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The mission of Hannibal-LaGrange University is to provide an excellent education in both liberal arts and professional disciplines in a distinctively Christian environment that integrates Christian faith and learning in preparing graduates for personal and career effectiveness.

**CSC 253 – Networking Term: Spring 2022**

**Instructor Contact Information**

Michelle Todd, Associate Professor

Office: Partee Center, office B

Office Hours: by appointment

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Preferred method of contact: email

**Course Description:** Introduces data communication concepts, hardware, and software; includes both local-area and wide-area networking concepts. Lab fee. Offered spring semester.

**Prerequisites/Corequisites:** Prerequisite: CSC 283.

**Mode of Delivery:** in seat – Monday, Wednesday, Friday 10:00 a.m. – 10:50 a.m.

**Required Text(s) and Material(s):**

Cisco Academy Curriculum – www.netacad.com

Routing and Switching – Introduction to Networks version 7

**Additional Suggested Resources:** Research using the internet.

**O’Reilly Online books**. The HLGU Library offers the O’Reilly online book service to the CS students. There are over 10,000 titles which can aid students in their studies. Detailed instructions on how to access the site are given by the library staff or professor.

**Course Learning Objectives**

Good sense is a fountain of life to him who has it, but the instruction of fools is folly.

Proverbs 16:22

Students will, …

* Read and complete the Cisco Academy Curriculum
* Strive to complete Cisco Academy Curriculum at a 70% or above for a letter of commendation from Cisco.
* Complete a number of network simulations in a software titled Packet Tracer
* Complete a network design exercise and a mock bid.
* Complete some networking hands-on labs with lab equipment
* Solve IPv4 subnetting problems
* Work with IPv6 addressing topics
* Set up and demonstrate a virtual network, using Microsoft 2012 Server and Windows 10, setting up Active Directory/DNS an DHCP
* Set up wireless networking devices

The CSC Department has defined a student success level measurement of 80% or above for each objective.

**Course Policies**

**Academic Integrity:** Students are responsible for upholding the HLGU Honor Code. Cheating, plagiarism, or other violations of the Honor Code will not be tolerated. Consequences for Honor Code violations are outlined in the *HLGU Student Handbook* at <http://www.hlg.edu/campuslife/downloads/student-handbook.pdf>. Students who are placed on probation or suspension or who have been dismissed may appeal by following the procedures as outlined in the *HLGU Student Handbook*.

The instructor may require work be turned in through Turn It In, a site checking for work integrity. The web address: www.turnitin.com

**Late Assignments:** Late work is accepted, but will not receive an A grade. Some assignments, such as major project, have nonflexible due dates and they will be announced.

**Grading:**

**PROJECTS:**

1. Cisco Academy Curriculum (Packet Tracers and exams) 45%
2. Homework/Competencies 35%
3. Network Design and CS lab assignments 20%

**SCALE:**

|  |  |  |  |
| --- | --- | --- | --- |
| A+ | 100% | to | 99% |
| A | < 99% | to | 93% |
| A- | < 93% | to | 90% |
| B+ | < 90% | to | 87% |
| B | < 87% | to | 83% |
| B- | < 83% | to | 80% |
| C+ | < 80% | to | 77% |
| C | < 77% | to | 73% |
| C- | < 73% | to | 70% |
| D+ | < 70% | to | 67% |
| D | < 67% | to | 63% |
| D- | < 63% | to | 60% |
| F = Fired! | < 60% | to | 0% |

Reporting of progress/student feedback: Regular posting in the Netacad course management system and the HLGU student portal.

Please contact the instructor if you need additional academic support in this course.

You may access your final grade in this course via the student portal, after you have completed the course evaluation.

**Attendance Requirements:** To comply with Federal laws, attendance will be taken and reported to college officials.

Excused absences are approved by the Vice President for Academic Affairs and are university-related/required in nature. Students involved in excused university activities are responsible for: (1) receiving and submitting assignments before or on due date, and (2) notifying instructor.

After the first 3 unexcused absences, a letter grade is dropped for every three thereafter.

When students arrive to class they expect teachers to be present, and so teachers expect the same of students. It is common courtesy of either party to give notice of absence when possible.

**Technology Use:** The course requires use of the internet. The student may use personal equipment or will be assigned CSC equipment from the lab.

Technology devices may be used in the classroom setting. The teacher retains the right to require students to put devices away if they become a distraction or interfere with classroom plans.

