

Course Syllabus

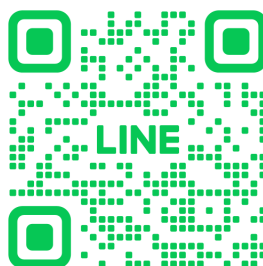
EE 431 Economics of Financial Markets and Institutions

Semester 2/2023 (January 8th – May 4th, 2024)

- 1. Number of credits:** 3 credits (3-0-6)
- 2. Lecture Date and Time:** Tuesday, 9.00 – 12.00 hr.
- 3. Class Venue:** Room 302, Faculty of Economics building
- 4. Online Contact:**

Class Material Repository: Online LMS: Google Classroom
Invitation Link: <https://classroom.google.com/c/NjE4NDZAzODczNjgw?cjc=ia3z3fb>
Passcode: ia3z3fb

Line Official:



Note that this Line official is very important. We will use it to announce important announcement. **Please also note that I am not responsive to this Line Official. If you would like to contact me, please email me.**

5. About instructor:

Instructor's Name: Asst.Prof. Dr. Sicha Thubdimphun
Contact Information: sicha@econ.tu.ac.th

Office hours: appointment via email.

6. Course description:

Money and capital markets at the micro level; Financial assets; financial risks and financial risks bearing; Theory of equilibrium pricing of financial assets; the CAPM and APT models; Interest rate structure; bond and equity instruments; Financial derivatives; Asymmetric information in financial market; The study of financial institutions with the emphases on theories regarding the roles and functions of commercial banks; Risk management of financial institutions; Monitoring and controlling of financial institutions; The deposit insurance system and financial institution business from the perspective of industrial economics.

7. Prerequisite: EE311

8. The objective of the course:

- (1) To provide students with an understanding of financial asset characteristics, risk, return, and liquidity
- (2) To provide students with an understanding of the debt market and interest rates at the microeconomic level.
- (3) To provide students with an understanding of the decision process for investment in financial assets at the microeconomic level, where investors seek to maximize their expected utility under constraint (combination of risk and returns available in the financial market)
- (4) To provide students with an understanding of diversification, degree of risk aversion, and risk premium, which are important determinants of the equilibrium price of financial assets in the financial market.
- (5) To provide students with how to derive equilibrium in the financial market
- (6) To provide students with an understanding of asymmetric information problems in the financial market and the role of financial intermediaries
- (7) To provide students with an understanding of the risk management of financial institutions
- (8) To provide students of an understanding of agency problems and excessive risk-taking in the financial market and how to mitigate the situation
- (9) To provide students with an understanding of a bank's liquidity creation, bank liquidity problem, bank runs, and deposit insurance

9. Evaluation

Homework*	5%
Quiz**	10%
Mid-term exam	30% (Topic 1 – Topic 3)
Final exam	55% (Topic 3 – Topic 8)
Mid-Term Examination:	Tuesday, February 27, 2024 09.00-11.00 hr
Final Examination:	Thursday, May 9, 2024 09.00-12.00 hrs.

*There will be a total of 12 homework assignments. For each student, we will consider the 10 best homework scores, dropping the two homework assignments with the lowest scores.

**There will be approximately two quizzes for each class, although this may vary. In some classes, there might be only one quiz. There will be 26 quizzes at the maximum, for 13 classes from January 23 onwards. For each student, we drop 8 quizzes with the lowest scores and count the others. If there is a class in which we have a guest speaker, participating in the class will be counted as two quizzes. This semester, we will have the guest speaker on January 30.

*, ** The idea behind dropping some quizzes/homework with the lowest scores is to accommodate students who may miss assignments for various reasons. Therefore, if a student happens to miss a quiz or a homework assignment, there won't be a makeup opportunity, as we've already factored this into the grading system.

Remarks:

1. Evaluation methods are subject to change.
2. More information will be announced in the Class, Google Classroom or Line Official.
3. When doing any essay exam or assignments use graphs, mathematical expressions, or else to support your answer where appropriate. Marks depend on the quality of the explanation.

10. Video Recording Policy

Make-up classes may be recorded for the convenience and review of students who are unable to attend in person. However, regular classes will not be recorded. If you cannot attend a make-up class, please inform the instructor in advance so arrangements can be made for the recording.

Please note that recorded classes are for personal use only and may not be shared or distributed

11. Grading Criteria:

To determine the letter grade, I use a mixed procedure between the criteria-based and the distribution-based method. When the criteria-based grading can be directly applied, I follow the general guidelines of the university described below.

