

# 강 의 계 획 서

교과목번호 (Course Number)	446.781	강좌번호 (Lecture Number)	-	교과목명 (Course Title)	무인항공시스템 의사결정기술 (Decision making for Unmanned Vehicles)	학점	3
담당교수 (Instructor)	Name : 김 현 진 (Hyoun Jin Kim)			Homepage : <a href="http://icsl.snu.ac.kr">http://icsl.snu.ac.kr</a>			
	E-mail : <a href="mailto:hjinkim@snu.ac.kr">hjinkim@snu.ac.kr</a>			Tel : 02-880-9252			
	면담시간 / 장소 (Office Hour): M/W 13:00-14:30 / Bldg 301-1305						
1. 수업목표 (Objective s)	- Learn techniques used for guidance and control of various unmanned vehicle platforms, including : path planning, localization, control, learning and optimization, multiagent systems						
2. 교재 및 참고문헌 (Text and References)	There is no required text. (REF) Planning Algorithms, Steven M. LaValle, Cambridge University Press, 2006 <a href="http://msl.cs.uiuc.edu/planning/">http://msl.cs.uiuc.edu/planning/</a> (REF) Robot Motion Planning, J.-C. Latombe, Kluwer, 1991. (REF) Principles of Robot Motion: Theory, Algorithms, and Implementation, H. Choset, K. M. Lynch, S. Hutchinson, G. Kantor, W. Burgard, L. E. Kavraki, and S. Thrun, MIT Press, 2005 (REF) Reinforcement Learning: An Introduction, R. S. Sutton and A. G. Barto, MIT Press, 1998 <a href="http://webdocs.cs.ualberta.ca/~sutton/book/ebook/the-book.html">http://webdocs.cs.ualberta.ca/~sutton/book/ebook/the-book.html</a>						
2. 평가방법 (Grading Policy)	출석 (Attendance)	과제 (Assignments)	중간 (Midterm)	기말 (Final)	평소학습	기타 (Final Project)	합계 (Total)
	%	35%	35%	0%	%	30%	100%
(In-class tests for midterm)							
3. 강의계획 (Schedule)	주 (Week)	강의내용 (Topics)					
	1	Path planning					
	2	Path planning					
	3	Localization					
	4	Localization and mapping					
	5	Dynamics and Control					
	6	Dynamics and Control					
	7	Dynamics and Control					
	8	Dynamics and Control					
	9	Function approximation – neural networks					

	10	Markov Decision Processes
	11	Dynamic Programming
	12	Reinforcement learning
	13	Multiagent systems
	14	Multiagent systems
	15	Course summary
	16	Final
5. 수강생 참고사항 (Other info)	- Prerequisites : linear control systems, linear algebra	
6. 부정행위자 에 대한 처리 (Policy against academic dishonesty)	All students are presumed upon enrollment to have an understanding of the Honor System.	