LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Degree	Bachelor of Engineering
Department/Study Program	Industrial Engineering
Type of Class	ENIE615051 Decisions, Uncertainties, and Risks
Lecturer Name	Dr. Ir. Andri Dwi Setiawan, M.Sc. Dr. Ir. Armand Omar Moeis, M.Sc.
Course Structure	Lecture
Course Credits	3 credits
Course Overview	Decisions, Uncertainty, and Risk discusses the use of statistical methods for decision-making. The aim of the Decisions, Uncertainty, and Risk course is to equip learners with various techniques for decision-making and statistical reasoning. This is particularly important, as decision-making in industry generally involves multiple individuals and is associated with uncertainties that impact risk.
Course Key Words	
Learning Outcome	Students are able to apply appropriate methods to structure complex problems (involving multiple persons,objectives, perspectives, and uncertainty) for decisionmaking purposes.
Course Schedule	Introduction to Decision Analysis; Elements in Decision Models; Creating Decision Structures; Making Choices; Sensitivity Analysis; Modeling Uncertainty; Monte Carlo Simulation; Value of Information; Interpretive Structural Modeling; and Analytic Hierarchy Process.
Textbooks, References, and Supplementary Materials (Maximum 3)	1. Clemen, Robert T. , Making Hard Decisions, 2nd Edition, Brooks/Cole Publishing Company, 1996 2. Surjandari, I., Handout Kuliah Keputusan, Ketidakpastian dan Resiko, Departemen Teknik Industri,Universitas Indonesia, 2014 3. Saaty, T.L., and L.G. Vargas ., Decision Making With The Analytical Network Process: Economic, Political, Social and Technological Applications with Benefits, Opportunities, Costs and Risks, Springer, 2011 4. Forman, Ernest H., and MaryA. Selly., Decision By Objectives: How to Convince Others that You are Right, World Scientific Publishing Company, 2001
Grading Component	Please describe the grading component. For example:

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

	- Midterm Exam: 30% - Final Exam: 40% - Assignments: 20% - Participation: 10%
Other (i.e. Expectations on Classroom Conduct and Decorum etc.)	For example: Students are expected to: - Attend all classes regularly and on time. - Participate actively in discussions and learning activities. - Maintain respectful behavior toward instructors and peers. - Avoid any form of academic dishonesty (e.g., plagiarism, cheating).

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Degree	Bachelor of Engineering
Department/Study Program	Industrial Engineering
Type of Class	ENIE613014 Discrete Mathematics
Lecturer Name	Komarudin, S.T., Ph.D. Artya Lathifah, Ph.D. Nabila Yuraisyah Salsabila, M.T., Ph.D.
Course Structure	Lecture
Course Credits	2 credits
Course Overview	This course introduces the fundamentals of transportation networks, including definitions, characteristics, and performance metrics. It also covers basic concepts of complex networks, structure, topology, and transportation network dynamics. Additionally, students will learn about classical transportation models, optimization algorithms for solving transportation problems, and the application of optimization models to real-world transportation issues.
Course Key Words	
Learning Outcome	(1) Able to think logically, understand mathematical proofs, and implement mathematical proof techniques. (2) Able to identify and analyze a problem and design efficient and effective algorithms to solve it.
Course Schedule	Algorithm; Pseudocode; Programming language; Asymptotic analysis; Tree method; Set theory; Direct and Indirect proof; Mathematical induction; Propositional and first-order logic.
Textbooks, References, and Supplementary Materials (Maximum 3)	1. Kenneth H. Rosen. (2012). Discrete Mathematics and Its Applications. 7th ed. The McGraw-Hill Companies, Inc. 2. Cormen, Thomas, Charles Leiserson, Ronald Rivest, and Clifford Stein. (2009). Introduction to Algorithms. 3rd ed. MIT Press. 3. Miller, Bradley, and David Ranum. (2011). Problem Solving with Algorithms and Data Structures Using Python. 2nd ed. Franklin, Beedle & Associates. 4. Erik Demaine, and Srini Devadas. 6.006 Introduction to Algorithms. Fall 2011. Massachusetts Institute of Technology: MIT OpenCourseWare, https://ocw.mit.edu. License: Creative Commons BY-NC-SA.

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

	5. Svein Linge and Hans Petter Langtangen. (2020). Programming for Computations – Python: A Gentle Introduction to Numerical Simulations with Python 3.6. 2nd ed. Springer Cham.
Grading Component	Please describe the grading component. For example: - Midterm Exam: 30% - Final Exam: 40% - Assignments: 20% - Participation: 10%
Other (i.e. Expectations on Classroom Conduct and Decorum etc.)	For example: Students are expected to: - Attend all classes regularly and on time. - Participate actively in discussions and learning activities. - Maintain respectful behavior toward instructors and peers. - Avoid any form of academic dishonesty (e.g., plagiarism, cheating).

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Degree	Bachelor of Engineering
Department/Study Program	Industrial Engineering
Type of Class	ENIE613015 Engineering Economics
Lecturer Name	Riajeng Rizqi Amalia, M.T. Laksmi Ambarwati, M.T. Farizal, M.Sc., Ph.D.
Course Structure	Lecture
Course Credits	2 credits
Course Overview	Engineering economics introduces knowledge and understanding as well as basic skills in investment feasibility studies (engineering projects) in making optimal decisions from several alternatives using an engineering economics approach.
Course Key Words	Introduction to Engineering Economics, Time Value of Money, Combining Factors, Interest Rates, Money Worth Analysis, Rate of Return Analysis, Effects of Inflation, Benefit Cost & Break-Even Point Analysis, Sensitivity Analysis, Depreciation
Learning Outcome	Students are able to analyze the economic and financial feasibility of making economic practice decisions.
Course Schedule	Introduction to Engineering Economics, Time Value of Money, Combining Factors, Interest Rates, Money Worth Analysis, Rate of Return Analysis, Effects of Inflation, Benefit Cost & Break-Even Point Analysis, Sensitivity Analysis, Depreciation
Textbooks, References, and Supplementary Materials (Maximum 3)	1. Blank, Leland and Tarquin, Anthony. 2018. Engineering Economy 8th Ed. McGraw Hill. 2. Park, Chan S. 2016. Contemporary Engineering Economics 6th Ed. Pearson. Upper Saddle River. 3. White, Case and Pratt. 2012. Principles of Engineering Economic Analysis 6th ed. John Wiley and Sons
Grading Component	Please describe the grading component. For example: - Midterm Exam: 30% - Final Exam: 40% - Assignments: 20% - Participation: 10%
Other (i.e. Expectations on Classroom	For example: Students are expected to:

