

Introduction to Forestry and Natural Resources

COURSE DESCRIPTION

Introduction to Forestry and Natural Resources

Forests and other natural resources play an important role in our world, from providing lumber and paper products to providing habitat for birds and animals. In the Introduction to Forestry and Natural Resources course, you'll learn more about forest ecology, management, and conservation. You'll explore topics such as environmental policy, land use, water resources, and wildlife management. Finally, you'll learn more about forestry related careers and important issues facing forestry professionals today.

COURSE METHODOLOGY

- This is an inquiry-based course. Students will generate knowledge through online readings, asynchronous discussions with students and their instructor, interactions with online tutorials, and online and hands-on simulations.
- The instructor will act as a guide, a facilitator, an events planner, and a resource advisor. He/she will always be available through course message.
- The student must actively construct and acquire knowledge by being intrinsically motivated to succeed. To succeed, students must participate and complete all readings and activities. This course requires the student's active participation.
- Both formal and informal assessment methods will be used in the course. Informal assessment will include an evaluation of the quality and timeliness of participation in class activities. Formal assessment may include multiple-choice quizzes, tests, discussion board participation, and written assignments. A final exam will be given at the end of the course.

COURSE PARTICIPATION OBJECTIVES

This course for which you are registered is a college preparatory, academically rigorous course that covers an entire semester's worth of material. As such, it is important that you adhere to the following guidelines as you manage your time and commit to successfully completing all required coursework:

1. The requirements for this course are equivalent to completion of minimum of 90+ hours of class instruction at a traditional on-site high school
2. Assignments must be submitted for each unit as they are completed so that the teacher may review and assess your performance. Do not hold your work, you must submit each unit's homework as it is completed, demonstrating weekly assignment completions
3. You must log in regularly to your course to demonstrate continued participation, and completion of all course requirements, including assignments, assessments and discussion forums
4. You must complete your individual work and any incident of suspected cheating, plagiarism or collaboration on assignments violates the academic integrity expectations outlined at the time of your enrollment and can result in failure of the course or further action as deemed appropriate

Citizenship

Students are expected to conduct themselves in a responsible manner that reflects sound ethics, honor, and good citizenship. It is the student's responsibility to maintain academic honesty and integrity and to manifest their commitment to the goals of NUVHS through their conduct and behavior. Students are expected to abide by all NUVHS policies and regulations. Any form of academic dishonesty, or inappropriate conduct by students or applicants may result in penalties ranging from warning to dismissal, as deemed appropriate by NUVHS.

Communication

Throughout this course students will need to be in close contact with their instructor and fellow students. Students are expected to communicate via course message and electronic discussion boards. Therefore, students should plan on checking their course messages at least three times a week and participate in the discussion boards during the weeks they are live.

Instructors strongly encourage and welcome open communication. Clear, consistent, and proactive communication will ensure a successful experience in this course. It is the student's responsibility to notify the instructor immediately if and when a personal situation occurs that affects his/her performance in this class. Being proactive with communication will result in a quick solution to any problems that may occur.

COURSE OUTLINE

Unit 1 – What is Forestry?

Thriving forests are an essential part of the health of the planet, which is why there is an entire profession devoted to their health and preservation, forestry. Forests have an important role in the health of the planet. They provide a lot of important resources, ranging from lumber to clean air. Those focusing on forestry can expect to study a lot of biology, with particular attention to the structure of trees. Of course, identifying trees is also an important skill to develop. Trees cannot thrive without the right soil, so those interested in this career will be spending a lot of time examining dirt. Fortunately, both trees and soil have identifying characteristics that you will explore in this unit.

Learning Objectives

- Describe the historical and economic significance of forestry.
- Illustrate tree anatomy and growth.
- Discuss photosynthesis and respiration.
- Analyze and interpret soil survey data.

Activities

Unit 1 Text Questions	Homework	10 points
Unit 1 Online Lab Questions	Homework	10 points
Unit 1 Activity	Homework	15 points
Unit 1 Discussion 1	Discussion	5 points
Unit 1 Discussion 2	Discussion	5 points
Unit 1 Quiz	Quiz	15 points

Unit 2: All About Ecosystems

Having a thriving forest is not just about the trees. Every living organism in the area shapes the health of the forest because forests are ecosystems. This means that a change in one species likely impacts another. Wildlife management is also part of effectively managing forests. Forestry also includes silviculture, the maintenance of the forests and all they contain. Often forests serve several purposes at once, so multiuse forests are quite common. Thus those interested in a forestry career need to consider all aspects of how forests are used, by both humans and animals. Without this kind of consideration, ecosystems cannot thrive.

Learning Objectives

- Describe silviculture.
- Define watershed management.
- Compare forests and woodlands.
- Identify wildlife population management practices.
- Apply multiuse principles to forests and other lands.

