

TQF. 3



Bachelor's Degree

Master's Degree

Course Specification

Course Code: GEN0301

Course Title: Information Technology for Communication

Credits: 3(3-0-6)

Programs: (All)

Semester: 1

Academic Year: 2019

**International College, Suan Sunandha Rajabhat University
(SSRUIC)**

Section 1 - General Information

1. Course code and course title

Course code: GEN0301

Course title (English): Information Technology for Communication

ชื่อวิชา (ภาษาไทย): เทคโนโลยีสารสนเทศเพื่อการสื่อสาร

2. Credits

3(3-0-6)

3. Curriculum and course category

3.1 Curriculums: (All)

3.2 Course Category:

- General Education Required Course
 Elective Course Others

4. Lecturer

4.1 Lecturer responsible for this course: Mr.Pongrapee Kaewsaiha

4.2 Instructional course lecturer: Mr.Pongrapee Kaewsaiha

5. Contact

Room Number: 305 **Tel.:** 081-446-4238 **e-Mail:** pongrapee.ka@ssru.ac.th

6. Semester/Academic year

6.1 Semester: 1 **Academic Year:** 2019

6.2 Number of the students enrolled: (TBA)

7. Pre-requisite course

None

8. Co-requisite course

None

9. Learning center

International College Building, Nakhon-Pathom Education Center, Room Number 211

10. Last date for preparing and revising this course

August 2019

Section 2 - Aims and Objectives

1. Course aims

At the end of this course students will reach the desired learning outcomes based on five domains, as mentioned in the curriculum specification (TQF2), as follows:

1.1 Morals and ethics

1.1.1 Learning outcomes to be developed

- 1) Employ discretion, core value, rational, as well as understand social regulation for living
- 2) Possess discipline, responsibility, honesty, contribution and endurance
- 3) Perform life under the Philosophy of Sufficiency Economy
- 4) Realize and aware of Thainess

1.1.2 Teaching strategies

The program considers the main task to teach each subject which involves developing students' ethical and moral learning in practice with the instructor/guest lecturer. The instructor will act as a good role model and try to integrate ethics and morals into topics in order to foster students have disciplinary area. Students' disciplinary area focuses on 'class attendance on time', 'dress code in accordance with the university regulations', and 'demonstrates honesty'. Those of characteristics should be evaluated in every course. The instructor provides a positive and negative reinforcement, such as praising students who are dressed properly, attend the class and submit tasks on time; on the other hand, provides suggestion to eliminate the students' repeated misbehavior.

1.1.3 Assessment & evaluation strategies

- 1) Punctuality, attendance, regularity and dressing
- 2) Enthusiasm and contribution to classroom activities
- 3) Extra-curriculum activities participation
- 4) Assignment responsibility

1.2 Knowledge

1.2.1 Learning outcomes to be developed

- 1) Own rounded knowledge with vision and can access life-long learning
- 2) Know and understand the current changing situation
- 3) Know, understand and realize self-worth, other-worth, society, arts and culture, and nature

1.2.2 Teaching strategies

A variety of instruction is applied with concentration on the integration of theory and practice, including classroom activities. The teaching material in the form of documents, e-book and electronic files are also distributed and downloadable. In addition, self-learning materials are also available on

website. Authentic practices, in particular, the real situation found in workplaces are also focused and in line with the cutting-edge technology and serve the nature of each subject. The guest speakers in certain fields are occasionally invited.

1.2.3 Assessment & evaluation strategies

- 1) Pre-test and post-test
- 2) Mid-term and final tests

1.3 Cognitive skills

1.3.1 Learning outcomes to be developed

- 1) Gain life-long learning skills for continuous self-development
- 2) Gain holistic thinking skill

1.3.2 Teaching strategies

- 1) Presentation based on rational and analytical concept by instructor
- 2) Group presentation and discussion
- 3) Authentic

1.3.3 Assessment strategies

Evaluation based on practice, i.e. testing

1.4 Interpersonal skills and responsibility

1.4.1 Learning outcomes to be developed

- 1) Possess volunteer spirit and public awareness
- 2) Be good citizen with benefit to Thai and global societies
- 3) Possess leadership and be able to work with others

1.4.2 Teaching strategies

In teaching, students' activities are required to work in group or team through collaboration with others. Expected learning outcomes of interpersonal and responsibility skills are being good citizen of global and ability to share responsibility with others.

