# Advanced Networking

# Syllabus

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| --- | --- |
| Class: | NET 153 -- 81001 |
| Semester: | Spring 2018 |
| Classroom and Class Time: | Room 111 MW 10:30 AM - 12:30 PM |
| ***Start and End Dates:*** | 1/8/2018to5/9/2018 |

## Academic Department: Career and Technical Education -- Peosta

Final:The final examination date and time will be announced  generally by the fifth week of classes. I will announce the final examination date and time for this course on Brightspace once it is known. Do not plan your end of the semester travel plans until the final exam schedule is made public. It is your responsibility to know the date, time, and place of the final exam. Every class must have a final meeting during the established time frame. All classes are required to meet throughout their scheduled timeframe including the final exam date.

### Instructor Information

**Name**: Click here to enter text.

Phone: Click here to enter text.

Email: Click here to enter text.

*NICC email is the official means of communication, you should regularly check your email.*

Office Location: Click here to enter text.

Office Hours: Click here to enter text.

Best method to contact instructor: All communication with the instructor outside of class should be done via e-mail to the instructor’s college e-mail address. The student should expect a response within 24 hrs. during the school week. Responses are not guaranteed on weekends.

*NICC has a commitment to respond to student communication within*

*24 hours on a school day, and 48 hours on non-school days.*

### Course Information

### Course Description

#### This course introduces the student to various protocols and internetwork technologies used in wide area networks.

**Primary Common Learning Outcome Assessed**: Apply knowledge and skills to life

#### **Unit Objectives**

#### 9.1 Unit One Objectives. At the end of this unit, the student will be able to: 9.1.1 Activate DHCP service. 9.1.2 Address TCP/IP OSI relationship. 9.1.3 Analyze centralized address controls. 9.1.4 Analyze IP traffic. 9.1.5 Analyze TCIP role. 9.1.6 Assess address conventions. 9.2 Unit Two Objectives. At the end of this unit, the student will be able to: 9.2.1 Perform fixed-length sub-netting. 9.2.2 Perform variable-length sub-netting. 9.3 Unit Three Objectives. At the end of this unit, the student will be able to: 9.3.1 Compare connectionless services. 9.3.2 Compare network access technologies. 9.3.3 Compare routing-switching technology to WANs. 9.3.4 Configure DNS server. 9.3.5 Configure network addresses. 9.3.6 Configure network monitor. 9.3.7 Configure performance monitor. 9.3.8 Configure routing table. 9.3.9 Configure the internetwork. 9.3.10 Configure the router. 9.4 Unit Four Objectives. At the end of this unit, the student will be able to: 9.4.1 Describe ARP operation. 9.4.2 Describe basic router operation. 9.4.3 Describe firewalls. 9.4.4 Describe packet routing technique. 9.4.5 Describe RIP and OSPF operation. 9.4.6 Describe routing protocols. 9.4.7 Examine port and socket functions. 9.4.8 Examine TCP header. 9.4.9 Explain address resolution purpose. 9.4.10 Explain DHCP operation. 9.4.11 Explain dynamic routing. 9.4.12 Explain host name resolution. 9.4.13 Explain ICMP messaging. 9.5 Unit Five Objectives. At the end of this unit, the student will be able to: 9.5.1 Explain frame relay. 9.5.2 Explain PPP. 9.5.3 Explain RARP operation. 9.5.4 Explain static routing. 9.5.5 Explain VPN. 9.5.6 Identify router ports. 9.5.7 Identify TCP/IP performance parameters. 9.5.8 Identify the role of ISDN. 9.5.9 Identify WAN technology. 9.6 Unit Six Objectives. At the end of this unit, the student will be able to: 9.6.1 Illustrate IP packet header. 9.6.2 Interpret network class type. 9.6.3 Modify host file. 9.6.4 Understand IPV6 address plan. 9.6.5 Use ARP diagnostic command. 9.6.6 Use performance monitor. 9.6.7 Use Ping command. 9.6.8 Utilize IP applications.