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Conduct and Decorum etc.)	- Attend all classes regularly and on time. - Participate actively in discussions and learning activities. - Maintain respectful behavior toward instructors and peers. - Avoid any form of academic dishonesty (e.g., plagiarism, cheating).

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Degree	Bachelor of Engineering
Department/Study Program	Industrial Engineering
Type of Class	ENIE613013 Engineering Mechanics
Lecturer Name	Danu Hadi Syaifullah, S.T., M.Sf.Sc., Ph.D. Muhammad Zaki Fuadi, M.T. Irzhafarina Aldayondri, M.T.
Course Structure	Lecture
Course Credits	2 credits
Course Overview	This course is designed to provide students with an introduction to engineering mechanics in static systems. It covers two-and three-dimensional systems of particles and rigid bodies in static equilibrium. Additional topics include concentrated and distributed forces, center of gravity and centroid, and moments of inertia. The topics discussed in this course are essential for the design and analysis of structures that must maintain their shape while bearing loads or performing tasks where dynamic forces (forces arising from system acceleration) are absent or negligible.
Course Key Words	
Learning Outcome	(1) Understanding the mathematical and graphical techniques of vector analysis (C3). (2) Understanding the principles of physics required for static equilibrium and being able to apply them to rigid structures that are crucial in engineering (C4)
Course Schedule	Force Vectors; Particle Equilibrium; Resultant Force System; Equilibrium in Rigid Bodies; Structural Analysis; Internal Forces; Friction; Centre of Mass and Centroid; Moment of Inertia; Unit load method
Textbooks, References, and Supplementary Materials (Maximum 3)	1. Hibbeler, R. C. (2013). Engineering Mechanics, 13 th Edition. Pearson Prentice Hall 2. Meriam, J. L., Kraige, L. G. (2002). Engineering Mechanics: Static, 5 th Edition. John Wiley & Sons, Inc.
Grading Component	Please describe the grading component. For example: - Midterm Exam: 30% - Final Exam: 40%

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

	- Assignments: 20% - Participation: 10%
Other (i.e. Expectations on Classroom Conduct and Decorum etc.)	For example: Students are expected to: - Attend all classes regularly and on time. - Participate actively in discussions and learning activities. - Maintain respectful behavior toward instructors and peers. - Avoid any form of academic dishonesty (e.g., plagiarism, cheating).

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Degree	Bachelor of Engineering
Department/Study Program	Industrial Engineering
Type of Class	ENIE615023 Facilities Design and Material Handling
Lecturer Name	Novandra Rhezza Pratama, S.T., M.T., Ph.D. Ir. Dendi P. Ishak, MSIE., Ph.D.
Course Structure	Lecture
Course Credits	3 credits
Course Overview	This course is designed to develop students' ability to systematically and optimally design plant layouts and facilities as part of a team, according to the needs and characteristics of their respective industries. The course provides an understanding of the methods for designing a facility layout, which includes stages such as creating part drawings, Operation Process Charts (OPC), Assembly Charts, Multi-Product Process Charts (MPPC), Machine Requirement Calculations (MRC), calculations for machine area, office and supporting facility area, plant area calculations, Activity Relationship Charts (ARC), Activity Relationship Diagrams (ARD), Area Allocation Diagrams (AAD), and the final design of the facility layout along with the selection of material handling equipment.
Course Key Words	
Learning Outcome	(1) Ability to design, implement and improve the performance of an integrated system, component, or process to meet needs within realistic constraints such as economic, environmental, social, political, legal, ethical, human factors, health and safety, manufacturing feasibility, and sustainability (2) Ability to use modern techniques, skills, and tools required in engineering practice
Course Schedule	Definition, benefits and types of factory layout and facility design issues; Plant layout and facility design applications; Stages of designing the layout and facilities of the plant; Mechanism of making part drawing; Bill of Materials (BOM); Operation Process Chart (OPC); Assembly Chart (AC); Routing Sheet creation mechanism; Multi Product Process Chart (MPPC); Machine Requirements Calculation (MRC)
Textbooks, References, and Supplementary Materials	1. Apple, James M. Plant Layout and Materials Handling, Third Edition. Wiley, 1977.

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

(Maximum 3)	2. Richard Muther & Lee Hales, Systematic Layo Planning, Fourth Edition, MANAGEMENT &; INDUSTRIALRESEARCH PUBLICATIONS, Marietta, G 30067, USA, 2015. 3. Heragu, Sunderesh S. Facilities Design. CRC Press, 2015. 4. J ames A. Tompkins, J ohn A. White, Y avuz A. Bozer J . M. A. Tanchoco. Facilities Planning, Wiley, 2010
Grading Component	Please describe the grading component. For example: - Case Study 20% - Proposal for market research 10% - Marketing plan & strategy 10% - Post test 7% - Midterm Exam 23% - Final Project 30%
Other (i.e. Expectations on Classroom Conduct and Decorum etc.)	For example: Students are expected to: - Attend all classes regularly and on time. - Participate actively in discussions and learning activities. - Maintain respectful behavior toward instructors and peers. - Avoid any form of academic dishonesty (e.g., plagiarism, cheating).