A = 4.0 (85-100)	B+ = 3.5 (75-84)
B = 3.0 (70-74)	C + = 2.5 (65-69)
C = 2.0 (60-64)	D+ = 1.5 (50-59)
D = 1.0 (40-49)	F = 0 (0-39)

12. Teaching Materials and Resources

Required Text:

Frederic Mishkin, The Economics of Money, Banking and Financial Markets 9th Edition (Pearson, 2009)

Peter D Spencer, The Structure and Regulation of Financial Market (Oxford University Press, 2000)

Copeland, Thomas E. and J. Fred Weston, Financial Theory and Corporate Policy, 4th edition, (Addison-Wesley, 2005)

Diamond (2007), Bank and Liquidity Creation: A Simple Exposition of the Diamond-Dybvig Model, Federal Reserve Bank of Richmond Economic Quarterly.

Diamond (1996) Financial Intermediation and Delegated Monitoring: A Simple Example, Federal Reserve Bank of Richmond Economic Quarterly.

Kent Mathews and John Thompson, The Economics of Banking 2nd Edition (John Wiley & Son, 2008)

Bailey R.E., The Economics of Financial Markets, Cambridge University Press (2005)

Remarks: Supplement handouts or reading will be posted on *Google Classroom*.

The lecturer will provide a lecture presentation.

- The lecture presentation is designed to support learning in the class. Therefore, it is not sufficient for the exam.

13. Lecture/Schedule

Topics	Reading
Part I : Economic Analysis of Asset Prices	
Topic 1. Financial assets and the overview of financial market (1 time)	FM2009
1.1 Money and Functions of Money	Ch. 1-3
1.2 Money, Wealth, and Income	
1.3 Financial Market and Financial Assets	
1.4 Financial Assets Classified by Information Theory	
1.5 Flows of Funds in The Financial Market	
1.6 Structure of Financial Market	
Topic 2. Debt Market and Structure of interest rates (7 times)	FM2009
2.1 Measuring Interest Rates	Ch.4-6
2.2 Nominal Interest Rates and Real Interest Rates	
2.3 The Behavior of Interest Rates	
2.4 Risk and Term Structure of Interest Rates	
Topic 3. Mean-Variance Analysis (3 times)	Copeland2005 Ch.5
3.1 Measuring Risk and Returns for a Single Asset	
3.2. Measuring Portfolio Risk and Returns	
3.3. Efficient Frontier with Two Risky Assets	
3.4. Efficient Frontier with One Risky and One Risk Free Asset	
3.5. Optimal Portfolio Choice N Risky asset	
3.6. Optimal Portfolio Choice N Risky asset and One Risk Free Asset	
Topic 4: Capital asset pricing model (CAPM) and Arbitrage Pricing Theory (APT) (4 times)	Copeland2005 Ch.6
4.1 Capital Asset Pricing Model	
• Portfolio Diversification and Individual Asset Risk • Assumptions • The Efficiency of Market Portfolio • Derivation of CAPM • Properties of CAPM	
4.2 Arbitrage Pricing Theory	
• Arbitrage Opportunity • Replicating Portfolio • Derivation of Arbitrage Pricing Theory	

Topics	Reading
Part II : Financial Institution, Financial Market and Asymmetric Information	
Topic 5. Financial institutions (2 times)	FM2009
5.1 Introduction	Ch.9 -11
5.2 Major risks faced by banks	KM 2008
5.3 Liquidity Management and The Role of Reserve	
5.4 Interest Rate Risk Management	Ch.7
5.5 Credit Risk Management	
5.6 Capital Adequacy Management	
Topic 6. Theory of financial intermediation (5 times)	PS2000
6.1 Introduction	Ch.8
6.2 Shortcomings of direct finance	
6.3 How banks help to resolve the problem?	Diamond (1996)
(a) Confidentiality and The Banking Relationship	
(b) Economies of Scale and Role of Diversification in Banking:	
Financial Intermediation as Delegated Monitoring	
Topic 7. Convexity, excessive risk, and bank regulation (5 times)	PS2000
7.1 Decision Under Uncertainty	Ch.9
7.2 Agency Cost of Debt Finance: Conflict between a firm's bondholders and stockholders	KM 2008
7.3 Asset Substitutions Problem	Ch.8
7.4 How to solve asset substitution problem?	
7.5 Adverse Selection and Credit Rationing	
Topic 8. Bank runs, systemic risk and deposit insurance (4 times)	Diamond (2007)
8.1 Introduction	
8.2 Demand for Liquidity	
8.3 Bank Liquidity Creation	
8.4 Bank Runs	
8.5 Suspension of Convertibility and Deposit Insurance	
8.6. Note on the optimal level of liquidity	

14. Important dates:

ACADEMIC CALENDAR & HOLIDAY SEMESTER 2/2023

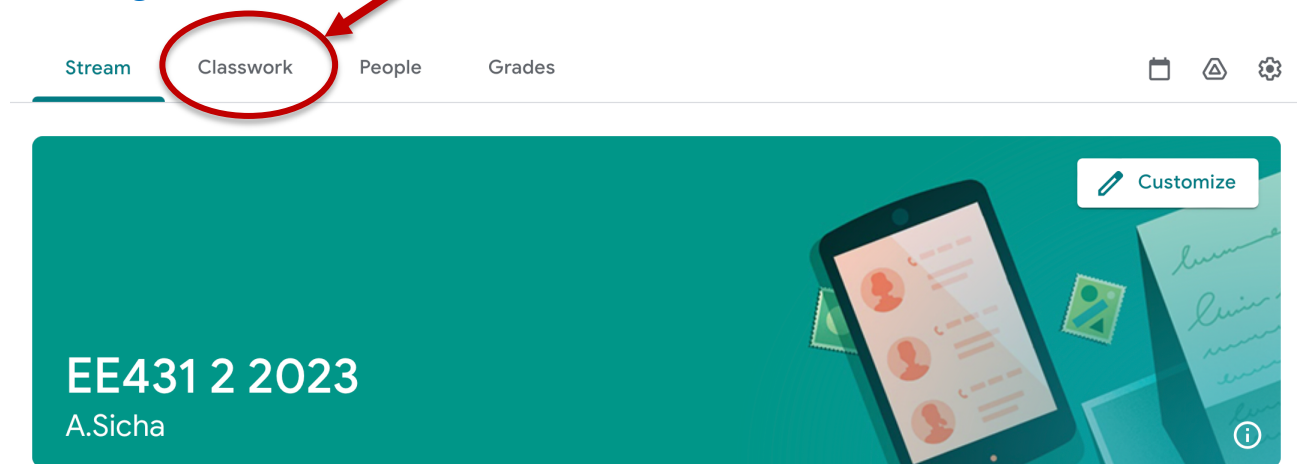
Semester 2/2023 (January 8 – May 4, 2024)	
Registration (Create Plan from Quota via TU Greats App) (*ID.62-66)	December 18 – 21, 2023.
Tuition Fee Payment Period (Via TU Greats App)	December 18 2023 - January 5, 2024.
Classes Begin	January 8, 2024
Add-drop period	January 8 – 21, 2024 (from 9.00 AM of January 8 to 10.30 PM of January 21).
Tuition Fee Payment Period (Via TU Greats App)	January 8 – 22, 2024 (9 AM - 10.30 PM)
Mid-term Examination Period	25, 27 - 29 February - 4 March, 2024
<i>Substitution for Makha Bucha Day *</i>	<i>February 26, 2024</i>
Withdrawal period with "W" on record	January 24 – March 17, 2024 (from 9.00 AM of January 24 to 10.30 PM of March 17).
Special Withdrawal with "w" on record	March 18 – April 22, 2024
<i>Substitution for Chakri Memorial Day*</i>	<i>April 8, 2024</i>
<i>Songkran Festival Day*</i>	<i>April 11 – 17, 2024</i>
Last day of class for Semester 2/2023	May 4, 2024
<i>Substitution for Coronation Day*</i>	<i>May 6, 2024</i>
Final exam period	May 7 - 21, 2024
Submitting Forms for Degree Conferral	January 8 – 21, 2024

Remark * Holiday, No classes during this period

Updated: November 1, 2023

15. Class Online Material

15.1 Google Classroom



Example a Display in the Google Classroom from the Past Semester

Important Announcement



-  Tentative Final Exam Cover Page and ... Posted Dec 12
-  Material Permission Form - Final Posted Dec 2
-  Make-up class: The class on Nov 28 wi... Posted Nov 23

Course Outline



-  Course Outline Posted Aug 3

Score Announcement



-  Midterm Exam Score Posted Oct 13
-  Quiz Score 10% Posted Sep 2
-  Homework Score 5% Edited Sep 2

Homework



	Homework 12 : Due 5 December	Posted Nov 29
	Homework 11: Due 5 December 2023	Posted Nov 22
	Homework 10 : Deadline - November 21	Posted Nov 15
	Homework 9: Deadline 7 Nov	Posted Nov 2

Topic 1. Overview of Financial Markets



	Class Note - 15 Aug	Posted Aug 16
	Lecture Presentation: Chapter 1. Over...	Posted Aug 14

Topic 2. Debt Market and Structure of Interest Rates



	Correction Page 38	Posted Oct 2
	Class note: 19 Sept (Correction - Page...	Edited Oct 2
	Class Note : Sept 12	Posted Sep 13
	Class Note: Sept 5	Posted Sep 6
	Class note: Aug 29 - Please see page 1...	Edited Aug 30
	Class note: Aug 22	Posted Aug 23
	Present Value Tables	Edited Oct 1
	Lecture Presentation: Topic 2. Debt M...	Posted Aug 14

Topic 3. Mean-Variance Analysis



 Class note: October 10, part 1	Posted Oct 17
 Class note: September 26	Posted Sep 26
 Lecture presentation	Posted Sep 26

Topic 4. Capital Asset Pricing Model



 Class note : 24 October	Posted Oct 24
 Class note: Oct 17	Edited Oct 18
 Class note : October 10 , part 2	Edited Oct 17
 Lecture Presentation Topic 4	Posted Oct 10

Topic 5. Bank Management



 Class note : October 31	Posted Oct 31
 Commercial Bank's Income Statement	Posted Oct 24
 Commercial Bank's Balance Sheet	Posted Oct 24
 Lecture Presentation: Topic 5	Edited Oct 24

Topic 6. Theory of Financial Intermediation



 Class note: November 14	Posted Nov 14
 Class note : November 7	Posted Nov 7
 Lecture Presentation Topic 6	Posted Oct 17
 Main Reading Material - Journal Articl...	Posted Aug 14

Topic 7. Convexity, Excessive Risk and Bank Regulatio... :



Class note: November 21, Ch7

Posted Nov 22



Lecture Presentation : Topic 7

Posted Oct 17

Topic 8. Bank Run, Systemic Risk and Deposit Insuran... :



Class note : Nov 28

Posted Nov 28



Lecture Presentation - Topic 8

Posted Oct 17



Main Reading Material: Banks and Liqu...

Posted Aug 17

Definitions

- A lecture Presentation is a PowerPoint presentation used in the class. It will be uploaded to the GG classroom before the date of each class. A student should prepare it before attending the class.
- A class note is the lecture presentation with the lecturer's writing in the class. It will be uploaded to the GG classroom within 7 days after the class.
- Quiz and Homework Scores will be uploaded in a shared GG sheet. The score for each homework/quiz will be announced within 7 days after the deadline of each homework or after the date of the quiz.

15.2. How to find a Solution for Homework: An Example of a Solution for Each Homework from the Past Semester

EE4311 2023

Important Announcement

- There is no homework this week (10 October). Homework 7 will be availabl...
Posted 10 Oct
- Tentative Midterm Exam Cover Page
Posted 1 Oct
- Midterm Exam Preparation
Posted 26 Sept
- Class policy for 5% homework score
Posted 29 Aug
- Policy for 10% Quizzes and In-class Activities
Posted 29 Aug

Course Outline

- Course Outline
Posted 3 Aug

Score Announcement

- Midterm Exam Score
Posted 13 Oct
- Quiz Score 10%
Posted 2 Sept
- Homework Score 5%
Posted 2 Sept

Solution to Quiz

Google Sheet Link for Homework Score

Stream Classwork People

Homework_score_1_2023

File Edit View Insert Format Data Tools Extensions Help

75% 123 Arial 15 B I

C10 Solution in the sheet "HW1_ans"

