

MINISTRY OF EDUCATION & TRAINING
HO CHI MINH CITY UNIVERSITY OF TECHNOLOGY & EDUCATION

UNDERGRADUATE PROGRAM
Major of
INDUSTRIAL MANAGEMENT

*(Issued under Decision No. 3744 /QĐ-ĐHSPKT dated 06 / 10 /2025 by the President of
Ho Chi Minh City University of Technology and Education)*

Education Program: Industrial Management

Level: Undergraduate

Major: Industrial Management

Major Code: 7510601A

Ho Chi Minh City, 2025

UNDERGRADUATE PROGRAM

Education Program: Industrial Management

Level: Undergraduate

Major: Industrial Management

Major Code: 7510601A

Type of Training: FULL-TIME

Graduation Diploma: Bachelor

(Issued under Decision No. 3744 /QĐ-ĐHSPKT dated 06 / 10 /2025 by the President of Ho Chi Minh City University of Technology and Education)

1. Duration of Study: 4 years

2. Student Enrollment: High-school Graduates

3. Grading System, Curriculum and Graduation Requirements

Grading System: 10

Curriculum: Based on Decision No. 3116/QĐ-ĐHSPKT dated 22/08/2025 issued by Ho Chi Minh City University of Technology and Education on regulations for undergraduate training programs.

Graduation Requirements:

General Conditions: Based on Decision No. 3116/QĐ-ĐHSPKT dated 22/08/2025 by Ho Chi Minh City University of Technology and Education on undergraduate training regulations.

4. Educational Objectives and Learning Outcomes

Goals

Graduates will be capable of managing production and business operations across various domains, such as production management, quality management, human resource management, and marketing management. They will possess communication skills suitable for business environments and international integration, as well as teamwork and leadership capabilities. Graduates will be able to analyze, synthesize, and solve problems, and propose effective solutions to enhance enterprise performance.

Objectives

Graduates will acquire knowledge, skills, and competencies as follows:

1. Knowledge of fundamental sciences, general and specialized knowledge in industrial management.
2. Ability to analyze, conduct research, and solve problems in business management; systems thinking; adherence to professional ethics; capacity for lifelong learning and global integration.
3. Communication skills in both Vietnamese and English; leadership and teamwork skills.

4. Capability to form ideas, plan, implement, and operate improvement solutions throughout production and business processes.

Program outcomes

Code	Expected Learning Outcomes	Level
1	ELO 1: Apply basic scientific knowledge and foundational disciplinary knowledge in business management.	3
1.1	PI1.1: Apply mathematical knowledge in management.	
1.2	PI1.2: Apply social science knowledge in business management.	
1.3	PI1.3: Apply information technology in business management.	
2	ELO 2: Apply specialized knowledge in industrial management.	3
2.1	PI2.1: Apply specialized knowledge in production and quality management.	
2.2	PI2.2: Apply specialized knowledge in human resource management.	
2.3	PI2.3: Apply specialized knowledge in marketing and business management.	
3	ELO 3: Analyze, evaluate, and solve problems in business management.	5
3.1	PI3.1: Ability to apply basic knowledge in problem-solving.	
3.2	PI3.2: Ability to apply foundational disciplinary knowledge in problem-solving.	
3.3	PI3.3: Ability to apply specialized knowledge in problem-solving.	
4	ELO 4: Develop systems thinking and conduct research in business management.	4
4.1	PI4.1: Ability to develop a research plan.	
4.2	PI4.2: Ability to conduct research.	
4.3	PI4.3: Ability to apply systems thinking to economic, social, and management issues.	
5	ELO 5: Develop professional attitude, global integration capacity, and lifelong learning ability.	3
5.1	PI5.1: Demonstrate a professional working attitude.	
5.2	PI5.2: Ability to integrate into international environments.	
5.3	PI5.3: Ability to search for and synthesize new knowledge through effective self-learning methods.	
6	ELO 6: Develop leadership capacity and teamwork skills.	3
6.1	PI6.1: Ability to plan and allocate tasks within a team.	

6.2	PI6.2: Ability to coordinate team activities.	
6.3	PI6.3: Ability to evaluate task performance of team members.	
7	ELO 7: Develop communication skills in various forms and use of foreign languages in professional contexts.	3
7.1	PI7.1: Ability to communicate orally.	
7.2	PI7.2: Ability to communicate through writing.	
7.3	PI7.3: Ability to read, write, and communicate effectively in English.	
8	ELO 8: Develop ideas and planning skills: for entrepreneurship and improvement of business and production activities.	5
8.1	PI8.1: Ability to develop ideas and business startup plans.	
8.2	PI8.2: Ability to develop improvement ideas for production and business activities.	
8.3	PI8.3: Ability to plan improvements for production and business activities.	
9	ELO 9: Ability to organize, operate, and control improvement activities in production and business.	5
9.1	PI9.1: Ability to organize control activities for improvement in production and business.	
9.2	PI9.2: Ability to operate improvement activities in production and business.	
9.3	PI9.3: Ability to control improvement activities in production and business.	

Competency Scale

Competency Level		Brief Description
$0.0 \leq TĐNL \leq 1.0$	Basic	Remember: Students recall/ recognize/ remember knowledge through actions such as defining, repeating, listing, identifying, determining,...
$1.0 < TĐNL \leq 2.0$	Satisfactory	Comprehend: Students construct knowledge from documents, through actions such as explaining, classifying, illustrating, reasoning,...
$2.0 < TĐNL \leq 3.0$		Apply: Students perform/ apply knowledge to create products such as models, real objects, simulated products, reports,...
$3.0 < TĐNL \leq 4.0$	Proficient	Analyze: Students analyze documents/ knowledge into details/ parts and identify new relationships of the whole through actions such as analyzing, classifying, comparing, synthesizing,...
$4.0 < TĐNL \leq 5.0$		Evaluate: Students make judgments, predictions about knowledge/ information according to defined

		standards, criteria, and measured indicators through actions such as commenting, critiquing, proposing,...
$5.0 < \text{TĐNL} \leq 6.0$	Excellent	Create: Students create/ organize/ structure/ design/ generalize details/ parts in different/new ways to form new structures/models/products.

