Course Description
INFX 546 – Networking Technology

INFX 546 – Networking Technology (4Cr): Theory, terminology, concepts and best practices involved with the technologies found in modern converged networks based on the foundation covered in INFX 504. Each technology will be viewed from the perspective of purpose, user access, organizational fit, mission alignment, as well as security and privacy issues. Prerequisite: INFX 504

Subtitle: Networking Technology for Managers.

This course looks in greater depth at the technologies introduced in INFX 504. In looking at each technology and its requirements, the focus will be determining suitability based meeting defined requirements, user access, organizational fit, mission alignment, as well as security and privacy issues.

There will be presentations on some technologies at a higher level and there will be hands on exercises to demonstrate some fundamentals. The goal is to go only as deep as necessary to help you become a knowledgeable leader who can understand the impact of network and security technologies, participate in planning, make decisions and work comfortably with staff and consultants.

This course will explore how the various Internet and enterprise networking technologies are implemented, how they work, and any accommodations required of the existing network. While not requiring a high level of computer experience, the course assumes students have a basic familiarity with the skills and concepts covered in INFX 504.

When appropriate the module readings and discussions will also look at current events as well as the impacts on the individual and organization of the featured technologies. We will also look at the impact of Globalization on technology resources and planning.

Degree Programs
- Masters of Library and Information Science
- Masters of Science in Information Management

Course Justification

To develop a working understanding of the concepts, terminology and technologies found in modern converged networks. Each technology will be evaluated for organizational fit, user access, mission alignment, return on investment as well as any security or privacy issues. The course prepares students for leadership roles in evaluating and making decisions about network technologies being considered by the organization.

Course Format

This course can be offered either as an online or residence course. The course is composed of hands-on skills labs using the textbook, discussion boards, and iPeer assignment feedback. The course will include hands-on exercises using a network simulator. The course is Four (4) Credits.

Course Objectives

Upon completion of the course, the student will be able to:

- Use basic network terminology
- Know the types of networks used today
- Be familiar with the devices that make up our network
- Understand basic configuration of those devices
- Recognize network Standards and Standards Organizations
- Understand the similarities and differences in OSI vs TCP/IP
- Work with protocols including Internet Protocols

Course Syllabus (from Canvas)
Each week will cover one module. The module week runs from Monday through Sunday with all "Module" assignments to be sent to your iPeer (reviewing partner) by Tuesday night of the week following. These assignments should be reviewed and returned three days later by Friday night.

Readings, videos, lectures and any discussion topics assigned will be posted on the Monday that the module starts on the Web page. Some assignments will have solutions sets.

<table>
<thead>
<tr>
<th>Module</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module 1</td>
<td>Networking Fundamentals and Standards</td>
</tr>
<tr>
<td>Module 2</td>
<td>IPv4 Addressing and Subnet Masks</td>
</tr>
<tr>
<td>Module 3</td>
<td>Switching: Moving Data Inside Your LAN</td>
</tr>
<tr>
<td>Module 4</td>
<td>Configuring Switches - Basic Device Configuration</td>
</tr>
<tr>
<td>Module 5</td>
<td>VLANs and Switch Port Security</td>
</tr>
<tr>
<td>Module 6</td>
<td>Routing Essentials and Routing Protocols</td>
</tr>
<tr>
<td>Module 7</td>
<td>Basic Router Configuration</td>
</tr>
<tr>
<td>Module 8</td>
<td>Open Shortest Path First (OSPF) Routing</td>
</tr>
<tr>
<td>Module 9</td>
<td>IP Services and Access Control Lists</td>
</tr>
<tr>
<td>Module 10</td>
<td>IPv6 Introduction and Wrap Up</td>
</tr>
</tbody>
</table>

Assessment
Each week will have one or more assignments to be completed. There may be a comprehensive final project developed throughout the course.

Suggested Readings
CCENT Cisco Certified Entry Networking Technician ICND1 Study Guide (Exam 100-101) with Boson NetSim Limited Edition
by Bob Larson, Matt Walker
Publisher: McGraw-Hill Osborne Media - Certification Press
ISBN-10: 0071838392
Publish date: September 19, 2014, 2nd edition

Note: Neither the 1st edition nor used versions will work for this class. This book has a network simulator that requires registering online that will be used in the course for all assignments. There is no way to do the assignments without it. The full version of the simulator is $99-$149.

Selected Web-based readings and documents are assigned to supplement the material and technologies presented during the lectures.