**Digital Design – Modeling of Logic Circuits** concerns the deeper understanding of more complex digital circuits like PLAs, PALs, CLPDs and FPGAs as well as the use of VHDL language for modeling, simulation and testing of digital systems

The course aims to help students a)understand the fundamental principles of some of the most complex logic devices and b) formulate design and simulate digital circuit models with VHDL language, in order to test their correctness and functionality.

Course content

1. Programmable Logic Array

2. Programmable Array Logic

3. Complex Programmable Logic Devices

4. Field Programmable Gate Arrays

5. Concepts of VHDL language

6. Dataflow, Algorithmic, and Structural Descriptions

7. Testbenches

8. Modeling and Simulation of Basic Digital Circuits

Written final examination (60%), Programming short Projects (530%)

Course Bibliography

18548869 Ψηφιακά Συστήματα, Τύπος: Σύγγραμμα, Σουραβλάς Σταύρος Ι.,Ρουμελιώτης Μάνος, 2008, ΤΖΙΟΛΑ, ISBN: 978-960-418-155-1 18548944