Mr. Mason/ Mr. Hansen Advanced Cisco Networking Academy Syllabus

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NHS Cisco Networking Academy Website: http://www.nhscisco.com

Cisco NetSpace Academy Connection: https://www.netacad.com

Course Overview:

The Advanced Cisco Networking Academy Program is a comprehensive e-learning program, which provides students with the Internet technology skills essential in a global economy. The Networking Academy program delivers Web-based content, online assessment, student performance tracking, hands-on labs, instructor training and support, and preparation for industry-standard certifications.

The Networking Academy curriculum gives students in-demand Internet technology skills for designing, building and maintaining networks.

The ultimate goal of the Cisco course is to prepare students for the workforce and to take the Amazon Cloud Foundations as well as Cisco industry certification in the spring.

Course Outcomes:

- Describe cloud architecture and the available services
- Deploy, manage, and migrate virtual machines and services
- Configure a cloud storage solution
- Describe a system backup and restoration
- Configure a cloud networking service
- Configure L2 redundancy in an enterprise network.
- Configure EIGRP to optimize performance in an enterprise network.
- Implement advanced OSPF features to improve performance in both IPv4 and IPv6 enterprise networks.
- Configure eBGP in a single-homed remote access network.
- Explain the concepts of multicast operation and QoS in an enterprise network.
- Configure IP services and VPNs to support secure, managed site-to-site and remote-access networks.
- Explain how wireless topologies and antennas allow APs to pair with WLCs in an enterprise network.
- Implement secure wireless networks to manage and support wireless roaming.
- Implement advanced technologies to support a secure and scalable enterprise network architecture.
- Configure network technologies to provide secure infrastructure access.
- Explain the purposes and characteristics of virtualization and network automation.
- Implement DHCP to operate across multiple LANs.
- Implement EIGRP for IPv4 in a small to medium-sized business network.
- Explain how advanced EIGRP features affect network performance.
- Troubleshoot common EIGRP configuration issues.

- Troubleshoot EIGRPv6 issues.
- Explain how OSPF operates.
- Implement multiarea OSPF for IPv4 to enable internetwork communications.
- Troubleshoot connectivity issues in OSPFv2.
- Implement multiarea OSPFv3.
- Troubleshoot issues with OSPFv3 implementation.
- Configure BGP.
- Configure BGP with advanced features.
- Explain the processes used by BGP for path selection.
- Troubleshoot BGP issues.
- Troubleshoot Route Maps and conditional forwarding issues.
- Configure route redistribution between routing protocols.
- Troubleshoot IPv4 and IPv6 route redistribution.
- Explain the impact of VFR and MPLS on routing decisions.
- Implement DMVPN tunnels.
- Configure IPsec DMVPN with Pre-Shared Authentication.
- Troubleshoot ACLs and Prefix Lists.
- Troubleshoot security threats to a network.
- Troubleshoot Device Management and Management Tools.

Skills Center:

The Newport Cisco Academy is a Skills Center (WaNIC) class. This is a three period class. Two periods during the school day and a period either before or after school. Because Cisco is a WaNIC class you will receive three credits on your Newport transcript equivalent to three year-long classes. Typically, you will only see one grade but when you look at the weighting it is weighted 3X that of a normal year long class such as AP Computer Science. The class will consist of lectures, labs, practical hands-on, real-life problems as well as additional activities.

What does the additional activities consist of? It might be studying the online curriculum, network simulations on software such as Packet Tracer, internships, labs, or other work related to earning your CCNA (Cisco Certified Network Associate), CCST (Cisco Certified Support Technician), Security+, Amazon Web Services Cloud Practitioner, CCNP (Cisco Certified Network Professional) certificate or the more advanced CCSP (Cisco Certified Security Professional). You may even choose to participate in networking competitions or Hackathons with other students across the world. We occasionally have opportunities for a limited number of students to travel abroad designing networks and computer labs for needy students in third-world countries.

Class Rules:

1. Be considerate, no talking while someone is presenting information to the class.
2. Be responsible. It is your responsibility to turn work in on time and to find out what we did in class if you were absent.
3. Be prepared for class, when the bell rings you should be in your seat and ready to begin.
4. Do your part to help keep the room clean. Push in your chair when you leave.
5. Dishonest behavior and profanity are UNACCEPTABLE!!!
6. To leave the room you must have a hall pass with you at all times.

7. Our lab is one of the best Cisco labs in the nation! The equipment is extremely expensive to replace thus requiring the utmost care at all times.
8. No voice, video or camera recordings by students of students, teacher, or classroom activity are allowed at any time unless permitted by your instructor.