**Required Materials: 4 GB Flash Drive**

**Methods of Delivery:** Face-to-face

#### **Grading Procedures and Scale**

#### Grades will be posted in Brightspace within one week after the assignment due date.

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| --- | --- | --- |
| Grade | Grading Scale by  Percent of Total Points  *Ex. (94 - 100%)* | Grading Scale by Points  *Ex. (940 - 1000+)* |
| A | 92-100% | 700-760 |
| A- | 90-91% | 670-684 |
| B+ | 88-89% | 625-669 |
| B | 82-87% | 609-624 |
| B- | 80-81% | 594-608 |
| C+ | 78-79% | 549-593 |
| C | 72-77% | 533-548 |
| C-  (or P) | 70-71% | 518-532 |
| D+ | 68-69% | 473-517 |
| D | 62-67% | 457-472 |
| D- | 60-61% | 456 |
| F  (or NP) | Below 60% | Less than 456 |

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| --- | --- | --- |
|  | # of Assignments | Points |
| Chapter homework | 28 | 280 |
| Daily Quizzes | 14 | 280 |
| Tests | 2 | 200 |
| Total Points possible | 44 | 760 |

### Course Calendar

Details of the course, deadlines, and organization can be found at the end of the syllabus.

### Student Course Feedback

Prior to course completion you will receive an email providing a link to share your feedback. You are **EXPECTED** to complete the feedback form for each class.

### Assessment

Northeast Iowa Community College is an institution dedicated to continuous instructional improvement as part of our assessment efforts. It is necessary for us to collect and analyze course level data. Data drawn from student work for the purposes of institutional assessment will be posted in aggregate and will not identify individual students. Your continued support in our ongoing effort to provide quality instructional services at NICC is appreciated.

### Course Policies

### Attendance/Academic Engagement

Click here to enter text.

#### **Academic Dishonesty**

#### (definition and consequences) For a detailed explanation of plagiarism, visit the Lib Guide on plagiarism at http://nicc.libguides.com/citingsources

#### **Late Work**

Click here to enter text.

#### **Missing Assignments**

Click here to enter text.

#### **Makeup Testing**

Click here to enter text.

### Use of Technology in the Classroom

#### **Cell Phone/Text Messaging Usage**

Click here to enter text.

#### **Laptop Use**

Click here to enter text.

#### **Recording**

Click here to enter text.

### Classroom Conduct

Click here to enter text.

#### **Behavior**

Click here to enter text.

*(Students are responsible to know the Student Conduct code in the College Catalog)*

#### **Emergency Procedures**

Click here to enter text.

## Additional Information

### Disclaimer:

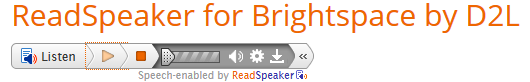
Click here to enter text.

### Learning Center

The NICC Learning Centers provide tutoring assistance free of charge to any student Monday through Friday. Students are encouraged to utilize the Learning Centers in Calmar, Peosta or Dubuque.

### Access

Take advantage of the *ReadSpeaker Listen Button* to enhance understanding and comprehension of the materials in this and any syllabus within the content area. All of the materials posted in the content area of NICC Brightspace classrooms have a *Listen Button* to have the text highlighted and read for you. Listening to text read aloud is shown to improve reading comprehension. www.nicc.edu/readspeaker



### Course Copyright

All course materials students receive or to which students have online access are protected by copyright laws. Students may use course materials and make copies for their own use as needed, but unauthorized distribution and/or uploading of materials without the instructor’s express written permission is strictly prohibited. Students who engage in the unauthorized distribution of copyrighted materials may be held in violation of the College’s Code of Conduct, and/or liable under Federal and State laws.

### Netiquette

The term "Netiquette" refers to the etiquette guidelines for electronic communications, such as e-mail and bulletin board postings. Netiquette covers not only rules to maintain civility in discussions, but also special guidelines unique to the electronic nature of forum messages.