5. Total Program Credit Requirement: 132 credits

(not including physical, national defense education and Enterprise Seminar)

Foreign Language Knowledge:

- Students with an IELTS ≥ 4.5 or equivalent (as per Decisions No. 3239/QĐ-ĐHSPKT dated 03/09/2025) will be exempted from the English placement test. Their scores will be converted for English courses in the program and English proficiency requirement (Outcome).
- English Placement Test for Level Classification: Students without IELTS certificate must participate in an English placement test to determine their proficiency level.
 - If a student achieves Level 1, they will study Communicative English 1,2.
 - If a student achieves Level 2, they will study Academic English 1,2.
- Sequence of English courses: Communicative English 1,2 $\rightarrow$ Academic English 1, 2.

Note:

- Communicative English 1 and 2 are supplementary courses designed to enhance English communication skills for students not accumulating credits in the program.
- Academic English 1 and 2 are academic courses that accumulate credits in the program.

6. Allocation of Knowledge Group

NO.	COURSE NAME	Credits
GENERAL EDUCATION KNOWLEDGE		52
A. Compulsory Courses		28
I. Political Education and General Laws		14
1	Philosophy of Marxism and Leninism	3
2	Political economics of Marxism and Leninism	2
3	Scientific socialism	2
4	Ho Chi Minh's ideology	2
5	History of Vietnamese communist party	2
6	General Laws	3
II. Mathematics		9
1	Mathematical Economics 1	3

2	Mathematical Economics 2	3
3	Mathematical Statistics for Engineers	3
III. Introduction to Industrial Management		3 (2+1)
IV. Informatics		2
1	Applied Computing	2(1+1)
B. Selective Courses		16
V. Social Sciences (as listed)		4
VI. Engineering Sciences		6
VII. Fundamental and Specialized Knowledge		6
C. Physical Education, National Defense Education, and Foreign Languages Knowledge		Engineering Sciences + Fundamental and Specialized Knowledge
VIII. Physical Education		
1	Physical Education 1	1
2	Physical Education 2,3	2
IX. National Defense Education		165 hours
X. Foreign Languages		
1	Academic English 1	4
2	Academic English 2	4
3	Communicative English 1	Non-accumulation
4	Communicative English 2	Non-accumulation
SPECIALIZED KNOWLEDGE		80
General and Specialized Courses		72
Fundamental Courses		
Specialized Courses		
Enterprise Seminar		1 (Non-accumulation)
Internship		2
Thesis		6

7. Program content (Title and credit load of compulsory courses)

A – Compulsory courses

7.1. General Education Knowledge

No.	Course's ID	Course name	Credits	Prerequisite
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1.	LLCT130105E	Philosophy of Marxism and Leninism	3	
2.	LLCT120205E	Political economics of Marxism and Leninism	2	
3.	LLCT120405E	Scientific socialism	2	
4.	LLCT120314E	Ho Chi Minh's ideology	2	
5.	LLCT220514E	History of Vietnamese communist party	2	
6.	GELA236939E	General Laws	3	
7.	MATH132701E	Mathematical Economics 1	3	
8.	MATH132801E	Mathematical Economics 2	3	MATH132701E
9.	MATH132901E	Mathematical Statistics for Engineers	3	MATH132801E
10.	INMA130106E	Introduction to Industrial Management	3(2+1)	
11.	APCM220307E	Applied Computing	2	
12.		Selective Social Sciences	4	
13.		Selective Engineering Knowledge	6	
14.		Selective Management Knowledge	6	
15.	ENCS140026E	English Communication Skills 1	4	Non-accumulation
16.	ENCS240026E	English Communication Skills 2	4	Non-accumulation
17.	ACEN340535E	Academic English 1	4	
18.	ACEN340635E	Academic English 2	4	
19.	PHED110130	Giáo dục thể chất 1 (<i>Physical Education 1</i>)	1	Non-accumulation
20.	Giáo dục thể chất 2,3 (<i>Physical Education 2,3</i>)		2	Choose 2
21.	FOOT112330	Bóng đá (<i>Football</i>)	1	Non-accumulation
22.	VOLL112330	Bóng chuyền (<i>Volleyball</i>)	1	Non-accumulation
23.	BASK112330	Bóng rổ (<i>Basketball</i>)	1	Non-accumulation

24.	BADM112330	Cầu lông (<i>Badminton</i>)	1	Non-accumulation
25.	TENN112330	Quần vợt (<i>Tennis</i>)	1	Non-accumulation
26.	KARA112330	Không thủ đạo (<i>Karate</i>)	1	Non-accumulation
27.	CHES112330	Cờ vua (<i>Chess</i>)	1	Non-accumulation
28.	CHIN112330	Cờ tướng (<i>Chinese Chess</i>)	1	
29.	YOGA112330	Yoga (<i>Yoga</i>)	1	
30.	PICK112330	Pickleball	1	
31.	National Defense Education		4	Non-accumulation
32.	GDQP110131	Giáo dục quốc phòng 1 (<i>National Defence Education 1</i>)	1	Non-accumulation
33.	GDQP110231	Giáo dục quốc phòng 2 (<i>National Defence Education 2</i>)	1	Non-accumulation
34.	GDQP110331	Giáo dục quốc phòng (<i>National Defence Education 3</i>)	1	Non-accumulation
35.	GDQP110431	Giáo dục quốc phòng 4 (<i>National Defence Education 4</i>)	1	Non-accumulation
Total			44	

7.2. Specialized Knowledge

7.2.1. General and Specialized Courses

No.	Course's ID	Course name	Credits	Prerequisite
1.	BLAW220308E	Business Law	2	
2.	ECON240206E	Economics	4	
3.	PRAC230407E	Principles of Accounting	3	
4.	FUMA230806E	Fundamental Management	3	
5.	BCOM320106E	Business Communication	2	
6.	MAOP230706E	Mathematical Optimization	3	
7.	RMET220406E	Research Method	2	
8.	BSTA231006E	Business Statistics	3	
9.	DANA230706E	Data Analysis	3	
Total			25	

