​​​​​​​​​​CpS 201 - Information Technology I

Fall 2024

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| ​Instructor: Dr. Alan Hughes | **Instructor:** | Dr. Alan Hughes |
| **Office:** | AL76Alternatively, MB203 (CS Lab) |
| **Office Hours:** | MWF 2pm by appointment (or in person in CS lab); T – electronic; Th – 10am |
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Course Description:

Introduction to fundamental information technology concepts and troubleshooting. Problem solving regarding installation and configuration of operating systems and common software applications with a focus on the Windows platform.

Course Reading(s):

Microsoft 365 Modern Desktop Administrator Guide to Microsoft Exam MD-100: Windows 10, by Byron Wright, Leon Plesniarski, 1st Edition | Copyright 2022



Articles as assigned.

Context:

The faculty of the Computer Science department has aligned the computer science program with the goals of the Mathematical Sciences Division, BJU Bible and liberal arts core objectives, and the BJU institutional goals. The goal of the Computer Science department is to align all courses in the Computer Science and Information Technology majors to support one or more of the following departmental goals. An asterisk indicates a specific goal fulfilled by this course.

1. Design and implement solutions to practical problems. \*
2. Use appropriate technology as a tool to solve problems in various domains. \*
3. Create efficient solutions at the appropriate abstraction level.
4. Demonstrate an ability to work effectively in teams. \*
5. Demonstrate an ability to communicate technological information effectively both in written and oral forms. \*
6. Demonstrate an ability to acquire new knowledge in the computing discipline. \*
7. Demonstrate an understanding of social, professional and ethical considerations related to computing.
8. Demonstrate understanding of fundamental concepts in the student's discipline. \*
9. Prepare students for graduate school or to secure employment in a related area. \*

Course Goals:

1. Design and implement solutions to practical problems.
2. Demonstrate an ability to work effectively in teams.
3. Demonstrate an ability to communicate technological information effectively both in written and oral forms.
4. Demonstrate an ability to acquire new knowledge in the computing discipline.
5. Demonstrate understanding of fundamental concepts in the discipline
6. Provide the student a platform for continued learning and development of his or her God-given abilities.
7. Instill in the student a desire to use his abilities in service to Christ.

Learning Objectives:

At the end of the course, students should be able to:

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| **Learning Objective** | **Assessment Tools** |
| Install, configure, and understand the operational details of Microsoft Windows | Lab Projects; Quizzes; Tests |
| Demonstrate the ability to troubleshoot user problems and selected Windows Operating System and application problems. | Lab Projects; Quizzes; Tests |
| Set up a SOHO network. | Lab Projects; Quizzes |
| Effectively use workstation virtualization. | Lab Projects; Quizzes |

Course Policies:

Qualifications

CpS 201 has no prerequisites.

Absences, lateness, and makeup opportunities

1. The overarching guide for class attendance is the [BJU Class Attendance Policy](http://home.bju.edu/life/policies/class-attendance-policy.php).
2. For planned absences, please email me one week in advance.
3. Written assignments should be submitted before your planned absence.
4. Scheduled tests and quizzes should be taken before your planned absence; please contact me to make arrangements for doing so.
5. For absences due to incapacitating illness or emergency, you should contact me as soon as you are able to return to class in order to make arrangements for making up any graded work without penalty.
6. In other circumstances, tests and quizzes may be made up within one week of your return, with a 10 percent grade penalty for that test or quiz.
7. Leaving class early without prior arrangement will constitute an absence.

Late Work

1. Assignments must be submitted using the electronic submission system before midnight on the day due.
2. The use of the submission system will be explained during the first week of class.
3. Only work missed for legitimate reasons may be made up without penalty.  Legitimate reasons include illness, a death in the family, or a BJU sanctioned tour. **Missed quizzes due to forgetting will not be made up.**
4. You must make up late work according to the number of days missed - that is, missing one day of class gives you one extra day to turn in your work.
5. Any other late work will receive a 20% grade penalty.
6. All late work must be made up within one week in order to receive a non-zero grade.

Grade appeals

1. Grading appeals must be made by email only, no later than one week after the grade was assigned.
2. Appeals will be automatically denied if the student attempts to make the appeal verbally.
3. Email grading appeals should be made respectfully and logically (My grade should be increased because.....).

