

Program specification

1. Program title:

Bachelor of Science Program in Food Science and Technology. There are 2 majors

-Major food science and technology

-Major food catering technology and management

2. Mode of the study

Full time for 4 years

3. Registration Period

Depending on KMITL's schedule

4. Typical entry requirements

Applicants can be Thai and Foreign Students who have very good skill in Thai language for their education.

Qualifications: High school graduation on Science-Math program. The qualifications of applicants also are in accordance to the Regulations of King Mongkut's Institute of Technology Ladkrabang regarding Bachelor's Degree Education 2016.

5. Program aims/Objectives

To produce graduates who have characteristics as follows:

5.1 To acquire knowledge of food science and technology, able to effectively apply and transfer the knowledge and skills to be able on working in public and private sectors and also able to continue their academic career

5.2 To achieve initiative and creative thinking, able to research, develop and apply new technology in food industry and/or food catering technology and management

5.3 To morally and ethically earn a living with professional ethics and to be responsible for oneself, society and environment

6. PLO Curriculum mapping teaching/ learning methods / assessment

Graduate qualification

Graduates will be able to apply food science and technology knowledge for thinking abilities and solving solve problems related to food industry.

Learning Methods

-Each subject in core courses of this program will consist of lectures, practicals (laboratory exercises), or a combination of these.

-The class will focus on active learning technique. Students have a chance to enroll in the courses or choose the topic research to develop their skills and knowledges.

Assessment

Regulation of assessment of this program for grading and graduation are in accordance to the Regulations of King Mongkut's Institute of Technology Ladkrabang regarding Bachelor's Degree Education 2016.

In addition, an assessment based learning outcome strategies including (1) morality and ethics (2) knowledge development, (3) intellectual development,(4) Interpersonal relationship and responsibility and (5) Mathematical analytical thinking, communication skills and information technology skills.

7. Program structure

Total credits 143 credits

Year 1 Semester 1

Course Code	Course Name	Credit (Lecture-Lab—Self Study)
90595001	FOUNDATION ENGLISH	3(3-0-6)
90595xxx	GENERAL EDUCATION ELECTIVE IN LANGUAGE AND COMMUNICATION	3(x-x-x)
90591xxx	GENERAL EDUCATION ELECTIVE IN VALUE OF LIFE	3(x-x-x)
9059xxxx	ELECTIVE IN GENERAL EDUCATION	3(x-x-x)
05106701	ELEMENTARY CHEMISTRY	3(3-0-6)
05106702	ELEMENTARY CHEMISTRY LABORATORY	1(0-3-2)
05206001	GENERAL BIOLOGY	3(3-0-6)
05206002	GENERAL BIOLOGY LABORATORY	1(0-3-2)
Total		<u>20</u>

Year 1 Semester 2

Course Code	Course Name	Credit (Lecture-Lab—Self Study)
05016200	GENERAL CALCULUS	3(3-0-6)
90595002	ENGLISH FOR COMMUNICATION	3(3-0-6)
05306701	FUNDAMENTAL PHYSICS	3(3-0-6)
05306702	FUNDAMENTAL PHYSICS LABORATORY	1(0-3-2)
08016401	ENGINEERING DRAWING LABORATORY	1(0-3-2)
05106713	ORGANIC CHEMISTRY I	3(3-0-6)
05106714	PRACTICAL ORGANIC CHEMISTRY I	1(0-3-2)
08016430	INTRODUCTION TO AGRO INDUSTRY	3(3-0-6)
90591001	I LOVE KMITL	2(1-2-3)
90591002	SPORT AND RECREATIONAL ACTIVITIES	1(0-3-2)
Total		<u>21</u>

Year 2 Semester 1

Course Code	Course Name	Credit (Lecture-Lab—Self Study)
05016206	MATRIX AND ORDINARY DIFFERENTIAL EQUATIONS	3(3-0-6)
05106715	PRINCIPLE OF BIOCHEMISTRY	3(3-0-6)
05106716	PRINCIPLE OF BIOCHEMISTRY LABORATORY	1(0-3-2)
05106808	PHYSICAL CHEMISTRY I	3(3-0-6)
05106809	PRACTICAL PHYSICAL CHEMISTRY I	1(0-3-2)
.....	FREE ELECTIVE 1	3(.....)
90595003	ENGLISH FOR ACADEMIC PURPOSES	3(3-0-6)
90592xxx	GENERAL EDUCATION ELECTIVE IN WAY OF SOCIETY	3(x-x-x)
Total		<u>20</u>

Year 2 Semester 2

Course Code	Course Name	Credit (Lecture-Lab—Self Study)
05406001	ELEMENTARY STATISTICS	3(3-0-6)
05106810	ANALYTICAL CHEMISTRY	3(3-0-6)
05106811	ANALYTICAL CHEMISTRY LABORATORY	1(0-3-2)
05206003	GENERAL MICROBIOLOGY	3(3-0-6)
05206004	GENERAL MICROBIOLOGY LABORATORY	1(0-3-2)
08016440	FOOD AND NUTRITION	3(.....)
.....	FREE ELECTIVE 2	3(.....)
90593xxx	GENERAL EDUCATION ELECTIVE IN SCIENCE OF THINKING	3(x-x-x)
Total		<u>20</u>

Year 3 Semester 1

Course Code	Course Name	Credit (Lecture-Lab—Self Study)
08016432	FOOD CHEMISTRY	3(2-3-6)
08016433	PRINCIPLES OF FOOD ENGINEERING	4(3-3-8)
08016434	FOOD PROCESSING 1	3(2-3-6)
08026410	FOOD MICROBIOLOGY	4(3-3-8)
08016437	QUALITY CONTROL FOR FOOD PRODUCTS	3(3-0-6)
08016511*	PRODUCT DEVELOPMENT TECHNOLOGY	3(2-3-6.)
08016611**	PRINCIPLES OF FOOD SERVICE AND KITCHEN MANAGEMENT	3(3-0-6)
Total		<u>20</u>