7.2.2 Specialized Courses (for theoretical and practical courses)

No.	Course's ID	Course name	Credits	Prerequisite
Production Management Knowledge				
1.	PRMA330806E	Production Management 1	3	MAOP230706E
2.	PRMA331506E	Production Management 2	3	PRMA330806E
3.	PRMP330806E	Production Management Practice		Selective
4.	PLSC331126E	Production Planning and Scheduling		Selective
5.	ERPS431208E	Enterprise Resource Planning (ERP)	3	
6.	SCMA430709E	Supply Chain Management	3	
Total			12	
Quality Management Knowledge				
7.	QMAN331606E	Quality Management	3	
8.	MAIM330406E	Maintenance Management	3	FUMA230806E
9.	LESI440806E	Lean & Six Sigma	4	
Total			10	
Human Resource Management Knowledge				
10.	HRMA331206E	Human Resource Management	3	FUMA230806E
11.	WSIE320425E	Occupational Safety and Industrial Environment	2	
12.	BCUL330506E	Corporate Culture		Selective
13.	ORBE330306E	Organization Behavior		Selective
Total			5	
Marketing and Business Knowledge				
14.	FIMA430807E	Financial Management	3	
15.	ECOM431308E	Ecommerce	3	
16.	PROM430506E	Project Management	3	
17.	MAMA330906E	Marketing Management	3	
18.	BPLA430606E	Business Planning		Selective
19.	STMA430406E	Strategic Management	3	
20.	PRAN321106E	Project Analysis and Evaluation	2	
21.	BUAN331706E	Business Analytics	3	

Total	20	
Total	47	

7.2.3. Internship and Thesis

No.	Course's ID	Course name	Credits	Prerequisite
1.	SEMI310026E	Enterprise Seminar	1 (Non-accumulated)	
2.	INTE421106E	Internship	2	
3.	IMGR461206E	Thesis	6	
Total			8	

B – Selective courses:

Social Sciences (*Students must choose 04 credits from the following courses*)

No.	Course's ID	Course name	Credits	Prerequisite
1.	PLSK120290E	Planning Skill	2	Semester 2-Term 1
2.	BPLA121808E	Business Plan	2	Semester 2-Term 2
3.	SYTH220491E	Systems Thinking	2	Semester 2-Term 2
4.	INLO220405E	Introduction to Logics	2	Semester 3-Term 1
5.	PSBU220408E	Business Psychology	2	Semester 3-Term 2

Engineering Knowledge_Group A (*Students must choose 06 credits from the following courses*)

No.	Course's ID	Course name	Credits	Prerequisite
1.	CADM230320E	Computer-Aided Design and Manufacturing	3	Semester 4-Term 1
2.	AMAP432225E	Automation of Production Process	3	Semester 4-Term 2
3.	WEDE330484E	Web Design	3 (2+1)	Semester 4-Term 1
4.	FUBY333808E	Basic Python Programming	3(2+1)	Semester 5-Term 1
5.	MALE433908E	Machine Learning	3	Semester 5-Term 1
6.	CIMS330709E	Computer Integrated Manufacturing (CIM) Systems	3(2+1)	Semester 5-Term 2
7.	TEDG130120E	Technical Drawing	3	Semester 4-Term 2

Management Knowledge_Group B (*Students must choose 06 credits from the following courses*)

No.	Course's ID	Course name	Credits	Prerequisite
1.	MAIS430306E	Management Information System	3	Semester 4-Term 2
2.	ORBE330306E	Organization Behavior	3	Semester 4-Term 1
3.	BCUL330506E	Corporate Culture	3	Semester 4-Term 1
4.	FTMA430908E	Foreign Trade Management	3	Semester 6-Term 1
5.	PLSC331126E	Production Planning and Scheduling	3	Semester 6-Term 2
6.	BPLA430606E	Business Planning	3	Semester 6-Term 1

C – Interdisciplinary Knowledge:

Students may substitute 6 credits of interdisciplinary courses for the specialized courses listed in the selective sections:

- Refer to the list of proposed courses in the Appendix, or
- Students may select other courses not included in the list, as long as those courses are aligned with their intended career direction. It is advisable that students consult with the Program Advisory Board for appropriate guidance.

8. Program Roadmap

Note: Courses in Political Theory and Physical Education are not scheduled in fixed semesters. Students will register for these courses based on the class offerings of the university. Political Theory courses should be taken in the following sequence:

No.	Course's ID	Course name	Credits	Prerequisite
1.	LLCT130105E	Philosophy of Marxism and Leninism	3	Semester 1
2.	LLCT120205E	Political economics of Marxism and Leninism	2	
3.	LLCT120405E	Scientific socialism	2	
4.	LLCT120314E	Ho Chi Minh's ideology	2	
5.	LLCT220514E	History of Vietnamese communist party	2	
6.	GELA236939E	General Laws	3	
Total			14	

Course Schedule over 8 Semesters:

Semester 1:

No.	Course's ID	Course name	Credits	Prerequisite	Term
1.	FUMA230806E	Fundamental Management	3		2
2.	INMA130106E	Introduction to Industrial Management	3(2+1)		1

3.	LLCT130105E	Philosophy of Marxism and Leninism	3		2
4.	MATH132701E	Mathematical Economics 1	3		1
5.	APCM220307E	Applied Computing	2(1+1)		2
6.	BCOM320106E	Business Communication	2		2
7.	PHED110130	Giáo dục thể chất 1	0		1
8.	ACEN340535E	Academic English 1	4		1
9.	ACEN340635E	Academic English 2	4		2
Total			24		

Note: The course Introduction to Industrial Management may feature guest speakers including industry experts or successful alumni.

