Course Name: Calculus 1
Course Code: CSGE601012
Course Credits: 3 SKS

Degree	Bachelor
Department/Study Program	Computer Science and Information System / International Undergraduate Program
Type of Class	International
Language of Instruction	English
Lecturer Name	-
Course Structure	Lecture
Course Overview	This course discusses basic concepts of calculus and emphasizes its importance for solving scientific problems and providing the basis of many computational techniques.
Course Key Words	-
Academic Goal	Ability to apply fundamental calculus concepts and reasoning to computer science applications.
Course Schedule	W1. The Number System and Functions W2-3. Limits and Continuity W4-6. The Derivative W7. Applications of the Derivative W8. Midterm W9. Indefinite Integral W10. Techniques of Integration W11-12. The Definite Integral W13-14. Applications of the Integral W15. Review W16. Final Exam
Textbooks, References, and Supplementary Materials	Main Reference [1] Varberg, Dale; Edwin J. Purcell; Steven E. Rigdon. Calculus, 9th Edition, Prentice Hall, Inc., 3.2. Other References [2] Briggs, William; Lyle Cochran, Bernard Gillett. Calculus, Pearson, 2011 [3] Edwards, Henry C., Davis E Penney, Calculus with Analytic

	Geometry 5th, Edition, Prentice Hall, Upper Saddle River, NJ 1998 [4] Finney, Ross L., Maurice D. Weir; Frank R. Giordano (ed), Thomas' Calculus, Addison Wesley Publ. Co. 2001
Grading Component	- Quiz (9x): 24% - Group Assignment (2x): 16% - Midterm Exam: 30% - Final Exam: 30%
Other (i.e. Expectations on Classroom Conduct and Decorum etc.)	The following are the general rules to abide by in this course to maintain the online learning process and its effectiveness. 1. Classes are held offline every week according to the SIAK-NG schedule. However, in the event if an online session is needed, then an announcement of an online class/session will be made and links to the synchronous classes will be released 10 minutes, at the latest, before the class begins. Offline and online classes will be recorded and shared through Scele, if possible. 2. Quizzes will be held every Friday at 08:00 (offline). Tutorials for exam preparation will be held on the same schedule (Friday 08:00) before the exam week. If any additional tutorial is needed, students are required to request said tutorial to the coordinator along with the agreed schedule. 3. There is no make-up quiz for every quiz that a student does not attend. 4. There is no make-up exam for the midterm and final exam without presenting a doctor's letter if you are ill or a letter approved by the faculty. The letter must be given as soon as possible to the academic secretariat (sekreakademik@cs.ui.ac.id) and lecturer by e-mail. The student must notify their condition before the exam begins, at the latest. 5. There are no additional assignments to improve a student's grade. Students have the chance to prove their ability from the beginning until the end of the semester. 6. Any form of plagiarism or violation of academic integrity, such as copying assignments, copying exams, cooperating in quizzes and exams, will be subjected to a penalty of grade E in accordance with the faculty's rules.

Course Name: Discrete Mathematics 1
Course Code: CSGE601010
Course Credits: 3 SKS

Degree	Bachelor
Department/Study Program	Computer Science and Information System / International Undergraduate Program
Type of Class	International
Language of Instruction	English
Lecturer Name	-
Course Structure	Lecture
Course Overview	This course discusses various topics on Discrete Mathematics that provide theoretical foundations to support advanced study in computer science. Applications of each topic in computer science are also discussed.
Course Key Words	-
Academic Goal	Ability to construct logical arguments and apply discrete structures to represent discrete objects and use them to solve combinatorial problems systematically and logically.
Course Schedule	W1. Intro to Discrete Math, Propositional Logic W2. Applications of Propositional Logic, Satisfiability, Equivalence W3. Predicate Logic: Motivation & Introduction W4. Predicate Logic: Nested Quantifiers, Translating Sentences W5. Inference rules W6. Proving Methods: Direct Proof, Indirect Proof W7. Proving Methods: Biconditional Proof, Equivalence Proof, Proof by Case, Counter examples W8. Midterm Exam W9-10. Set, Function, Sequence, Cardinality W11-12. Mathematical Induction, Strong Induction W13. Counting: basic rules and pigeonhole principles W14-15. Counting: permutations, combinations, and related techniques W16. Final Exam

Textbooks, References, and Supplementary Materials	Kenneth H. Rosen. Discrete Mathematics and Its Applications, 8th Ed. McGraw-Hill, International edition, 2019. (an older edition is acceptable, too)
Grading Component	- Pre-class quizzes (best 10 quizzes): 15% - Post-class quizzes (best 10 quizzes): 30% - Midterm Exam: 27.5% - Final Exam: 27.5%
Other (i.e. Expectations on Classroom Conduct and Decorum, etc.)	- Academic misconduct, such as cheating, plagiarism, etc., in any of the above components is strictly prohibited. Those who violate this rule will subsequently be punished according to the regulations. - Exams beyond the predetermined schedule will only be given to students with illness or other reasons approved by the faculty. The lecturer should be notified by email at the latest on the day of the exam. - No make-up exams, quizzes, or assignments