**Note for Students with Disabilities:** If you have a special need addressed by the *Americans with Disabilities Act (ADA),* please notify the instructor at the beginning of the course. In order for reasonable accommodations to be provided, you must provide appropriate documentation to Hannibal-LaGrange University’s ADA Coordinator whose office is in Woodrow W. Burt Administration Building, Suite 201, and phone: 573-629-3016.

**Course Assignment Descriptions**

**Note: In general, university courses require a minimum of two hours of homework for each hour of class time.**

1. Cisco Academy Curriculum grade 45%
   1. Read and test over the Cisco Introduction to Networks curriculum. All packet tracers and exams are included in this score.
2. Homework/Competencies 35%
   1. Outside lab projects and homework given. T
3. Network design/ CS Lab Assignments 20%
   1. A bid proposal for a network design project and subnetting exams

**Course Outline**

Instructor reserves the right to alter the schedule. Changes will be announced.

**Use** [**www.netacad**](http://www.netacad) **for study materials, packet tracers activities, and exams.**

**Use the shared Google document for tracking competencies**

Instructor reserves the right to alter the schedule. Changes will be announced on the Google document and in class.

For each chapter there are Readings, Packet tracers, Discussion, Exams, and Competencies.

Follow the online netacad learning management system for most current dates.

**Course Summary**

The student should review the Canvas web site for the most accurate view of the course calendar. The professor reserves the right to alter the syllabus. It is highly likely that changes will be made, and will be available on Canvas, only.