Academic Integrity

1. The overarching guide for academic integrity is the [BJU Academic Integrity Policy](http://home.bju.edu/academics/integrity.pdf).
2. Cheating on assignments and tests is a form of deception and stealing, and as such, is prohibited by Scripture and will incur academic penalties.
3. Since the goal of the assignments in this course is to learn to develop the skills covered NOT complete the tasks assigned, and since the use of AI to complete or jumpstart tasks defeats the goal of the assignments, you may not use generative AI tools (i.e. Chat GPT, Bing Chat, Google Bard, etc.) in this course for any assignment without the professor’s express permission.  Should an AI tool be used with permission, its use must be documented.
4. All work is to be done individually unless Mr. Hughes gives permission for group work.
5. In general students are encouraged to assist one another in the lab environment *but must exercise care when seeking assistance while completing labs*.
6. **The goal is for each student to become familiar with Windows Administration and be able to work effectively on his or her own. Therefore, please do not copy work from another person, as this constitutes cheating.**

Class Participation

1. Compliance with student handbook policies is expected during class.
2. Class participation grades are based upon actively participating in lecture class discussions, working diligently on course assignments in lab classes and being respectful to the rest of the class and the instructor.
3. Class participation grade will include in-class assignments throughout the semester that will be individually graded.
4. Playing games, electronic messages, working on other subjects, etc. is a demonstration of disrespect for both the instructor and other students, and is not allowed during lecture and lab classes.

Instructor Help outside of class

You are encouraged to use **email** or the telephone to ask Dr. Hughes for assistance.

Copyright Policy

Copyright 2009-2024, Alan Hughes, as to this syllabus and all lectures. Students are prohibited from selling (or being paid for taking) notes during the course to, or by any person, or commercial firm without the express written permission of the professor teaching the course.

Disclaimer

Changing conditions due to coronavirus or other health situations may make changes to the schedule and/or delivery method necessary. In any such event, students will be apprised of the situation and directions for continuing/finishing the course.

Schedule (may be modified as necessary during semester)

