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| **YEAR** | **CODE** | **SUBJECT** |

1 0102-104 Bazat e TIK (Bazat e Teknologjisë së Informacionit dhe Komunikimit)

**CONTENT**

This Subject covers fundamental computer and career skills for entry-level IT jobs. The subject includes hands-on labs that provide practical experience to prepare you for enterprise networking. Simulation tools help you hone your troubleshooting skills and practice what you learn.

* Develop working knowledge of how computers and mobile devices operate.
* Identify common security threats and vulnerabilities like malware, phishing, spoofing and social engineering.
* Apply skills and procedures to install, configure, and troubleshoot computers, mobile devices, and software.
* Develop critical thinking and problem-solving skills using both real equipment and Packet Tracer, a network configuration simulation tool.
* Get immediate feedback on your work through built-in quizzes and tests.

The Internet is changing life as we know it—bringing new economic and social opportunities to communities throughout the world and increasing the global demand for information and communication technology (ICT) skills. Innovations such as social networking, cloud computing, e-commerce, web conferencing, and desktop virtualization are changing the way we live, work, play, and learn. These capabilities are all powered by networks, and organizations around the world are experiencing a shortage of qualified ICT candidates to design, install, and manage these networks.

PC Hardware and Software curriculum provides an introduction to the computer hardware and software skills needed to help meet the growing demand for entry-level ICT professionals. The curriculum covers the fundamentals of PC computer technology, networking, and security, and also provides an introduction to advanced concepts.   
PC Hardware and Software is a hands-on, career-oriented e-learning solution with an emphasis on practical experience to help students develop fundamental computer skills, along with essential career skills. The Cisco® IT Essentials curriculum helps students prepare for entry-level ICT career opportunities and the CompTIA A+ certification, which helps students differentiate themselves in the marketplace to advance their careers.

PC Hardware and Software provides a comprehensive introduction to the ICT industry and interactive, hands-on exposure to personal computers, hardware, software, and operating systems. The curriculum offers the following features and benefits:

• Students develop working knowledge of how computers operate, how to assemble computers, and how to troubleshoot hardware and software issues

• Hands-on labs and virtual learning tools help students develop critical thinking and complex   
problem-solving skills

• The subject emphasizes the practical application of skills and procedures needed for hardware and software installations, upgrades, and troubleshooting systems

• Expanded mobile device hardware and software configuration and diagnostic and common security threats and vulnerabilities like malware, phishing, spoofing and social engineering.

• Cisco Packet Tracer simulation-based learning activities promote the exploration of networking and network security concepts and allow students to experiment with network behavior

• Interactive assessments provide immediate feedback to support the evaluation of knowledge and acquired skills

Innovative formative and summative assessments are integrated into the curriculum and supported by an advanced online delivery system. Immediate, rich feedback supports instructor and student evaluation of acquired knowledge and skills. Assessments can be as simple as a multiple-choice question or as complex as troubleshooting a simulated network.

This subject covers the fundamentals of PC hardware and software as well as advanced concepts. It is designed for students who want to pursue careers in ICT and students who want to gain practical knowledge of how a computer works.

Students who complete this subject will be able to describe the internal components of a computer, assemble a computer system, install an operating system, and troubleshoot using system tools and diagnostic software. Students will also be able to connect to the Internet and share resources in a network environment. Additional topics covered include laptops and portable devices, wireless connectivity and basic implementation skills, Voice over Internet Protocol (VoIP), security, safety and environmental issues, applied network configuration and troubleshooting skills, and communication skills.

Hands-on lab activities and virtual learning tools are essential elements that are integrated into the curriculum. The Virtual Laptop and Virtual Desktop are standalone tools that enable students to virtually disassemble and reassemble desktop and laptop computers. Both tools are designed to supplement classroom learning and provide an interactive “hands-on” experience in environments with limited physical equipment.

PURPOSE

Ky modul ka për qëllim të shërbej si hyrje në arkitekturën, strukturën, funksionet, komponentët dhe modelet e rrjetave kompjuterike duke ofruar konceptet themelore të kësaj teknologjie

KOHËZGJATJA E MODULIT

Moduli ka shtrirje kohore pre 15 javësh dhe organizohet dy deri ne tre herë në javë me nga dy orë mësimore. Ne total moduli ka 80 ore ligjëratë dhe kontakt te drejtpërdrejtë me kandidatin.

