaluated by

13.1 the ability to explain/define terms relevant to food production/manufacturing.
13.2 the ability to state examples of macro and micronutrients present in foods.
13.3 the ability to describe the structure, chemistry and significance of macronutrients found in food.

13.4 the ability to describe the structure, chemistry and deficiency diseases of micronutrients found in food.
13.5 the ability to state examples of different food groups.
13.6 the ability to describe the various types of food additives used in food production and preservation.
13.7 the ability to state the components of a balanced diet.
13.8 the ability to describe some basic food analysis techniques.
13.9 the ability to describe the consequences of poor food hygiene.
13.10 the ability to state some of the advantages and disadvantages of genetic engineering.
13.11 the ability to describe techniques used in the creation of genetically altered bacteria, plants and animals.

Student's achievement will be graded according to the faculty and university standard using the symbols: A, B+, B, C+,C,D+, D, and F.

Students must have attended at least 80% of the total class hours of this course. MUIC standard grading criteria: 90% and above is grade A

Ratio of mark

Component	%
Attendance/Class participation	10
Quizzes	15
Assignments	15
Mid-term	30
Final examination	30
TOTAL	**100**

Assessment made from the set forward criteria:

Grade	Percent
A	90 - 100
B+	85 to 89
B	80 to 84
C+	75 to 79
C	70 to 74
D+	65 to 69
D	60 to 64
F	0 to 59

14. Course evaluation

14.1 Students' achievement as indicated in number 13 above.

14.2 Students' satisfaction toward teaching and learning of the course using questionnaires.

15. Reference *(s)*

Peter S. Murano, Thomson & Wadsworth .Understanding Food Science & Technology. 1st edition: 2003.

16. Instructor *(s)*

16.1 Valeeratana Sinsawasdi

17. Course Coordinator

Valeeratana Sinsawasdi