* MAJOR FOOD SCIENCE AND TECHNOLOGY

** MAJOR FOOD CATERING TECHNOLOGY AND MANAGEMENT

Year 3 Semester 2

Course Code	Course Name	Credit (Lecture-Lab—Self Study)
08016435	FOOD PROCESSING 2	3(2-3-6)
08016436	EXPERIMENTAL DESIGN FOR AGRO INDUSTRY	3(3-0-6)
08016438	FOOD ANALYSIS	3(2-3-6)
08026411	FOOD REGULATION AND GOOD MANUFACTURING PRACTICE	3(3-0-6)
08026412	FOOD QUALITY ASSURANCE SYSTEM	3(3-0-6)
08016512*	PRINCIPLES OF FOOD MARKETING	3(3-0-6)
08016612**	TECHNIQUES IN FOOD PREPARATION AND COOKING	3(2-3-6)
90594xxx	GENERAL EDUCATION ELECTIVE IN ART OF MANAGEMENT	3(x-x-x)
Total		<u>21</u>

* MAJOR FOOD SCIENCE AND TECHNOLOGY

** MAJOR FOOD CATERING TECHNOLOGY AND MANAGEMENT

Year 3 Summer

Course Code	Course Name	Credit (Lecture-Lab—Self Study)
08016439	INDUSTRIAL PRACTICE	0(0-150-0)
Total		<u>0</u>

Year 4 Semester 1

REGULAR PROGRAM

Course Code	Course Name	Credit (Lecture-Lab—Self Study)
08016810	SPECIAL PROBLEM 1	3(1-6-5)
08036628*	FOOD INDUSTRY MANAGEMENT	3(3-0-6)
08016513*	HEALTHY FOOD	3(3-0-6)
08016613**	THAI DISHES AND DESSERTS	3(2-3-6)
08016614**	WESTERN FOODS	3(2-3-6)
080xxxx	MAJOR ELECTIVE 1	3(.....)
080xxxx	MAJOR ELECTIVE 2	3(.....)
Total		<u>15</u>

* MAJOR FOOD SCIENCE AND TECHNOLOGY

** MAJOR FOOD CATERING TECHNOLOGY AND MANAGEMENT

Year 4 Semester 1

COOPERATIVE EDUCATION PROGRAM

Course Code	Course Name	Credit (Lecture-Lab—Self Study)
08016812	PRE-COOPERATIVE EDUCATION(NON-CREDIT)	1(1-0-2)
080366xx*	FOOD INDUSTRY MANAGEMENT	3(3-0-6)
08016513*	FUNCTIONAL FOOD	3(3-0-6)
08016613**	THAI DISHES AND DESSERTS	3(2-3-6)
08016614**	WESTERN FOODS	3(2-3-6)
080xxxx	MAJOR ELECTIVE 1	3(.....)
080xxxx	MAJOR ELECTIVE 2	3(.....)
080xxxx	MAJOR ELECTIVE 3	3(.....)
Total		<u>15</u>

* MAJOR FOOD SCIENCE AND TECHNOLOGY

** MAJOR FOOD CATERING TECHNOLOGY AND MANAGEMENT

Year 4 Semester 1

OVERSEA TRAINING PROGRAM

Course Code	Course Name	Credit (Lecture-Lab—Self Study)
08016814	PRE-OVERSEA TRAINING (NON-CREDIT)	1(1-0-2)
080366xx*	FOOD INDUSTRY MANAGEMENT	3(3-0-6)
08016513*	FUNCTIONAL FOOD	3(3-0-6)
08016613**	THAI DISHES AND DESSERTS	3(2-3-6)
08016614**	WESTERN FOODS	3(2-3-6)
080xxxxx	MAJOR ELECTIVE 1	3(.....)
080xxxxx	MAJOR ELECTIVE 2	3(.....)
080xxxxx	MAJOR ELECTIVE 3	3(.....)
Total		<u>15</u>

* MAJOR FOOD SCIENCE AND TECHNOLOGY

** MAJOR FOOD CATERING TECHNOLOGY AND MANAGEMENT

Year 4 Semester 2

REGULAR PROGRAM

Course Code	Course Name	Credit (Lecture-Lab—Self Study)
08016811	SPECIAL PROBLEM 2	3(0-9-0)
080xxxxx	MAJOR ELECTIVE 3	3(.....)
Total		<u>6</u>

Total credits in program 143 credits

Year 4 Semester 2

COOPERATIVE EDUCATION PROGRAM

Course Code	Course Name	Credit (Lecture-Lab—Self Study)
08016813	COOPERATIVE EDUCATION	6(0-45-0)
Total		<u>6</u>

Total credits in program 143 credits

Year 4 Semester 2

OVERSEA TRAINING PROGRAM

Course Code	Course Name	Credit (Lecture-Lab—Self Study)
08016815	OVERSEA TRAINING	6(0-45-0)
Total		<u>6</u>

Total credits in program 143 credits

8. Facilities available

Library, Computer room, and equipment to support laboratory and research works such as Product and development, Food microbiology and food safety, Fermentation technology, Food chemistry, and Food process engineering

9. Career prospects

Graduates normally find employment in

9.1 food scientists in production, production plan, research and development, quality assurance, quality control, food safety and marketing

9.2 public and private sectors e.g. in scientist, academician, researcher, plan and policy analyst in the field of food science and technology and/or food catering technology and management

9.3 self-employed person and entrepreneur in food industries

10. Tuition fee

The regular tuition fee as lump-sum appropriation of this program is 21,000 Baht/semester.