Violation of any of these rules will result in a program of increased steps of discipline. First time offenders receive moderate consequences while repeat offenders will receive more severe consequences. This can range from a verbal warning and/or icy glare to administrative intervention. Most consequence will be loss of privilege(s) or time before/after school.

Attendance:

The Newport High School attendance policy will be followed in this course. All students are expected to attend classes regularly. The instructional objective of this particular course is to assist students in establishing lifelong habits of reliability and promptness. Progress towards this goal will be measured, at least in part, by tracking student's attendance. Therefore, a student's grade or credit in this class may be adversely affected by reason of tardiness or absence.

Make-up Procedures:

After an excused absence, it is a student's responsibility to make up his/her work. The student has two days for each day missed to make-up work. If a student is absent on the day an assignment is due and expects to receive full credit, the assignment is due the next class. NO EXCEPTIONS! Missed tests must be made up within a week following the students return to school.

Late Work:

All assignments are due on time. Assignments that are late due to an absence must be marked as such with the date and reason for the absence and turned in to the class folder.

Computer Usage:

Students are to follow the Computer Usage Guidelines for all of the computer labs. The use of the Internet will be restricted to instructional sites and may not be used at all in some classes. Computers will not be used for games or music at any time. Violation of any of these rules will result in a program of increased steps of discipline as stated in the Class Rules portion of the Syllabus.

NOTE: This unique program is a member of both College in the High School as well as Pacific Northwest College Credit Program. If you choose to receive Bellevue College credit under the Pacific Northwest College Credit Program please read the following paragraph and note the following additional rules apply:

This course is Pacific Northwest College Credit (formerly Tech Prep) approved and articulated with Bellevue College, Bellevue, WA. Students who demonstrate proficiency of the college course competencies with a 'B' (3.0) or better grade, maybe eligible to earn college credit through the PNW College Credit program. During the school year, all of the college competencies will be covered in class. (…some may require additional independent work by the student). Students must register online using

the statewide enrollment and reporting system https://pnwcollegecredit.org/ and are required to pay a non-refundable $50 annual consortium fee to earn college credit through the PNW College Credit program. Payments can be made through online payment site (https://pnwcollegecredit.org/).Grades are recorded during the summer quarter and transcripts are usually not posted until the middle of August.

Students may earn credit for the following Bellevue College courses:

IT 231	Introduction to Cloud Architecture and Services	5 credits

Grading:

Passing Grade		
100.0% to 93%	=	A
92.99% to 90%	=	A-
89.99% to 87%	=	B+
86.99% to 83%	=	B
82.99% to 80%	=	B-
79.99% to 77%	=	C+
76.99% to 73%	=	C
72.99% to 70%	=	C-
69.99% to 67%	=	D+
66.99% to 63%	=	D
62.99% to 60%	=	D-
59.99% or below	=	F

Accessibility

The elements of this course are designed to be welcoming to, accessible to, and usable by everyone, including students who are English-language learners, have a variety of learning styles, have disabilities, or are new to online learning. Be sure to let me know immediately if you encounter a required element or resource in the course that is not accessible to you. Also, let me know of changes I can make to the course so that it is more welcoming to, accessible to, or usable by students who take this course in the future.

Affirmation of Inclusion

Bellevue College affirms the diversity of human identities and experiences and is committed to creating spaces free from harassment and discrimination (4000 Institutional Commitment to Inclusion). Furthermore, Bellevue College rejects all forms of racism, homophobia, sexism, xenophobia, religious intolerance, classism, ableism, ageism, language bias, and hate speech or actions that attempt to silence, threaten, or degrade others.

In classroom settings, we might disagree with views shared in the classroom; however, courteous, and respectful behavior and responses are always expected. When providing criticism, it is important to focus on the ideas and not the person.

Faculty are encouraged to disrupt and address hate speech and behaviors. Students are also encouraged to speak up and advocate when they experience, or witness hate speech and behaviors. Faculty, staff, and students also are encouraged to submit a report to the CARE Team regarding any concerns of discrimination, harassment, or inappropriate and disrespectful conduct. Affirmation of Inclusion (https://www.bellevuecollege.edu/inclusion/)

Reasons of Faith and Conscience
Students who will be absent from course activities due to reasons of faith or conscience may seek reasonable accommodations so that grades are not impacted. Such requests must be made within the first two weeks of the course to the office of the Associate Vice President of Student Affairs (see Bellevue College Policy 2950 (https://www.bellevuecollege.edu/policies/id2950/)). In the event you feel you are being discriminated against based on faith or conscious, you may refer to the procedures outlined in the college's Discrimination, Harassment and Retaliation Policy 1440P (https://www.bellevuecollege.edu/policies/id-1440p/).

