Purpose: It is the intention of this Administrative-Master Syllabus to provide a general description of the course, outline the required elements of the course and to lay the foundation for course assessment for the improvement of student learning, as specified by the faculty of Wharton County Junior College, regardless of who teaches the course, the timeframe by which it is instructed, or the instructional method by which the course is delivered. It is not intended to restrict the manner by which an individual faculty member teaches the course but to be an administrative tool to aid in the improvement of instruction.

Course Title - Implementing Mail Servers  
Course Prefix and Number - ITNW 2311  
Department - Computer Science  
Division - Tech & Bus

Course Type: (check one)
- Academic General Education Course (from ACGM - but not in WCJC Core)
- Academic WCJC Core Course
- WECM course (This course is a Special Topics or Unique Needs Course:  Yes □ No □)

Semester Credit Hours #: Lecture hours#: Lab/other hours #  3:2:2

Equated Pay hours for course - 3

Course Catalog Description - Install and configure mail servers and connectivity to other mail systems; synchronize directory information between mail systems; configure security; manage private information stores; and optimize site-to-site connections.

Prerequisites/Corequisites - ITNW 2305

Approvals - the contents of this document have been reviewed and are found to be accurate.

Prepared by Stephanie Dees  
Signature:  
Date 11/23/2009

Department Head Stephanie Dees  
Signature:  
Date 11/23/2009

Division Chair Stephanie Dees  
Signature:  
Date 11/23/2009

Vice President of Instruction or Dean of Vocational Instruction  
Signature:  
Date 12-1-09
I. Topical Outline – Each offering of this course must include the following topics (be sure to include information regarding lab, practicum, and clinical or other non lecture instruction):

- Introduction to Mail servers
  - Install Windows Server Enterprise operating system
  - Configure static IP address on server
  - Install Active Directory
  - Install IIS (Internet Information Services)
- Differences in Exchange Server Editions
- Installing and Configuring Mail servers
  - Install Windows Server Services Required for Mail servers
    - ASP.Net
    - NNTP Service and SMTP Service
    - Run ForestPrep to prepare Active Director for installation of Mail servers
    - Run DomainPrep to prepare domain for installation of Mail servers
  - Install Mail servers
- Review Exchange tools found in Microsoft Exchange group under All Programs on Start menu.
  - Exchange System Manager
  - Active Directory Users and Computers
- Explore Exchange-Related Changes to Active Directory Users and Computers (extra tabs)
- Create custom MMC to include Exchange System Manager and Active Directory Users and Computers
- Switch Mail servers to native mode
- Configure Global Settings
  - Internet Message Formats
  - Message Deliver
  - Mobile Services
- Configure DNS to support Mail servers Internet E-mail
- Managing Recipients
  - Create Mailbox-enabled users
  - Create Mail-enabled groups
  - Create mail-enabled contacts and add to a distribution group
  - Create a query-based distribution group
  - Configure e-mail address and exchange general settings
  - Configure Exchange feature settings
  - Create and Apply Recipient Policies
- Configuring Outlook and Outlook Web Access
  - Install Outlook
  - Configure user Access to an Exchange Server using Outlook
  - Connect to Exchange Server using IMAP4
  - Install Server Certificate
  - Test SSL-Secured Outlook Web Access Connection
  - Enable Forms-based Authentication
- Managing Addresses
  - Create Address List
  - Assign Permissions to Address List
  - Configure Clients to make use of custom address list
  - Configure Offline Address list
  - Configure Clients to make use of Offline address list
  - Create E-mail Address Recipient Policy
  - Create exception to E-mail Address Recipient Policy
• Create Mailbox Manager Policy
  • Schedule E-mail Address Recipient Policy Updates

• Public Folders
  • Create and configure public folders
  • Set Client permissions
  • Set Directory Rights and designate Administrators
  • Manage public folder replication and referrals
  • Troubleshoot public folders

• Configuring and Managing Exchange Server
  • Create and manage Administrative groups
  • Create Routing group
  • Configure and Manage Virtual server
  • Configure and Manage Virtual directories

