Course Numbering	TMA-MEE320E
Year	First semester 2026
Subject (J)	Fundamentals of Information Science I
Subject	(IMAC-U) Fundamentals of Information Science I
Credit(s)	2Credits
Instructor	MASASHI KONYO
Media Class Subjects	
Essential Subjects	○
Language of Instruction	English
Course Objectives and Summary/ Learning Goals (J)	
Course Objectives and Summary/ Learning Goals	The class code for Google Classroom: dl3d4wmh The objective of this course is for students to learn the basic structure and operating principles of computers. Starting with the history of computing, the course will explain the mechanisms of how computers work. The ultimate goal is to help students grasp the fundamental concepts behind computer design and operation, enabling them to deeply understand software behavior and utilize computers more effectively.
Relevance to Other Subjects/Considerations for Taking the Class (J)	
Relevance to Other Subjects/Considerations for Taking the Class	
Course Description (J)	
Course Description	1. History and basics of computers 2. Representation of numbers (1) 3. Representation of numbers (2) 4. Boolean algebra 5. Combinatorial circuits 6. Sequential circuits: basics 7. Sequential circuits: design and application 8. Computer architecture 9. Arithmetic, control, and memory systems 10. High-performance computing 11. Compilers (1) 12. Compilers (2) 13. I/O and operating systems 14. Computer networks 15. Summary and discussion
Preparation and Review(J)	
Preparation and Review	Review the class handouts before attending the class
Evaluation methods and criteria (J)	
Evaluation methods and criteria	Students will be evaluated based on: class attendance, homework assignments, reports, and the final exam.

Textbooks and references

Title	Author	Publisher	Year	ISBN/ISSN	Classification
Computer Organization and Design MIPS Edition: The Hardware/Software Interface (The Morgan Kaufmann Series in Computer Architecture and Design)	David A Patterson and John L. Hennessy	Morgan Kaufmann	2020	978-0128201091	Reference

URL	
Attached File	
Office Hours(J)	
Office Hours	Anytime
Contact： Please insert '@' in the email address.	Please check with the contact list posted on the Graduate School website or contact via Classroom.
Notes	
Practical Skill/Hands-on Class	
Other Comments/Instructions	
Last Update	2025/3/6

One-credit courses require 45 hours of study. In lecture and exercise-based classes, one credit consists of 15-30 hours of class time and 30-15 hours of preparation and review outside of class. In laboratory, practical skill classes, one credit consists of 30-45 hours of class time and 15-0 hours of preparation and review outside of class.