Syllabus [2025Year 1 Term]

Course Information

Course Title	Embedded System	Credits	3
Course Code	465890-2	Required/Elective (For Undergraduate Courses)	Selective majors
Department or Major	Department of Mobile Systems Engineering	Language	English
Methods of Teaching		Lecture Room	화15,16,17,18,19(국제205)
Time Allotment	Lecture(3) Experiments(0) Trainging & Practice(0) Performance(0) Designing & Planning(0)	Cyber Lectures	
Course Type	offline		

Lecturer

Lecturer	Name	WOOJIN JEONG	Rank	Adjunct Professor	Final Academic Degree	박사
	Department & college	Department of Mobile Systems Engineering		Office		
	Office Phone Number	—		e-mail	jeong.woojin@dankook.ac.kr	
	Field of Interest					

Course Summary

Course Description	In this class, in order to increase the usability of embedded systems, we learn about the basic structure and operation method of machine learning and how to develop, learn, and apply models, and then look at the structure for utilizing YOLO and a demo project utilizing it. , carry out an embedded system project using this.
Description Related Courses	Python Programming language Artificial intelligence or Machine Learning
Course Goals	Learning how to run artificial intelligence models in embedded devices Personal project using ML Learn how to implement ML on embedded system
Projected Results	Understanding how to learn machine learning using Tensorflow Understand how to save the developed model, convert it for embedded devices, and run it
Percentage of the original langua	

ge classes(%)	

Syllabus

Times	Lecture Topic	Lecture Goals	Lecture Methods	Assignments
1	Introduction	- Introduce Syllabus - What we will learn - Preparations - Introduction to the term project	강의,	
2	Basic of Machine Learning	- What is the machine learning? - Using tensorflow & colab environment	강의,	
3	Basic of Machine Learning	- Basic ML with MNIST - Design network & training	강의,	
4	Deep learning	- Convolutional Neural Network - How the CNN is working?	강의,	
5	Deep learning	- Convolutional Neural Network - Simple classification project using CNN	강의,	
6	Deep learning	- YOLO (You Only Look Once) - How the YOLO is working?	강의,	
7	Midterm Exam	- Evaluate students' understanding of the topics covered so far	강의,	
8	YOLO Introduction	- YOLO (You Only Look Once) - Practical project using YOLO (1)	강의,	
9	Deep learning	- YOLO (You Only Look Once) - Practical project using YOLO (2)	강의,	
10	Implementing YOLO on Raspberry Pi	- Recent trending topics in AI (1)	강의,	
11	Project Developing	- Recent trending topics in AI (2)	강의,	
12	Project Developing	- Team meetings to discuss project pro	강의,	

Times	Lecture Topic	Lecture Goals	Lecture Methods	Assignments
		gress		
13	Project Developing	- Team meetings to discuss project progress	강의,	
14	Final Presentation	- Finalize the term project	강의,	
15	Final Exam	- Evaluate the overall understanding of course topics	강의,	

Methods of Grading

sequence	Description	Percentage	Details
1	Mid-tem Exam	15%	Midterm Exam
2	Final-exam	20%	Final Exam.
3	Pop Quizzes	0%	
4	Assignments	45%	Assignments & Term project (Planning, Final report)
5	Reports	0%	
6	Presentations & Discussions	0%	
7	Attendance	10%	Attendance
8		0%	
9	Others	10%	Etc
All		100%	

Core of Value

핵심가치	전공역량	역량정의	역량구분	값(%)
혁신 (Discovery)	창의적문제해결 (Creative problem-solving)	주어진 상황과 문제를 창의적으로 해결할 수 있는 능력		0%
혁신 (Discovery)	도전 (Challenging)	전공 지식을 새로운 분야와 융합하고 아우를 수 있는 능력		10%
혁신 (Discovery)	지식융합 (Knowledge convergence)	새로운 분야를 개척하거나 도전적으로 임할 수 있는 능력		0%
헌신 (Dedication)	세계시민 (Universal value)	세계 공동체 구성원으로 전공자로서 국제적 이슈에 대응할 수 있는 능력		0%
헌신 (Dedication)	상호협력 (Cooperation)	공동의 목적 달성을 위해 타인과 상호협력을 할 수 있는 능력		0%

핵심가치	전공역량	역량정의	역량구분	값(%)
헌신 (Dedication)	공동체 (Sense of community)	공동체의 구성원으로서 필요한 태도와 윤리의식을 가질 수 있는 능력		0%
능동 (self- Determination)	자기주도 (Self-Managing)	주어진 상황과 문제를 주도적이고 능동적으로 해결할 수 있는 능력		0%
능동 (self- Determination)	지식활용 (Knowledge application)	주어진 상황과 문제에 대해 논리적으로 파악하고 분석할 수 있는 능력		60%
능동 (self- Determination)	논리적사고 (Logical thinking)	전공관련 지식을 필요에 따라 다양하게 적용하고 활용할 수 있는 능력		30%
능동 (self- Determination)	의사소통 (Articulation)	대화를 통해 다양한 의견을 조율하고 합의를 이끌어 낼 수 있는 능력		0%

Textbook(s) & References

Description	Title	Author	Publisher
Required Textbook	Lecture Notes	Woojin Jeong	

Memo