• Configuring and Managing Exchange Server (STMP)
  • Create and Configure SMTP Virtual Servers
  • Install and configure Routing Group connectors
  • Install and configure STMP connectors

• Managing Data Storage and Hardware Resources
  • Create additional storage groups
  • Create additional mailbox store
  • Create full-text indexes
  • Schedule index updates and allow index searching

• Securing Mail server
  • Configure security tab within Exchange System Manager and assign permissions
  • Block inheritance
  • Install Certificate Services
  • Configure POP3 Server SSL/TLC Encryption
  • Send encrypted and digitally signed e-mail between two Outlook e-mail clients

• Backup and Recovery of Mail server
  • Plan for disaster recovery
  • Backup Mail server
  • Restore failed Mail Server
  • Restore a corrupted Mail Server store
  • Restore a Mail mailbox or message

• Troubleshooting Connectivity
  • Access Queue Viewer
  • Enable Protocol Loggings
  • Enable and use Message Tracking
  • Use WinRoute to view information about current Exchange Server
  • Use telnet to test SMTP connectivity
  • Research NDR diagnostic codes

• Monitoring and Troubleshooting the Server
  • Configure Service monitoring, SMTP Queue monitoring, CPU Utilization monitoring
  • Configure free disk space monitoring, virtual memory monitoring
  • Use ESEUTIL to check integrity of database, to perform offline defragmentation, and to recover and repair a database
  • Use ISINTEG to check integrity of a database
  • Use RPC Ping to test connectivity

• Discuss upgrading to Mail servers

*Instructional Methods:*
  Lecture
  Individual Written and Hands-on Lab Assignments
  Exams
II. Course Learning Outcomes

<table>
<thead>
<tr>
<th>Course Learning Outcome</th>
<th>Method of Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan, install, configure, and administer an email server</td>
<td>Assessed in ITNW 2335 - Group Capstone Project. At least 75% of students will score C or higher, grading based on rubric</td>
</tr>
<tr>
<td>Identify, implement, and document an appropriate backup and recovery plan</td>
<td></td>
</tr>
</tbody>
</table>

III. Required Text(s), Optional Text(s) and/or Materials to be supplied by Student.

<table>
<thead>
<tr>
<th>Required Text(s), Optional Text(s) and/or Materials to be supplied by Student.</th>
<th>Author(s)</th>
<th>Publisher</th>
<th>ISBN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft Exchange Server 2007 Unleashed</td>
<td>Rand Morimoto, Michael Noel, Andrew Abbate, Chris Amaris, Mark Weinhardt</td>
<td>SAMS Publishing</td>
<td>978-0-672-32920-3</td>
</tr>
</tbody>
</table>

IV. Suggested Course Maximum - 15

V. List any specific spatial or physical requirements beyond a typical classroom required to teach the course.

- Microsoft Windows Server Enterprise Edition software licensed for each student (evaluation version is appropriate)
- Microsoft Exchange Server Enterprise Edition software licensed for each student (evaluation version is appropriate)
- Norton Antivirus software licensed for each student
- Computer (including monitors, mice, keyboards) not in use by any other class for each student
- Printer
- Network device (hub or switch) and cables
- Internet Access

VI. Course Requirements/Grading System – Describe any course specific requirements such as research papers or reading assignments and the generalized grading format for the course

Tests and Comprehensive Final Exam (partial multiple choice, fill in the blank, etc. with a hands-on component)
Weekly Short Answer and Hands-on Lab Assignments

10% - Attendance and Participation
40% - Lab Assignments
50% - Tests

VII. Curriculum Checklist

☐ - Academic General Education Course (from ACGM – but not in WCJC Core)
   No additional documentation needed

☐ - Academic WCJC Core Course
   Attach the Core Curriculum Checklist, including the following:
   • Basic Intellectual Competencies
   • Perspectives
   • Exemplary Educational Objectives

☒ - WECM Courses
   If needed, revise the Program SCANS Matrix & Competencies Checklist.