Semester 2:

No.	Course's ID	Course name	Credits	Prerequisite	Term
1.	BLAW220308E	Business Law	2		2
2.	ECON240206E	Economics	4		1
3.	PRAC230407E	Principles of Accounting	3		2
4.	MATH132801E	Mathematical Economics 2	3	MATH132701E	1
5.	GELA236939E	General Laws	3		1
6.		Giáo dục thể chất 2 (tự chọn 1) <i>Physical Education 2 (Option 1)</i>	1		
7.		Selective Social Sciences	2		1-2
8.		Giáo dục Quốc phòng <i>National Defence Education</i>	4		
9.					
Total			17		

Semester 3:

No.	Course's ID	Course name	Credits	Prerequisite	Term
1.	BSTA231006E	Business Statistics	3		2
2.	ECOM431308E	Ecommerce	3		2
3.	WSIE320425E	Occupational Safety and Industrial Environment	2		1
4.	MAOP230706E	Mathematical Optimization	3		2

5.	MATH132901E	Mathematical Statistics for Engineers	3		1
6.	RMET220406E	Research Method	2		1
7.		Selective Social Sciences	2		1-2
8.	LLCT120205E	Political Economics of Marxism and Leninism	2		1
9.	LLCT120405E	Scientific socialism	2		2
Total			22		

Semester 4:

No.	Course's ID	Course name	Credits	Prerequisite	Term
1.	DANA230706E	Data Analysis	3	RMET220406E	1
2.	PRMA330806E	Production Management 1	3		2
3.	STMA430406E	Strategic Management	3		1
4.	PRAN321106E	Project Analysis and Evaluation	2		2
5.		Selective Group A	3		1-2
6.		Selective Group B	3		1-2
7.	LLCT120314E	Ho Chi Minh's ideology	2		1
8.	LLCT220514E	History of Vietnamese communist party	2		2
Total			21		

Semester 5:

No.	Course's ID	Course name	Credits	Prerequisite	Term
1.	HRMA331206E	Human Resource Management	3		2
2.	MAMA330906E	Marketing Management	3		1
3.	PRMA331506E	Production Management 2	3		1
4.	FIMA430807E	Financial Management	3		2
5.	PROM430506E	Project Management	3		1
6.	QMAN331606E	Quality Management	3		2
7.		Selective Group A	3		1-2
Total			21		

Semester 6:

No.	Course's ID	Course name	Credits	Prerequisite	Term
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1.	MAIM330406E	Maintenance Management	3		2
2.	SCMA430709E	Supply Chain Management	3		2
3.	BUAN331706E	Business Analytics	3		2
4.	ERPS431208E	Enterprise Resource Planning (ERP)	3		1
5.	LESI440806E	Lean & Six Sigma	4		1
6.		Selective Group B	3		1-2
Total			19		

Semester 7:

No.	Course's ID	Course name	Credits	Prerequisite	Term
1.	SEMI310026E	Enterprise Seminar	1	Not accumulated	2
2.	INTE421106E	Internship	2		2
Total			2		

Semester 8:

No.	Course's ID	Course name	Credits	Prerequisite	Term
1.	IMGR461206E	Thesis	6	INTE421106E	2
Total			6		

APPENDIX OF INTERDISCIPLINARY COURSES

No.	Course's ID	Course name	Credits	Prerequisite
1.	SERM332009E	Service Marketing	3	
2.	MAAC331307E	Managerial Accounting	3	
3.	SAMA332008E	Sales Management	3	
4.	ABDA433708E	Application of Data Analysis (Big Data) in Business	3	
5.	PROC330109E	Procurement	3	
6.	WDER231726E	Work System Design and Ergonomics	3	
7.	EMAR431108E	E-Marketing	3	

9. Brief description and credit load of the courses

9.1 General Laws

Number of credits:02

- *Learning time allocation:* 2 (2, 0, 4)
- *Prerequisite course(s):*

- *Course content summary:* Law is a system of universally binding norms issued by the State. Legal provisions apply to everyone and affect all areas of life. One of the fundamental duties of citizens is to "living and working in accordance with the law". The course General Law equips learners with foundational knowledge of the State and the legal system. Students will be introduced to legal concepts and terminology, as well as key understandings of the structure and functions of the Vietnamese state apparatus. In addition, they will study core legal branches and regulations to be able to participate proactively and effectively in legal relationships.

9.2 Mathematical Economics 1

Number of credits:03

- *Learning time allocation:* 3 (3, 0, 6)
- *Prerequisite course(s):*
- *Course content summary:* This course covers knowledge of matrices, determinants, systems of linear equations, the vector space R^n , quadratic forms, differential calculus of single-variable functions, and several applications in economics.

9.3 Mathematical Economics 2

Number of credits:03

- *Learning time allocation:* 3 (3, 0, 6)
- *Prerequisite course(s):* *Mathematical Economics 1*
- *Course content summary:* This course covers knowledge of multivariable differential calculus, single-variable integral calculus (including indefinite integrals, definite integrals, and improper integrals), and first- and second-order differential equations. It also introduces several applications of mathematical knowledge in economics.

9.4 Mathematical Statistics for Engineers

Number of credits:03

- *Learning time allocation:* 3 (3, 0, 6)
- *Prerequisite course(s):* *Mathematical Economics 1*
- *Course content summary:* This course introduces fundamental knowledge of probability theory and applied statistics, including: random events, probability and probability calculation formulas, random variables and probability distribution laws, sampling theory, parameter estimation, hypothesis testing, and linear regression and correlation analysis.

9.5 Introduction to Industrial Management

Number of credits:03

- *Learning time allocation:* 3 (3, 0, 6)
- *Prerequisite course(s):*
- *Course content summary:* This course equips students with foundational knowledge of the Industrial Management discipline, along with essential information about the Faculty and the University. It also introduces students to several effective learning methods at the university level and provides them with essential skills for future academic and professional success.

9.6 Production Management Practice

Number of credits:02

- *Learning time allocation:* 3 (3, 0, 6)
- *Prerequisite course(s):*

- *Course content summary:* Apply theories and tools learned in the Production Management 1 course such as line balancing, work standardization, etc., to practical situations in enterprises.

9.7 Research Method

Number of credits:02

- *Learning time allocation:* 2 (2, 0, 4)
- *Prerequisite course(s):*
- *Course content summary:* The course equips students with the ability to search for and comprehend academic journal articles, thereby identifying research directions in the fields of management and economics. Upon completion of the course, students will be able to develop a complete and feasible research proposal for implementation.

9.8 Data Analysis

Number of credits:02

- *Learning time allocation:* 3 (3, 0, 6)
- *Prerequisite course(s):* Research Method
- *Course content summary:* The course enables students to carry out a specific research project based on an existing research proposal. The implementation includes data collection, data analysis, and writing a final report to summarize the research findings.

9.9 Business Statistics

Number of credits:03

- *Learning time allocation:* 3 (3, 0,6)
- *Prerequisite course(s):* Mathematical Statistics for Engineers
- *Course content summary:* The course equips students with knowledge related to statistics, with a particular focus on its applications in quality management, production management according to Lean and Six Sigma, time series forecasting, and business decision-making.