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Degree	Bachelor of Engineering
Department/Study Program	Industrial Engineering
Type of Class	ENIE615025 Industrial Project Design
Lecturer Name	Novandra Rhezza Pratama, S.T., M.T., Ph.D. Irzhafarina Aldayondri, M.T.
Course Structure	Lecture
Course Credits	3 credits
Course Overview	Introducing engineering projects with an engineering science approach, starting from the initial activity plan,creating an activity schedule, compiling the necessary resources, Calculating activity costs in detail, until the project is completed and handed over to the owner.
Course Key Words	
Learning Outcome	Able to design the scheduling of industrial projects and their allocation of resources effectively and efficiently.
Course Schedule	System theory, PMDA Organization project, project resources, staff organization and project team, time Management, Critical Path Method, PERT, Project graphs, cost control.
Textbooks, References, and Supplementary Materials (Maximum 3)	1. Chapman, Steve, & Arnold, Tony K. Introduction to Materials Management, Eight Edition. Pearson, 2016. 2. Cooper.Winning at New Products. 4th Edition.2017 3. Ulrich & Eppinger. Product Design and Development. 5th Edition. McGraw-Hill. 2017
Grading Component	Please describe the grading component. For example: - Midterm Exam: 30% - Final Exam: 40% - Assignments: 20% - Participation: 10%
Other (i.e. Expectations on Classroom Conduct and Decorum etc.)	For example: Students are expected to: - Attend all classes regularly and on time. - Participate actively in discussions and learning activities. - Maintain respectful behavior toward instructors and peers. - Avoid any form of academic dishonesty (e.g., plagiarism, cheating).

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Degree	Bachelor of Engineering
Department/Study Program	Industrial Engineering
Type of Class	ENIE615027 Industrial Simulation
Lecturer Name	Dr. Ir. Armand Omar Moeis, M.Sc. Dr. Ir. Andri Dwi Setiawan, M.Sc.
Course Structure	Lecture
Course Credits	3 credits
Course Overview	This course is designed to develop students' ability to construct a risk-based financial decision model for an industrial system, simulate feasibility analyses, and provide recommendations based on the developed model. The course content includes continuous modeling concepts, continuous modeling methods, causal loop diagrams, stock-flow diagrams, time-based system behavior, model development based on case studies, scenario development, as well as verification and validation.
Course Key Words	
Learning Outcome	(1) Ability to design, implement and improve the performance of an integrated system, component, or process to meet needs within realistic constraints such as economic, environmental, social, political, legal, ethical, human factors, health and safety, manufacturing feasibility, and sustainability. (2) Ability to use modern techniques, skills, and tools required in engineering practice.
Course Schedule	Introduction to Decision and Risk Modeling; Principles in Financial Modeling; Introduction and Risk Management Methodology; Tools in Risk Management: FMEA; Event Tree Diagram; Project Risk Management in Systems Engineering; Multi-criteria Decision-Making: AHP dan ANP; Case: Financial Modeling and Analysis; Sensitivity Analysis; Designing Scenarios 1-4
Textbooks, References, and Supplementary Materials (Maximum 3)	1. Tennent, J.; Friend, G. (2011). Guide to business modelling (Vol. 89). John Wiley & Sons. 2. Benninga, S. (2014). Financial Modeling (MIT Press). Bessis, J.(1998) Risk Management in Banking John Wiley; Sons Ltd. 3. Proctor, K. S. (2004). Building financial models with Microsoft Excel: A guide for business professionals (Vol. 269). John Wiley & Sons.

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

	4. Sengupta, C. (2004). Financial modeling using excel and VBA (Vol. 152). John Wiley; Sons. 5. Knaflic, C. N. (2015). Storytelling with data: A data visualization guide for business professionals. John Wiley & Sons.
Grading Component	Please describe the grading component. For example: - Midterm Exam: 30% - Final Exam: 40% - Assignments: 20% - Participation: 10%
Other (i.e. Expectations on Classroom Conduct and Decorum etc.)	For example: Students are expected to: - Attend all classes regularly and on time. - Participate actively in discussions and learning activities. - Maintain respectful behavior toward instructors and peers. - Avoid any form of academic dishonesty (e.g., plagiarism, cheating).

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Degree	Bachelor of Engineering
Department/Study Program	Industrial Engineering
Type of Class	ENIE611001 Intro to Industrial Engineering
Lecturer Name	Prof. Dr. Ir. Akhmad Hidayatno, S.T., MBT. Dr.rer.pol. Ir. Romadhani Ardi, S.T., M.T.
Course Structure	Lecture
Course Credits	2 credits
Course Overview	This course aims to help students understand the basic concepts of production processes, including the definition, functions, and types of production. It also provides examples to familiarize students with different materials and production processes, enabling them to analyze production based on material types. The course covers practical aspects, including product creation, starting with designing in Mastercam software as input for CNC cutting machines to produce new products. Afterward, students are expected to create a Bill of Materials (BOM) and estimate product costs.
Course Key Words	
Learning Outcome	1. Students are able to identify problem-solving approaches using appropriate methods to address issues related to the application of Industrial Engineering. 2. Students are able to understand fundamental concepts related to the scope of Industrial Engineering, which can later be applied in the real world as preparation for becoming Industrial Engineering graduates.
Course Schedule	History and Development of Industrial Engineering Discipline; Industrial Engineering and Systems; Production System; Work Measurement; Location and Layout of Facilities; Operation Method; Material Transfer, Distribution and Routing; Production Process Planning and Control; Quality Control.
Textbooks, References, and Supplementary Materials (Maximum 3)	1. Hicks, Philips. (1993). Industrial Engineering and Management, Mc Graw Hill 2. Turner, Wayne. (1993). Industrial Engineering Handbook, Volume Three, Prentice Hall 3. Groover, M.P. (2002). Fundamentals of Modern Manufacturing, Prentice Hall
Grading Component	Please describe the grading component. For example:

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

	- Midterm Exam: 30% - Final Exam: 40% - Assignments: 20% - Participation: 10%
Other (i.e. Expectations on Classroom Conduct and Decorum etc.)	For example: Students are expected to: - Attend all classes regularly and on time. - Participate actively in discussions and learning activities. - Maintain respectful behavior toward instructors and peers. - Avoid any form of academic dishonesty (e.g., plagiarism, cheating).