1.4.3 Assessment & evaluation strategies

Evaluate students' behaviors and performance in group/team working and participating in various activities.

1.5 Numerical analysis, communication and information technology skills

1.5.1 Learning outcomes to be developed

- 1) Gain numeric analytical skills
- 2) Capable to use language for communication efficiently
- 3) Capable to apply technology intentionally

1.5.2 Teaching strategies

Provide learning activities in every course to foster students possessing numerical analysis, communication, and information technology skills in General Education Cluster. There are supplementary teaching and learning materials for students to download the documents and files. E-book should be prepared for student to access during teaching and learning in class. In addition, there is E-learning on website that support student's self-learning and be able to use information technology appropriately and communicate with others clearly.

1.5.3 Assessment & evaluation strategies

Evaluate from presentation techniques by applying theories. Selection tools in information technology or mathematics and statistics related to the capacities to use computer through web browser in testing, opening and downloading supplementary teaching and learning materials both in document and file format. There is E-book for students to study during teaching and learning. In addition, there is self-study in E-learning system on website by using computer, mobile phone or tablet, also midterm and final examination for learning evaluation.

2. Objectives for developing/revising course (Content/Learning Process/Assessment/ etc.)

According to TQF (Thailand Quality Framework: H.Ed.) for General Education courses, undergraduate students should have opportunity to master learning in nature of person, think logically, good communication, realize morals and ethics, realize Thai cultural value and global cultural value. Finally, students can apply knowledge in daily life for quality of life.

Section 3 - Characteristics and Operations

1. Course description

(English) Principles, the importance, and fundamental knowledge of information technology; computer systems; data communications and networking; database management; big data; internet usage; development of information technology to the digital world; cybercrime act; application of digital technology in various dimensions; and digital world revolution.

(ไทย) หลักการ ความสำคัญ และความรู้พื้นฐานของเทคโนโลยีสารสนเทศ; ระบบคอมพิวเตอร์; การสื่อสารข้อมูลและเครือข่าย; การจัดการฐานข้อมูล; Big Data; การใช้อินเทอร์เน็ต; การพัฒนาเทคโนโลยีสารสนเทศสู่โลกดิจิทัล; อาชญากรรมไซเบอร์; การประยุกต์ใช้เทคโนโลยีดิจิทัลในมิติต่าง ๆ; และการปฏิวัติโลกดิจิทัล

2. Time length per semester (Lecture/Practice/Self-study hours)

Lecture	Practice/ Field Work/Internship	Self-Study	Remedial Class
	3 hours/week	6 hours	-

3. Time length per week for individual academic consulting and guidance

3.1 Self-consulting at the lecturer's office:

Room Number 305, International College Building, Nakhon-Pathom Education Center. Mon.,
9 AM – 4 PM

3.2 Consulting via office telephone/mobile phone:

081-446-4238

3.3 Consulting via e-mail:

pongrapee.ka@ssru.ac.th

3.4 Consulting via social media (Facebook/Twitter/Line):

Ling group created for this course

3.5 Consulting via computer network (Internet/Web board):

Moodle LMS and MOOC

Section 4 - Developing Students' Learning Outcomes

Expected students' learning outcomes are categorized into five domains, developed from curriculum specification (TQF2), as follows:

1. Morals and ethics

3.1 Learning outcomes to be developed

- 1) Employ discretion, core value, rational, as well as understand social regulation for living.
- 2) Possess discipline, responsibility, honesty, contribution and endurance.
- 3) Perform life under the Philosophy of Sufficiency Economy.
- 4) Realize and aware of Thainess.

3.2 Teaching strategies

- 1) Keep classroom regulation, as well as online learning behaviors
- 2) Focus on using information technology in responsible ways without violating the others' right (i.e. copyright/creative commons, citation/plagiarism, and privacy)
- 3) Build up awareness in being a good digital citizen, both national and international levels

3.3 Assessment & evaluation strategies

- 1) Classroom observation (Face-to-face)
- 2) System log (Online)
- 3) Self- and peer assessment for projects and submissions

2. Knowledge

2.1 Learning outcomes to be developed

- 1) Own rounded knowledge with vision and can access life-long learning
- 2) Know and understand the current changing situation
- 3) Know, understand and realize self-worth, other-worth, society, arts and culture, and nature