Annual Notice Non-Discrimination
Bellevue College does not discriminate on the basis of race or ethnicity; creed; color; national origin; sex; marital status; sexual orientation; age; religion; genetic information; the presence of any sensory, mental, or physical disability; or veteran status in educational programs and activities which it operates. Bellevue College is prohibited from discriminating in such a manner by college policy and by state and federal law. If you are reading this, see me before class on the first day for EC. All college personnel and persons, vendors, and organizations with whom the college does business are required to comply with applicable federal and state statutes and regulations designed to promote affirmative action and equal opportunity.

Reports of gender and sex-based based discrimination, sexual misconduct, or retaliation by a student should be raised with the Title IX office (see 1440P2 for contact information). In cases where the impacted party is a student and the responding party is a college employee, the Title IX coordinator will direct the matter to the Office of Human Resources (HR). All other reports, including all reports where the impacted party is an employee, should be raised with the HR. If a report is against personnel in the Title IX office or HR, it should be submitted to the president's office for referral to an alternate designee.

Equal Opportunity (http://www.bellevuecollege.edu/equal/)

Confidentiality and Mandatory Reporting
As an instructor, one of my responsibilities is to help create a safe learning environment on our campus. It is my goal that you feel able to share information related to your life experiences in classroom discussions, in your written work, and in our one-on-one meetings. I will seek to keep information you share private to the greatest extent possible. However, I am required to share with the Title IX Coordinator any and all information regarding sexual assault and other forms of sexual misconduct (e.g. relationship violence, stalking) that may have occurred on campus or that impacts someone on campus. Students may speak to someone confidentially by contacting the BC Counseling Center at (425) 564-2212. The Title IX Office can be contacted at 425-564-2641 and more information can be found at Title IX (http://www.bellevuecollege.edu/titleix/).

If you have any concerns, you may report to: Report Concerns (https://www.bellevuecollege.edu/reportconcerns/).

Student Conduct Code and Academic Integrity
Any act of academic dishonesty, including cheating, plagiarism (using the ideas or words of another as one's own without crediting the source), and fabrication, and inappropriate/disruptive classroom behavior are violations of the Student Conduct Code of Bellevue College. Examples of disruptive behavior include, but are not limited to, repeatedly talking out of turn, arriving late or leaving early without a valid reason, allowing cell phones to ring, and inappropriate behavior toward the instructor or

classmates. The instructor can refer any violation of the Student Conduct Code to the Manager of Student Conduct for investigation. Specific student rights, responsibilities, and appeal procedures are listed in the Student Conduct Code at: Student Code

Important Links
See "Important Links" page online for more information about the E-mail and MyBC, Public Safety, the Academic Calendar, the Academic Success Center, and more.

Disability Resource Center (DRC)
The Disability Resource Center serves students with disabilities. Common disabilities include physical, neurological (e.g., Autism, ADD/ADHD), and mental health (e.g., depression, anxiety). If you are a student who has a disability or if you think you may need accommodation in order to have equal access to your classes, programs, activities, and any other services, please contact the DRC.

If you require assistance in an emergency, please meet with your individual instructors to develop a safety plan for while in class and contact the DRC to develop a safety plan for while you are elsewhere on campus.

The DRC office is in building U Room 001. You can contact the DRC by stopping by the office at U001, calling our front desk phone number (425) 564-2498, emailing drc@bellevuecollege.edu. For more information about the services we offer, including our Initial Access Application, visit our website at Disability Resource Center (http://www.bellevuecollege.edu/drc).

Service Animals are allowed in this classroom. Emotional Support Animals need to be approved through the DRC. All other animals will be asked to leave. If you believe you need your animal with you, please contact the DRC and refrain from bringing your animal until a decision has been made.

Final Exam Schedule
Bellevue College's Final Exam Schedule can be found here:
https://www.bellevuecollege.edu/courses/exams/

Academic Calendar
The Bellevue College Academic Calendar is separated into two calendars. They provide information about holidays, closures and important enrollment dates such as the finals schedule. These calendars can be found here: https://www.bellevuecollege.edu/enrollment/calendar/

Enrollment Calendar - On this calendar you will find admissions and registration dates and important dates for withdrawing and receiving tuition refunds.

College Calendar - This calendar gives you the year at a glance and includes college holidays, scheduled closures, quarter end and start dates, and final exam dates.

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Student's Signature: I have read, understand, and agree to abide with all of the material in the syllabus for Cisco

_____ _____

Student Signature Date

_____

Printed Student Name

CCNP and Cybersecurity course grades are posted on the District gradebook as normal

I also understand that my student can obtain college credit through Bellevue College/Edmonds College by complete the requirements listed on the previous page.

_____ _____

Parent/Guardian Signature Date

Please have your student return this page as soon as possible. Thank you