Course Title	Network Cabling				
Course Code	ETECH 270				
Course Type	Compulsory				
Level	First Cycle				
Year / Semester	Second Year / Fall				
Teacher's Name	Kallinikos Tsolias				
ECTS	6	Lectures / week	1 ½	Laboratories / week	1 ½
Course Purpose and Objectives	The main objectives of the course are to: • Provide technical information and characteristics of cables and cable system components used in different applications • Educate students on cable standards and limitations • Provide the skills required to select the correct cabling for a given network architecture • Develop the skills to design, install, and test a cabling system • Provide in-class, hands-on experience on the installation, testing, and troubleshooting of cabling systems for different applications (e.g. LAN, optical fibers, telephones, etc)				
Learning Outcomes	After completion of the course students are expected to: • Make judicious choices on the type of cabling and cable components used in different network architectures • Setup an infrastructure to support a variety of communication devices (e.g., computers, printers, faxes, telephones, TVs, etc) • Integrate voice and data on the same cable system • Be aware of the characteristics and limitations of different types of cables • Install cable connectors for different types of cables • Design, install, test, and troubleshoot cable systems for a plethora of applications • Provide documentation of cabling based on standard procedures and rules				
Prerequisites	None	Required	None		
Course Content	• Cabling specifications and standards • Selection of correct cabling for a given network architecture and topology • Cable system and infrastructure constraints • Current limitations of data communications and network cabling • Laws and building codes constrain cabling • Universal cabling standards • Cabling system components • Assembly of a complete cabling toolkit • Integration of voice and data on the same cable system • Setup of an infrastructure in which laptops, printers, copiers, and other nodes share cabling				

	• Meaning of bandwidth, impedance, attenuation, crosstalk, capacitance, propagation delay, etc • Copper cable media • Wall plates and connectors • Fiber optic and wireless media • Cabling system design and installation • Cable connector installation • Cable system testing and troubleshooting • Documentation of cabling
Teaching Methodology	Lectures, in-class examples, exercises, practical.
Bibliography	<u>Compulsory</u> • Cabling: The Complete Guide to Network Wiring (2004), David Barnett, David Groth, and Jim McBee, Wiley, 3rd Edition, ISBN: 978-0-7821-4331-7 • Lecturers notes.
Assessment	Homework: 10% Participation: 10% Laboratory: 20% Mid Term: 20% Final Exam: 40%
Language	Greek