

Ambient Intelligence			
Credits: 5 Semester 3 (WUT) Compulsory: No			
Format	Lectures 30 h	Tutorials 5 h, Lab.10h	Private study 80 h
Lectures: A. Sgorbissa, F. Mastrogiovanni			
Objectives: The goal of the course is to enable students to understand the Ambient Intelligence computing paradigm, which envisions a world where people (and possibly robots) are surrounded by intelligent sensors/actuators and interfaces embedded in the everyday objects around them.			
Contents: The following subjects will be discussed:			
<ul style="list-style-type: none"> • Middleware Infrastructures for Ambient Intelligence. • Networks of sensors and actuators. • Robots within Smart Environments. • User/Situation Modelling and Context Awareness. • Human-centred adaptive interfaces, Augmented Reality and wearable computing. • Applications: from Smart Dust to Smart Cities. 			
Abilities: After completing this course the students will be able to			
1.Understand and discuss the most relevant articles in related areas: smart environments, smart networked objects, augmented + mixed realities, ubiquitous computing & communication, sensor and actuator networks, pervasive computing, tangible computing, intelligent interfaces and wearable computing.			
2.Come up with new ideas, start innovative projects in this area.			
3.Address the socio-cultural impact (to a lesser extent).			
Assessment: 30% continuous assessment, 70% from end of semester examination.			
Practical Work: Laboratory exercises with the KnowHouse simulator.			
Recommended texts:			
<i>Handbook of Ambient Intelligence and Smart Environments (AISE)</i> , Ed. by H. Nakashima, H. Aghajan and J.C. Augusto (Eds.), Springer, to be printed in 2009.			
<i>Ambient Intelligence</i> , Ed. by G. Riva, F. Vatalaro, F. Davide and, M. Alcañiz, Vol. 6., IOS Press Emerging Communication series, January 2005, 316 pp.			
Further readings: will be provided during the course			