Activities

Unit 2 Text Questions	Homework	10 points
Unit 2 Online Lab Questions	Homework	10 points
Unit 2 Activity	Homework	15 points
Unit 2 Discussion 1	Discussion	5 points
Unit 2 Discussion 2	Discussion	5 points
Unit 2 Quiz	Quiz	15 points

Unit 3: Measuring and Monitoring the Forest

You know that the density of trees determines the difference between a forest and a woodland, but how do you know when the land has the right number of trees? That's where measuring and monitoring come in. To keep forests healthy, a variety of data must be collected. This includes everything from the number, size, and variety of trees to how the water flows within the forest. There are methods for monitoring and measuring these natural resources, and this kind of attention is particularly important in cases where industries depend on the health of forests, as in the timber industry.

Learning Objectives

- Measure trees and forest volume.
- Estimate timber growth and yield.
- Evaluate by cruising timber stands.
- Calculate quality and volume by scaling logs.
- Monitor water resources.

Activities

Unit 3 Text Questions	Homework	10 points
Unit 3 Online Lab Questions	Homework	10 points
Unit 3 Activity	Homework	15 points
Unit 3 Discussion 1	Discussion	5 points
Unit 3 Discussion 2	Discussion	5 points
Unit 3 Quiz	Quiz	15 points

Unit 4: Forest Management Basics

Some threats that forests face come from nature. Because they are natural, these threats play a role in the development of forests. Fires can bring unparalleled destruction or provide the foundation for a new generation of growth. Other elements, such as pests and diseases, also are a threat to thriving ecosystems. In this unit, you'll learn more about these threats as well as how forestry professionals fight these threats. Proper management can help minimize the damage, but those in forestry will need to monitor these threats as well.

Learning Objectives

- Discuss the role of fire in forest management.
- Prescribe controlled burning for forest management.
- Demonstrate the control of destructive agents, such as insects and disease.
- Apply the principles of nursery management.

Activities

Unit 4 Text Questions	Homework	10 points
Unit 4 Online Lab Questions	Homework	10 points
Unit 4 Discussion 1	Discussion	5 points
Unit 4 Discussion 2	Discussion	5 points
Unit 4 Quiz	Quiz	15 points

Unit 4: Forest Management Basics (Continued)

Midterm Exam Objectives

- Review information acquired and mastered from this course up to this point.
- Take a course exam based on material from the first four units in this course (Note: You will be able to open this exam only one time.)

Midterm Exam Activities

Midterm Discussion	Discussion	5 points
Midterm Exam	Exam	50 points

Unit 5: Working with Wood

The timber industry is an important part of the American economy, and it takes a variety of experts to keep it thriving. When economic times are hard, many industries that the timber industry depends on, like construction and furniture, suffer. International trade also impacts the industry. Those working in the timber field need to understand not only how forests thrive, but also how the wood they produce will be used after it is harvested. Getting timber to the markets has gotten much more complex as technological innovations in everything from measuring devices to cutting equipment have become more precise. The advancements have also improved the production side of the industry, making timber processing and product development easier than ever before.

Learning Objectives

- Explain principles of forestry economics.
- Identify research and development issues in forestry and wood technology.
- Define technological advances in the timber industry.
- Compare timber manufacturing processes and products.

Activities

Unit 5 Text Questions	Homework	10 points
Unit 5 Online Lab Questions	Homework	10 points
Unit 5 Discussion 1	Discussion	5 points
Unit 5 Discussion 2	Discussion	5 points
Unit 5 Quiz	Quiz	15 points

Unit 6: Getting the Lay of the Land

Maps are one of the most useful tools for those in forestry. Given all of the measuring and monitoring involved in the forest industry, keeping track of the land measured is essential, as is finding the exact section of the forest that was measured previously. Improvements in technology and digital mapping have made tracking changes in the land and forest easier than ever before. In addition, it has never been easier to update information. At the same time, those in forestry still need to know how to perform basic navigation and surveying functions without depending on electronic devices.

Learning Objectives

- Describe different types of maps.
- Interpret map scale and actual distance.
- Use a geographic information system (GIS) to interface geospatial data.
- Identify direction from a map.

Activities

Unit 6 Text Questions	Homework	10 points
Unit 6 Online Lab Questions	Homework	10 points
Unit 6 Activity	Homework	15 points
Unit 6 Discussion 1	Discussion	5 points
Unit 6 Discussion 2	Discussion	5 points
Unit 6 Quiz	Quiz	15 points

Unit 7: Ethics, Ecology, and Safety

Maintaining thriving forests comes with a lot of responsibility. Those in forestry have quite a few standards to keep in mind as they perform their jobs. Professional ethics help determine the appropriate course of action, and government agencies create rules and regulations for forestry to ensure that forests are treated well. In addition, the public, particularly environmentalist groups, hold foresters accountable for the state of the forest. At the same time, forestry professionals work with business owners and those whose property borders forests—these stakeholders also have their own interests. Fortunately, guidelines are in place that allow forestry professionals to negotiate these relationships and preserve the forest.

Learning Objectives

- Identify and evaluate ethical guidelines.
- Apply environmental principles to the agricultural industry.
- Locate applicable local, state, and federal rules and regulations and assistance programs.
- Recognize applicable local, state, and federal rules and regulations and assistance programs.