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Degree	Bachelor of Engineering
Department/Study Program	Industrial Engineering
Type of Class	ENIE611002 Introduction to Economics
Lecturer Name	Laksmi Ambarwati, M.T. Riajeng Rizqi Amalia, M.T.
Course Structure	Lecture
Course Credits	2 credits
Course Overview	This course provides students with knowledge and skills to understand the principles and issues in economics, both in microeconomics and macroeconomics.
Course Key Words	
Learning Outcome	Students are able to explain the principles and issues in economics (C2).
Course Schedule	Introduction to Economics; Concept of Opportunity Cost; Concept of Net Marginal Benefit; The Invisible Hand Concept; Demand and Supply Analysis; Consumer and Producer Surplus; Free Markets and Government Intervention; Elasticity of Demand and Supply; Cost and Profit Analysis; Public Goods and Externalities
Textbooks, References, and Supplementary Materials (Maximum 3)	1. Case, Karl. E. & Fair Ray C. (2007). Principle of Economics, 8th Edition. Prentice-HallInternational 2. 2. Samuelson, P.A.; Nordhaus, William D. (2010). Economics, 19th Edition. McGraw-Hill, Inc.
Grading Component	Please describe the grading component. For example: - Midterm Exam: 30% - Final Exam: 40% - Assignments: 20% - Participation: 10%
Other (i.e. Expectations on Classroom Conduct and Decorum etc.)	For example: Students are expected to: - Attend all classes regularly and on time. - Participate actively in discussions and learning activities. - Maintain respectful behavior toward instructors and peers. - Avoid any form of academic dishonesty (e.g., plagiarism, cheating).

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Degree	Bachelor of Engineering
Department/Study Program	Industrial Engineering
Type of Class	ENIE615085 Introduction to Technological Entrepreneur
Lecturer Name	Dr. Arry Rahmawan Destyanto, S.T., M.T.
Course Structure	Lecture
Course Credits	3 credits
Course Overview	This course introduces the fundamental concepts of technology entrepreneurship to Industrial Engineering students. It covers the opportunities and challenges involved in building technology-based businesses, as well as the strategies and methodologies that can be employed to develop successful technology ventures. Students will learn how to identify innovative technology business ideas, create effective business models, and apply lean startup principles in the development of technology businesses. The course also focuses on training students to effectively present their technology business ideas to investors and other stakeholders.
Course Key Words	
Learning Outcome	(1) Able to identify innovative and economically high potential technology businessideas. (2) Able to develop effective business models for technology businesses. (3) Able to present their technology business ideas effectively to investors and other stakeholders.
Course Schedule	Introduction to Technology Entrepreneurship Concepts; Identifying Opportunities in Technology Entrepreneurship; Understanding Emerging Technologies and Their Business Opportunities; Market Trend Analysis for Technology Ventures; Idea Generation Techniques for Technology Ventures; Idea Evaluation Techniques for Building Technology Ventures; Financial Management in Technology Ventures; Marketing and Sales for Technology Ventures; Business Models in Technology Ventures; Business Model Validation in Technology Ventures;
Textbooks, References, and Supplementary Materials (Maximum 3)	1. Barringer, B. R., Ireland, R. D. (2016). Entrepreneurship: Successfully Launching New Ventures 5th Edition. Pearson Internasional 2. Scarborough, N. M., Cornwall, J. R. (2016). Essentials of Entrepreneurship and Small Business Management 8th Edition.

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

	Pearson International. 3. Osterwalder, A., Pigneur, Y. (2010). Business Model Generation. Wiley.
Grading Component	Please describe the grading component. For example: - Midterm Exam: 30% - Final Exam: 40% - Assignments: 20% - Participation: 10%
Other (i.e. Expectations on Classroom Conduct and Decorum etc.)	For example: Students are expected to: - Attend all classes regularly and on time. - Participate actively in discussions and learning activities. - Maintain respectful behavior toward instructors and peers. - Avoid any form of academic dishonesty (e.g., plagiarism, cheating).

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Degree	Bachelor of Engineering
Department/Study Program	Industrial Engineering
Type of Class	ENIE613012 Linear Programming
Lecturer Name	Danu Hadi Syaifullah, S.T., M.Sf.Sc., Ph.D. Dr. Teuku Naraski Zahari, M.T. Dr. Komarudin, S.T., M.Eng.
Course Structure	Lecture
Course Credits	3 credits
Course Overview	Linear Programming is one of the three fundamental mathematical tools in the field of Industrial Engineering. Therefore, the aim of this course, offered in the third semester, is to equip students with the ability to understand and apply operations research methods based on linear approaches to solve engineering and management problems.
Course Key Words	
Learning Outcome	The ability to apply mathematics, science, and engineering principles
Course Schedule	Introduction to Operations Research; Modeling; Graphical Solution to Linear Programming; Simplex Method; Duality and Sensitivity Analysis; Transportation Model; Assignment model; Integer Programming; Multiobjective Linear/Goal Programming; TORA software
Textbooks, References, and Supplementary Materials (Maximum 3)	1. Taha, Operations Research an Introduction, Pearson Education, 8 th edition, 2007 or later. 2. Hillier and Liberman, Introduction to Operations Research, 8 th edition 20053. Winston, Operations Research: application and algorithm, 4 th edition
Grading Component	Please describe the grading component. For example: - Midterm Exam: 30% - Final Exam: 40% - Assignments: 20% - Participation: 10%
Other (i.e. Expectations on Classroom Conduct and Decorum etc.)	For example: Students are expected to: - Attend all classes regularly and on time. - Participate actively in discussions and learning activities.

