CS 513: SOFTWARE DEFINED NETWORKING (3-0-0: 3)

History and evolution of SDN

Control and data plane separation: Distributed and centralized control plane, Openflow, Openflow controllers

Virtual networking

Programming SDNs

Applications of SDN: Data center concepts and constructs, SDX, Home networks etc.

Network topology and topological information extraction,

Building an SDN framework,

Use cases for bandwidth scheduling, manipulation and calendaring,

Use Cases for Data Center Overlays, Big Data, and Network Function Virtualization, Input traffic classification and triggered actions.

Text Books and References

1. Thomas D. Nadeau, Ken Gray, SDN: Software Defined Networks, An Authoritative Review of Network Programmability Technologies, O'Reilly media
2. Rajesh Kumar Sundararajan, Software Defined Networking (SDN) - a definitive guide, Kloudspan Press
3. Vishal Shukla, Introduction to Software Defined Networking – OpenFlow & VxLAN, Create Space Independent Publishing Platform
4. Siamak Azodolmolky, Software Defined Networking with OpenFlow, O'Reilly media