9.10 Occupational Safety and Industrial Environment

Number of credits:02

- *Learning time allocation:* 2 (2, 0,4)
- *Prerequisite course(s):*
- *Course content summary:* The course provides students with fundamental knowledge of labor protection, including labor protection policies, occupational accident first aid,...

9.11 Lean & 6 sigma

Number of credits:04

- *Learning time allocation:* 4 (4, 0,8)
- *Prerequisite course(s):* Mathematical Statistics for Engineers
- *Course content summary:* The course equips students with Lean production methods and the Six Sigma breakthrough improvement approach, aiming to minimize waste in the production process, and to enhance productivity and quality...

9.12 Enterprise Resource Planning (ERP)

Number of credits:03

- *Learning time allocation:* 3 (3, 0, 6)
- *Prerequisite course(s):* Management Information Systems (MIS), Human Resource Management

- *Course content summary:* The course begins by introducing real-world problems that lead to the formulation of linear programming models. Its core focus is on presenting the simplex algorithm at varying levels of application. The theory of duality is explained in a simplified manner. The course concludes with applications of linear programming to demonstrate its wide range of practical uses.

9.13 Mathematical Optimization

Number of credits:03

- *Learning time allocation:* 3 (2, 1, 6)
- *Prerequisite course(s):* *Mathematical Economics 1, Mathematical Economics 2*
- *Course content summary:* The course begins with the introduction of several real-world problems that lead to the formulation of linear programming models. The focus of the course is the presentation of the simplex algorithm at various levels of application. The theory of duality is presented in a simplified manner. The application of linear programming is presented at the end to demonstrate the wide applicability of linear programming.

9.14 Foreign Trade Management

Number of credits:03

- *Learning time allocation:* 3 (3,0, 6)
- *Prerequisite course(s):*
- *Course content summary:* The Foreign Trade Management course provides learners with practical knowledge of foreign trade operations, equipping them with fundamental techniques for conducting international transactions and business activities. The course introduces key practices and conventions in international commerce, enabling learners to understand the content and process of various international payment methods... Overall, the course prepares students to effectively manage the execution of international trade contracts.

9.15 Economics

Number of credits:04

- *Learning time allocation:* 4 (4,0, 8)
- *Prerequisite course(s):* None
- *Course content summary:* This foundational Economics course equips economics students with core principles to analyze market economy activities from both microeconomic and macroeconomic perspectives. With the knowledge gained from this course, learners will develop a dynamic and systematic understanding of real-world economic operations within a state-managed market economy. As a result, students will be able to apply economic principles and business law regulations to handle specific situations.

9.16 Principles of Accounting

Number of credits:03

- *Learning time allocation:* 3 (3,0, 6)
- *Prerequisite course(s):*
- *Course content summary:* This course is designed to provide students with fundamental knowledge of accounting - one of the essential tools in business economic management. Students will be introduced to basic accounting theories, the objectives and subjects of accounting, key accounting principles and applied methods, as well as basic practical steps in an accounting cycle (such as working with accounting documents, making journal entries and ledger records, and preparing simplified financial statements).

9.17 Business Law

Number of credits:02

- *Learning time allocation:* 2(2,0,4)
- *Prerequisite course(s):* General Laws
- *Course content summary:* The Business Law course gradually provides learners with foundational knowledge of the philosophy, nature, role, and functions of business law in the context of the business environment. It also helps learners recognize the close relationship between law and economics, in which the legal system is regarded as a factor contributing to business costs. With the aim of creating a learning environment rooted in real-life experiences, the course integrates a collection of actual case studies to deliver essential insights into legal philosophies in general, and business law in particular. These include the theories of property rights; freedom of business; competition; transaction cost; legal personality and limited liability; principal-agent theory; freedom of contract; asymmetric information and risk management; and the theory of equity, among others....

9.18 Fundamental Management

Number of credits:03

- *Learning time allocation:* 3(3,0,6)
- *Prerequisite course(s):*
- *Course content summary:* Effectively managing employees' work within organizations is a central issue in industrialized societies, as it is the managers who must make decisions regarding the use of human resources, materials, technology, and capital. This course provides a realistic portrayal of the roles and responsibilities that managers must undertake. In addition, the course highlights the essential skills that managers must apply to achieve important goals and standards by equipping learners with fundamental knowledge on a range of topics, including planning, organizing, staffing, leading, organizational change, and decision-making..

9.19 Technical Drawings

Number of credits:03

- *Learning time allocation:* 3 (3, 0, 6)
- *Prerequisite course(s):*
- *Course content summary:* This course provides students with the fundamental rules for constructing technical drawings, including: standards for technical drawing development, basic techniques in descriptive geometry, principles of spatial representation, geometric transformations, surface intersections, and more. It also covers essential elements of technical drawings such as points, lines, projections, sections, various types of detail drawings, assembly drawings, and schematic motion diagrams - all developed in accordance with ISO and Vietnamese Standards.

9.20 Marketing Management

Number of credits:03

- *Learning time allocation:* 3(3,0,6)
- *Prerequisite course(s):*
- *Course content summary:* Marketing Management is a course that provides students with the most fundamental knowledge of marketing: what marketing is and how the marketing process is conducted within an organization. The marketing process begins with a deep understanding of the marketing environment, as well as consumers' needs and wants. Based on this foundation, businesses will develop

a Customer-Driven Marketing Strategy to deliver superior value to customers. To implement the selected marketing strategy, businesses must translate it into an Integrated Marketing Program, which consists of: Product Strategy, Price Strategy, Place Strategy, and Communication/Promotion Strategy.

9.21 Managerial Accounting

Number of credits:03

- *Learning time allocation:* 3(3,0,6)
- *Prerequisite course(s):*
- *Course content summary:* Managerial Accounting has the function of collecting, processing, and providing necessary information for managers to perform organizational management. Managerial accounting information is one of the primary sources for managers in making decisions, operating, and controlling activities within an organization. The course covers specific contents of managerial accounting as follows: analyzing the relationship between cost - volume - profit, analyzing costs for business decision-making, planning and budgeting, analyzing variances in production costs, evaluating managerial responsibility, using variance analysis techniques to assess the effectiveness of activities within the enterprise...

