



2013 Curriculum for the Certificate of Vocational Education in Fisheries

Fish Processing Program

Specializations:

Fish Processing

Frozen Aquatic Animal Products

Surimi and Surimi Products

Canned Aquatic Animal Products

**Office of
the Vocational Education Commission
Ministry of Education**

Program Structure

2013 Curriculum for the Certificate of Vocational Education in Fisheries

Fish Processing Program

The graduates of the Certificate of Vocational Education in Fisheries (Fish Processing) must complete minimum 103 credits from different courses and participate in extracurricular activities are shown in the following structure.

1. Life Skills Courses	minimum 22 credits
1.1 Thai Language Courses	(minimum 3 credits)
1.2 Foreign Language Courses	(minimum 6 credits)
1.3 Science Courses	(minimum 4 credits)
1.4 Mathematics Courses	(minimum 4 credits)
1.5 Social Studies Courses	(minimum 3 credits)
1.6 Health Education and Physical Education Courses	(minimum 2 credits)
2. Vocational Skills Courses	minimum 71 credits
2.1 Basic Vocational Skills Courses	(18 credits)
2.2 Specialized Vocational Skills Courses	(24 credits)
2.3 Elective Vocational Skills Courses	(minimum 21 credits)
2.4 Vocational Skills Practical Experience	(4 credits)
2.5 Vocational Skills Development Project	(4 credits)
3. Elective Courses	minimum 10 credits
4. Extracurricular Activities (2 hours per week)	
Total	minimum 103 credits

1. Life Skill Courses**minimum 22 credits**

In each group listed below, the first course is compulsory (except 1.6). The remaining credits can be selected from other courses within the group to meet the requirements. The chosen courses must be related to the program of study. The total credits should be at least 22 credits.

1.1 Thai Language Courses (minimum 3 credits)

Code	Title	T – P – C
2000-1101	Basic Thai	2 – 0 – 2
2000-1102	Thai for Careers	1 – 0 – 1
2000-1103	Business Thai	1 – 0 – 1
2000-1104	Speaking for Careers	1 – 0 – 1
2000-1105	Writing for Careers	1 – 0 – 1
2000-1106	Creative Thai	1 – 0 – 1
2000*1101 to 2000*1199	Courses in this range are additionally developed by the individual colleges or institutes.	* - * - *

1.2 Foreign Language Courses (minimum 6 credits)

Code	Title	T – P – C
2000-1201	Real Life English 1	2 – 0 – 2
2000-1202	Real Life English 2	2 – 0 – 2
2000-1203	English Listening and Speaking 1	0 – 2 – 1
2000-1204	English Listening and Speaking 2	0 – 2 – 1
2000-1205	Reading Authentic Materials	0 – 2 – 1
2000-1206	Daily Writing	0 – 2 – 1
2000-1227	English for Fisheries	0 – 2 – 1
2000*1201 to 2000*1299	Courses in this range are additionally developed by the individual colleges or institutes.	* - * - *

1.3 Science Courses (minimum 4 credits)

Code	Title	T – P – C
2000-1301	Science for Life Skills	1 – 2 – 2
2000-1305	Science for Agriculture	1 – 2 – 2
2000-1306	Science Project	0 – 2 – 1
2000*1301 to 2000*1399	Courses in this range are additionally developed by the individual colleges or institutes.	* - * - *

1.4 Mathematics Courses (minimum 4 credits)

Code	Title	T – P – C
2000-1401	Basic Mathematics	2 – 0 – 2
2000-1402	Basic Mathematics for Careers	2 – 0 – 2
2000-1408	Experimental Statistics	2 – 0 – 2
2000*1401 to 2000*1499	Courses in this range are additionally developed by the individual colleges or institutes.	* - * - *

1.5 Social Studies Courses (minimum 3 credits)

Code	Title	T – P – C
2000-1501	Civil Duties and Morals	2 – 0 – 2
2000-1502	Life Skills and Society	2 – 0 – 2
2000-1503	Geography and Thai History	2 – 0 – 2
2000-1504	ASEAN Studies	1 – 0 – 1
2000-1505	Current Affairs	1 – 0 – 1
2000-1506	ASEAN Culture	1 – 0 – 1
2000*1501 to 2000*1599	Courses in this range are additionally developed by the individual colleges or institutes.	* - * - *

1.6 Health Education and Physical Education Courses (minimum 2 credits)

Select any course(s) within this group for a total of not less than 2 credits.

