

**Course Outline for CS 798-1: Network Softwarization: Principles and Foundations (Short title: Network Softwarization Foundations)**

Part 1: Software-Defined Networking Principles and Design

- Introduction to SDN
- SDN Data, Control Planes, and APIs
- Network Virtualization

Part 2: Cloud Computing, Network Function Virtualization and Orchestration

- Introduction to Cloud Computing
- Programmable Networks
- Network Function Virtualization

Part 3: 5G and Internet of Things

- IoT, Smart Cities, and 5G Use Cases
- 5G Network Architecture
- 5G Fronthaul

Part 4: Sustainable Management of Clouds and Networks

- Energy efficient and sustainable management
- Data Analytics

Part 5: Optical WAN and Radio Access

- Optical Network Trends