	A	B	C	D	E	F	G
1	Homework is counted for 5% of total score						
2	For every student, ONE homework with the lowest score will be dropped.						
3	If you would like to see your homework (the questions and their alternatives),						
4	a copy of your homework is sent to your @st.econ.tu.ac.th at the time you submit each homework.						
5	You may search your mail box using the key word "EE431" or "Google forms"						
6							
7			HW1 (100)	HW2(100)	HW3(100)	HW4(100)	HW5(100)
8							
9							
10			Solution is in the sheet "HW1_ans"	Solution is in the sheet "HW2_ans"	Solution is in the sheet "HW3_ans"	Please check your email@st.econ.tu.ac.th for the solution : You may search "EE431" in your inbox.	Please check your email@st.econ.tu.ac.th for the solution : You may search "EE431" in your inbox.
11						Please check your email@st.econ.tu.ac.th for the solution : You may search "EE431" in your inbox.	Solution is in the sheet "HW7_ans_Q2_Q13 and HW7_ans_Q14_Q24"
12							Solution is in the sheet "HW8_ans"
13	3	6304610098	75	42	76	83	49
14	4	6304610092	52	78	68	5	67
15	5	6404640094	100	80	100	95	76
16	6	6404640097	90	80	100	100	100
17	7	6404640090	95	80	88	100	100
18	8	6404640096	79	90	94	100	66
19	9	6404641000	95	70	82	100	76
20	10	6404641001	80	60	94	90	86
21	11	6404641003	100	60	100	90	65

HW_SCORE HW1 HW2 HW1_ans HW2_ans HW3 HW3_ans HW4 HW5 HW6 HW7 HW7_ans_Q2

information on where you can find the solution for each homework, either (1) in your @st.econ.tu.ac.th mailbox or (2) sheet HW#_ans in the google sheet

Example of a homework

EE431 Homework 1: Due 23 January

11.59 pm

1. Please be careful when you answer the 1st and the 2nd question. If your answer to the 1st or the 2nd question is wrong, your homework may not be graded. You will receive 0 marks.

2. You can submit only one time. Please make sure everything is OK before you submit your homework.

3. Late submission is not counted. Please spare some time for the system to operate.

4. After you submit, you will receive a confirmation email. You may check your@st.econ.tu.ac.th to see whether you have successfully submitted the homework or not.

5. If there is any mistake, I do apologize. Please notify me if there are any by emailing me - at sicha@econ.tu.ac.th.

6. **This homework** is multiple choices or short answers. The advantage of these types of questions is that students can quickly respond. The test **grades on only the final answer. Exams will be essay questions.** Please make sure you can deliver the process that led to the solution. **Exam grading depends on both the final answer and the quality of your explanation.**

7. There will be 12 homework. **TWO** homework with the lowest score will be dropped.

8. Homework is 5% of the grade.

demostudent1@st.econ.tu.ac.th [Switch account](#)

* Indicates required question

Email *

☐ Record demostudent1@st.econ.tu.ac.th as the email to be included with my response

1. Student ID [*** If you give a wrong answer for this question, your homework will not be graded***] *

Your answer

2. Let Z be the last digit of your student ID. If the last digit of your student ID = 0, use Z = 5. For example, if your student ID is 6404640356, your Z = 6. If your student ID is 6404642120, your Z = 5. What is your Z? [*** If you give a wrong answer for this question, your homework will not be graded***] [***Note that this value "Z" will be used in the other questions throughout this homework***] *

Your answer

3. What is Z +1 * 5 points

Your answer

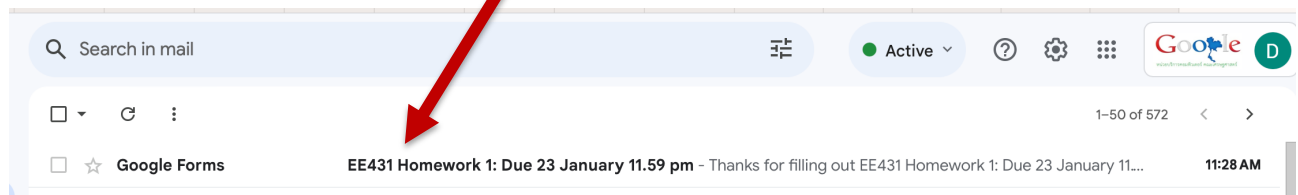
A copy of your responses will be emailed to demostudent1@st.econ.tu.ac.th.

Submit Clear form

Check the box

For some Questions the answer depends on your "Z" value. Therefore, you must provide a correct value of "Z"

After you click “submit”, a confirmation email with a copy of your homework will be sent to your@st.econ.tu.ac.th mailbox.



In the email, it will appear a copy of your response. This email can be used as evidence of your successful submission of homework.