9.22 Production Management 1

Number of credits:03

- *Learning time allocation:* 3(3,0,6)
- *Prerequisite course(s):* None
- *Course content summary:* Production is one of the core functions of a business and is the process of creating products and services to be delivered to the market. The course Production Management 1 equips learners with foundational knowledge of how certain production systems operate. Learners will be introduced to key concepts and terminology in the field of production, as well as the knowledge and skills needed to design production processes, calculate parameters within production systems, and understand the role and responsibilities of a production manager. This is a core course in the major and serves as a prerequisite that provides students with the foundational knowledge needed to pursue more advanced and in-depth courses in the field of production management, such as: Production Management 2, Lean and JIT Production Management, and Supply Chain Management.

9.23 Production Management 2

Number of credits:03

- *Learning time allocation:* 3(3,0,6)
- *Prerequisite course(s):* Production System
- *Course content summary:* Production is one of the core functions of a business and is the process of creating products and services to be delivered to the market. Production management plays an important role in business management, as it affects the enterprise's performance through production costs, product quality, and delivery time. The course Production Management 2 equips learners with fundamental knowledge related to production and operations management within enterprises. Learners will be introduced to key concepts and terminology in the production field, along with the knowledge and skills in demand forecasting, capacity planning, plant location, facility layout, aggregate planning, material requirements planning, inventory management, and production scheduling. This is

a core course in the major, which helps learners master theoretical foundations and apply them in practice at manufacturing and service-providing enterprises.

9.24 Human Resource Management

Number of credits:03

- *Learning time allocation:* 3(3,0,6)
- *Prerequisite course(s):* Fundamental Management
- *Course content summary:* The course provides students with fundamental knowledge of human resource management practices. Through a combination of theoretical content, case discussions, and group presentation reports, students become familiar with Human Resource Management activities in businesses, especially in small and medium-sized enterprises. The course places strong emphasis on case analysis and problem-solving.

9.25 Quality Management

Number of credits:03

- *Learning time allocation:* 3(3,0,6)
- *Prerequisite course(s):* Mathematical Statistics for Engineers
- *Course content summary:* The course aims to provide an overview of fundamental concepts related to quality, quality management, and quality systems, as well as to introduce several tools and techniques in quality management for implementing quality improvement in manufacturing and service enterprises.

9.26 Maintenance Management

Number of credits:03

- *Learning time allocation:* 3(3,0,6)
- *Prerequisite course(s):*
- *Course content summary:* This course provides students with general knowledge of maintenance practices, aiming to improve the speed and effectiveness of maintenance processes, enhance productivity, ensure occupational safety, and minimize breakdowns and industrial waste released into the environment.

9.27 Management Information System (MIS)

Number of credits:03

- *Learning time allocation:* 3(3,0,6)
- *Prerequisite course(s):* Fundamental Management, Applied Computing
- *Course content summary:* This course provides students with general knowledge of information technology, the components and types of information systems, thereby enabling them to develop appropriate IT application strategies in business management and enhance competitiveness in the context of the modern era.

9.28 Strategic Management

Number of credits:03

- *Learning time allocation:* 3(3,0,6)
- *Prerequisite course(s):* Fundamental Management, Marketing Management
- *Course content summary:* Strategic Management examines the operations of an enterprise, issues related to strategy formulation and implementation from the perspective of a business executive, and provides a comprehensive framework for managing the organization and its functional units. This course is particularly useful for those who plan to pursue careers in senior management positions, run small and medium-sized enterprises, or take charge of functional departments, as it enhances organizational effectiveness.

9.29 Project Management

Number of credits:03

- *Learning time allocation:* 3(3,0,6)

- *Prerequisite course(s)*: Fundamental Management
- *Course content summary*: This course provides fundamental knowledge and skills in project management, including project analysis and selection, project planning and scheduling, monitoring and control, as well as approaches to resolving issues arising during project execution. In addition, the course introduces relevant software tools to enhance the effectiveness of project management.

9.30 Business Planning

Number of credits:02

- *Learning time allocation*: 2(2,0,4)
- *Prerequisite course(s)*:
- *Course content summary*: This course equips students with the knowledge and skills required to develop a business plan within an enterprise. It primarily provides the essential foundation for students to synthesize and formulate a complete business plan - covering the business model, identifying business objectives, conducting market analysis, developing marketing and operational plans, estimating capital requirements, evaluating profitability, return on investment, and projecting other essential business activities to seize opportunities or mitigate potential risks. The process of gathering information for preparing the business plan enables students to recognize the interconnection among different subjects in the training program, the collaboration between departments within a business, and the relationship between theory and practice.

9.31 Supply Chain Management

Number of credits:03

- *Learning time allocation*: 3(3,0,6)
- *Prerequisite course(s)*: Production System, Production Management
- *Course content summary*: This course introduces key concepts, definitions, perspectives, values, objectives, methods, techniques, and technologies in the design and development of supply chain management systems, providing learners with an overall understanding before delving into more advanced topics. The core emphasis is to help students develop a new perspective, recognizing supply chain management as a specialized profession that plays a vital role in today's economic development.

9.32 Financial Management

Number of credits:03

- *Learning time allocation*: 3(3,0,6)
- *Prerequisite course(s)*: Principles of Accounting
- *Course content summary*: This course equips students with fundamental concepts, principles, and techniques of Financial Management and their applications in the decision-making process of a financial manager, including investment, financing, and dividend decisions. Students will become familiar with key issues that a financial manager faces within a company. Major topics include: information asymmetry, agency problems, break-even analysis, investment decisions in the context of globalization, capital structure, business valuation, capital mobilization, working capital management, and financial planning.

9.33 Ecommerce

Number of credits:03

- *Learning time allocation*: 3(3, 0, 6)
- *Prerequisite course(s)*: Fundamental Management

- *Course content summary:* This course provides students with a general understanding of E-commerce, including how to apply and implement E-commerce projects. It enables learners to develop appropriate E-commerce strategies for businesses and identify the most effective implementation approaches to enhance competitiveness in the digital era.

9.34 Systems Thinking

Number of credits:02

- *Learning time allocation:* 2 (2, 0, 4)
- *Prerequisite course(s):*
- *Course content summary:* The course System Thinking introduces students to fundamental knowledge of system overview; thinking approaches to live, study, and work more effectively; the methodology of system thinking; and various thinking methods and techniques for generating creative solutions.