1.6.1 Physical Education Courses

Code	Title	T – P – C
2000-1601	Physical Education for Health Development	0 – 2 – 1
2000-1602	Life Skills for Health Development	0 – 2 – 1
2000-1603	Physical Fitness for Work	0 – 2 – 1
2000-1604	Self-Defense	0 – 2 – 1
2000-1605	Physical Education for Disabled	0 – 2 – 1

1.6.2 Health Education Courses

Code	Title	T – P – C
2000-1606	Life Management for Happiness	1 – 0 – 1
2000-1607	Sexuality Education	1 – 0 – 1
2000-1608	Narcotic Education	1 – 0 – 1

1.6.3 Integrated Courses

Code	Title	T – P – C
2000-1609	Skills for Healthy Behavior	1 – 2 – 2
2000-1610	Quality of Life Development	1 – 2 – 2
2000*1601 to 2000*1699	Courses in this range are additionally developed by the individual colleges or institutes.	* - * - *

2. Vocational Skills Courses minimum 71 credits

2.1 Basic Vocational Skills Courses (18 credits) All courses are compulsory.

Code	Title	T – P – C
2001-1001	Work Orientation	2 – 0 – 2
2001-1004	Vocational Hygiene and Safety	1 – 2 – 2
2001-2001	Computer and Information Technology for Work	1 – 2 – 2
2501-2005	General Fisheries	1 – 2 – 2
2600-1001	Introduction to Business Management	1 – 2 – 2
2602-1001	Aquatic Animal Biology	1 – 3 – 2
2602-1002	Introduction to Food Science	1 – 3 – 2
2602-1003	Fundamental Fish Processing Practice	0 – 4 – 2
2602-1004	Fish Processing Career Skills	0 – 4 – 2

- **Additional Basic Vocational Skills Courses**

Colleges and institutes can also provide the following courses under the Elective Vocational Skills Courses or Elective Courses.

Code	Title	T – P – C
2001-1002	Entrepreneurship	2 – 0 – 2
2001-1003	Energy and the Environment	1 – 2 – 2
2001-1005	Resource and Environment Conservation at Work	1 – 0 – 1
2001-1006	Labor Law	1 – 0 – 1
2001-1007	Work Safety	1 – 0 – 1

2.2 Specialized Vocational Skills Courses (24 credits) All courses are compulsory.

Code	Title	T – P – C
2501-2416	Machines and Equipment for Food Processing	1 – 3 – 2
2601-2001	Computer Applications in Fisheries	2 – 2 – 3
2602-2001	Introduction to Nutrition	1 – 2 – 2
2602-2002	Introduction to Raw Aquatic Animal Management	1 – 2 – 2
2602-2003	Introduction to Aquatic Animal Quality	1 – 2 – 2
2602-2004	Introduction to Food Additives	1 – 2 – 2
2602-2005	Introduction to Fish Processing	2 – 2 – 3
2602-2006	Introduction to Plant Sanitation	1 – 3 – 2
2602-2007	Basic Packaging	1 – 2 – 2
2602-2008	Aquatic Animal Marketing and Products	2 – 0 – 2
2602-2009	Quality Standards of Fish Processing	2 – 0 – 2

2.3 Elective Vocational Skill Courses (minimum 21 credits)

Select courses (minimum 15 credits) within one of the following specializations. The remaining courses can be chosen from any other specializations within this section to meet the credit requirement.

2.3.1 Fish Processing Courses

Code	Title	T – P – C
2602-2101	Dried Fish Processing	1 – 6 – 3
2602-2102	Salted Fish Processing	1 – 6 – 3
2602-2103	Smoked Fish Processing	1 – 6 – 3
2602-2104	Fermented Fish Processing	1 – 6 – 3
2602-2105	Refrigerated Fish Processing	1 – 6 – 3
2602-2106	High Temperature Fish Processing	1 – 6 – 3
2602-2107	Fish Product Production	1 – 6 – 3
2602-2108	Utilization of Production Waste	1 – 6 – 3
2602-2109	Fish Processing Project 1	0 – 4 – 2
2602-2110	Fish Processing Project 2	0 – 4 – 2
2501-2417	Machinery in Food Processing Plant	1 – 3 – 2
2602*2101 to 2602*2199	Courses in this range are additionally developed by individual colleges or institutes according to the needs of the workplace or the regional strategies.	* – * – *

- **Dual Vocational Education (DVE)**

Code	Title	T – P – C
2602-5101	Fish Processing Practice 1	* – * – *
2602-5102	Fish Processing Practice 2	* – * – *
2602-5103	Fish Processing Practice 3	* – * – *
2602-5104	Fish Processing Practice 4	* – * – *
2602-5105	Fish Processing Practice 5	* – * – *
2602-5106	Fish Processing Practice 6	* – * – *
2602-51XX	Fish Processing Practice ...	* – * – *

2.3.2 Frozen Aquatic Animal Products

Select 2602-2105, 2602-2106, 2602-2207, and 2602-2208 courses and select other courses from any other group within this section to meet the credit requirement.