Course Name: Programming Foundations 1
Course Code: CSGE601020
Course Credits: 4 SKS

Degree	Bachelor
Department/Study Program	Information System / International Undergraduate Program
Type of Class	International
Language of Instruction	English
Lecturer Name	-
Course Structure	Lecture / Practicum
Course Overview	This course aims to teach the fundamental concepts and techniques of computer programming as an introduction to computer science. This module is taught using a combination of lectures and hands-on programming exercises. The programming language used is Python 3.13.
Course Key Words	-
Academic Goal	Ability to articulate fundamental programming concepts, apply them to problem abstraction and logical and computational solutions, and be familiar with various programming paradigms.
Course Schedule	W1. Introduction to programming, computer systems, and AI tools W2. Variables; Data Types; Number Systems W3. Control mechanisms: Selection & Repetition W4. Strings & Slicing W5. Text Files & Exceptions W6. Functions; Parameter Passing W7. Lists, tuples & mutability W8. Recursion; Problem solving using recursion W9. Review; Midterm Exam (UTS) W10. Sets; Dictionaries; Randomness W11. Intro to Object-Oriented Programming: Classes; Namespaces W12. Design of classes; UML; GUI W13. OOP: Inheritance, polymorphism W14. Binary Files & Exceptions; Testing W15. Lambda; iterator; generator; decorator

	W16. Review; Final Exam (UAS)
Textbooks, References, and Supplementary Materials	1. William F. Punch and Richard Enbody. *The Practice of Computing using Python.* 3rd Edition. Pearson, 2017. 2. John V. Guttag. *Introduction to Computation and Programming Using Python: With Application to Computational Modeling and Understanding Data*, 3rd Edition. MIT Press, 2021. 3. Eric Matthes. Python Crash Course, Third Edition. No Starch Press, 2023.
Grading Component	Lab Tutorials (10x): 10% Quizzes (every week or so): 20% Midterm Exam (UTS): 30% Final Exam (UAS): 40% On-time presence in class: 5%
Other (i.e. Expectations on Classroom Conduct and Decorum etc.)	**Academic Rules** • If you cheat, you will get a final mark of E. - The goal of assignments/projects/labs/homeworks is to give you practice in mastering the course material. - You must write up each problem solution or program by yourself without assistance, even if you collaborate with others to solve the problem, including the use of AI-based chatbot such as ChatGPT, Google Gemini, MicroSoft Copilot, DeepSeek etc. You are asked on your assignment hand-in to identify your collaborators. If you did not work with anyone, you should write "Collaborators: none". If you obtain a solution through research (e.g., on the world wide web), acknowledge your source, but write up the solution in your own words. - Programming assignments/projects are to be done individually. Discussing problem-solving strategies with other students is encouraged, BUT as soon as the discussion turns to Python implementation that must be done on your own.

	- Under no circumstances should you share a project solution with another student. Simply showing your solution to another student almost guarantees a zero score: past experience shows that student who asks to "look at" your solution will copy parts of it. - Plagiarism and other anti-intellectual behavior cannot be tolerated in any academic environment. We learn best by not doing plagiarism. **Class Rules** • Class Attendance: It is expected that you will arrive on time and attend every class. If you need to miss a class due to an emergency, it will be your responsibility to obtain missed notes and course announcements from another student.

Course Name: Business Management
Course Code: CSIM601190
Course Credits: 3 SKS

Degree	Bachelor
Department/Study Program	Information System / International Undergraduate Program
Type of Class	International
Language of Instruction	English
Lecturer Name	-
Course Structure	Lecture
Course Overview	This course aims to improve students' knowledge and abilities related to business and management aspects in organizations. Through examples and case studies, students will understand the basic concepts of business organization and build managerial analysis skills needed by information systems graduates.
Course Key Words	-
Academic Goal	Ability to create and propose a simple blueprint business plan by considering management aspects and business within an organization.
Course Schedule	W1. Taking Risk and Making Profit within Dynamics Business Environment; Understanding Economics and How It Affects Business. W2. Demanding ethical and socially responsible behavior; How to form a business. W3. Entrepreneurship and Starting a Small Business. W4. Business Model Canvas, Value Proposition Canvas, and Testing Business Idea. W5. Marketing: Helping buyers buy; Developing and pricing goods and services. W6. Distributing products; Using effective promotions; Understanding accounting and financial information. W7. Financial management: Managing Personal Finance. W8. Managers in the Workplace; Making Decisions. W9. Constraints on Managers & Managing Change; Global Management; Planning and Goal-Setting. W10. Strategic Planning; Organization Design.