2.2 Teaching strategies

- 1) Build up self-directed learning skills using e-learning and MOOCs
- 2) Focus on emerging technology and build new early adopters

2.3 Assessment & evaluation strategies

- 1) Quiz
- 2) Self-assessment and self-reflection
- 3) Examination

3. Cognitive skills

3.1 Learning outcomes to be developed

- 1) Gain life-long learning skills for continuous self-development
- 2) Gain holistic thinking skill

3.2 Teaching strategies

- 1) Use work-integrated learning, focusing on developing life-long employable skills
- 2) Emphasize the development of soft skills, as well as industry-specific skills

3.3 Assessment & evaluation strategies

- 1) Assessment rubrics for assignments
- 2) 360-degree assessment

4. Interpersonal skills and responsibilities

4.1 Learning outcomes to be developed

- 1) Possess volunteer spirit and public awareness
- 2) Be good citizen with benefit to Thai and global societies
- 3) Possess leadership and be able to work with others

4.2 Teaching strategies

- 1) Use collaborative learning
- 2) Assign group works

4.3 Assessment & evaluation strategies

- 1) Classroom observation (Face-to-face)
- 2) System log (Online)
- 3) 360-degree assessment

5. Numerical analysis, communication, and information technology skills

5.1 Learning outcomes to be developed

- 1) Gain numeric analytical skills
- 2) Capable to use language for communication efficiently
- 3) Capable to apply technology intentionally

5.2 Teaching strategies

- 1) Assign hands-on activities involving the use of ICT and the analysis of data
- 2) Emphasize the use of English language throughout the course

5.3 Assessment & evaluation strategies

- 1) Assessment rubrics for submissions
- 2) Quiz and examination

Remark: Symbol ● means “major responsibility”

Symbol ○ means “minor responsibility”

No symbol means “no responsibility”

Expected learning outcomes are combined for multiple-group instruction.

Section 5 - Lesson Plan and Assessment

1. Lesson plan

Week	Topic/Outline	Hours	Learning Activities and Medias	Lecturer
1	<p>Course Introduction</p> <ul style="list-style-type: none"> - Course outlines - Grading criteria - Self-assessment: IT competencies <p>Chapter 1: Principles, Importance, and Fundamental Knowledge of Information Technology</p> <ul style="list-style-type: none"> - Information technology as a part of an information system - Data and information - Components of IT; Hardware, Software, and Services (Peopleware) - Development of information technology to the digital world 	3	<ol style="list-style-type: none"> 1. Welcome students to the course. Announce course outlines, define grading criteria, and suggest some useful external resources and services. 2. Introduce the Learning Management System (LMS) used in this course and provide technical assistance if necessary. 3. Students complete a self-assessment form asking about their prior IT skills. The result will be used to revise teaching strategies. 4. Describe fundamental concepts of information technology and its components. Each student gives an example of information technology and describe how it impacts on his/her life. 5. Describe how information technology was developed from time to time and revolutionize of IT in this digital world. 6. Use an online quiz to evaluate student understandings. 	Mr. Pongrapee
2	<p>Chapter 2: Hardware</p> <ul style="list-style-type: none"> - Computer system - Personal and non-personal computers - Computer components - Peripherals 	3	<ol style="list-style-type: none"> 1. Use a gamification technique to introduce students to the topic. 2. Provide information about current computer hardware and trend of the IT market. 3. Describe and illustrate major components of a computer. 4. Each student identifies key specifications of a computer in the lab or any device of his/her own. 5. Discuss on how to select the appropriate device for each task. 6. Use an online quiz to evaluate student understandings. 	Mr. Pongrapee

