

# Information Technology

**2003 Curriculum for Diploma of Vocational Education**  
**Area of Study : Information and Communication**  
**Technology**  
**Program : Information Technology**  
**Objectives**

The program aims at providing students with knowledge, skills, abilities, attitudes and experience which will enable them to perform as skilled technicians in the field of Information Technology. The objectives of the program are:

1. To provide basic knowledge and skills about languages, society, humanities, mathematics and science, and also to apply these to self-development by seeking out further knowledge within the field of Information Technology.
2. To provide knowledge and skills about the basic principles and processes of technician tasks concerning industrial management and planning; and to provide the ability to follow new technological developments to improve their career.
3. To promote critical thinking, problem-solving skills and creative thinking; and to provide the ability to bring the technology into the development of information technology work.
4. To promote good personality; responsibility to themselves, family and society; morals and ethics; and good manners in their career.
5. To provide the ability to work in industrial workplaces or in self-employment in the field of Information Technology.

## **Vocational Education Standards of the Program**

### **Students should be able to:**

1. Conduct technical communication in the workplace
2. Organize and program data-based systems in the workplace
3. Solve problems using mathematics, science, technology and relevant procedures
4. Manage, control and develop their quality of work
5. Demonstrate the attributes of technicians
6. Design and develop websites
7. Develop application programs by object-oriented approach
8. Design and develop database systems
9. Design, install, train and maintain network systems
10. Analyze and design the information and internet systems

**Program Structure**  
**2003 Curriculum for the Diploma of Vocational Education**  
**Area of Study : Information and Communication Technology**  
**Program : Information Technology**

For the fulfillment of the program, graduates should have completed at least 91 credits from the 5 groups of courses below.

<b>1. General Courses (not less than)</b>		<b>24 credits</b>
<b>1.1 Basic General Courses</b>	<b>13 credits</b>	
<b>1.2 Vocational-based General Courses (not less than)</b>	<b>11 credits</b>	
<b>2. Vocational Courses (not less than)</b>		<b>61 credits</b>
<b>2.1 Basic Vocational Courses</b>	<b>15 credits</b>	
<b>2.2 Core Vocational Courses</b>	<b>24 credits</b>	
<b>2.3 Specialized Vocational Courses (not less than)</b>	<b>18 credits</b>	
<b>2.4 Project</b>	<b>4 credits</b>	
<b>3. Free Elective Courses (not less than)</b>		<b>6 credits</b>
<b>4. On-the-job Training (not less than 1 Semester)</b>		
<b>5. Extracurricular Activities 120 Hours</b>		
<b>Total (not less than)</b>		<b>91 credits</b>

Entry into this program requires satisfactory completion of the Vocational Education Certificate in any program or secondary school (M6 or Grade 12) or equivalent.

## 1. General Courses (not less than) 24 credits

### 1.1 Basic General Courses 13 credits

Code	Course Title	Cr	(Hr)
3000-110X	Thai Language (Elective)	3	(3)
3000-1201	Developing Skills for English Communication 1	2	(3)
3000-1202	Developing Skills for English Communication 2	2	(3)
3000-1301	Thai Life and Culture	1	(1)
3000-130X	Social Studies (Elective)	2	(2)
3000-1601	Library and Information Studies	1	(1)
3000-160X	Humanities (Elective)	2	(2)

### 1.2 Vocational-based General Courses (not less than) 11 credits

Code	Course Title	Cr	(Hr)
3000-122X	English (Elective)	1	(2)
3000-122X	English (Elective)	1	(2)
3000-142X	Science (Elective)	3	(4)
3000-1521	Mathematics 2	3	(3)
3000-1525	Calculus 1	3	(3)

## 2. Vocational Courses (not less than) 61 credits

### 2.1 Basic Vocational Courses 15 credits

Students must take the compulsory courses (3901-0101 - 3901-0104) and select one course from 3000-010X to fulfill the requirements.

Code	Course Title	Cr	(Hr)
3901-1001	Information Technology	3	(4)
3901-1002	Computer Programming 1	3	(4)
3901-1003	Database Systems	3	(4)
3901-1004	Computer Networking Fundamentals	3	(4)
3000-010X	Quality Management (Elective)	3	(3)

**Remarks :** The code with X will be chosen from the appendix.

### 2.2 Core Vocational Courses 24 credits

Student must take 6 compulsory courses (3901-2001 to -2006) and select courses from the remainder to fulfill this requirements.

Code	Course Title	Cr	(Hr)
3901-2001	Computer Architecture and Operating Systems	3	(4)
3901-2002	Data Structures and Algorithms	3	(4)
3901-2003	Object-Oriented Analysis and Design	3	(4)
3901-2004	Implement of Database	3	(4)
3901-2005	Web Design and Development	3	(4)
3901-2006	Object-Oriented Programming 1	3	(4)
3901-2007	Software Engineering	3	(4)
3901-2008	Extensible Markup Language Programming	3	(4)
3901-2009	Web Programming 1	3	(4)
3901-2010	Web Programming 2	3	(4)
3901-2011	Introduction to IT for Business Administration	3	(3)

### 2.3 Specialized Vocational Courses (not less than)18 credits

Student must take at least 18 credits from the Specialized Vocational Courses.

Code	Course Title	Cr	(Hr)
3901-2101	Advanced dot Net Programming and File Security	3	(4)
3901-2102	Computer Network Maintenance	3	(5)
3901-2103	Linux Basic	3	(4)
3901-2104	Object-Oriented Programming 2	3	(4)
3901-2105	Object-Oriented Programming 3	3	(4)
3901-2106	Computer Programming 2	2	(3)
3901-2107	Computer Programming 3	2	(3)
3901-2108	Developing Win forms	2	(3)
3901-2109	E-Business Technology Fundamentals	3	(3)
3901-2110	E-Commerce Fundamentals	2	(2)
3901-2111	Introduction to dot Net	3	(4)
3901-2112	dot Net Server Side Scripting	3	(4)
3901-2113	Complus Services	2	(3)
3901-2114	Working with Web Service	2	(3)
3901-2115	System Analysis and Design	3	(4)
3901-2116	IT Project 1	1	(2)
3901-2117	IT Project 2	1	(2)
3901-2118	Seminar in Information Technology	3	(3)
3901-2119	Advance Topics in IT 1	3	(*)
3901-2120	Advance Topics in IT 2	2	(*)
3901-2121	Special Problems in IT 1	3	(*)
3901-2122	Special Problems in IT 2	2	(*)
3901-2123	IT Services	3	(5)
3901-4101	IT Apprenticeship 1	5	(*)
3901-4102	IT Apprenticeship 2	5	(*)
3901-4103	IT Apprenticeship 3	4	(*)
3901-4104	IT Apprenticeship 4	4	(*)

For the Dual System (apprenticeships), the college and the employer together analyze the course objectives and course standards, to produce an appropriate work plan (40 hours is equivalent to 1 credit) and design a method of evaluation.

### 2.4 Project

4 credits

Code	Course Title	Cr	(Hr)
3901-6001	Project	4	(*)

### 3. Free Elective Courses

(not less than) 6 credits

Students can choose courses from any area of study, according to their aptitude and interests, from the list provided in the 2003 Curriculum for the Diploma of Vocational Education.

### 4. On-the-job Training (not less than 1 Semester)

For On-the-job Training, the college selects Vocational Courses which are undertaken at the workplace, for at least 1 semester.

### 5. Extracurricular Activities (120 Hours)

The college arranges extracurricular activities for 40 hours/semester, totaling not less than 120 hours for the entire program.