## **Course Summary:**

| **Date** | **Details** | **Due** |
| --- | --- | --- |
| Thu Jan 20, 2022 | Assignment [Module 1: Packet Tracer 1.0.5 Demonstration (Dr. Todd)](https://hlg.instructure.com/courses/7820/assignments/105618) | due by 11:59pm |
| Sat Jan 22, 2022 | Assignment [Module 1: CS Lab Task - Learn the CS Network](https://hlg.instructure.com/courses/7820/assignments/105620) | due by 11:59pm |
| Sun Jan 23, 2022 | Assignment [Packet Tracer 1.5.7 Internet Connections](https://hlg.instructure.com/courses/7820/assignments/105693) | due by 11:59pm |
| Wed Jan 26, 2022 | Assignment [Module 2: Current Event Article](https://hlg.instructure.com/courses/7820/assignments/105623) | due by 10am |
| Assignment [Module 2: Current Event Article Discussion (Bryce)](https://hlg.instructure.com/courses/7820/assignments/107521) | due by 10am |
| Assignment [Lab 1.9.3 Research IT and Networking Job Opportunities (Dr. Todd)](https://hlg.instructure.com/courses/7820/assignments/105668) | due by 11:59pm |
| Assignment [Lab 2.3.8 Navigate the IOS by Using Tera Term for Console Connectivity (Stephen)](https://hlg.instructure.com/courses/7820/assignments/105669) | due by 11:59pm |
| Assignment [Lab 2.9.2 Basic Switch and End Device Configuration (Tomo)](https://hlg.instructure.com/courses/7820/assignments/105670) | due by 11:59pm |
| Sat Jan 29, 2022 | Assignment [Module 2: Lab Project](https://hlg.instructure.com/courses/7820/assignments/105624) | due by 11:59pm |
| Sun Jan 30, 2022 | Assignment [Find this assignment on netacad.com Need to upload to Canvas The activity saved .pka file  Handwrite the answers on the correlating instructions found in the course lab booklet, given by the professor. Lab booklet isPacket Tracer 2.3.7 Navigate the IOS](https://hlg.instructure.com/courses/7820/assignments/105700) | due by 11:59pm |
| Assignment [Packet Tracer 2.5.5 Configure Initial Switch Settings](https://hlg.instructure.com/courses/7820/assignments/105701) | due by 11:59pm |
| Assignment [Packet Tracer 2.7.6 Implement Basic Connnectivity](https://hlg.instructure.com/courses/7820/assignments/105702) | due by 11:59pm |
| Assignment [Packet Tracer 2.8.1 Video Activity Test the Interface](https://hlg.instructure.com/courses/7820/assignments/105703) | due by 11:59pm |
| Assignment [Packet Tracer 2.8.2 Video Activity Test End to End Connectivity](https://hlg.instructure.com/courses/7820/assignments/105704) | due by 11:59pm |
| Assignment [Packet Tracer 2.9.1 Basic Switch and End Device Configuration](https://hlg.instructure.com/courses/7820/assignments/105705) | due by 11:59pm |
| Wed Feb 2, 2022 | Assignment [Lab 3.4.4 Research Networking Standards (River)](https://hlg.instructure.com/courses/7820/assignments/105671) | due by 11:59pm |
| Assignment [Lab 3.7.10 Use Wireshark to View Network Traffic (Bryce)](https://hlg.instructure.com/courses/7820/assignments/105672) | due by 11:59pm |
| Assignment [Lab 3.7.9 Install Wireshark (Peyton)](https://hlg.instructure.com/courses/7820/assignments/105673) | due by 11:59pm |
| Sat Feb 5, 2022 | Assignment [Module 3: Lab Task](https://hlg.instructure.com/courses/7820/assignments/105627) | due by 11:59pm |
| Sun Feb 6, 2022 | Assignment [Packet Tracer 3.5.5 Investigate the TCP/IP and OSI Models in Action](https://hlg.instructure.com/courses/7820/assignments/105706) | due by 11:59pm |
| Wed Feb 9, 2022 | Assignment [Module 4: Current Event Article Discussion (River)](https://hlg.instructure.com/courses/7820/assignments/107522) | due by 10am |
| Assignment [Lab 4.6.6 View Wired and Wireless NIC Information (Carson)](https://hlg.instructure.com/courses/7820/assignments/105674) | due by 11:59pm |
| Fri Feb 11, 2022 | Assignment [Cisco Exam/Labbook Chapter 1-3](https://hlg.instructure.com/courses/7820/assignments/105645) | due by 10am |
| Sat Feb 12, 2022 | Assignment [Module 4: Lab Task](https://hlg.instructure.com/courses/7820/assignments/105630) | due by 11:59pm |
| Sun Feb 13, 2022 | Assignment [Network Media Lab](https://hlg.instructure.com/courses/7820/assignments/105679) | due by 11:59pm |
| Assignment [Packet Tracer 4.6.5 Connect a Wired and Wireless LAN](https://hlg.instructure.com/courses/7820/assignments/105707) | due by 11:59pm |
| Assignment [Packet Tracer 4.7.1 Connect the Physical Layer](https://hlg.instructure.com/courses/7820/assignments/105708) | due by 11:59pm |
| Sat Feb 19, 2022 | Assignment [Module 5: Lab Task](https://hlg.instructure.com/courses/7820/assignments/105633) | due by 11:59pm |
| Wed Feb 23, 2022 | Assignment [Module 6: Current Event Article](https://hlg.instructure.com/courses/7820/assignments/105635) | due by 10am |