	W11. Organizing Around Team; Human Resources Management. W12. Organizational Behavior. W13. Leadership; Motivation. W14. Controlling Activities and Operation.
Textbooks, References, and Supplementary Materials	[1] Nickels, W. G., McHugh, J. M., & McHugh, S. M. (2024). Understanding business. Boston: McGraw-Hill/Irwin. [2] Robbins, S. P; Coulter, M. K. (2020). Management (15th edition). New York: Pearson Education.
Grading Component	- Quizzes: 10% - Midterm Exam: 20% - Final Exam: 20% - Assignments: 45% - Participation: 5%
Other (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

Course Name: Principles of Information Systems
Course Code: CSIM601280
Course Credits: 3 SKS

Degree	Bachelor
Department/Study Program	Information System / International Undergraduate Program
Type of Class	International
Language of Instruction	English
Lecturer Name	-
Course Structure	Lecture
Course Overview	This course teaches students about aspects and basic knowledge as well as the principles of information systems.
Course Key Words	-
Academic Goal	Ability to analyze the components, elements, operations, and impacts of Information Systems within an organization.
Course Schedule	W1. System and Information Concepts
	W2. Organization and Mangement Theory
	W3. Information Systems
	W4. Information Technology
	W5. Data Management
	W6. Business Intelligence
	W7. Ethics
	W8. Information Systems Security
	W9. Networks, Cloud Computing, and Internet of Things
	W10. Business Information Systems
	W11. System Development and Project Management
	W12. Strategic Planning, System Conception, Analysis, and Design
	W13. System Construction, Implementation, and Maintenance
	W14. Knowledge Management and Artificial Intelligence
Textbooks, References, and Supplementary Materials	[1] Ralph M. Stair and George W. Reynolds. Principles of Information Systems, A Managerial Approach. 14th Edition. Thomson Learning, Inc. 2020.

	[2] Paul Beynon-Davies. Information Systems : An Introduction to Informatics in Organisations. 1st Edition. Palgrave 2002. [3] McLeod, Raymond Jr. Management Information Systems: A Study of Computer-Based Information Systems. 8th Edition. Prentice Hall, Inc. 2001. [4] Ralph M. Stair and George W. Reynolds. Principles of Information Systems, A Managerial Approach. 6th Edition. Thomson Learning, Inc. 2003. [5] Laudon, Kenneth C., and Jane P. Laudon. Management Information Systems: Managing the Digital Firm. 8th Edition. Prentice Hall, Inc. 2004.
Grading Component	- Quizzes: 10% - Midterm Exam: 20% - Final Exam: 20% - Assignments: 35% - Group Discussion: 10% - Participation: 5%
Other (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

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

Course Name: Introduction to Computer Architecture
Course Code: CSIM601251
Course Credits: 3 SKS

Degree	Bachelor
Department/Study Program	Information System / International Undergraduate Program
Type of Class	International
Language of Instruction	English
Lecturer Name	-
Course Structure	Lecture
Course Overview	Through this course, students are expected to be able to understand the basic components of a computer system and how these components work together to produce the desired functions of computer users. The lecture will be divided into 2 parts. The first part of this lecture will learn about Digital Systems, and the second part will learn about Computer Architecture. Topics covered in Digital Systems are reviewing binary representations; designing and analysing combination circuits; designing and analysing sequential circuits; other basic components such as counters, registers and memory. Topics covered in Computer Architecture are: assembly language, parts of a processor, processor workcycle, and memory hierarchy.
Course Key Words	-
Academic Goal	Ability to analyze digital systems as a constituent component of computer organization as well as analyzing the performance of computer systems based on the architecture used.
Course Schedule	W1. Introduction to Compute System
	W2. Data Representation
	W3. Boolean Algebra
	W4. Standard and Canonical Form
	W5. Karnaugh Map
	W6. Logic Gates and Combinational Circuits
	W7. Combinational Circuits MSI
	W8. Sequential Circuits Logic
	W9. Sequential Circuit Analysis
	W10. Register & Memory

	W11. Introduction to Computer Architecture W12. Datapath W13. Introduction to AVR W14. AVR Memory, Stack, and Subroutine; AVR IO; AVR External Interrupt; AVR Timer Interrupt.
Textbooks, References, and Supplementary Materials	Mandatory: [1] Aaron Tan Tuck Choy, Digital Logic Design, McGraw-Hill, 2011 [2] Morris Mano, Charles R. Kime, & Tom Martin, Logic and Computer Design Fundamentals, 5th ed., Pearson, 2016 [3] David A.Patterson & John L. Hennessy, Computer Organization and Design, 5 th ed. Morgan Kaufmann, 2013 Supplement: [4] AVR Instruction Set Manual (http://ww1.microchip.com/downloads/en/DeviceDoc/AVR-Instruction-SetManual-DS40002198A.pdf)
Grading Component	- Quizzes: 5% - Midterm Exam: 30% - Final Exam: 35% - Individual Assignments: 15% - Lab Assignments: 15% - Participation: 5% (bonus)
Other (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