Week	Topic/Outline	Hours	Learning Activities and Medias	Lecturer
3	<p>Chapter 3: Software & Services</p> <ul style="list-style-type: none"> - System and application software - Desktop and mobile platforms - Online services - Software licensing 	3	<ol style="list-style-type: none"> 1. Use a gamification technique to introduce students to the topic. 2. Describe types of software (System & Application), and platforms (Desktop & Mobile). 3. Students share experiences in using their favorite Operating Systems (Desktop/Mobile) including their pros and cons. 4. Give some examples of commonly-used desktop programs and mobile applications. 5. Describe software licensing (freeware, shareware, open-source, etc.) and alternative (free) online services. 6. Introduce some other useful online services. 7. Use an online quiz to evaluate student understandings. 	Mr. Pongrapee
4	<p>Chapter 4: Data Communications and Networking</p> <ul style="list-style-type: none"> - Ages of communication - Signal and transmission (Wired/Wireless) - Internet usage - Computer network 	3	<ol style="list-style-type: none"> 1. Describe the history of communication, wired and wireless communication in each generation (1G – 5G). 2. Discuss how communication technology was developed from time to time till present dates. 3. Explain how data was encoded/decoded signal for transmission. 4. Display available wired and wireless communication at the present time including their use. 5. Use a gamification technique to introduce students to the topic. 6. Illustrate and visualize the worldwide internet connection/usage. 7. Explain how we connect to the world-wide internet. 8. Classify network hardware devices and their use. 9. Students create a network map of the computer lab. 10. Discuss in solving common network issues. 11. Use an online quiz to evaluate student understandings. 	Mr. Pongrapee

Week	Topic/Outline	Hours	Learning Activities and Medias	Lecturer
5	<p>Chapter 5: Database Management</p> <ul style="list-style-type: none"> - Database vs offline documents - Database structure - Data types within the database - User interface - Database administration 	3	<ol style="list-style-type: none"> 1. Compare systems with and without database. Identify differences between database and offline documents. 2. Describe the database structure and its components. 3. Explain and clarify types of data within the database. Use in-class questioning to determine student understandings. 4. Identify levels of database administration and authentication methods. Provide examples of database application in registration, reservation, and financial systems. 5. Use an online quiz to evaluate student understandings 6. Students create simple online or offline database with user interface, and work together to perform a data collection task. Also manage the database access and authentication. 	Mr. Pongrapee
6	<p>Chapter 6: Data Analysis</p> <ul style="list-style-type: none"> - Simple data analysis task - Data presentation - Analysis and visualization of big data 	3	<ol style="list-style-type: none"> 1. Students perform a simple data analysis task using data they collected from the previous chapter. 2. Practice data presentation in a proper manner. 3. Learn about technology for analysis and visualization of big data. 4. Discuss on data analysis tasks used by world leading IT companies to determine how data analysis is crucial for business. 	Mr. Pongrapee
7	<p>Chapter 7: Data Security and Information Ethics</p> <ul style="list-style-type: none"> - Malware and antivirus - Data security - Cybercrime act - Intellectual properties (copyright, trademark, patent, & trade secret) 	3	<ol style="list-style-type: none"> 1. Describe types of malware, destructive power, and efficient methods to prevent infection and spreading 2. Provide case studies to have students aware of data security, protection of personal ID, and secured internet usage. 3. Explain the ethical use of IT resources, fair use, creative commons, and related lawsuits. 4. Practice secured searching, giving credits, and citation. 	Mr. Pongrapee

Week	Topic/Outline	Hours	Learning Activities and Medias	Lecturer
8	Mid-Term Examination	3	An online knowledge-based examination.	Mr. Pongrapee
9 – 10	Developing IT Competency 1: Graphics and Multimedia - Digital image - Sound & audio - Video & animation	6	1. Explain the proper use of multimedia contents including digital photos, audio, and videos. 2. Hands-on activity or project using a scaffolding technique with 360-degree assessment.	Mr. Pongrapee
11 - 14	Developing IT Competency 2: Office Programs - Word Processing - Spreadsheet - Presentation	12	Practice using office programs, aiming to develop students' competency at the intermediate level (minimum), and advanced level for students who have prior experiences (reflection of self-evaluation on Week 1) using a scaffolding technique with 360-degree assessment.	Mr. Pongrapee
15	(Make-up Class)			
16	Final Examination	3	An online skill-based examination.	Mr. Pongrapee