| Assignment [Module 6: Current Event Article Discussion (Carson)](https://hlg.instructure.com/courses/7820/assignments/107523) | due by 10am |
| Sat Feb 26, 2022 | Assignment [Module 6: Lab Task](https://hlg.instructure.com/courses/7820/assignments/105636) | due by 11:59pm |
| Wed Mar 2, 2022 | Assignment [Lab 7.1.6 Use Wireshark to Examine Ethernet Frames (Stephen)](https://hlg.instructure.com/courses/7820/assignments/105675) | due by 11:59pm |
| Assignment [Lab 7.2.7 View Network Device MAC Address (Peyton)](https://hlg.instructure.com/courses/7820/assignments/105676) | due by 11:59pm |
| Assignment [Lab 7.3.7 View the Switch MAC Address Table (Tomo)](https://hlg.instructure.com/courses/7820/assignments/105677) | due by 11:59pm |
| Sat Mar 5, 2022 | Assignment [Module 7: Lab Task](https://hlg.instructure.com/courses/7820/assignments/105638) | due by 11:59pm |
| Wed Mar 9, 2022 | Assignment [Module 8: Current Event Article Discussion (Stephen)](https://hlg.instructure.com/courses/7820/assignments/107524) | due by 10am |
| Fri Mar 11, 2022 | Assignment [Exam/Lab book Chapter 4-7](https://hlg.instructure.com/courses/7820/assignments/105647) | due by 10am |
| Sat Mar 12, 2022 | Assignment [Module 8: Lab Task](https://hlg.instructure.com/courses/7820/assignments/105640) | due by 11:59pm |
| Sun Mar 20, 2022 | Assignment [Packet Tracer 9.1.3 Identify MAC and IP Addresses](https://hlg.instructure.com/courses/7820/assignments/105709) | due by 11:59pm |
| Assignment [Packet Tracer 9.2.9 Examine the ARP Table](https://hlg.instructure.com/courses/7820/assignments/105710) | due by 11:59pm |
| Assignment [Packet Tracer 9.3.4 IPv6 Neighbor Discovery](https://hlg.instructure.com/courses/7820/assignments/105711) | due by 11:59pm |
| Wed Mar 23, 2022 | Assignment [Module 10: Current Event Article Discussion (Tomo)](https://hlg.instructure.com/courses/7820/assignments/107525) | due by 10am |
| Assignment [Lab 10.4.4 Build a Switch and Router Network (Bryce)](https://hlg.instructure.com/courses/7820/assignments/105655) | due by 11:59pm |
| Fri Mar 25, 2022 | Assignment [VM Network](https://hlg.instructure.com/courses/7820/assignments/105715) | due by 10am |
| Sat Mar 26, 2022 | Assignment [Module 10: Lab Task](https://hlg.instructure.com/courses/7820/assignments/105606) | due by 11:59pm |
| Sun Mar 27, 2022 | Assignment [Packet Tracer 10.1.4 Configure Initial Router Settings](https://hlg.instructure.com/courses/7820/assignments/105680) | due by 11:59pm |
| Assignment [Packet Tracer 10.3.4 Connect a Router to a LAN](https://hlg.instructure.com/courses/7820/assignments/105681) | due by 11:59pm |
| Assignment [Packet Tracer 10.3.5 Troubleshoot Default Gateway Issues](https://hlg.instructure.com/courses/7820/assignments/105682) | due by 11:59pm |
| Assignment [Packet Tracer 10.4.3 Basic Device Configuration](https://hlg.instructure.com/courses/7820/assignments/105683) | due by 11:59pm |
| Wed Mar 30, 2022 | Assignment [Lab 11.10.2 Design and Implement a VLSM Addressing Scheme (Carson)](https://hlg.instructure.com/courses/7820/assignments/105656) | due by 11:59pm |
| Assignment [Lab 11.6.6 Calculate IPv4 Subnets (River)](https://hlg.instructure.com/courses/7820/assignments/105657) | due by 11:59pm |
| Fri Apr 1, 2022 | Assignment [Exam/Lab book Chapters 8-10](https://hlg.instructure.com/courses/7820/assignments/105650) | due by 10am |
| Assignment [Subnetting Booklet](https://hlg.instructure.com/courses/7820/assignments/105712) | due by 10am |
| Sat Apr 2, 2022 | Assignment [Module 11: Lab Task](https://hlg.instructure.com/courses/7820/assignments/105608) | due by 11:59pm |
| Sun Apr 3, 2022 | Assignment [Packet Tracer 11.10.1 Design and Implement a VLSM Addressing Scheme](https://hlg.instructure.com/courses/7820/assignments/105684) | due by 11:59pm |
| Assignment [Packet Tracer 11.5.5 Subnet an IPv4 Network](https://hlg.instructure.com/courses/7820/assignments/105685) | due by 11:59pm |
| Assignment [Packet Tracer 11.7.5 Subnetting Scenario](https://hlg.instructure.com/courses/7820/assignments/105686) | due by 11:59pm |
| Assignment [Packet Tracer 11.9.3 VLSM Design and Implementation Practice](https://hlg.instructure.com/courses/7820/assignments/105687) | due by 11:59pm |
| Wed Apr 6, 2022 | Assignment [Module 12: Current Event Article Discussion (Peyton)](https://hlg.instructure.com/courses/7820/assignments/107526) | due by 10am |
| Assignment [Lab 12.7.4 Identify IPv6 Addresses (Stephen)](https://hlg.instructure.com/courses/7820/assignments/105658) | due by 11:59pm |
