

Kemper Academy
Introduction to Forestry and Natural Resources
Course Syllabus
Instructor: Adam Wade

Course Overview:

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.

Grading Breakdown:

- Tests/Projects: 20%
- Quizzes: 20%
- Classwork: 15%
- Homework: 15%
- Nine-Weeks Exam: 30%

Course Outline:

Unit 1: What is Forestry?

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

Unit 2: All About Ecosystems

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

Unit 3: Measuring and Monitoring the Forest

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

Unit 4: Forest Management Basics

- 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.

Unit 5: Working with Wood

- 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.

Unit 6: Getting the Lay of the Land

- 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.

Unit 7: Ethics, Ecology, and Safety

- 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.

Unit 8: Professional Skills in Forestry

- 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.

Required Materials:

- Notebook/Binder: For note-taking and organizing handouts and assignments.
- Writing Utensils: Pens, pencils, and highlighters.
- Calculator: For mathematical calculations related to forestry measurements and data analysis.
- Field Journal: (Composition Notebook) For recording observations and data during field trips and outdoor activities.
- Outdoor Gear: Appropriate clothing and footwear for fieldwork (e.g., boots, long pants, hat, gloves).
- Technology: Laptop or tablet for research, assignments, and accessing online resources.
- Measuring Tools: Ruler, measuring tape, and other tools as specified for certain activities.
- Safety Gear: Safety glasses, gloves, and any other required protective equipment for hands-on activities.
- GIS Software: Access to GIS software (details provided in class).

Class Expectations:

1. **Respect and Responsibility:** Show respect for classmates, teachers, guest speakers, and the environment. Take responsibility for your actions, assignments, and equipment.
2. **Attendance and Punctuality:** Attend all classes and arrive on time. Notify the teacher in advance if you will be absent. Make arrangements to catch up on missed work.

3. Participation: Actively participate in class discussions, activities, and field trips. Contribute positively to group work and collaborate with peers.
4. Preparedness: Come to class prepared with necessary materials, including textbooks, notebooks, writing utensils, and any assigned readings or homework. Dress appropriately for outdoor activities and field trips.
5. Assignments and Projects: Complete all assignments and projects by the due dates. Submit work that is original, well-researched, and demonstrates a thorough understanding of the topic.
6. Field Trips and Outdoor Activities: Follow all safety guidelines and instructions during field trips and outdoor activities. Show respect for natural environments and adhere to Leave No Trace principles.

Course Policies:

1. Grading: Grading will be based on a combination of class participation, homework assignments, quizzes, projects, and exams. Late assignments will be accepted up to one week after the due date, with a penalty of 10% per day.
2. Academic Integrity: Plagiarism and cheating will not be tolerated. Any student caught engaging in these activities will receive a zero for the assignment and may face further disciplinary action.
3. Technology Use: Use of electronic devices is permitted for educational purposes only. Devices should not be used for personal activities during class time. Be mindful of the environment; avoid using technology that could disturb wildlife during field activities.
4. Safety: Safety is a top priority. Follow all safety guidelines provided by the teacher, especially during hands-on activities and field trips. Report any accidents or unsafe conditions to the teacher immediately.
5. Communication: Check school email and the course webpage regularly for updates, announcements, and assignment information. Reach out to the teacher with any questions or concerns via email or during office hours.

Classroom Environment:

1. Supportive Learning Atmosphere: Foster a positive and inclusive environment where all students feel valued and supported. Encourage curiosity and a love for learning about forestry and the natural world.
2. Respect for Diversity: Recognize and respect the diverse backgrounds and perspectives of all students. Promote equity and inclusion in all class activities and discussions.

Additional Expectations:

1. Field Work Commitment: Participate fully in fieldwork components of the course, understanding that they are essential for practical learning. Show diligence and enthusiasm in both classroom and outdoor settings.
2. Environmental Stewardship: Embrace the role of an environmental steward, advocating for sustainable practices and conservation efforts both in and outside of school.

Acknowledgment:

I have read and understood the High School Forestry Course Policy and Expectations. I agree to adhere to these guidelines to contribute to a positive and effective learning environment.

Student Name: _____

Signature: _____

Date: _____