

INSTITUTION	NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS				
SCHOOL	SCHOOL OF SCIENCE				
DEPARTMENT	INFORMATICS AND TELECOMMUNICATIONS				
COURSE LEVEL	GRADUATE				
COURSE TITLE	Dialogue Systems and Voice Assistants				
COURSE CODE	C17	Semester	3	ECTS	6
TEACHING HOURS per week	THEORY	2	SEMINAR.	LABORATORY	1
URL	https://eclass.uoa.gr/courses/DI530/				

COURSE CONTENT
<p>The course covers the basics of dialogue systems and voice assistants:</p> <ul style="list-style-type: none"> • Conversational analysis • Task-driven dialogue systems and chatbots • Dialogue system design principles • Natural Language Understanding • Dialogue management • Natural Language Generation • Voice assistant architecture • Voice (or multimodal) assistants vs. text-based dialogue systems • Dialogue system applications

STUDENT LEARNING OBJECTIVES
<p>Teaching-Learning Goals-Expected Learning Outcomes Upon successful completion of the course the student will be able to:</p> <ul style="list-style-type: none"> • Build a basic dialogue system from scratch using open-source toolkits in python • Adapt a voice assistant to a specific task • Analyze the performance of a voice assistant

TEACHING AND LEARNING METHODS - ASSESSMENT					
TEACHING METHOD	Hybrid: In Class (Face to Face) / Remote Sessions (Online)				
USE OF INFORMATION AND COMMUNICATION TECHNOLOGIES	<p>Learning process supported by the e-class platform: Discussions, Announcements, Task assignments, Student groups</p> <p>Email communication</p> <p>Live transmission of lectures</p> <p>Ability to track recorded lectures</p>				
TEACHING ORGANIZATION <i>Describe in detail the way and methods of teaching: Enhanced Lectures,</i>	<table border="1"> <thead> <tr> <th>Activity</th> <th>Student Workload (hours)</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	Activity	Student Workload (hours)		
Activity	Student Workload (hours)				

<p>Online Lectures, Seminars, Tutorial, Laboratory, Laboratory Exercise, Study & analysis of literature, Practice (Positioning), Interactive teaching, Developing a project, Individual / group work Telework (reference to tools) etc.</p> <p><i>Details of the student's study hours for each learning activity and hours of non-guided study are shown to ensure that the total workload at the semester corresponds to the ECTS</i></p>	<table border="1"> <tr><td>Lectures</td><td>26</td></tr> <tr><td>Laboratory</td><td>13</td></tr> <tr><td>Teamwork in a case study</td><td>46</td></tr> <tr><td>Small individual exercises</td><td>15</td></tr> <tr><td>Independent Study</td><td>50</td></tr> <tr><td>Total Course (25 hours of workload per unit of credit)</td><td>150</td></tr> </table>	Lectures	26	Laboratory	13	Teamwork in a case study	46	Small individual exercises	15	Independent Study	50	Total Course (25 hours of workload per unit of credit)	150
	Lectures	26											
Laboratory	13												
Teamwork in a case study	46												
Small individual exercises	15												
Independent Study	50												
Total Course (25 hours of workload per unit of credit)	150												
<p>ASSESSMENT OF STUDENTS <i>Description of the assessment process</i></p> <p><i>Assessment Methods, Formative or Concluding, Multiple Choice Test, Quick Response Questions, Test Development Questions, Problem Solving, Written Work, Report / Report, Oral Examination, Public Presentation, Laboratory Work, Other / Other</i></p> <p><i>Fully defined evaluation criteria are mentioned and if and where they are accessible to students.</i></p>	<p>Describe explicitly methods, evaluation tools and provided feedback. The table below is supplemented accordingly.</p> <table border="1"> <thead> <tr> <th>Assessment methods</th> <th>Number</th> <th>Percentage</th> </tr> </thead> <tbody> <tr> <td>Exercises</td> <td>4</td> <td>40%</td> </tr> <tr> <td>Laboratory</td> <td>4</td> <td>40%</td> </tr> <tr> <td>Final project</td> <td>1</td> <td>20%</td> </tr> </tbody> </table>	Assessment methods	Number	Percentage	Exercises	4	40%	Laboratory	4	40%	Final project	1	20%
Assessment methods	Number	Percentage											
Exercises	4	40%											
Laboratory	4	40%											
Final project	1	20%											

<p>LITERATURE AND STUDY MATERIALS / READING LIST</p> <ol style="list-style-type: none"> 1. Jurafsky & Martin: Speech & Language processing. 3rd ed. draft (chapter 24). 2. McTear: Conversational AI: Dialogue Systems, Conversational Agents, and Chatbots. Morgan & Claypool 2021. 3. Designing Voice Interfaces: Principles of Conversational Experiences, Cathy Pearl 4. Wired for Speech: How Voice Activates and Advances the Human-Computer Relationship
--