

Internet Course & Services

Course Syllabus and Semester Requirements

2023/2024 2nd semester

Course code and name	BPI1224" Internet Course & Services
Credits:	4
Weekly hours	2+2(self learning)
Prerequisite:	-
Assessment:	Practical endterm grade
Teacher:	Attila Halasz
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1. **The objective of mastering the subject:** introducing the possibilities and tools at operation of network / internet tools and services.
2. **Course Program:** The role, usage, and implementation of current Internet tools based on application-oriented foundations. Client-server and multi-tier architectures and the Internet. Standards and protocols. Security and protection issues. Control of server-side and client-side applications.
3. **Mid-term academic requirements:** According to the distributed syllabus, (presentation of a test or practical task, participation in the practical excursion, completion of the self-learning material)
4. **Available resources for acquiring knowledge, skills, and competencies:** Electronically downloadable lecture outlines, online self-study/self-checking materials, downloadable practical tasks. Computer lab, one personal computer per student (own computer recommended).
5. **Mandatory and recommended literature:**
 - Instructor's notes:#[Internet Tools & Services - BPI1224 2023/24](#)
 - Self-learning material:# [IoT Networks, Internet Tools & Services](#)
 - Collegium: UNIX and Linux System Administration Handbook, Penguin Putnam Inc., 2017
 - Allen W. Wyatt: The Basics of the Internet, Kossuth Publishing Budapest, 1996
 - Doug Lowe: Networking for Dummies, 2015
 - Kathy Ivens: Home Networking for Dummies Candace 4th Edition, 2007
 - Leiden: TCP/IP for Dummies, 2009
 - Manjo Agarwal: Virtualization for Dummies, 2023

THEMES & SYLLABUS

Objectives - Topics : #Network basics, #network hardware devices, #network structure, network protocols. #Applications of computer networks, #Reference models#VLSM, #Network tools, #Network Services #Virtualization #Automation

Network services & Protocols:

- DHCP/DNS/WINS
- WWW
- File sharing
- FTP
- Email

Network security:

- User identification
- Firewall, proxy, IDS, VPN
- Encryption

Virtualization & Automation

- Server Virtualization
- Microservices
- Automation

IoT:

- The building blocks and basics of IoT architectures.
- The operation of IoT protocols.
- IoT hardware and software tools.

Excursion:

- Real life and best practice methods.
- Visiting the server room and ISP of the university.

Nyíregyháza, 2024.

Attila Halasz