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

	- Maintain respectful behavior toward instructors and peers. - Avoid any form of academic dishonesty (e.g., plagiarism, cheating).

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Degree	Bachelor of Engineering
Department/Study Program	Industrial Engineering
Type of Class	ENIE616081 Marketing Strategy
Lecturer Name	Dr. Komarudin, S.T., M.Eng. Artya Lathifah, Ph.D.
Course Structure	Lecture
Course Credits	3 credits
Course Overview	This course introduces quantitative marketing concepts, covering Marketing Analytics, Customer Segmentation, Predictive Modeling, Marketing Mix Modeling (MMM), A/B Testing, Attribution Modeling, Customer Lifetime Value (CLV), Social Media Analytics, and Machine Learning.
Course Key Words	
Learning Outcome	(1)Able to understand principles related to quantitative based marketing; (2) Able to design marketing strategies based on field data.
Course Schedule	Marketing Analytics; Customer Segmentation Analysis; Predictive Modeling; Marketing Mix Modeling (MMM); A/B Testing and Experimentation; Attribution Modeling; Customer Lifetime Value (CLV) Analysis; Social Media Analytics; Machine Learning for Marketing.
Textbooks, References, and Supplementary Materials (Maximum 3)	1. Grigsby, M. (2023). Marketing analytics: A practicalguide to improving consumer insights using data techniques. KoganPage. 2. Feroz, A. K., Khan, G. F., & Sponder, M. (2024). Digital Analytics for marketing. Routledge. 3. Robert W. Palmatier and Shrihari Sridhar. (2021). Marketing Strategy: Based on First Principles and Data Analytics, 2nd Ed. Bloomsbury Academic.
Grading Component	Please describe the grading component. For example: - Midterm Exam: 30% - Final Exam: 40% - Assignments: 20% - Participation: 10%
Other (i.e. Expectations on Classroom	For example: Students are expected to:

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Conduct and Decorum etc.)	- Attend all classes regularly and on time. - Participate actively in discussions and learning activities. - Maintain respectful behavior toward instructors and peers. - Avoid any form of academic dishonesty (e.g., plagiarism, cheating).

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Degree	Bachelor of Engineering
Department/Study Program	Industrial Engineering
Type of Class	ENIE611003 Material Sciences
Lecturer Name	Prof. Dr. Ir. Sotya Astutiningsih, M.Eng. Dr. Deni Ferdian, M.Sc. Raihan Kenji Rizqillah, S.T., M.T.
Course Structure	Lecture
Course Credits	3 credits
Course Overview	The scope of this course on material science covers material structures, fundamental concepts of material testing, and the processing pathways from ores/raw materials to final engineered products. The types of materials discussed in this course include metals (iron, steel, and aluminum), polymers, ceramics, composites, and advanced materials.
Course Key Words	
Learning Outcome	Able to understand the structure and bonding of materials, basic characteristics, processing, and applications of all types of engineering materials.
Course Schedule	Type and structure of engineering materials; Properties of materials; Manufacturing methods of materials; Steel and iron materials; Aluminum materials; Polymer materials; Ceramic materials; Composite materials; Advanced materials
Textbooks, References, and Supplementary Materials (Maximum 3)	1. Callister, W.D, Materials Science and Engineering: An Introduction, 8 th ed., Wiley., 2010 2. Smallman, R.E and Bishop, R.L, Metal and Materials, Butterworth Heinemann 3. Vlack, Van, Elements of Materials Science, Addison Wesley 4. Mangonon, P. L, The Principles of Materials Selection for Engineering Design, Prentice-Hall 5. Mitchell, B.S, An Introduction to Materials Engineering and Science, for Chemical and Materials Engineers,Wiley, 2004
Grading Component	Please describe the grading component. For example: - Midterm Exam: 30% - Final Exam: 40% - Assignments: 20% - Participation: 10%

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Degree	Bachelor of Engineering
Department/Study Program	Industrial Engineering
Type of Class	ENIE615087 Model-Based Policy Analysis
Lecturer Name	Dr. Ir. Andri Dwi Setiawan, M.Sc. Dr. Ir. Armand Omar Moeis, M.Sc.
Course Structure	Lecture
Course Credits	3 credits
Course Overview	This course is designed to develop students' ability to present decision recommendations using multi-criteria decision-making (MCDM) models in accordance with the context of the problems they encounter.
Course Key Words	
Learning Outcome	(1) Able to present decision-making solutions through multi-criteria decision models.(2) Able to provide decision recommendations based on multi-criteria decision models that are appropriate for the context of the problem.
Course Schedule	Introduction to Model-Based Decision Making; Principles of Multi-Criteria Decision Modeling for Decision Problem Solving; Decision Tree Analysis and Expected Monetary Value; MCDA 1 - AHP (Analytic Hierarchy Process); MCDA 1 - SAW (Simple Additive Weighting); MCDA 1 – WP (Weighted Product); MCDA 1 - MAUT (Multi-Attribute Utility Theory); MCDA 1 - Goal Programming; MCDA 2 - ELECTRE/ARGUS; Combination of MCDA and Decision Recommendation Formulation.
Textbooks, References, and Supplementary Materials (Maximum 3)	1. Bert Enserink, Pieter Bots, Els Daalen, et al. (2022). Policy Analysis of Multi-Actor Systems, 2nd ed. Eleven International Publishing. 2. M. Granger Morgan. (2017). Theory and Practice in Policy Analysis: Including Applications in Science and Technology. Cambridge University Press. 3. John Sterman and John D. Sterman. (2000). Business Dynamics: Systems Thinking and Modeling for a Complex World with CD-ROM. McGraw-Hill Education.
Grading Component	Please describe the grading component. For example: - Midterm Exam: 30% - Final Exam: 40%