Code	Title	T – P – C
2602-2105	Refrigerated Fish Processing	1 – 6 – 3
2602-2106	High Temperature Fish Processing	1 – 6 – 3
2602-2107	Fish Product Production	1 – 6 – 3
2602-2201	Frozen Fish Production 1	1 – 6 – 3
2602-2202	Frozen Fish Production 2	1 – 6 – 3
2602-2203	Frozen Shrimp Production 1	1 – 6 – 3
2602-2204	Frozen Shrimp Production 2	1 – 6 – 3
2602-2205	Frozen Squid Production 1	1 – 6 – 3
2602-2206	Frozen Squid Production 2	1 – 6 – 3
2602-2207	Frozen Aquatic Animal Products Production Project 1	0 – 4 – 2
2602-2208	Frozen Aquatic Animal Products Production Project 2	0 – 4 – 2

Code	Title	T – P – C
2501-2417	Machines in Food Processing Plant	1 – 3 – 2
2602*2201 to 2602*2299	Courses in this range are additionally developed by individual colleges or institutes according to the needs of the workplace or the regional strategies.	* - * - *

- **Dual Vocational Education (DVE)**

Code	Title	T – P – C
2602-5201	Frozen Aquatic Animal Products Practice 1	* - * - *
2602-5202	Frozen Aquatic Animal Products Practice 2	* - * - *
2602-5203	Frozen Aquatic Animal Products Practice 3	* - * - *
2602-5204	Frozen Aquatic Animal Products Practice 4	* - * - *
2602-5205	Frozen Aquatic Animal Products Practice 5	* - * - *
2602-5206	Frozen Aquatic Animal Products Practice 6	* - * - *
2602-52XX	Frozen Aquatic Animal Products Practice ...	* - * - *

2.3.3 Surimi and Surimi Products

Select 2602-2105, 2602-2106, 2602-2306, and 2602-2307 courses and select other courses from any other group within this section to meet the credit requirement.

Code	Title	T – P – C
2602-2105	Refrigerated Fish Processing	1 – 6 – 3
2602-2106	High Temperature Fish Processing	1 – 6 – 3
2602-2107	Aquatic Animal Product Production	1 – 6 – 3
2602-2301	Frozen Minced Fish Meat Production	1 – 6 – 3
2602-2302	Imitation Crab Meat Production 1	1 – 6 – 3
2602-2303	Imitation Crab Meat Production 2	1 – 6 – 3
2602-2304	Surimi-Based Product Production 1	1 – 6 – 3
2602-2305	Surimi-Based Product Production 2	1 – 6 – 3
2602-2306	Surimi and Product Production Project 1	0 – 4 – 2
2602-2307	Surimi and Product Production Project 2	0 – 4 – 2
2501-2417	Machinery in Food Processing Plant	1 – 3 – 2
2602*2301 to 2602*2399	Courses in this range are additionally developed by individual colleges or institutes according to the needs of the workplace or the regional strategies.	* - * - *

- **Dual Vocational Education (DVE)**

Code	Title	T – P – C
2602-5301	Surimi and Surimi Products Practice 1	* - * - *
2602-5302	Surimi and Surimi Products Practice 2	* - * - *
2602-5303	Surimi and Surimi Products Practice 3	* - * - *
2602-5304	Surimi and Surimi Products Practice 4	* - * - *
2602-5305	Surimi and Surimi Products Practice 5	* - * - *
2602-5306	Surimi and Surimi Products Practice 6	* - * - *
2602-53XX	Surimi and Surimi Products Practice ...	* - * - *

2.3.4 Canned Aquatic Animal Products

Select 2602-2105, 2602-2106, 2602-2406, and 2602-2407 courses and select other courses from any other group within this section to meet the credit requirement.

Code	Title	T – P – C
2602-2105	Refrigerated Fish Processing	1 – 6 – 3
2602-2106	High Temperature Fish Processing	1 – 6 – 3
2602-2107	Aquatic Animal Product Production	1 – 6 – 3
2602-2401	Canned Food Production 1	2 – 2 – 3
2602-2402	Canned Food Production 2	1 – 6 – 3
2602-2403	Canned Tuna Production	1 – 6 – 3
2602-2404	Canned Pet Food Production 1	1 – 6 – 3
2602-2405	Canned Pet Food Production 2	1 – 6 – 3
2602-2406	Canned Aquatic Animal Product Production Project 1	0 – 4 – 2
2602-2407	Canned Aquatic Animal Product Production Project 2	0 – 4 – 2
2501-2417	Machinery in Food Processing Plant	1 – 3 – 2
2602*2401 to 2602*2499	Courses in this range are additionally developed by individual colleges or institutes according to the needs of the workplace or the regional strategies.	* - * - *