| Assignment [Lab 12.9.2 Configure IPv6 Addresses on Network Devices (Tomo)](https://hlg.instructure.com/courses/7820/assignments/105659) | due by 11:59pm |
| Fri Apr 8, 2022 | Assignment [Test on Subnetting #1](https://hlg.instructure.com/courses/7820/assignments/105714) | due by 10am |
| Sat Apr 9, 2022 | Assignment [Module 12: Lab Task](https://hlg.instructure.com/courses/7820/assignments/105610) | due by 11:59pm |
| Sun Apr 10, 2022 | Assignment [Packet Tracer 12.6.6 Configure IPv6 Addressing](https://hlg.instructure.com/courses/7820/assignments/105688) | due by 11:59pm |
| Assignment [Packet Tracer 12.9.1 Implement a Subnetted IPv6 Addressing Scheme](https://hlg.instructure.com/courses/7820/assignments/105689) | due by 11:59pm |
| Wed Apr 13, 2022 | Assignment [Lab 13.3.2 Use Ping and Traceroute to test Network Connectivity (Peyton)](https://hlg.instructure.com/courses/7820/assignments/105660) | due by 11:59pm |
| Fri Apr 15, 2022 | Assignment [Exam/Lab Book Chapters 11-13](https://hlg.instructure.com/courses/7820/assignments/105648) | due by 10am |
| Sat Apr 16, 2022 | Assignment [Module 13: Lab Task](https://hlg.instructure.com/courses/7820/assignments/105612) | due by 11:59pm |
| Sun Apr 17, 2022 | Assignment [Packet Tracer 13.2.6 Verify IPv4 and IPv6 Addressing](https://hlg.instructure.com/courses/7820/assignments/105690) | due by 11:59pm |
| Assignment [Packet Tracer 13.2.7 Use Ping and Traceroute to Test Network Connectivity](https://hlg.instructure.com/courses/7820/assignments/105691) | due by 11:59pm |
| Wed Apr 20, 2022 | Assignment [Module 14: Current Event Article Discussion (Dr. Todd)](https://hlg.instructure.com/courses/7820/assignments/107527) | due by 10am |
| Fri Apr 22, 2022 | Assignment [Test #2 on VLSM & IPv6](https://hlg.instructure.com/courses/7820/assignments/105713) | due by 10am |
| Sat Apr 23, 2022 | Assignment [Module 14: Lab Task](https://hlg.instructure.com/courses/7820/assignments/105614) | due by 11:59pm |
| Sun Apr 24, 2022 | Assignment [Packet Tracer 14.8.1 TCP and UDP Communications](https://hlg.instructure.com/courses/7820/assignments/105692) | due by 11:59pm |
| Wed Apr 27, 2022 | Assignment [Lab 15.4.8 Observe DNS Resolution (Bryce)](https://hlg.instructure.com/courses/7820/assignments/105661) | due by 11:59pm |
| Sat Apr 30, 2022 | Assignment [Module 15: Lab Task](https://hlg.instructure.com/courses/7820/assignments/105616) | due by 11:59pm |
| Sun May 1, 2022 | Assignment [Packet Tracer 16.4.6 Configure Secure Passwords and SSH](https://hlg.instructure.com/courses/7820/assignments/105694) | due by 11:59pm |
| Assignment [Packet Tracer 16.5.1 Secure Network Devices](https://hlg.instructure.com/courses/7820/assignments/105695) | due by 11:59pm |
| Assignment [Packet Tracer 17.5.9 Interpret show Command Output](https://hlg.instructure.com/courses/7820/assignments/105696) | due by 11:59pm |
| Assignment [Packet Tracer 17.7.7 Troubleshooting Scenarios](https://hlg.instructure.com/courses/7820/assignments/105697) | due by 11:59pm |
| Assignment [Packet Tracer 17.8.2 Skills Integration Challenge](https://hlg.instructure.com/courses/7820/assignments/105698) | due by 11:59pm |
| Assignment [Packet Tracer 17.8.3 Troubleshooting Challenge](https://hlg.instructure.com/courses/7820/assignments/105699) | due by 11:59pm |
| Wed May 4, 2022 | Assignment [Lab 16.2.6 Research Network Security Threats (River)](https://hlg.instructure.com/courses/7820/assignments/105662) | due by 11:59pm |
| Assignment [Lab 16.4.7 Configure Network Devices with SSH (Carson)](https://hlg.instructure.com/courses/7820/assignments/105663) | due by 11:59pm |
| Assignment [Lab 16.5.2 Secure Network Devices (Stephen)](https://hlg.instructure.com/courses/7820/assignments/105664) | due by 11:59pm |
| Assignment [Lab 17.18.1 Design and Build a Small Business Network (Peyton)](https://hlg.instructure.com/courses/7820/assignments/105665) | due by 11:59pm |
| Assignment [Lab 17.4.6 Test Network Latency with Ping and Traceroute (Tomo)](https://hlg.instructure.com/courses/7820/assignments/105666) | due by 11:59pm |
| Assignment [Lab 17.7.6 Troubleshoot Connectivity Issues](https://hlg.instructure.com/courses/7820/assignments/105667) | due by 11:59pm |
| Fri May 6, 2022 | Assignment [Exam/Lab book 14-15](https://hlg.instructure.com/courses/7820/assignments/105646) | due by 10am |
| Assignment [Exam/Lab book Chapters 16-17](https://hlg.instructure.com/courses/7820/assignments/105649) | due by 10am |
| Assignment [Hands On Final](https://hlg.instructure.com/courses/7820/assignments/105652) |  |