C. Program Teknologi Informasi *Internet-based System Automation* (TI ISA)

Overview

Industry 4.0 and IoT is the hottest technology today. Many country, scientist, and professional look for any technology to be the best standard which would achieve the Automation in everything. It makes everyone race to upgrade their skills to master this technology since it could transform any kind of business and industry to be a new kind of method.

This technology would be a new jump of the internet which will change how people interact each other, not only people with others but also between the machine to machine. Thus who are not upgrade their skills in the hottest technology would not plays any role at the future business.

Exit Profile of ISA Curriculum

After completing all modules, the students should be able to:
• Find the solution to enable automation in an environment based on IoT platform
• Design and Implement an automatic system using sensors, controller, database, and enable the data to be accessed by a web based application or mobile applications
• Understand how the IoT (Internet of Things) help the industry 4.0 transformation

Curriculum Contents

Semester 1

Modules	Credits
Introduction to Information Technology	3
Introduction to Information Technology Project	1
Algorithm and Programming	2
Algorithm and Programming Project	1
Relational Database Design	2
Implementing Database Design on MS SQL Server	3
Implementing Database Design on MS SQL Server Project	1
Tools and Technique for Analyzing Data	3
Tools and Technique for Analyzing Data Project	1
Operating System	2
Total Credits	19

Semester 2

Modules	Credits
Object Oriented Programming	2
Object Oriented Programming Project	1
Backend Programming	2
Backend Programming Project	1
Computer Network	2
Administering Network Operating System	3
Computer Network Design Project	1
Linux Server Configuration	3
Linux Server Configuration Project	1
Electronic Circuit and Sensors	3
Electronic Circuit and Sensors Project	1
Algorithm and Data Structure	2
Total Credits	22

Semester 3	
Modules	**Credits**
Introduction to IoT	1
Internet of Things Circuit	4
Big Data and Analytic	4
Embedded system	4
IoT Framework and Platforms	2
IoT Project I	3
Information Systems Architecture and Technology	2
Total Credits	20

Semester 4	
Modules	**Credits**
Programming in Java	3
Programming in Java Project	1
Mobile Application on Android Platform	3
Mobile Application on Android Platform Project	1
Integration System	4
Information System Security	3
Information System Security Project	1
Web Application	3
Web Application Project	1
Developing Enterprises Information System using Framework	3
Developing Enterprises Information System using Framework Project	1
Total Credits	24