The University Of Montana - Missoula  
Department of Applied Computing and Electronics  
Course Syllabus

**ITS 210 Network Operating Systems - Desktop**  
Credits: 3  
Prerequisites: ITS 150 Cisco Networking I  
Syllabus Last Revised: August 2014

**Faculty Contact**  
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Phone: 406.243.7814  
Office Hours: MTWR 10:30-11:30  
Office Location: Missoula College Campus - Griz House 8

**Meetings**  
Classroom Meetings: MR 9-10 HB04  
Lab Meetings: T 8-10 HB04  
Final Exam Meeting: Wednesday, December 10, 10:10-12:00 HB04

**Course Description**  
The class provides an in-depth study of a secure, multi-user, client-based network operating system. Topics include installation, administration of resources, performance, network services, and security.

**Course Overview**  
Network Operating Systems - Desktop builds upon material introduced in CRT 112 Operating Systems Fundamentals and ITS 150 Networking Basics. Foundational concepts involving operating system installation, configuration, management, administration, security, and optimization are examined using Windows 7. The course combines classroom-based activities with instructor-led lab exercises. The lab component of the course is intended to provide students the opportunity to apply technologies commonly used by professionals in the I.T. field. Objectives from the course provide contemporary skills in computer support applicable to all professional fields.

**Learner Outcomes**  
- Install a secure, multi-user, client-based network operating system. (Chapters 2 and 3)  
- Implement and administer operating system resources. (Chapters 4 and 6)  
- Understand and implement share and NTFS permissions. (Chapters 4 and 6)  
- Configure and troubleshoot workstation performance measurement/monitoring. (Chapter 8)  
- Implement, monitor, and troubleshoot operating system security. (Chapters 7 and 10)  
- Understand, configure, and troubleshoot network connectivity. (Chapters 5 and 9)

**Required Textbook Bundle**  
There are two choices for the textbook. PLEASE ONLY CHOOSE ONE:

- Hard Copy with MOAC Online Labs  

- OR

  eText with Digital Content and MOAC Online Labs  
Other Materials
*Virtual PC Virtualization Software* (free download from Microsoft Corp. for Windows XP Users)
USB 2.0 Thumb Drive or Electronic Storage Drive (minimum 8 GB)

Course Supplement
An electronic supplement for the course will be delivered using the University’s Learning Management System - *Moodle* found at [http://umonline.umt.edu](http://umonline.umt.edu).

Evaluation Procedures
Grades will be weighted and assessed as follows:

<table>
<thead>
<tr>
<th>Assessment Area</th>
<th>Weighting</th>
<th>Grading Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Reports &amp; Quizzes</td>
<td>30%</td>
<td>90-100%</td>
</tr>
<tr>
<td>Review Questions &amp; Research</td>
<td>10%</td>
<td>80-89%</td>
</tr>
<tr>
<td>Written &amp; Skills Exams</td>
<td>35%</td>
<td>70-79%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>25%</td>
<td>60-69%</td>
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</table>

Lab Reports & Quizzes
Labs provide students “hands-on” experience in installing, deploying, configuring and managing the *Windows 7* operating system. The virtualization technologies revolutionizing the IT industry also serve as great teaching tools. The MOAC curriculum includes a lab manual and virtual labs hosted on Microsoft servers. We’ll also deploy virtual machines on the Windows 7 desktop through the use of Microsoft Virtual PC software. Virtual PC software is built into Windows 7 Professional O.S. and is freely downloadable for the Windows XP platform.

Lab attendance is mandatory. A short quiz will be given at the start of each lab session. **Quizzes must be completed within the first 20 minutes of the lab meeting. NO MAKEUP or LATE Quizzes will be accepted.** A short lab report will be required upon completion of each lab.

Review Questions & Research Assignments
Each unit will conclude with a set of review questions to assist students in preparing for written exams. Short (one page) research assignments will be assigned periodically

Written & Skills Exams
The tentative schedule includes three unit-level written exams and two skill-based exams for the semester. Skill-based exams will require the student to complete a series of tactile activities using virtual machines and the Windows 7 O.S.

Final Exam
A comprehensive final exam is required for this course. It will be assessed on 8-10am on Friday, December 16th.

Academic Conduct
Academic honesty is expected of all students. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code. The Code is available for review online at: [http://www.umt.edu/vpsa/policies/student_conduct.php](http://www.umt.edu/vpsa/policies/student_conduct.php)

Using the Web to research materials and concepts is an integral part of learning in the twenty-first century. Studying with other students is a productive method of learning. A certain amount of collaborating on concepts with other students and using resources found on the Internet in an assignment is recommended. Copy and paste is not acceptable. It is expected that each student will input his/her assignment into the computer, and each student must be able to explain any assignment turned in. Collaboration on exams is strictly forbidden.