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

	- Assignments: 20% - Participation: 10%
Other (i.e. Expectations on Classroom Conduct and Decorum etc.)	For example: Students are expected to: - Attend all classes regularly and on time. - Participate actively in discussions and learning activities. - Maintain respectful behavior toward instructors and peers. - Avoid any form of academic dishonesty (e.g., plagiarism, cheating).

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Degree	Bachelor of Engineering
Department/Study Program	Industrial Engineering
Type of Class	ENIE615029 Multivariate Statistics
Lecturer Name	Dr. Ir. Zulkarnain, S.T., M.T. Annisa Marlin Masbar Rus, S.T., M.Sc., Ph.D.
Course Structure	Lecture, Practicum
Course Credits	3 credits
Course Overview	Multivariate statistics is a branch of mathematics widely utilized not only for analyzing research aspects but also for designing approaches to data collection, decision-making, and problem-solving. The learning outcomes of the multivariate analysis course are that students will be able to construct research models, analyze data, and interpret research results using appropriate multivariate methods based on the characteristicsof the data set. Upon completing this course, students are expected to apply techniques based on multivariate analysis in conducting scientific research as well as in applications within other fields of industrial engineering.
Course Key Words	
Learning Outcome	(1) The ability to apply mathematical, scientific, and engineering principles. (2) The ability to design and implement research and research projects, as well as analyze and interpret data
Course Schedule	Introduction to Multivariate Methods; Data Characteristics; Exploratory Factor Analysis; Multiple Regression Analysis; Multiple Discriminant Analysis; Logistic Regression; Conjoint Analysis; Cluster Analysis; Multidimensional Scaling; Correspondence Analysis
Textbooks, References, and Supplementary Materials (Maximum 3)	1. Hair, Joseph F., Anderson, Rolph E., Black, William C.. (2014). Multivariate Data Analysis (Ed. 7th). Harlow: Pearson
Grading Component	Please describe the grading component. For example: - Midterm Exam: 30% - Final Exam: 40% - Assignments: 20% - Participation: 10%
Other	For example:

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

(i.e. Expectations on Classroom Conduct and Decorum etc.)	Students are expected to: - Attend all classes regularly and on time. - Participate actively in discussions and learning activities. - Maintain respectful behavior toward instructors and peers. - Avoid any form of academic dishonesty (e.g., plagiarism, cheating).

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Degree	Bachelor of Engineering
Department/Study Program	Industrial Engineering
Type of Class	ENIE615028 Organization Design & Industrial Psychology
Lecturer Name	Mirna Lusiani, M.T.
Course Structure	Lecture
Course Credits	3 credits
Course Overview	This course is designed to introduce students to information systems, focusing on how the use of information systems can enhance a ompany's competitiveness. It covers the role of information systems in electronic commerce (e-commerce), the phases of system development, the necessary esources, database management systems, information system security, ethics in information systems, decision support systems, and large project management. By the end of the course, students will be able to design and analyze information contained within a database.
Course Key Words	
Learning Outcome	(1) Able to select effective decision-making methods according to the characteristics of job design and organizational culture when faced with organizational problems (C5). (2) Able to apply a respectful attitude towards rules and ethics within the organization when faced with team work issues (A3).
Course Schedule	Foundations of Individual Behavior; Motivation in Organizations; Motivating Employee Performance Through Work; Motivating Employee Performance Through Rewards; Managing Stress and the Work-Life Balance; Decision Making and Problem Solving; Foundations of Interpersonal and Group Behavior; Using Teams in Organizations; Communication in Organizations; Leadership in Organizations.
Textbooks, References, and Supplementary Materials (Maximum 3)	1. Griffin, R. W.,; Moorhead, G. (2011). Organizational behavior. Nelson Education. 2. DeCenzo, D. A., Robbins, S. P., & Verhulst, S. L. (2016). Fundamentals of human resource management. John Wiley & Sons.
Grading Component	Please describe the grading component. For example: - Midterm Exam: 30% - Final Exam: 40% - Assignments: 20%

	- Participation: 10%
Other (i.e. Expectations on Classroom Conduct and Decorum etc.)	For example: Students are expected to: - Attend all classes regularly and on time. - Participate actively in discussions and learning activities. - Maintain respectful behavior toward instructors and peers. - Avoid any form of academic dishonesty (e.g., plagiarism, cheating).

