

Course syllabus

2011/12 1. semester

Course name: Personal Navigation

Course code (NEPTUN): P-MIM_D38, PPKE-I-PD85

Educational program, where the course is available: Msc - Mérnök informatikus

Credits: 4 Semester of the course:

Language of the course: magyar

Professor(s): Kristóf Karacs

Professor's e-mail address: karacs@itk.ppke.hu

Classes, lessons:¹

Lectures - 2 hours/week
laboratory - 1 hour/week

Course description²:

Navigation systems: global and local navigation
objectives: scientific and social aspects
system requirements for different application areas
implementation platforms
case study: bionic eyeglass
scene perception and classification
object and object primitive detection
noise filtering
feature extraction methods

Prerequisites (Course name, code):

Theory of probability and mathematical statistics, ITMAT-0004
Introduction to artificial intelligence, MIB_T14

¹ Theoretical, practical and labor classes' length per week.

² Main topics of the course in a few sentence, or in an enumeration



Exams:

Numbers and methods of the exams during the semester (*written exam, paper, assignment, etc.*):

Laboratory reports 30% (3 best results are taken into account)
Final 70%

Supplement methods:

Method of the final exam:

Written / Oral / Written and oral

Written and oral

Webpage of the course: <http://digitus.itk.ppke.hu/~karacs/Pe>

Recommended references for the course (lecture slides, books, papers):

- C. M. Bishop, Pattern Recognition and Machine Learning, Springer Verlag, 2006
- . Bar-Shalom, X. R. Li, and T. Kirubarajan, Estimation with Applications to Tracking and Navigation. New York: John Wiley & Sons, 2001
- . Roweis, Z. Ghahramani, A unifying review of linear gaussian models. Neural Computation, 1999 Feb 15;11(2):305-345
- . van Handel, Hidden Markov Models, Lecture Notes, Princeton University, 2008 (available: <http://www.princeton.edu/~rvan/orf557/hmm080728.pdf>)

Participation in the lectures is:	<input checked="" type="radio"/> Required	<input type="radio"/> Not required
Participation in the practices is:	<input type="radio"/> Required	<input type="radio"/> Not required
Participation in the labor is:	<input checked="" type="radio"/> Required	<input type="radio"/> Not required



Requirements of the Teacher's signature:

At least 3 laboratory reports have to be submitted.

Grading method:

5: 87.5%-
: 75.0%-
: 62.5%-
: 50.0%-

Other information:

You can send this form by clicking to the „**Submit Form**” button in the top right corner.