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| --- | --- | --- | --- |
| **Date** | **Day** | **Class Topic​** | **Assignment** **Due** |
| **Week 1** |  | **Chapter 1** |  |
| Aug 28 | W | Introduction, Syllabus | Read Syllabus; Chapter 1 |
| Aug 29 | Th | Lab - Introduction to VMWare Workstation Pro (and Player) | ​Chapter 1 |
| Aug 30 | F | Introduction to Windows 10​ | Chapter 1 |
| **Week 2** |  | **Chapter 1** |  |
| Sep 2 | M | Labor Day – no classes | Chapter 1; Quiz 1 |
| Sep 4 | W | Installing Windows 10 | ​Chapter 1 |
| Sep 5 | Th | Lab - Windows 10 Installation | ​Chapter 1 |
| Sep 6 |  F | Windows 10 Networking Models; Networking in General | ​Chapter 1 |
| **Week 3** |  | **Chapter 2** |  |
| Sep 9 | M | Command Line, Powershell | (Sep 5): Lab 1; Chapter 2; Quiz 2 |
| Sep 11 | W | Settings; Command Line, PowerShell | ​Chapter 2 |
| Sep 12 | Th | Lab - Using they System Utilities, PowerShell | ​Chapter 2 |
| Sep 13 | F | Using the System Utilities | Chapter 2​ |
| **Week 4** |  | **Chapter 3** |  |
| Sep 16 | M | User Management | Chapter 3; Quiz 3; Lab 2 |
| Sep 18 | W | User Management | Chapter 3 |
| Sep 19 | Th | Lab – User Management | Chapter 3 |
| Sep 20 | F | User Management | ​Chapter 3 |
| **Week 5** |  | **Chapter 4** |  |
| Sep 23 | M | Networking overview, IPv4, IPv6 | Chapter 4; Lab 3; Quiz 4 |
| Sep 25 | W | Internet connectivity | Chapter 4 |
| Sep 26 | Th | Lab – Networking in Windows 10 | Chapter 4 |
| Sep 27 | F | Networking | Chapter 4 |
| **Week 6** |  | **Chapter 5** |  |
| Sep 30 | M | **Test 1 – Ch 1-4**  | Chapter 5; Lab 4; Quiz 5 |
| Oct 2 | W | Disk technology, management tools | Chapter 5 |
| Oct 3 | Th | Lab | Chapter 5 |
| Oct 4 | F | Files, folders, permissions | Chapter 5 |
| **Week 7** |  | **Chapter 6** |  |
| Oct 7 | M | **Lab Test 1** | Chapter 6; Lab 5; Quiz 6 |
| Oct 9 | W | UAC; Windows Security Policies | Chapter 6 |
| Oct 10 | Th | Lab – Security | Chapter 6 |
| Oct 11 | F | Malware protection, Windows update | ​Chapter 6 |
| **Week 8** |  | **Chapter 7** |  |
| Oct 14 | M | User Productivity Tools | Chapter 7; Lab 6; Quiz 7 |
| Oct 16 | W | User Productivity Tools | Chapter 7 |
| Oct 17 | Th | Lab - User Productivity Tools | ​Chapter 7 |
| Oct 18 | F | User Productivity Tools | Chapter 7; Research paper/presentation (recorded) |
| **Week 9** |  | **Chapter 8** |  |
| Oct 20-22 | M | **Fall Break** |  |
| Oct 23 | W | **Lab Test 2** | **Lab Test 2** |
| Oct 24 | Th | The Registry | Chapter 8; Lab 7; Quiz 8 |
| Oct 25 | F |  |  |
| **Week 10** |  | **Chapter 9** |  |
| Oct 28 | M | **Test 2 – Chapters 5-8** | Chapter 9; Lab 8; Quiz 9 |
| Oct 30 | W | Performance Tuning and System Recovery | Chapter 9 |
| Oct 31 | Th | Lab - Perf Tuning and Sys Recovery | ​Chapter 9 |
| Nov 1 | F | Performance Tuning and System Recovery | Chapter 9 |
| **Week 11** |  | **Chapter 10** |  |
| Nov 4 | M | Enterprise Computing | Chapter 10; Lab 9; Quiz 10 |
| Nov 6 | W | Active Directory; Group Policy | Chapter 10 |
| Nov 7 | Th | Lab – Enterprise Management Tools | Chapter 10 |
| Nov 8 | F | Cloud Services | **​**Chapter 10 |
| **Week 12** |  | **Chapter 11** |  |
| Nov 11 | M | Troubleshooting and Managing Enterprise Clients | Chapter 11; Lab 10; Quiz 11 |
| Nov 13 | W | Managing Profiles | Chapter 11 |
| Nov 14 | Th | Lab – Managing Profiles | ​Chapter 11 |
| Nov 15 | F | VPNs | Chapter 11 |
| **Week 13** |  | **Chapter 12** |  |
| Nov 18 | M | Automating Deployment | Chapter 12; Lab 11; Quiz 12 |
| Nov 20 | W | Unattended Installation | Chapter 12 |
| Nov 21 | Th | Lab - Imaging | Chapter 12 |
| Nov 22 | F | Lab – Imaging (cont'd) | Chapter 12 |
| **Week 14** |  |  |  |
| Nov 25-29 |  | **Thanksgiving Break!** |  |
| **Week 15** |  | **FOG Server** |  |
| Dec 2 | M | Installing FOG on Ubuntu | Lab 12 |
| Dec 4 | W | **Lab Test 3** | ​ |
| Dec 5 | Th | Configuring FOG |  |
| Dec 6 | F | Configuring FOG |  |
| **Week 16** |  | **FOG Continued** |  |
| Dec 9 | M | **Test 3 – Ch 9-12** |  |
| Dec 11 | W | Imaging with FOG |  |
| Dec 12 | Th | Lab – FOG |  |
| Dec 13 | F | FOG – Restore the image | Lab 13 – FOG lab |
| **Week 17** |  |  |  |
| Dec 16 | Mon | **Final Exam – 12:30-1:40pm** | **Comprehensive** |

Grading

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| --- | --- | --- | --- |
| **#** | **Item** | **Pts.** | **Total** |
| 12 | Quizzes | 30 | 360 |
| 13 | Labs  | 35 | 455 |
| 3 | Tests | 100 | 300 |
| 1 | Research Paper | 100 | 100 |
| ​3  | ​Lab Tests | ​100 | ​​300 |
| 1 | Final Exam | 200 | 200 |
|  | Participation (includes in-class exercises) | 100 | 100 |
| ​ | ​ | ​ | ​ |
| ​ | **TOTAL** | ​ | **1815** |

Scale

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| --- | --- |
| A | 90-100 |
| B | 80-89 |
| C | 70-79 |
| D | 60-69 |
| F | < 60 |