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Degree	Bachelor of Engineering
Department/Study Program	Industrial Engineering
Type of Class	ENIE611004 Probability Theory
Lecturer Name	Dr. Arian Dhini, S.T., M.T. Rahmi Lathifah Islami, M.Stat. Annisa Marlin Masbar Rus, S.T., M.Sc., Ph.D.
Course Structure	Lecture
Course Credits	2 credits
Course Overview	This course is designed to help students understand and solve problems related to randomness and uncertainty through probability models, random variables and their distributions, as well as conditional thinking.
Course Key Words	
Learning Outcome	(1) Able to explain the concept of probability in data, treat it as a random variable, and solve problems related to random variables (C3). (2) Able to explain the concepts of central tendency and dispersion of random variables, analyze the relationship between two random variables, and explain how a random variable changes over time (C4).
Course Schedule	Introduction to Probability; Conditional Probability; Random Variables and Discrete Probability Distributions; Random Variables and Continuous; Probability DistributionsExpectation; Central Limit Theorem; Joint Distribution; Conditional Expectation; Markov Chains
Textbooks, References, and Supplementary Materials (Maximum 3)	1. Blitzstein, J.K., & Hwang, J. (2019). Introduction to Probability, 2nd Edition, Taylor & Francis Group, LLC. 2. Ross, S.M. (2010) A First Course in Probability, 8th Edition, Prentice Hall.
Grading Component	Please describe the grading component. For example: - Midterm Exam: 30% - Final Exam: 40% - Assignments: 20% - Participation: 10%
Other (i.e. Expectations on Classroom	For example: Students are expected to:

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Conduct and Decorum etc.)	- Attend all classes regularly and on time. - Participate actively in discussions and learning activities. - Maintain respectful behavior toward instructors and peers. - Avoid any form of academic dishonesty (e.g., plagiarism, cheating).

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Degree	Bachelor of Engineering
Department/Study Program	Industrial Engineering
Type of Class	ENIE615024 Product Design and Marketing
Lecturer Name	Andri Mubarak, S.T., M.Sc. Safira Nurul Fathia, M.Sc.
Course Structure	Lecture
Course Credits	3 credits
Course Overview	Introducing product design by involving design and manufacturing functions into one product development approach, developing the right marketing strategy, so that an idea can be realized in the form of a good product and can be accounted for according to customer needs.
Course Key Words	
Learning Outcome	Able to designing a product by involving design and manufacturing functions to realize an idea into a good and accountable product, Able to designing a product by considering consumer needs as the basis for identifying entrepreneurial opportunities, thereby realizing ideas into products that add value to consumers, Able to characterizing marketing strategies across various types of industries and planning the appropriate marketing strategies for the designed product (C6).
Course Schedule	Introduction to the Product Development Process, Market segmentation and Customer needs, Initial product planning, Customer data collection, Product specification design, Product Concept design, Product Architecture, Product and production planning, Marketing strategy and Channel design, Prototyping
Textbooks, References, and Supplementary Materials (Maximum 3)	1. Kotler, P., Keller, K. L., & Manceau, D. (2012). Marketing Management. 14Eedition. NewJersey: Prentice Hall 2. Ulrich, Karl T.; Steven D. Epingger. 2008. Product Design Development. 3rd Edition. New York, NY: McGraw-Hill 3. Kahn, Kenneth B. 2013. The PDMA Handbook of New Product Development. Hoboken, NJ: Willey
Grading Component	Please describe the grading component. For example: - Midterm Exam: 30% - Final Exam: 40%

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

	- Assignments: 20% - Participation: 10%
Other (i.e. Expectations on Classroom Conduct and Decorum etc.)	For example: Students are expected to: - Attend all classes regularly and on time. - Participate actively in discussions and learning activities. - Maintain respectful behavior toward instructors and peers. - Avoid any form of academic dishonesty (e.g., plagiarism, cheating).

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Degree	Bachelor of Engineering
Department/Study Program	Industrial Engineering
Type of Class	ENIE613010 Production Process + Lab
Lecturer Name	Ir. Fauzia Dianawati, M.Si. Dr. Inaki Maulida Hakim, S.T., M.T. Mirsa Diah Novianti, M.T.
Course Structure	Lecture, Practicum
Course Credits	3 credits
Course Overview	This course understands the basic concept of the production process starting from the definition of production, production functions and types of production. In addition, this textbook also providesexamples to students related to the introduction of material types and production processes so that students are able to understand and analyze the production process of making products based on the type of material.
Course Key Words	
Learning Outcome	Able to know the basics of production process related to the type of material used, the process of production processes related to the manufacturing process based on the materials used and machining processes and tools used.
Course Schedule	The basics of production processes, casting process, plastic forming process, Metal forming process, Metal plate forming process, production process for Wood Working, Theory and explanation of machining process, the theory, and technology of sculpture and cutting.
Textbooks, References, and Supplementary Materials (Maximum 3)	1. Walpole, R. E., Myers, R. H., Myers, S. L., & Ye, K. (2012). Probability and Statistics for Engineers and Scientists, 9 th Edition, Pearson. 2. Montgomery, D. C., & Runger, G. C. (2011). Applied statistics and probability for engineers. John Wiley & Sons.
Grading Component	Please describe the grading component. For example: - Midterm Exam: 30% - Final Exam: 40% - Assignments: 20% - Participation: 10%

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Other (i.e. Expectations on Classroom Conduct and Decorum etc.)	For example: Students are expected to: - Attend all classes regularly and on time. - Participate actively in discussions and learning activities. - Maintain respectful behavior toward instructors and peers. - Avoid any form of academic dishonesty (e.g., plagiarism, cheating).

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Degree	Bachelor of Engineering
Department/Study Program	Industrial Engineering
Type of Class	ENIE613011 Statistics 2 + Lab
Lecturer Name	Annisa Marlin Masbar Rus, S.T., M.Sc., Ph.D. Fitria Yuliani, M.T. Angella Natalia Ghea Puspita, M.T.
Course Structure	Lecture
Course Credits	3 credits
Course Overview	Statistics 2 + Practicum is the third course in a series of Statistics courses that form the foundation of Industrial Engineering science. Through this course, students are expected to master various approaches in designing experiments based on Statistics. Learning begins by reviewing Statistics 1 at the beginning of the meeting, the history of experimental design, analysis of variance (ANOVA), oneway ANOVA, two-way and three-way ANOVA, and other special forms of experimental design.
Course Key Words	
Learning Outcome	(1) Able to determine (C4) experimental designs with ananalysis of variance (ANOVA) approach and StatisticsQuality Control (SQC)-based monitoring methods thatare in accordance with the rules and assumptions of Statistics (2) Able to analyze (C4) experimental results and monitoring as a basis in the decision-making process.
Course Schedule	Concept of Experimental Design (DOE); Review of Inferential Statistics; Concept of Analysis of Variance (ANOVA); Randomized Complete Block Design (RCBD) and Latin Square; General Factorial Designs; 2k Designs; Random Model and Mixed Model; Nested Design; Introduction to Statistics Quality Control (SQC); Control Charts.
Textbooks, References, and Supplementary Materials (Maximum 3)	1. Montgomery, Douglas C. (2017) Design and analysis of experiments 9th Edition. John Wiley & Sons. 2. Montgomery, Douglas C. (2009). Statistical quality control 6th Edition. New York: John Wiley & Sons.
Grading Component	Please describe the grading component. For example: - Midterm Exam: 30% - Final Exam: 40% - Assignments: 20%

