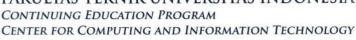
## FAKULTAS TEKNIK UNIVERSITAS INDONESIA





#### A. Program Teknologi Informasi Full Stack Developer (FSD)

### Overview

The Full Stack Developer course is a comprehensive discipline designed to provide individuals with the broad skill set and knowledge required to excel in front-end and back-end web development. It entails applying engineering ideas and processes across the software development spectrum, from web design to testing and continuous maintenance. This course prepares students for a successful career as full-stack developers.

Mastering full-stack development's primary goal is to equip students with a well-rounded education in programming, software design, testing, and project management, successfully preparing them for a career in online development. Fundamental programming concepts, object-oriented programming, web development, database fundamentals, SQL proficiency, software engineering principles, web application creation, software testing and quality assurance, software development methodologies, and hands-on project work.

## **Exit Profile of FSD Curriculum**

After completing all modules, the students should be able to:

- Design and develop software applications using programming languages.
- Understand and apply software engineering principles and methodologies to software development projects.
- Create and manage databases.
- Develop software using object-oriented programming principles.
- Apply software testing and quality assurance techniques to ensure the functionality and reliability of software applications.
- Work effectively as part of a software development team, collaborating with others to design, develop, and deliver software projects on time and within budget.
- Use software development tools and technologies, including integrated development environments (IDEs), version control systems, and bug tracking tools.
- Communicate effectively with stakeholders, including clients and team members, about software development projects.
- Continuously learn and adapt to new technologies and industry trends to stay up-to-date with the rapidly changing software industry.



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CONTINUING EDUCATION PROGRAM
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# **Curriculum Contents**

Semester 1		
Modules	Credits	
Introduction to Information Technology	3	
Introduction to Information Technology Project	1	
Algorithm and Data Structure	3	
Algorithm and Data Structure Project	1	
Relational Database Design	2	
Tools and Technique for Analyzing Data*	3	
Implementing Database Design on MySQL Server	3	
Implementing Database Design on MySQL Server Project	1	
Information Systems Architecture and Technology	2	
Operating System	2	
Total Credits	21	

<sup>\*)</sup> Khusus Program Kerja Sama CCIT – PNJ Prodi TI, Modul Tools and Technique for Analyzing Data (termasuk Project) di semester 1 dipertukarkan dengan Modul Software Engineering di semester 2

Semester 2		
Modules	Credits	
NoSQL - MongoDB Fundamentals	3	
NoSQL - MongoDB Fundamentals Project	1	
Introduction to Web Programming	3	
Introduction to Web Programming Project	1	
Object Oriented Programming	3	
Object Oriented Programming Project	1	
Software Engineering*	3	
Management Information System	2	
Leadership and Communication Skills	2	
Total Credits	19	

<sup>\*)</sup> Khusus Program Kerja Sama CCIT – PNJ Prodi TI, Modul Tools and Technique for Analyzing Data (termasuk Project) di semester 1 dipertukarkan dengan Modul Software Engineering di semester 2

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Semester 3		
Modules	Credits	
Human Computer Interaction	3	
Human Computer Interaction Project	1	
Web Application	3	
Web Application Project	1	
Distributed System	3	
Distributed System Project	1	
Project Management using DevOps	2	
Project Management using DevOps Project	1	
Collaborative Development using Repository System	2	
Security Concept	2	
System Analysis and Design	2	
Total Credits	20	

Semester 4		
Modules	Credits	
Developing Enterprises Information System using Framework	3	
Developing Enterprises Information System using Framework Project	1	
Mobile Programming	3	
Mobile Programming Project	1	
Software Quality Assurance	3	
Software Quality Assurance Project	1	
Writing Methodology	1	
Capstone Project	4	
Professional Ethics	2	
Total Credits	19	

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Certificate No: 50200176 QM15