



# UNIVERSITÀ DEGLI STUDI DELL'AQUILA

## CORSI DI INGEGNERIA

**A.A. 2018/2019**

**Advanced and software defined networks ( I4T )**

**- Pratesi Marco -**

(Aggiornato il 25-09-2018)

### **Contenuti del corso (abstract del programma):**

Data-link level security methods. Spanning-Tree Protocol (STP) and its derivatives. Virtual LANs (VLAN). Inter-VLAN routing. Basic concept and configuration of Wireless LANs (WLAN) based on IEEE 802.11. IGP routing protocols: RIP, EIGRP, OSPF. WAN protocols: xDSL, PON FTTx, Frame Relay, ATM, MPLS. Metro Ethernet networks. Convergence of the traditional phone network on the IP network. 4G mobile networks and evolution toward 5G. Basics of vehicular ad-hoc networks (VANET). Basics of Software Defined Networks (SDN) and Network Function Virtualization (NFV).

### **Programma esteso:**

Data-link level security methods. Spanning-Tree Protocol (STP) and its derivatives. Virtual LANs (VLAN). Inter-VLAN routing. Basic concept and configuration of Wireless LANs (WLAN) based on IEEE 802.11. IGP routing protocols: RIP, EIGRP, OSPF. WAN protocols: xDSL, PON FTTx, Frame Relay, ATM, MPLS. Metro Ethernet networks. Convergence of the traditional phone network on the IP network. 4G mobile networks and evolution toward 5G. Basics of vehicular ad-hoc networks (VANET). Basics of Software Defined Networks (SDN) and Network Function Virtualization (NFV).

### **Modalità d'esame:**

Oral exam.

### **Risultati d'apprendimento previsti:**

Knowledge of technologies used in existing and upcoming telecommunications networks.

### **Testi di riferimento:**

Nessuno