

Fall 2017 Workshop UIU CISCO Networking Academy

Workshop on “Networking in a Day”

Date: Thursday, November 30, 2017

Time: 10 am to 4 pm

Fees: UIU Students: Taka 250/=

Non-UIU Students: Taka 350/=

Why this workshop?

- ✓ To provide hands-on networking basics using a live in-classroom network. Students will learn about network protocols (including a close-up look at TCP/IP), network devices like hubs, switches, routers, firewalls, repeaters, gateways, and more. This hands-on networking fundamentals workshop will give students knowledge with practical tools and techniques that will enable them to create their own network and share resources in a secured way.

Target Audience

- ✓ Beginners with little or no prior knowledge of networking
- ✓ Students, who already had done some basic network activities like setting IP address before, but do not have clear concepts of TCP/IP and network protocols needed to do some advanced settings

What will be covered?

- ✓ Basic concepts and terminologies of computer networks (Video and lecture)
- ✓ Layering Models – OSI, TCP/IP (Video/Animation)
- ✓ Hands-on: Introduction to network devices (Hubs, Switches, Routers, Wireless AP, Firewalls)
- ✓ Hands-on: Introduction to IP and MAC addresses used in network devices
- ✓ Hands-on: Create a small network and extend the network with Wi-Fi
- ✓ Hands-on: File sharing and home server creation in Windows
- ✓ Introduction to future/upcoming networks with video demonstration (Wi-Fi Direct, Mobile LTE – 4G/5G, Internet of Things (IoT), Smart home, Intelligent Transportation System (ITS), Network Security etc.)



Fall 2017 Workshop UIU CISCO Networking Academy

Workshop on “Creating Your First IoT-based System”

Date: Saturday, December 2, 2017

Time: 10 am to 4 pm

Fees: UIU Students: Taka 600/=

Non-UIU Students: Taka 700/=

UIU Cisco Academy Students: Taka 500/=

Why this workshop?

- ✓ Have you ever thought of controlling appliances at home while watching TV and without getting up from the bed? Or, are you fed up of looking for that misplaced remote? Do you want to secure your home and have a surveillance watch from any device, anywhere in the world? With the introduction of Internet of Things (IoT), even the dumb machines can be connected to the Internet so that it can be controlled using smartphone apps from a remote place! This workshop will provide a strong background knowledge and hands-on experience that will enable the participants to build an IoT-based system from scratch.

Target Audience

- ✓ There are no prerequisites for joining this workshop. Anyone interested, can join this workshop. While a basic networking concepts and some C/Python Programming would be helpful, it is not compulsory.
- ✓ Any science or engineering student, who have basic programming knowledge (like c or any other programming) and have basic computer skills like using computer applications, smartphone applications and Internet (web browsing and e-mail).
- ✓ Student from Electronics, Electrical, Instrumentation, CS/IT any branch student can attend this workshop.

What will be covered?

- ✓ Introduction to Internet of Things (Basic Components and IoT Architecture)
- ✓ Introduction to some potential IoT Applications in near future (Home Automation, Smart City, Intelligent Transportation System, Smart Healthcare, Industrial IoT etc.)
- ✓ Introduction to Micro-controller and Single-board Computer – Arduino, Raspberry PI
- ✓ **Simulation platform (Cisco Packet Tracer 7.1)**
 - **Hands-on:** Simple Devices Program Using IoT Device
 - **Hands-on:** Interface IoT Device into IoT gateway Server
 - **Hands-on:** Control Devices Using IoT Device & IoT gateway Server
 - **Hands-on:** Control Devices over Ethernet Using IoT Device/gateway
 - **Hands-on:** Read Sensors & Control Devices Using IoT Device over Ethernet
 - **Hands-on:** Control Home Appliance control Using IoT gateway Server
- ✓ **Hardware platform(Raspberry pi, Arduino, Raspbian OS & PL-App)**
 - Introduction to Raspberry pi & Raspbian OS
 - Introduction to Cisco PL App & Jupyter Notebooks
 - **Hands-on Project-1:** Create a simple IoT Real-Time Project using Raspberry pi & PL-App
 - **Hands-on Project-2:** Read/Write Devices Data using Local IoT gateway Server for Home Automation Using Raspberry pi, Arduino & PL-App



Fall 2017 Workshop UIU CISCO Networking Academy

Workshop on “C Programming – How Cisco Academy Can Help You”

Date: Thursday, December 7, 2017

Time: 10 am to 4 pm

Fees: UIU Students: Taka 250/=

Non-UIU Students: Taka 350/=

Why this workshop?

- ✓ To introduce C programming concepts to the students in an easier way and to present how Cisco Academy can help students to learn programming skills with useful resources and course materials

Target Audience

- ✓ Beginners with little or no prior knowledge of programming
- ✓ Students, who already had a programming course before, but failed to get a good grasp of the concepts in an easy way

What will be covered?

- ✓ Basic concepts of computer programming
- ✓ Input/output
- ✓ Variables, Data Types and Operators
- ✓ Control Statements and Loops
- ✓ Functions

****There will be a series of workshops to follow to cover intermediate to advanced concepts in C programming.**