9.35 Computer-Aided Design and Manufacturing (CAD)

Number of credits:03

- *Learning time allocation:* 3 (2, 1, 6)
- *Prerequisite course(s):* Engineering Drawings
- *Course content summary:* This course equips learners with fundamental knowledge of technical drawing using AutoCAD software. It covers the use of 2D command sets, the steps to set up and complete a 2D design drawing, and the methods for using commands to quickly and comprehensively define the technical specifications of a complete engineering drawing. The course also provides students with practical orientation for immediate application in real-world tasks. As an in-depth subject on technical drawing, it enables learners to recognize its impacts and importance in completing a single drawing or a set of drawings in the fields of design and manufacturing.

9.36 Automation of Production Process

Number of credits:03

- *Learning time allocation:* 3 (3, 0, 6)
- *Prerequisite course(s):* Automatic Control
- *Course content summary:* This course provides students with knowledge of the operating principles of components and systems in pneumatic and electro-pneumatic control. It introduces fundamental principles for designing pneumatic and electro-pneumatic control circuits. The course also covers automation equipment in the following areas: control, material feeding, and inspection. Additionally, it provides basic concepts related to automated production lines and automated assembly lines.

9.37 Organization Behavior

Number of credits:03

- *Learning time allocation:* 3 (3,0,6)
- *Prerequisite course(s):* None
- *Course content summary:* This course provides fundamental knowledge of organizational behavior models, the factors influencing individual and group behaviors within an organization, as well as issues related to communication, leadership, organizational structure, and organizational culture.

9.38 Project Analysis and Evaluation

Number of credits:03

- *Learning time allocation:* 3 (3,0,6)
- *Prerequisite course(s):* Financial Management, Fundamental Management

- *Course content summary:* This course equips students with fundamental knowledge of project analysis, including market analysis, technical-technological analysis, human resource analysis, and financial analysis. It also provides students with key project evaluation criteria such as NPV, IRR, and B/C ratio. In addition, the course covers the concept of inflation and its impact on project feasibility. Students are also introduced to risk analysis tools such as sensitivity analysis, scenario analysis, and simulation.

9.39 Business Communication

Number of credits:02

- *Learning time allocation:* 2 (2,0,4)
- *Prerequisite course(s):*
- *Course content summary:* This course is designed to equip students with knowledge of communication psychology in business, enabling them to interact effectively with various psychological profiles of customers, leaders, colleagues, and subordinates. Students will study both theoretical frameworks and practical applications across different situations - with emphasis on teamwork, public speaking - to build self-confidence in communication. Through this process, students will develop a clear awareness of the necessity to cultivate their communication techniques and interpersonal skills in preparation for integration into a dynamic business environment.

9.40 Business Psychology

Number of credits:02

- *Learning time allocation:* 2 (2, 0, 4)
- *Prerequisite course(s):*
- *Course content summary:* The course Business Psychology equips students with fundamental knowledge to understand human psychology – the key subject of management. The course introduces the full scope of individual psychological life, including psychological processes, states, and traits, along with their characteristics, principles, and mechanisms. This foundational understanding enables students to apply psychological theories to explore essential issues related to business organization and operations, human resource management, financial management, marketing, employee training, and more...

9.41 History of Vietnamese communist party

Number of credits: 2

- *Course code:* LLCT220514
- *Learning time allocation:* 2(2/0/4)
- *Course content summary:* The course consists of 3 chapters, providing students with an understanding of the subject, objectives, tasks, research methods, and study approaches of the Party's History, along with fundamental, core, and systematic knowledge regarding the establishment of the Communist Party of Vietnam (1920–1930); the Party's leadership in the revolutionary struggle for power (1930–1945); the leadership in two resistance wars against the French colonialists and American imperialists to achieve national liberation and national reunification (1945–1975); and the leadership in the transitional period toward socialism and the renovation process (1975–2018). The course affirms the Party's achievements, identifies limitations, and summarizes lessons learned in the revolutionary leadership of the Party. It thereby helps students enhance awareness, strengthen belief in the Party, and apply the acquired knowledge to practical tasks,

contributing to the construction and protection of the Socialist Republic of Vietnam.

9.42 Corporate Culture

Number of credits:03

- *Learning time allocation:* 3(3,0,6)
- *Prerequisite course(s):*
- *Course content summary:* The course Corporate Culture provides students with knowledge about corporate culture within organizations and its importance in the formation and development of a business. It covers both theoretical and practical aspects of culture, including the deeper dimensions of corporate culture. From this foundation, students will be equipped to develop an effective corporate culture for a business, whether in the role of an internal member or an external consultant.

9.43 Internship

Number of credits:02

- *Learning time allocation:* 2 (0, 2, 4)
- *Prerequisite course(s):* Fourth-year student
- *Course content summary:* Students register their internship topic and participate in internships at companies under the guidance of lecturers assigned by the Faculty. This course helps students understand the organizational structure and operations of a company; describe the organizational structure of a company as well as its departments; know how to prepare a graduation internship report; and complete a full graduation internship report.

9.44 Thesis

Number of credits:6

- *Learning time allocation:* 6(6, 0, 12)
- *Prerequisite course(s):* Sinh viên năm thứ 4
- *Course content summary:* This course helps consolidate and enhance the knowledge acquired throughout the program.

9.45 Applied Computing

Number of credits:02

- *Learning time allocation:* 2 (2, 1, 6)
- *Prerequisite course(s):*
- *Course content summary:* This course provides learners with both basic and advanced knowledge of applied informatics in economics and management, such as big data statistics, inventory management, export and import order management, payroll and personal income tax (PIT) management, using advanced Excel tools and Visual Basics. In addition, this course equips learners with basic data processing knowledge such as basic statistics and basic data visualization with Python in the Google Colaboratory environment. Moreover, this course also equips learners with soft skills including teamwork skills and presentation skills.

