

Course syllabus for ERASMUS+ incoming students

Course Title	
Structured Cabling Systems (CobiCabling)	
Academic Teacher	Śławomir Wolski, MSc in Engineering
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ECTS credits	5
Number of hours	120
Course code	INT-IPMT-SCS-26
Course description	
Basic knowledge about structured cabling system. Structure of the computer network. What are the passive components in computer network. Speed rate of data in transmission links. Design and planning recommendation of structured cabling system. Installation practice. Testing and certification links in structured cabling system Class format: traditional (on-site), project, workshops and product presentation.	
Learning outcomes - course content	
1. Regulations, norms, standards in structured cabling system. 2. The categories and classes of cabling. 3. The differences between industry standards, structured cabling standards and application standards. 4. Copper cabling. 5. Fiber optic cabling 6. Comparison of copper and fiber optic technology. 7. Types of cabling and their applications. 8. The techniques for planning and building a structured cabling network. 9. What are the most important design recommendations 10. Installation recommendations - good installation practices. 11. Testing and certification. Knowledge 1. Possesses structured and theoretically based knowledge of the structured cabling. 2. The physical basis of operation of twisted pair cables and fiber optics cables. 3. The use of structured cabling system in computer networks.	

4. Passive components in computer network.
5. Application for cable links in structured cabling systems.
6. Designing of the structured cabling system.
7. Testing and certification.

Skills

1. Can terminate RJ-45 module.
2. Planning and designing of structured cabling system.
3. Knows how to use the cable analyzer to measure cooper links.
4. Can select equipment in structured cabling systems.

Competences

1. Can work in the team and strive to continuously develop their knowledge.
2. Finds new vocabulary for structured cabling system.
3. Designing of structured cabling system.

Student workload (self-study description)

- Taking part in classes (15 hours)
- Taking part in workshops (5 hours)
- Taking part in project (10 hours)
- Reading assigned literature, scientific articles, and case studies related to fiber optics technology (60 hours)
- Reviewing lecture materials and preparing for examinations and verification of project (30 hours),

Literature

1. James F. Kurose, Keith W. Ross, Computer Networks. A Comprehensive Approach. 5th Edition, Helion, 2011.
2. Andrew S. Tanenbaum, David J. Wetherall, Computer Networks. 5th Edition, Helion, 2012.
3. William Stallings, Data and Computer Communications. Prentice-Hall, 2007.
4. Al Anderson, Ryan Benedetti, Head First. Computer Networks. Helion, 2010.
5. Rafał Pawlak, Structured Cabling Networks. Theory and Practice. 3rd Edition, Helion, 2001.
6. CobiCabling – catalogues
7. Norms and standards PN-EN 50173, PN-EN 50174