114-1 Full Curriculum of Da-Yeh University

Information

Title	Practice of Artificial Intelligence and Internet of Things	Serial No./ID	1088 /IFI3116
Required/Credit	Optinal /3	Time/Place	(Thu)567 /H705
Language	Chinese/English	Grade Type	Number
Lecturer /Full- or Part-time	Huan-Liang Tsai /Full-time	Graduate Class	Non-graduating Class
School System /Dept /Class, Grade	/Department of Computer Science and Information Engineering /Class 1, Grade 3		
Office Hour / Place	(Mon) 16:20~17:10, (Tue) 08:10~09:00, (Wed) 08:10~09:00, (Wed) 10:10~11:00 / H715		
Lecturer	n.a.		

Introduction

Arduino   Raspberry Pi

Outline

Prerequisite

Sensors

The Relationship Between Courses and Departmental Core Competencies and Basic Skills

- 1.2 Possess the technical skills and ability to use tools required for engineering practice
- 2.2 Possess the ability to plan, execute, and write reports for project proposals
- 2.1 Possess the ability to design experiments, execute them, and analyze and interpret data
- 3.3 Equipped with responsibility for sustainable social development
- 1.1 Possess the mathematical, scientific, and engineering knowledge required for applications in the field

of information engineering

- 3.1 Equipped with teamwork, communication skills, and continuous learning capabilities
- 3.2 Equipped with engineering ethics and a global perspective
- 2.3 Possess the ability to design and integrate systems

Teaching Plan						
Core Capability	Weight(%) A	Ability index(Performance Indicators)	Teaching Methods	Assessment and Weight	Core Competency Learning Outcomes B	Final Exam Grades C=B*A
1.1 Possess the mathematical, scientific, and engineering knowledge required for applications in the field of information engineering	20	Professional Ability	Student Presentation Practical Operation (Experiment, Machine Operation Lecturing Special Report	Oral Report: 20% Course Participation: 20% Final Exam: 30% Written Report: 30%	Total: 100	20
1.2 Possess the technical skills and ability to use tools required for engineering practice	20	Practical Ability	Lecturing Practical Operation (Experiment, Machine Operation Special Report Student Presentation	Final Exam: 30% Course Participation: 20% Written Report: 30% Oral Report: 20%	Total: 100	20
2.1 Possess the ability to design experiments, execute them, and analyze and interpret data	20	Professional Ability	Lecturing Student Presentation Practical Operation (Experiment, Machine Operation Special Report	Final Exam: 30% Oral Report: 20% Course Participation: 20% Written Report: 30%	Total: 100	20
2.2 Possess the ability to plan, execute, and write reports for project proposals	10	Practical Ability	Student Presentation Practical Operation (Experiment, Machine Operation Lecturing Special Report	Oral Report: 20% Course Participation: 20% Final Exam: 30% Written Report: 30%	Total: 100	10

2.3 Possess the ability to design and integrate systems	10	Professional Ability	Student Presentation Practical Operation (Experiment, Machine Operation Lecturing Special Report	Oral Report: 20% Course Participation: 20% Final Exam: 30% Written Report: 30%	Total: 100	10
3.1 Equipped with teamwork, communication skills, and continuous learning capabilities	10	Basic Ability	Student Presentation Practical Operation (Experiment, Machine Operation Lecturing Special Report	Oral Report: 20% Course Participation: 20% Final Exam: 30% Written Report: 30%	Total: 100	10
3.2 Equipped with engineering ethics and a global perspective	5	Basic Ability	Lecturing Practical Operation (Experiment, Machine Operation Student Presentation Special Report	Final Exam: 30% Course Participation: 20% Oral Report: 20% Written Report: 30%	Total: 100	5
3.3 Equipped with responsibility for sustainable social development	5	Practical Ability	Lecturing Practical Operation (Experiment, Machine Operation Student Presentation Special Report	Final Exam: 30% Course Participation: 20% Oral Report: 20% Written Report: 30%	Total: 100	5

Grade Auditing

Written Report: 30%
Final Exam: 30%
Course Participation: 20%
Oral Report: 20%

Book Type (Respect intellectual property rights. Please use official textbooks and do not illegally photocopy others' works.)

Book Type	Book name	Author
Textbook	IOT	
Textbook	IOT	

Lesson Plan

Weeks	Content	Teaching Methods
1	Introduction of IOT & Intellectual Property Protection (use legitimate textbooks only) & Traffic safety Propaganda & Gender equality education promotion	Lecturing
2	IOT Architecture	Lecturing Student Presentation
3	Sensor devices	Lecturing Practical Operation (Experiment, Machine Operation Student Presentation
4	Networking technology of sensors	Lecturing Practical Operation (Experiment, Machine Operation
5	Environment-Monitoring system	Lecturing Practical Operation (Experiment, Machine Operation Student Presentation
6	Environment-Monitoring system	Lecturing Practical Operation (Experiment, Machine Operation Student Presentation
7	Wireless Information communication technology	Lecturing Practical Operation (Experiment, Machine Operation Student Presentation
8	Wireless Information communication technology	Lecturing Practical Operation (Experiment, Machine Operation Student Presentation

9	Mid Exam	Practical Operation (Experiment, Machine Operation Student Presentation
10	Networking technology of IOT	Lecturing Practical Operation (Experiment, Machine Operation
11	Artificial IOT for the Power system	Lecturing Practical Operation (Experiment, Machine Operation Student Presentation
12	Artificial IOT for the Power system	Lecturing Practical Operation (Experiment, Machine Operation Student Presentation
13	MultiSensor Module implementation	Lecturing Practical Operation (Experiment, Machine Operation Student Presentation
14	MultiSensor Module Implementation	Lecturing Practical Operation (Experiment, Machine Operation Student Presentation
15	Automatic power-monitoring system f	Lecturing Practical Operation (Experiment, Machine Operation Student Presentation
16	Power-Monitoring system for DC motors	Lecturing Practical Operation (Experiment, Machine Operation Student Presentation
17	Self-directed Learning & Flexible Teaching/Learning	Flexible Teaching - Independent Action
18	Self-directed Learning & Flexible Teaching/Learning	Flexible Teaching - Independent Action