

INFORMATION TECHNOLOGY: AI & DATA SCIENCE



DOUBLE DEGREE | Academic Year 2023/2024

SEMESTER 1	SKS	ECTS	SEMESTER 2	SKS	ECTS
English 1	2	3	English 2	2	3
Algorithms & Object-Oriented Programming	4	6	Data Structures & Algorithms	3	4
Data Science Programming Language	2	3	Server-side Web Programming	4	6
Relational Database Design & Lab	3	4	Web Development Life Cycle Project	2	3
Discrete Mathematics	2	3	Introduction to Entrepreneurship	2	3
Web Design Fundamental	2	3	Ethics & Religious Philosophy	2	3
Analytical & Creative Thinking	3	4	Linear Algebra for Data Science	2	3
Statictics for Data Science	2	3	Probability for Data Science	2	3
Linux Fundamental & Computer Network	2	3	System Admin & Maintenance	2	3
Total Mandatory	22	32	Total Mandatory	21	31
Extracurricular Courses			Extracurricular Courses		
German Language and Culture 1	2	0	German Language and Culture 2	2	0
TOTAL	24	32	TOTAL	23	31
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SEMESTER 3	SKS	ECTS	SEMESTER 4	SKS	ECTS
SEMESTER 3 English 3	SKS 2	ECTS 3	SEMESTER 4 English 4	SKS 2	ECTS 3
English 3 Client-side Front-End Web	2	3	English 4	2	3
English 3 Client-side Front-End Web Development Personal & Profesional	2	3	English 4 Back-End Web Development & tools Framework-based Web	3	3
English 3 Client-side Front-End Web Development Personal & Profesional Development Non-Relational Database Design	2 2 4	3 3 6	English 4 Back-End Web Development & tools Framework-based Web Programming	3	3 4
English 3 Client-side Front-End Web Development Personal & Profesional Development Non-Relational Database Design & Lab Advanced Object-Oriented	2 2 4 3	3 3 6 4	English 4 Back-End Web Development & tools Framework-based Web Programming Pancasila & Civic	2 3 3 3	3 4 4 4
English 3 Client-side Front-End Web Development Personal & Profesional Development Non-Relational Database Design & Lab Advanced Object-Oriented Programming	2 2 4 3	3 3 6 4	English 4 Back-End Web Development & tools Framework-based Web Programming Pancasila & Civic Network Security & Lab Mobile Web Service & API	2 3 3 3	3 4 4 4 4
English 3 Client-side Front-End Web Development Personal & Profesional Development Non-Relational Database Design & Lab Advanced Object-Oriented Programming Computer Security & Lab	2 2 4 3 3	3 3 6 4 4	English 4 Back-End Web Development & tools Framework-based Web Programming Pancasila & Civic Network Security & Lab Mobile Web Service & API (Middleware) Introduction to Artificial Intelligence	2 3 3 3 3 2	3 4 4 4 4 3
English 3 Client-side Front-End Web Development Personal & Profesional Development Non-Relational Database Design & Lab Advanced Object-Oriented Programming Computer Security & Lab UI/UX Design & Evaluation	2 2 4 3 3 3 2	3 3 6 4 4 4 3	English 4 Back-End Web Development & tools Framework-based Web Programming Pancasila & Civic Network Security & Lab Mobile Web Service & API (Middleware) Introduction to Artificial Intelligence and Laboratory	2 3 3 3 3 2	3 4 4 4 4 3 5
English 3 Client-side Front-End Web Development Personal & Profesional Development Non-Relational Database Design & Lab Advanced Object-Oriented Programming Computer Security & Lab UI/UX Design & Evaluation Back-end System Administration	2 2 4 3 3 3 2 3	3 3 6 4 4 3 4	English 4 Back-End Web Development & tools Framework-based Web Programming Pancasila & Civic Network Security & Lab Mobile Web Service & API (Middleware) Introduction to Artificial Intelligence and Laboratory Math for Machine Learnings	2 3 3 3 2 3 3	3 4 4 4 4 3 5 5
English 3 Client-side Front-End Web Development Personal & Profesional Development Non-Relational Database Design & Lab Advanced Object-Oriented Programming Computer Security & Lab UI/UX Design & Evaluation Back-end System Administration Total Mandatory	2 2 4 3 3 3 2 3	3 3 6 4 4 3 4	English 4 Back-End Web Development & tools Framework-based Web Programming Pancasila & Civic Network Security & Lab Mobile Web Service & API (Middleware) Introduction to Artificial Intelligence and Laboratory Math for Machine Learnings Total Mandatory Extracurricular Courses	2 3 3 3 2 3 3	3 4 4 4 4 3 5 5
English 3 Client-side Front-End Web Development Personal & Profesional Development Non-Relational Database Design & Lab Advanced Object-Oriented Programming Computer Security & Lab UI/UX Design & Evaluation Back-end System Administration Total Mandatory Extracurricular Courses	2 2 4 3 3 2 3 22	3 3 6 4 4 3 4 31	English 4 Back-End Web Development & tools Framework-based Web Programming Pancasila & Civic Network Security & Lab Mobile Web Service & API (Middleware) Introduction to Artificial Intelligence and Laboratory Math for Machine Learnings Total Mandatory	2 3 3 3 2 3 3 22	3 4 4 4 4 3 5 5 5 32

SEMESTER 5	SKS	ECTS	SEMESTER 6	SKS	ECTS
Internship 1	2	10	Intenship 2	6	20
Indonesian Language	2	3			
Cross-Platform Mobile App Development	2	3	JOINT DEGREE SUBJECTS		
Pattern Recognition & Image Processing	3	4	ERP and Lab	2	3
Big Data Infrastructure	2	3	Current Developments in Business IT	1	2
Cross Study Program or Faculty Elective Course	2	3	Challenges in Int. Management (Globalization and CSR)	1	2
			SINGLE DEGREE SUBJECTS Cross Study Program or Faculty Elective Course	4	7
TOTAL	13	26	TOTAL	10	27
SEMESTER 7	SKS	ECTS	SEMESTER 8	SKS	ECTS
English 5	2	3	Thesis	6	20
Research Methodology	2	3	Professional Competence Assessment (PCA)	3	4
Data Science using Python	2	3	Character and Professional	2	3

SEMESIEK /	SVS	ECIS
English 5	2	3
Research Methodology	2	3
Data Science using Python	2	3
Data Mining	3	4
Native Mobile App Development	3	5
Secure Software Development Life Cycle	2	3
Machine Learning & Deep Learning	4	5
Big Data Analytics	3	5
TOTAL	21	31

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Thesis	6	20
Professional Competence Assessment (PCA)	3	4
Character and Professional Development Program (CPDP)	2	3
Cross Study Program or Faculty Elective Course	2	3

Total Compulsory: 144 SKS Total ECTS: 240 ECTS **SKS**: Satuan Kredit Semester

TOTAL

ECTS: European Credit Transfer System

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