Dropping and Adding Courses or Changing Sections, Grading or Credit Status
University Policy for dropping courses or requesting grading/credit status changes can be found in the catalog: [http://www.umt.edu/uac/adddrop.php](http://www.umt.edu/uac/adddrop.php) Students should become familiar with all academic policies found in the catalog.
Accommodations for Students with Disabilities
Students with disabilities will receive reasonable accommodations in this online course. To request course modifications, please contact the instructor as soon as possible. You may be required to show proof of eligibility from UM Disability Services. For more information, visit the Disability Services website at http://www.umt.edu/dss/ or call 406.243.2243

Proposed Topic Outline (subject to change)

I. Overview, Installation, and Deployment
   - Chapter 1: Introducing Windows 7
   - Chapter 2: Installing Windows 7
   - Chapter 3: Deploying Windows 7

II. Workstation and Network Resources
   - Chapter 4: Working with Disks and Devices
   - Chapter 5: Connecting to a Network
   - Chapter 6: Sharing Resources
   - Chapter 7: Working with Applications

III. Performance, User Account Control, and Security
   - Chapter 8: Managing and Monitoring Windows 7 Performance
   - Chapter 9: Working with Domains and Workgroups
   - Chapter 10: Securing Windows 7

IV. Administration and Mobile Support
   - Chapter 11 Administering Windows 7
   - Chapter 12 Using Mobile Computers
## Proposed Course Calendar (subject to change)

<table>
<thead>
<tr>
<th>Week</th>
<th>Monday</th>
<th>Thursday</th>
<th>Tuesday Lab Topic</th>
<th>MOAC Labs</th>
<th>Special Notes</th>
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</thead>
<tbody>
<tr>
<td>25-Aug</td>
<td>1.1 Introduction</td>
<td>1.2 Upgrade Paths</td>
<td>Upgrades &amp; Migrations</td>
<td>Lab 1 &amp; 2</td>
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<tr>
<td>1-Sep</td>
<td><strong>Labor Day Holiday</strong></td>
<td>1.3 Installation &amp; Boot</td>
<td>Installations</td>
<td>Lab 3</td>
<td></td>
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<tr>
<td>8-Sep</td>
<td>1.4 Installation, Migration, Upgrade</td>
<td>1.5 Deployment Strategies</td>
<td>Imaging</td>
<td>Lab 4 &amp; 5</td>
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<tr>
<td>15-Sep</td>
<td>1.6 Imaging Strategies</td>
<td>Review &amp; 2.1 Working with Disks</td>
<td>Working with Disks</td>
<td>Lab 6</td>
<td></td>
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<tr>
<td>22-Sep</td>
<td>Written Exam 1</td>
<td>2.2 VHDs, Devices, and Drivers</td>
<td>Virtualization</td>
<td>N/A</td>
<td>Written Exam 1</td>
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<td>29-Sep</td>
<td>2.3 Networking Basics</td>
<td>2.4 Connecting to a Network</td>
<td>Configuring Networking Connections</td>
<td>Lab 7</td>
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<tr>
<td>6-Oct</td>
<td>2.5 Managing Permissions</td>
<td>2.6 Sharing Files &amp; Folders</td>
<td>Permissions &amp; Sharing</td>
<td>Lab 8</td>
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<td>13-Oct</td>
<td>2.7 Working with Printers</td>
<td>Written Exam 2</td>
<td>Printers</td>
<td>Lab 9</td>
<td>Written Exam 2</td>
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<tr>
<td>20-Oct</td>
<td>3.1 Working with Applications</td>
<td>3.2 O.S. Updating</td>
<td>Configuring Applications &amp; Performance</td>
<td>Lab 10 &amp; 11</td>
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<td>27-Oct</td>
<td>3.3 Monitoring &amp; Managing Performance</td>
<td>3.4 Active Directory</td>
<td>Workgroups &amp; Domains</td>
<td>Lab 12</td>
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<td>3-Nov</td>
<td>3.5 Users and Groups</td>
<td>Lab: Remote Administration &amp; Review</td>
<td><strong>Election Day Holiday</strong></td>
<td>Lab 14</td>
<td>Lab Mtg - R 8:00-10:00</td>
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<td>10-Nov</td>
<td>Written Exam 3</td>
<td>4.1 OS Security</td>
<td><strong>Veteran’s Day Holiday</strong></td>
<td>No Lab</td>
<td>Written Exam 3</td>
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<td>17-Nov</td>
<td>4.2 OS Security</td>
<td>4.3 Troubleshooting</td>
<td>Configuring Security</td>
<td>Lab 13</td>
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<td>24-Nov</td>
<td>4.4 Mobile Computing</td>
<td><strong>Thanksgiving Break</strong></td>
<td>Backups &amp; Troubleshooting</td>
<td>Lab 15 &amp; 18</td>
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<td>1-Dec</td>
<td>TBA</td>
<td>Review</td>
<td>Working with Mobile Devices</td>
<td>Lab 16 &amp; 17</td>
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<td>8-Dec</td>
<td>Final Exam - Wednesday, December 10, 10:10-12:00 HB04</td>
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