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| **Kontributi nё ngarkesёn e studentit** | | | |
| **Aktiviteti** | **Orë** | **Ditë/javë** | **Gjithsej** |
| Ligjërata | 2 | 15 javë | 30 orë |
| Ushtrime teorike/laboratorike | 2 | 15 javë | 30 orë |
| Quize | 30 min | 15 javë | 7.5 orë |
| Detyrat | 30 min | 15 javë | 7.5 orë |
| Provimi Final | 2 | 3 javë | 6 orë |
| **Total orë** |  |  | **81 orë** |
| Konsultimet me mësimdhënësin | Sipas nevojës dhe gjatë takimeve në klasë. | | |
| Përforcim i njohurive dhe shkathtësive në vendin e punës | 4 | 15 javë | 60 orë |
|  | | | |

REZULTATET E PRITURA

Upon completion of the subject, students will be able to perform the following tasks:

• Select the appropriate computer components to build, repair, or upgrade personal computers.

• Explain how to correctly use tools and safely work in a lab.

• Install components to build, repair, or upgrade personal computers.

• Explain how to perform preventive maintenance and troubleshooting on personal computers.

• Install Windows operation systems.

• Perform management and maintenance of Windows operating systems.

• Configure computers to communicate on a network.

• Configure devices to connect to the Internet and Cloud services.

• Explain how to use, configure, and manage laptops and mobile devices.

• Explain how to configure, secure and troubleshoot mobile, OS X, and Linux operating systems.

• Install and share a printer to meet requirements

• Implement basic host, data, and network security.

METODAT MËSIMORE

Vlerësimi në këtë lëndë është dizajnuar në atë mënyrë që gjatë gjithë semestrit të kërkojë angazhim nga studentët dhe përgatitje paraprake (lexim) para ardhjes në ligjërata dhe ushtrime.

Pjesëmarrja në të gjitha aktivitetet në klasë është e obliguar për të qenë në hap të duhur me zhvillimin e mësimit.

Ligjërata, ushtrime dhe demonstrime, pune praktike, pune laboratorike, instalime dhe konfigurime, virtualizim, teste teorike dhe praktike, aktivitete, detyra, dhe seminare me prezantime.

VLERËSIMI

Pjesëmarrja dhe aktiviteti në klasë 10%

Rezultatet e testeve të kapitujve nga NetAcad 40%

Provimi final me shkrim 25%

Provimi final i shkathtësive 25%

Llogaritja e notës në numër bëhet si më poshtë:

91 - 100% - A ose10

81 - 90% - B ose 9

71 - 80% - C ose 8

61 – 70% - D ose 7

51 – 60% - E ose 6

0 – 50% - F ose 5, nuk është notë kaluese.

PJESA TEORIKE DHE PRAKTIKE E MESIMDHENIES

Pjesa teorike përbëhet nga ligjërata dhe diskutime e cila konkretizohet duke praktikuar detyrat laboratorike për temën që shtjellohet nën mentorimin e vazhdueshëm të mësimdhënësit.

MJETET E KONKRETIZIMIT

Harduer:

1. Kompjuter për secilin student në klasë
2. Paisje te rrjetit dhe vegla te ndryshme per pune praktike
3. Projektori në klasë
4. Altoparlanta

Softuer:

1. Word, Excel, PowerPoint, OneNote, Outlook ose Emaill llogari/Email Account te studentit, PDF.
2. Sisteme te ndryshme Operative
   1. Windows 7, 8, 10
   2. Microsoft Windows Server 2012 dhe Microsoft Windows Server 2016
   3. Hyper-V dhe VMware per virtualizim
   4. Linux OS
   5. Android dhe IOS

Aplikacione te sigurisë, Software Firewall dhe aplikacione e solucione Anti-Virus.

LITERATURA

1. Cisco Networking Academy (Cisco NetAcad), Moduli: IT Essentials: PC Hardware and Software ([www.netacad.com](http://www.netacad.com)), IT Essentials online curriculum
2. CompTIA A+ 220-901 and 220-902 Certification Study Guides (<https://certification.comptia.org/training/self-study/books/a-220-901-220-902-study-guide#tab2>)
3. IT Essentials: PC Hardware and Software Training Videos (Cisco NetAcad)
4. Cisco NetAcad Online Account - IT Essentials online curriculum Subject Materials
5. Certification Exam: CompTIA A+ Exam <https://certification.comptia.org/certifications/a>
   1. CompTIA A+ 220-901 covers PC hardware and peripherals, mobile device hardware, networking and troubleshooting hardware and network connectivity issues.
   2. CompTIA A+ 220-902 covers installing and configuring operating systems including Windows, iOS, Android, Apple OS X and Linux. It also addresses security, the fundamentals of cloud computing and operational procedures.