- **Dual Vocational Education (DVE)**

Code	Title	T – P – C
2602-5401	Canned Aquatic Animal Products Practice 1	* - * - *
2602-5402	Canned Aquatic Animal Products Practice 2	* - * - *
2602-5403	Canned Aquatic Animal Products Practice 3	* - * - *
2602-5404	Canned Aquatic Animal Products Practice 4	* - * - *
2602-5405	Canned Aquatic Animal Products Practice 5	* - * - *
2602-5406	Canned Aquatic Animal Products Practice 6	* - * - *
2602-54XX	Canned Aquatic Animal Products Practice ...	* - * - *

For the Dual Vocational Education (apprenticeship) of minimum 21 credits, the college and the workplace together analyze the nature of the business of the workplace in order to determine the number of credits, appropriate courses in details, the occupational training plans, and the assessment and evaluation methods for the courses. The minimum total training time at the workplace is 54 hours, which is equivalent to 1 credit.

2.4 Vocational Skills Practical Experience (4 credits)

Select only 2602-8001 Work Practice or, alternatively, select 2602-8002 Work Practice 1 together with 2602-8003 Work Practice 2.

Code	Title	T – P – C
2602-8001	Work Practice	* - * - 4
2602-8002	Work Practice 1	* - * - 2
2602-8003	Work Practice 2	* - * - 2

2.5 Vocational Skills Development Project (4 credits)

Select only 2602-8501 Project or, alternatively, select 2602-8502 Project 1 together with 2602-8503 Project 2.

Code	Title	T – P – C
2602-8501	Project	* - * - 4
2602-8502	Project 1	* - * - 2
2602-8503	Project 2	* - * - 2

3. Elective Courses

minimum 10 credits

Courses can be selected from the list below or from any area and program of study provided in the 2013 Curriculum for the Vocational Education Certificate according to students' aptitudes and interests. However, individual colleges and institutes can develop additional elective courses in relation to the local community needs and contexts.

Code	Title	T – P – C
2000-9201	Bridging English	0 – 2 – 1
2000-9202	Internet English	0 – 2 – 1
2000-9203	English for Job Applications	0 – 2 – 1
2000-9204	English for Project Work	0 – 2 – 1
2000-9205	English Terminology	0 – 2 – 1
2000-9206	Chinese for Communication 1	0 – 2 – 1
2000-9207	Chinese for Communication 2	0 – 2 – 1
2000-9208	Japanese for Communication 1	0 – 2 – 1
2000-9209	Japanese for Communication 2	0 – 2 – 1
2000-9210	Korean for Communication 1	0 – 2 – 1
2000-9211	Korean for Communication 2	0 – 2 – 1
2000-9212	Vietnamese for Communication 1	0 – 2 – 1
2000-9213	Vietnamese for Communication 2	0 – 2 – 1
2000-9214	Bahasa Indonesia for Communication 1	0 – 2 – 1
2000-9215	Bahasa Indonesia for Communication 2	0 – 2 – 1
2000-9216	Burmese for Communication 1	0 – 2 – 1
2000-9217	Burmese for Communication 2	0 – 2 – 1
2000-9218	Khmer for Communication 1	0 – 2 – 1
2000-9219	Khmer for Communication 2	0 – 2 – 1
2000-9220	Lao for Communication 1	0 – 2 – 1
2000-9221	Lao for Communication 2	0 – 2 – 1
2000-9222	Bahasa Manaya for Communication 1	0 – 2 – 1
2000-9223	Bahasa Manaya for Communication 2	0 – 2 – 1
2000-9224	Filipino for Communication 1	0 – 2 – 1
2000-9225	Filipino for Communication 2	0 – 2 – 1
2000-9226	Russian for Communication 1	0 – 2 – 1
2000-9227	Russian for Communication 2	0 – 2 – 1
2000-9228	German for Communication 1	0 – 2 – 1
2000-9229	German for Communication 2	0 – 2 – 1
2000-9230	French for Communication 1	0 – 2 – 1
2000-9231	French for Communication 2	0 – 2 – 1

Code	Title	T – P – C
2XXX*9X01 to 2XXX*9X99	Courses in this range are additionally developed by individual colleges or institutes according to the needs of the workplace or the regional strategies or further studies.	* _ * _ *

4. Extracurricular Activities

(2 hours per week)

Code	Title	T – P – C
2000-2001	Rover Scout Activity 1	0 – 2 – 0
2000-2002	Rover Scout Activity 2	0 – 2 – 0
2000-2003	Vocational Organization Activity 1	0 – 2 – 0
2000-2004	Vocational Organization Activity 2	0 – 2 – 0
2000-2005	Vocational Organization Activity 3	0 – 2 – 0
2000-2006	Vocational Organization Activity 4	0 – 2 – 0
2000*2001 to 2000*20XX	Courses in this range are additionally developed or arranged by individual colleges, institutes or the workplace. This can be a military activity.	0 – 2 – 0