2. Learning assessment plan

Learning Outcome	Assessment Activities	Time Schedule (Week)	Proportion for Assessment (%)
<p>1. Morals and Ethics</p> <p>1) Employ discretion, core value, rational, as well as understand social regulation for living</p> <p>2) Possess discipline, responsibility, honesty, contribution and endurance</p> <p>3) Perform life under the Philosophy of Sufficiency Economy</p> <p>4) Realize and aware of Thainess</p>	<p>1) Classroom observation (Face-to-face)</p> <p>2) System log (Online)</p> <p>3) Self- and peer assessment for projects and submissions</p>	<p>1) All</p> <p>2) All</p> <p>3) Week 9 – 14</p>	<p>5%</p>
<p>2. Knowledge</p> <p>1) Own rounded knowledge with vision and can access life-long learning</p> <p>2) Know and understand the current changing situation</p> <p>3) Know, understand and realize self-worth, other-worth, society, arts and culture, and nature</p>	<p>1) Quiz</p> <p>2) Self-assessment and self-reflection</p> <p>3) Examination</p>	<p>1) Week 1 – 7</p> <p>2) Week 9 – 14</p> <p>3) Week 8, 16</p>	<p>30%</p>
<p>3. Cognitive Skills</p> <p>1) Gain life-long learning skills for continuous self-development</p> <p>2) Gain holistic thinking skill</p>	<p>1) Use work-integrated learning, focusing on developing life-long employable skills</p> <p>2) Emphasize the development of soft skills, as well as industry-specific skills</p>	<p>Week 9 – 14</p>	<p>30%</p>

Learning Outcome	Assessment Activities	Time Schedule (Week)	Proportion for Assessment (%)
4. Interpersonal Skills and Responsibilities 1) Possess volunteer spirit and public awareness 2) Be good citizen with benefit to Thai and global societies 3) Possess leadership and be able to work with others	1) Classroom observation (Face-to-face) 2) System log (Online) 3) 360-degree assessment	Week 9 – 14	5 %
5. Numerical Analysis, Communication and Information Technology Skills 1) Gain numeric analytical skills 2) Capable to use language for communication efficiently 3) Capable to apply technology intentionally	1) Assessment rubrics for submissions 2) Quiz and examination	All	30 %

Section 6 - Learning and Teaching Resources

1. Textbook and main documents

Course materials provided by the lecturer

2. Important documents for extra study

YouTube videos and extra reading from web pages

3. Suggested information (Printing Materials/Website/CD/Others)

Information retrieved from search engines (e.g. Google) and YouTube videos

Section 7 - Course Evaluation and Revising

1. Strategies for course evaluation by students

Using a questionnaire to collect students' opinions to improve the course and enhance the curriculum. Sample questions:

1) The Learning Management System (e.g. Moodle & Google Classroom) and social media platforms (e.g. Facebook & Line) are useful and provide accessibility to learners. Other online learning tools such as Kahoot! and Quizizz are also fun to interact with.

2) Online contents are highly accessible and have better quality comparing with printed materials.

3) With the Learning Management System used, students can follow up with the course and check their learning progress.

4) Students can contact the lecturer easily using the internal messaging system, feedback system, and social networking.

5) As this course is skill-focused, students have opportunities to practice several IT skills useful to their studying and future jobs.

..... etc.

2. Strategies for course evaluation by the lecturer

The lecturer observes the class and determine if:

- 1) The lecturer is well prepared for class sessions.
 - 2) The lecturer answers questions carefully and completely.
 - 3) The lecturer uses examples to make the materials easy to understand.
 - 4) The lecturer stimulated interest in the course.
 - 5) The lecturer made the course material interesting.
 - 6) The lecturer is knowledgeable about the topics presented in this course.
 - 7) The lecturer treats students respectfully.
 - 8) The lecturer is fair in dealing with students.
 - 9) The lecturer makes students feel comfortable about asking question.
 - 10) Course assignments are interesting and stimulating.
 - 11) The lecturer's use of technology enhanced learning in the classroom.
- etc.

3. Teaching revision

The lecturer revises teaching and learning process based on the results from the questionnaire results.

4. Feedback for achievement standards

International College Administrator Committee monitor to assessment process and grading.

5. Methodology and planning for course review and improvement

- 1) Revise and develop course structure and process every three years.
- 2) Assign different lecturers teach this course to enhance students' vision.

Curriculum Mapping Illustrating the Distribution of Program Standard Learning Outcomes to Course Level

Course	1. Morals and Ethics				2. Knowledge			3. Cognitive Skills		4. Interpersonal Skills and Responsibility			5. Numerical Analysis, Communication and Information Technology Skills		
	1	2	3	4	1	2	3	1	2	1	2	3	1	2	3
GEN0301 Information Technology for Communication	●	●	●	○	●	●	○	●	●	○	○	●	○	●	●

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Expected learning outcomes are combined for multiple-group instruction.