A. COURSE DESCRIPTION

Credits: 3
Lecture Hours/Week: 2
Lab Hours/Week: 2
OJT Hours/Week: *
Prerequisites: None
Corequisites: None
MnTC Goals: None

This is an introductory course for telecommunications and covers the infrastructure of a telephony environment including legacy, core, and digital technologies. Students gain understanding of how the private and public telecommunications networks interact to provide phone service. Hands-on activities include building a digital switch, phone installation, voice mail and feature configurations. Students also enable soft phones that transform their laptop computers and smart phones into a voice terminal.

B. COURSE EFFECTIVE DATES: 08/25/2014 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Build a software private branch exchange (softPBX) telephone switch.
2. Configure Internet protocol (IP) phones.
3. Ensure quality of service (QoS).
4. Standards and compliance.
5. Topological considerations.
6. Coordinating a complete system switchover.
7. Migrating applications like voicemail and directory services.
8. Retro-interfacing with traditional telephony.
9. Supporting mobile users.
10. Security and survivability.
11. Building the network infrastructure for voice over Internet protocol (VoIP).
12. Traditional apps on the converged network.

D. LEARNING OUTCOMES (General)

1. The learner will be able to describe the wiring infrastructure for an analog, digital, and converged telephone network.
2. The learner will understand the physical components of an enterprise telephone system and the services it provides.
3. The learner will understand how call routing is managed.
4. The learner will understand setup, configuration, and commands for an enterprise telephony system to provide services to end-users.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None
F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted