**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: | Attilla Halasz |
| Contact Information | halasz.attila@nye.hu |

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 & Protocolls:

•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.

Excrusion:

•Real life and best pracice methods.

•Visiting the server room and ISP of the university.

Nyíregyháza, 2024.

Attila Halasz