9.46 Philosophy of Marxism and Leninism

Number of credits: 3

- *Course code:* LLCT130105
- *Learning time allocation:* 3(3/0/6)
- *Course content summary:* The course consists of three chapters, providing students with the following knowledge: Chapter 1 presents an overview of philosophy, Marxist-Leninist philosophy, and the role of Marxist-Leninist philosophy in social life. Chapter 2 introduces the fundamental contents of dialectical materialism, including the issues of matter and consciousness; the dialectical materialist

method; and the epistemology of dialectical materialism. Chapter 3 covers the basic contents of historical materialism, including the concepts of socio-economic formation; class and nation; the state and social revolution; social consciousness; and the philosophy of human beings.

9.47 Political economics of Marxism and Leninism

Number of credits: 2

- *Course code:* LLCT120205
- *Learning time allocation:* 2(2/0/4)
- *Course content summary:* The course consists of six chapters, providing students with the following knowledge: Chapter 1 introduces the subject, research methods, and functions of Marxist-Leninist political economy. From Chapter 2 to Chapter 6, the course presents the core content of Marxist-Leninist political economy in alignment with the learning objectives. Specific topics include: commodities, markets, and the roles of economic actors in a market economy; the production of surplus value in a market economy; competition and monopoly in the market economy; the socialist-oriented market economy and economic interest relations in Vietnam; and Vietnam's industrialization, modernization, and international economic integration.

9.48 Scientific socialism

Number of credits: 2

- *Course code:* LLCT120405
- *Learning time allocation:* 2(2/0/4)
- *Course content summary:* The course consists of seven chapters, providing students with the following knowledge: Chapter 1 presents introductory issues of scientific socialism (the formation and development process of scientific socialism); from Chapter 2 to Chapter 7, the course covers the fundamental contents of scientific socialism according to the learning objectives.

9.49 Ho Chi Minh's ideology

Number of credits: 2

- *Course code:* LLCT120314
- *Learning time allocation:* 2(2/0/4)
- *Course content summary:* The course consists of six chapters, providing students with knowledge on the concepts, subject matter, research methods, and significance of studying Ho Chi Minh Thought; the foundation, formation process, and development of Ho Chi Minh Thought; Ho Chi Minh's ideas on national independence and socialism; the Communist Party of Vietnam and the state of the people, by the people, for the people; great national unity and international solidarity; culture and humanity; and ethics.

9.50 Production Planning and Scheduling

Number of credits: 3

- *Course code:* PLSC331126
- *Learning time allocation:* 3(3/0/6)
- *Course content summary:* This course provides students with knowledge about production planning and scheduling in manufacturing and services, including concepts, terminology, principles, values, objectives, methods, and models for project planning, job shop, flexible assembly systems, and supply chain planning. It enables learners to understand how production planning and scheduling impact all areas and processes within a business. Additionally, the course equips students

with skills to analyze, manage, and evaluate production activities and to apply scheduling techniques in manufacturing and services. This is a core course in the major, helping students master theory and apply it effectively in manufacturing and service enterprises.

9.51 Business Analytics

Number of credits: 3

- *Course code:* **BUAN331706**
- *Learning time allocation:* 3(3/0/6)
- *Course content summary:* This course provides students with knowledge of business analytics. It explores the integration of data science techniques with business strategy and decision-making. Students will learn how to collect, process, and analyze data to enhance business insights and strategies. Topics include data management, exploratory data analysis, predictive modeling, machine learning, big data technologies, and effectively communicating data-driven insights.

10. Facilities for Learning Support

10.1. Workshops, Laboratories, and Important Testing Equipment Systems

Students majoring in Industrial Management mainly use computer rooms for their courses, including the following rooms: BI Room (A4-201), A3-101, A3-102, A3-103, A3-104, A3-105, A5-102A, A5-102B.

10.2. Libraries and Websites

Library of Ho Chi Minh City University of Technology and Education:
<http://lib.hcmute.edu.vn/>

Library of Vietnam National University, Ho Chi Minh City: www.vnulib.edu.vn

Library of University of Economics Ho Chi Minh City: www.lib.ueh.edu.vn

Library of Ho Chi Minh City University of Technology: www.lib.hcmut.edu.vn

Library of National Economics University: www.lic.neu.edu.vn

Journal of Science and Technology Education: www.tapchikhgdkt.hcmute.edu.vn

Journal of Economic Development: www.tcptkt.ueh.edu.vn

Journal of Science: www.tckh.ou.edu.vn

Saigon Times Newspaper: www.thesaigontimes.vn

11. Program Implementation Guidelines

The training program is implemented in accordance with the current regulations for full-time university-level credit-based training, as stipulated by the Ministry of Education and Training and Ho Chi Minh City University of Technology and Education.

The specified hours are calculated as follows:

- 1 credit = 15 hours of theoretical lectures or in-class discussions
- 1 credit = 30 - 45 hours of laboratory work or practical exercises
- 1 credit = 30 hours of self-study
- 1 credit = 45 - 90 hours of on-site internship
- 1 credit = 45 - 60 hours for project work or graduation thesis

The total hours for a course must be a multiple of 15.

Political Theory Knowledge: Implemented according to the regulations of the Ministry of Education and Training.

Foreign Language Knowledge: The foreign language output standard is determined by the university's Science and Training Council at the beginning of each admission cohort. Throughout their studies, the university will monitor the students' foreign language proficiency development each academic year to decide the number of credits for courses that students are allowed to register for in a semester. Students can self-study or register for the foreign language proficiency development program according to the university's plan.

Physical Education Knowledge: Implemented according to the regulations of the Ministry of Education and Training. For Physical Education 2 and 3, students can select from the course catalog when registering for modules.

National Defense Education Knowledge: Implemented according to the regulations of the Ministry of Education and Training. Students accumulate credits and are granted a certificate after completing the requirements of the module.

Elective Social Sciences and Humanities Knowledge: Students select 2 courses, equivalent to 4 credits, from the course catalog when registering for modules.

Elective Foundational Major Knowledge: Students select 2 courses, equivalent to 6 credits, from the course catalog when registering for modules.

Elective Specialized Major Knowledge: Students select 2 courses, equivalent to 6 credits, from the course catalog when registering for modules.

The remaining knowledge blocks are arranged into 8 semesters as presented in section 8.

VICE PRESIDENT

**DEAN OF FACULTY
OF INTERNATIONAL EDUCATION**

Dr. Quach Thanh Hai

Assoc. Prof. Dr. Truong Dinh Nhon