Activities

Unit 7 Text Questions	Homework	10 points
Unit 7 Online Lab Questions	Homework	10 points
Unit 7 Activity	Homework	15 points
Unit 7 Discussion 1	Discussion	5 points
Unit 7 Discussion 2	Discussion	5 points
Unit 7 Quiz	Quiz	15 points

Unit 8: Professional Skills in Forestry

Forestry offers diverse professional opportunities, and for those concerned about the environment, it is a great choice. This unit will explore some of the career options in forestry and the background required to start them. Resources, such as professional organizations, can help aspiring foresters get their start. Like most industries, forestry needs employees who understand and demonstrate appropriate conduct in the workplace. This means everything from working effectively in groups to sticking to a budget. Safety is also especially important in forestry—a good employee always follows safety procedures. Understanding the expectations is the first step in starting your forestry career.

Learning Objectives

- Apply basic financial management skills.
- Demonstrate knowledge of personal and occupational safety practices in the workplace.
- Identify career development and entrepreneurship opportunities in forestry and woodland ecosystems.
- Identify employers' expectations, including appropriate work habits, ethical conduct, legal responsibilities, and good citizenship skills.

Activities

Unit 8 Text Questions	Homework	10 points
Unit 8 Online Lab Questions	Homework	10 points
Unit 8 Activity	Homework	15 points
Unit 8 Discussion 1	Discussion	5 points
Unit 8 Discussion 2	Discussion	5 points
Unit 8 Quiz	Quiz	15 points

Unit 8: Professional Skills in Forestry (Continued)

Final Exam Objectives

- Review information acquired and mastered from this course up to this point.
- Take a course exam based on material from units five to eight in this course – the last four units.
(Note: You will be able to open this exam only one time.)

Final Exam Activities

Class Reflection Discussion	Discussion	10 points
Final Exam	Exam	50 points

HOW YOU WILL BE GRADED

For critical thinking questions, there are no right or wrong answers. For example, a question on your thoughts on why you think people are shy is a pretty open-ended type of question. Grades will be based on the depth of personal insight you present. **Do not simply agree or disagree** with an insight question. We are looking for critical thinking and possibly a related personal experience with the question.

It is important to provide detailed answers for insight/opinion questions.

For review questions, you should produce a more academic answer. For example, "What two categories are norms divided into?" This type of direct question requires a specific answer. Please use full sentences and proper grammar.

When submitting paragraphs, use these guidelines.

1. The first, second or last sentence contains the main idea and key words from the question or assigned topic.
2. Paragraph contains one to three explanatory sentences.
3. Paragraph contains two to four sentences about specific details related to question.
4. Details are colorful, interesting and appropriate.
5. Paragraph ends with a good closing sentence that refers to the main idea without repeating it.
6. Free of spelling and grammatical errors.

GRADE SCALE

The following grading scale will be used to determine your final letter grade.

Letter Grade	Percentage Earned
A	95%+
A-	90% - 94.9%
B+	87% - 89.9%
B	84% - 86.9%
B-	80% - 83.9%
C+	77% - 79.9%
C	74% - 76.9%
C-	70% - 73.9%
D+	67% - 69.9%
D	64% - 66.9%
D -	60% - 63.9%
F	59% and lower

SUPPORT

At NUVHS you will have access to multiple support teams. Who you contact will depend on the questions you have. Always start by contacting your teacher through the Message Center in the course. Your teacher should be able to answer your question, but if they can't, then they will direct you to another support team. If you have questions about any of the course content, your grades, or course policies, you should contact your instructor.

For questions about your enrollment, transcripts, or general school-wide policies, you can contact **NUVHS Student Services** at info@nuvhs.org or by phone at 866.366.8847. For example, if you would like to withdraw from your course, you should contact Student Services. Please note that a refund for your course can only be obtained if you drop within the first seven days of enrolling in the course.

For help with login/password issues, or other technical issues specific to the Blackboard website, you can contact the team at [National University Blackboard Learn](#). They can also be reached by phone at (888) 892-9095.

EXPECTED SCHOOL-WIDE LEARNING RESULTS (ESLRs)

Engaged Learners

- Demonstrate self-directed learning skills such as time management, and personal responsibility through the completion of course requirements
- Develop an understanding of their own preferred learning styles to enhance their overall academic potential
- Incorporate effective and relevant internet and multimedia resources in their learning process to broaden their knowledge base

Critical Thinkers

- Effectively analyze and articulate sound opinions on a variety of complex concepts
- Illustrate a variety of problem-solving strategies that strengthen college preparation and workforce readiness
- Formulate a framework for applying a variety of technology and internet-based research to enhance information literacy and collaborative thinking

Effective Communicators

- Demonstrate awareness and sensitivity to tone and voice in multiple forms of communication
- Express concepts and ideas in a variety of forms
- Enhance communication skills through the use of media rich or other technology resources

Global Citizens

- Appreciate the value of diversity
- Understand the range of local and international issues facing today's global community
- Demonstrate awareness of the importance of cultural sensitivity and social responsibility in the 21st century