Example of a Solution to homework, on the Google Sheet

Question :	solution depends on last digit ID	Solution does not depend on last digit ID								
1. Student ID [*** If you give a wrong answer for this question, your homework will not be graded***]	last digit ID is 0	last digit ID is 1	last digit ID is 2	last digit ID is 3	last digit ID is 4	last digit ID is 5	last digit ID is 6	last digit ID is 7	last digit ID is 8	last digit ID is 9
2. Let Z be the last digit of your student ID. If the last digit of your student ID = 0, use Z = 5. For example, if your student ID is 5804640356, your Z = 6. If you student ID is 5904642120, your Z = 5. What is your Z? [*** If you give a wrong answer for this question, your homework will not be graded***] [***Note that this value "Z" will be used in the other questions throughout this homework***]	5	1	2	3	4	5	6	7	8	9
3. Calculate the value of $1 + Z$	6.00	2.00	3.00	4.00	5.00	6.00	7.00	8.00	9.00	10.00

Example of the Solution to homework sent to your@st.econ.tu.ac.th email.



16. Other Policies:

Any changes to the course outline (if any) **will be announced in the on-site class, the Zoom Class, Google Classroom, or Line Official.** It is the responsibility of the students to obtain any information announced in the class. Ignorance of such information due to the absence of class is not a valid defense. If a student has any questions about the lecture, please do not hesitate to consult the lecturer during office hours. The lecturer would be pleased to assist. Please make an appointment in advance via email. Please allow enough time (at least 2 working days) for the lecturer to confirm the appointment. I will be available for you only if you confirm such an appointment by emailing back.

Attendance is highly encouraged

Proper manner and courtesy are expected

A student may contact me by sending an email.

On the night before a test/an exam, the cut-off for any question is 4.00 pm. via email, I can provide only short answers. If you prefer a long answer, please come to visit me by making an appointment.

17. Expected Learning Outcomes

1. Morality and Ethics

Applicability	Expected Learning Outcomes	Evaluation Method
●	1. Students demonstrate integrity.	Quizzes & HW / Exams
○	2. Students prioritize social and public benefits over personal ones.	
●	3. Students are punctual and comply with the code of conduct of the institution and society at large.	Observed class attendance / Quizzes & HW / Exams
○	4. Students are responsible and accountable to society, the nation, and the subject of economics.	
○	5. Students realize the cultural and environmental value of a sustainable society.	

2. Knowledge

Applicability	Expected Learning Outcomes	Evaluation Method
●	1. Students know and understand modern economics principles and theories, and are up to date with new developments.	In-class participations / Quizzes & HW / Exams
●	2. Students know and understand Thai and global economic structure and the importance of major international economic events.	In-class participations / Quizzes & HW / Exams
●	3. Students know and understand the instruments of economic analysis.	In-class participations / Quizzes & HW / Exams
●	4. Students know and understand applied fields in economics, including monetary, public, international, business, natural resource, and environmental, industrial, agricultural, cooperative, political, developmental, and entrepreneurial economics as well as agribusiness.	In-class participations / Quizzes & HW / Exams
○	5. Students are informed about related fields including sociology, business administration, education, law policy, and science.	

3. Intellectual Development

Applicability	Expected Learning Outcomes	Evaluation Method
●	1. Students have developed individual critical thinking.	In-class participations / Quizzes & HW / Exams
●	2. Students are sufficiently trained in research skills.	In-class participations / Quizzes & HW / Exams
●	3. Students demonstrate an ability to analyze and synthesize data, as well as appropriately integrate economics concepts to understand the causes of current economic problems in Thailand. Based on analysis and synthesis, students demonstrate an ability to propose policy guidelines to resolve problems.	In-class participations / Quizzes & HW / Exams

4. Interpersonal Skills and Responsibilities

Applicability	Expected Learning Outcomes	Evaluation Method
●	1. Students are responsible for assigned tasks and work in groups effectively.	In-class participations / Quizzes & HW / Exams
●	2. Students have problem-solving skills.	In-class participations / Quizzes & HW / Exams
○	3. Students show leadership skills and team spirit.	
●	4. Students are always improving themselves.	In-class participations / Quizzes & HW / Exams
○	5. Students have good interpersonal skills, adapt, and work under different conditions.	

5. Quantitative Analysis, communication, and information technology

Applicability	Expected Learning Outcomes	Evaluation Method
○	1. Students select and apply appropriate statistical and mathematical methods for data processing, interpretation, conclusions, and recommendations to resolve problems.	
○	2. Students communicate effectively and select appropriate presentation methods.	
○	3. Students use information and communication technologies appropriately to gather data as well as process, interpret, and present results.	

Remark: ● Primary expected outcome ○ Secondary expected