### Accommodation Policy:

The Americans with Disabilities Act (ADA) provides protection from illegal discrimination for qualified students with disabilities. Northeast Iowa Community College is committed to the equal provision of education for all students. Any student who needs instructional accommodation is encouraged to contact the Coordinator of Disability Services, Peosta Campus, at 563-556-5110 or 1-800-728-7367, ext. 280 or Calmar Campus, at 563-562-3263 or 1-800-728-2256, ext. 258.

### Statement of Non-Discrimination

Northeast Iowa Community College prohibits discrimination in educational programs, employment, and activities on the basis of age, race, creed, color, sex, sexual orientation, gender identity, national origin, religion, disability, pregnancy or genetic information as required by the 1964 Civil Rights Act, Titles VI and VII; the 1972 Education Amendments, Title IX; the Age Discrimination in Employment Act of 1975 (ADEA); the Federal Rehabilitation Act of 1973, Section 504; the Americans with Disabilities Act (ADA) of 1990, Title II; Titles I and V; the Civil Rights Act of 1991, the Genetics Information Nondiscrimination Act of 2008 and the Iowa Code, Chapter 216.

It is also the policy of this District that the curriculum content and instructional materials utilized reflect the cultural and racial diversity present in the United States and variety of careers, roles and lifestyles open to women as well as men in our society. One of the objectives of the total curriculum and teaching strategies is to reduce stereotyping and to eliminate bias on the basis of age, race, creed, color, sex, sexual orientation, gender identity, national origin, religion or disability. The curriculum should foster respect and appreciation for cultural diversity found in our country and an awareness of the rights, duties and responsibilities of each individual as a member of a pluralistic society. Inquiries and grievances regarding compliance with applicable state and federal laws may be directed to the executive director of human resources, P.O. Box 400, Calmar, Iowa 52132, or to the Director of the Iowa Civil Rights Commission, Des Moines, Iowa, or to the Director of the Region VII Office of Civil Rights, Department of Education, Kansas City, Missouri.

### Course Calendar

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| --- | --- | --- | --- | --- | --- | --- |
| Due Date | Assignment | Lesson | Unit | Point  Value | Program Learning Outcome | Common Learning Outcome |
| 1/15 | Labs and Quiz |  | Chapter 1 |  | Students will be able to identify the responsibilities of a professional working in the information technology field. | Apply knowledge and skills to life |
| 1/22 | Labs and Quiz |  | Chapter 2 |  | Students will be able to identify the responsibilities of a professional working in the information technology field. | Apply knowledge and skills to life |
| 1/29 | Labs and Quiz |  | Chapter 3 |  | Students will be able to identify the responsibilities of a professional working in the information technology field. | Apply knowledge and skills to life |
| 2/5 | Labs and Quiz |  | Chapter 4 |  | Students will be able to identify the responsibilities of a professional working in the information technology field. | Apply knowledge and skills to life |
| 2/12 | Labs and Quiz |  | Chapter 5 |  | Students will be able to identify the responsibilities of a professional working in the information technology field. | Apply knowledge and skills to life |
| 2/19 | Labs and Quiz |  | Chapter 6 |  | Students will be able to identify the responsibilities of a professional working in the information technology field. | Apply knowledge and skills to life |
| 2/26 | Labs and Quiz |  | Chapter 7 |  | Students will be able to identify the responsibilities of a professional working in the information technology field. | Apply knowledge and skills to life |
| 3/12 | Labs and Quiz |  | Chapter 8 |  | Students will be able to identify the responsibilities of a professional working in the information technology field. | Apply knowledge and skills to life |
| 3/19 | Labs and Quiz |  | Chapter 9 |  | Students will be able to identify the responsibilities of a professional working in the information technology field. | Apply knowledge and skills to life |
| 3/26 | Labs and Quiz |  | Chapter 10 |  | Students will be able to identify the responsibilities of a professional working in the information technology field. | Apply knowledge and skills to life |
| 4/2 | Labs and Quiz |  | Chapter 11 |  | Students will be able to identify the responsibilities of a professional working in the information technology field. | Apply knowledge and skills to life |
| 4/9 | Labs and Quiz |  | Chapter 12 |  | Students will be able to identify the responsibilities of a professional working in the information technology field. | Apply knowledge and skills to life |
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