	- Participation: 10%
Other (i.e. Expectations on Classroom Conduct and Decorum etc.)	For example: Students are expected to: - Attend all classes regularly and on time. - Participate actively in discussions and learning activities. - Maintain respectful behavior toward instructors and peers. - Avoid any form of academic dishonesty (e.g., plagiarism, cheating).

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Degree	Bachelor of Engineering
Department/Study Program	Industrial Engineering
Type of Class	ENIE615026 Supply Chain Systems
Lecturer Name	Dr. Arry Rahmawan Destyanto, S.T., M.T.
Course Structure	Lecture
Course Credits	3 credits
Course Overview	Supply Chain Management (SCM) is one of the latest paradigms for enhancing a company's competitiveness in mastering the market amid increasingly fierce competitionin this global era. Therefore, the objective of this courseoffered in the sixth semester is to enable students to understand the comprehensive concept of SCM, its significance in today's global landscape, and to train students to design SCM or improve existing supply chain systems in alignment with the competitive strategies established by the company.
Course Key Words	
Learning Outcome	The ability to design, implement and improve the performance of an integrated system, component, orprocess to meet realistic constraints such as economics, environment, social, politics, law, ethics, humanfactors, health and safety, manufacturing feasibility, and sustainability
Course Schedule	Introduction of Supply Chain System; Strategic Framework of the Supply Chain System; Outsourcing as the Backbone of the Supply Chain System; Designing the Supply Chain System; Sustainable Supply Chain System
Textbooks, References, and Supplementary Materials (Maximum 3)	1. Chopra and Meindl, Supply Chain Management: Strategy, Planning, and Operation, 6th ed. 2016 2. Levi, Kaminsky, and Levi, Designing and Managing the Supply Chain: Concepts, Strategies, and Case Studies, 20003. Supplementary readings.
Grading Component	Please describe the grading component. For example: - Midterm Exam: 30% - Final Exam: 40% - Assignments: 20% - Participation: 10%
Other (i.e. Expectations on Classroom	For example: Students are expected to:

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Conduct and Decorum etc.)	- Attend all classes regularly and on time. - Participate actively in discussions and learning activities. - Maintain respectful behavior toward instructors and peers. - Avoid any form of academic dishonesty (e.g., plagiarism, cheating).

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

Degree	Bachelor of Engineering
Department/Study Program	Industrial Engineering
Type of Class	ENIE613009 Work Design, Methods, and Standards
Lecturer Name	Ir. Boy Nurtjahyo Moch, MSIE. Danu Hadi Syaifullah, S.T., M.Sf.Sc., Ph.D. Mirsa Diah Novianti, M.T.
Course Structure	Lecture
Course Credits	3 credits
Course Overview	The Work Design, Methods, and Work Standards course is a foundational subject in Industrial Engineering. In this course, students will learn various methods for solving work system problems, including process mapping, line balancing, servicing, and manual work design. The course also covers workplace design, along with analysis and evaluation of standard work time using principles such as time study, work sampling, standard data, and Predetermined Time Systems (PDTS).
Course Key Words	
Learning Outcome	Able to evaluate the effectiveness and efficiency of the work system through appropriate work methods and standards (C5).
Course Schedule	Methods of solving problems in the work system consisting of: Exploratory tools, Recording and analysis tools, and Quantitative tools; Work process chart: Operation Process Chart, Flow Process Chart, and Flow Diagram; Application of line balancing and servicing in the work system; Manual work design in accordance with ergonomic principles in the work system; Design a work environment that increases worker productivity, namely: lighting, noise, temperature, vibration, and shift work; Standard working time using time study and work sampling approaches; Calculation of performance rating and allowance on workers as part of standard working time; Standard Data and Predetermined Time Systems (PDTS) as standard working time determination systems.
Textbooks, References, and Supplementary Materials (Maximum 3)	1. Frievalds, A., dan Niebels, B. (2009). Methods, Standards, and Work Design, 12th edition. Mc GrawHill 2. Macleod. (2006). The Ergonomics Kit for general industry. Macleod, Taylor & Francis. 3. Barnes. (1980). Motion and Time Study: Design and

LIST OF COURSES OFFERED TO INTERNATIONAL STUDENTS
NON-DEGREE PROGRAM
ODD SEMESTER, ACADEMIC YEAR 2026/2027
Faculty of Engineering - Universitas Indonesia

	Measurement of Work. Barnes, Ralph M. John Wiley and Sons.
Grading Component	Please describe the grading component. For example: - Midterm Exam: 30% - Final Exam: 40% - Assignments: 20% - Participation: 10%
Other (i.e. Expectations on Classroom Conduct and Decorum etc.)	For example: Students are expected to: - Attend all classes regularly and on time. - Participate actively in discussions and learning activities. - Maintain respectful behavior toward instructors and peers. - Avoid any form of academic dishonesty (e.g., plagiarism, cheating).