AG. 350 FORESTRY AND WILDLIFE MANAGEMENT

COURSE DESCRIPTION: A course designed to examine the importance of forestry, wildlife, and outdoor recreation with emphasis on efficient use of natural resources.

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TOTAL MINUTES	4,230

A. Introduction to Forestry

1. Match historical events with their major dates and people involved
2. List the federal and state agencies involved in management of forests
3. Describe how the forest industry operates in Idaho
4. Identify the location of National Forests in Idaho
5. Describe how private sector forestry plays its part in Idaho forestry
6. List the steps necessary to enter forestry training at the university level in the Northwest
7. Identify the size relationship of forestry to other agriculture industries in Idaho
8. List various types of forest products processed and manufactured in Idaho
9. Identify uses that a forest has other than the production of timber
10. Describe other cultural and environmental influences of forests
11. Describe the duties and responsibilities of one forestry related career
12. Select the types of Cedar products that are produced in Idaho
13. Identify types of forestry career training programs in the northwest

B. The Forests

1. Match terms associated with tree growth and forests
2. List the main parts of a tree including crown, trunk and root system
3. Describe the photosynthetic process of a tree
4. List the 2 kinds of wood formed in an annual ring of diameter growth
5. Classify trees according to size, crowns, and stands
6. Identify the six forest regions of the United States

C. Identify Idaho Trees and Forest Plants

1. Match terms associated with identifying trees and plants to their correct definition
2. Distinguish between the characteristics for angiosperms and gymnosperms
3. Label the parts of a simple leaf
4. Name the types of veins in a leaf
5. Label leaf shape and margins
6. Identify leaf arrangements
7. Identify evergreens based on needle, cone, and bark
8. Identify various species of forest plants
9. Identify the various reproductive systems as to sexual or asexual

D. Forest Surveying

1. Identify common forest surveying tools and equipment
2. Match terms and definitions associated with forest surveying
3. List the methods to find horizontal distance

4. List the types of tapes used in forest surveying
5. Arrange the steps in chaining horizontally and along slopes
6. Describe how to measure around obstacles with a tape
7. List the essential parts and accessories of a compass
8. Use a compass to obtain directions
9. Describe how to find magnetic declination
10. Find true azimuths and bearings for magnetic angles
11. List the guidelines to follow when reading a compass
12. Demonstrate pacing skill
13. Demonstrate ability to use a clinometer to measure slope
14. Demonstrate how to set magnetic declination on a compass
15. Convert slope distance to horizontal distance
16. Demonstrate the proper use of a hip chain

E. Forest Land Location

1. Match terms and definitions associated with land location
2. Select the methods of land survey systems
3. Match subdivisions of a rectangular survey to a map
4. Determine the number of acres from a legal description
5. Locate and label the principle base line and meridian for Idaho
6. List the types of witness markings
7. List items of entry found in survey notes
8. List the locations where survey notes can be found
9. Locate points from a given legal description
10. Write the legal description for a given point

F. Tree Measurements

1. Classify trees as to form
2. Match terms associated with tree measurements
3. Classify tree diameters correctly when given exact measurements
4. Identify and properly use common equipment used for determining tree heights
5. Identify and properly use common equipment used for determining tree diameter
6. Select the proper volume table for different tree species and form classes
7. Properly use volume tables to determine standing tree volume given tree height, diameter, form class, and species

G. Log Scaling

1. Match terms and definitions associated with log scaling
2. List commonly used log rules
3. List the parts of a scale stick
4. List the steps in scaling a log
5. Identify the types of defects for logs

6. Demonstrate the use of the Scribner decimal C log rule to determine the gross and net volume of logs

H. Remote Sensing in Forestry

1. Identify the uses of aerial photographs for forestry
2. Identify the different types of aerial photographs
3. Identify equipment used with aerial photograph interpretation
4. Use aerial photograph stereo pairs to determine land formations, cover types, and tree heights

I. Pine Tree Grading

1. Match terms and definitions associated with pine tree grading
2. Choose the reasons trees are graded
3. List the common tools used to find upper stem diameters
4. List the procedure to establish tentative log grades
5. List the defects that degrade a log
6. Demonstrate ability to measure log height, measure upper stems, and grade trees

J. Plot Cruising

1. Match terms and definitions associated with plot cruising
2. Select the commonly used plot forms and sizes
3. State commonly used plot sizes based on plot radii
4. List the methods of determining cruise intensity
5. Select the methods of planning a sampling layout
6. List the steps for conducting a plot cruise
7. Distinguish between advantages and disadvantages of plot cruising
8. Demonstrate the ability to complete a plot cruise layout
9. Demonstrate the ability to determine sawtimber and pulpwood volumes per acre using the plot cruising method

K. Point Sampling

1. Match terms and definitions associated with point sampling
2. Select other names for point sampling
3. Diagram an illustration of point sampling
4. Identify the tools used for point sampling
5. Select the principles used to determine BAF
6. Match commonly used BAF's to the correct angle size
7. State the rule to use PRF
8. Match commonly used BAF to the correct PRF
9. Select the proper uses of a prism

10. State the rules for determining the number of points to use in a point sampling cruise
11. Demonstrate the ability to complete a point sample layout
12. Demonstrate the ability to determine sawtimber volume per acre using the point sampling method

L. Silvicultural Systems

1. Match terms and definitions associated with silvicultural systems
2. Name the types of reproduction methods that can be used
3. Select the principles of selection method
4. Name the characteristics used in selecting harvest trees
5. Identify various species of Christmas trees
6. Describe the cultural practices used for a Christmas tree crop
7. Compare the management systems used for even age and uneven age management

M. Marking Timber

1. Identify equipment used for marketing timber
2. Match terms and definitions associated with marking timber in thinnings
3. Match methods and definitions for thinning
4. Select the most commonly used methods of marking timber
5. Arrange the priorities for marking trees in a thinning
6. Select the correct factors for crown spacings
7. Select the reasons for removing diseased trees and snags

N. Seeding and Planting

1. Match terms and definitions associated with seeding and planting
2. Name the sources for seed and seedlings
3. Name the types of seedling packaging
4. Select the correct procedures for the care of seedlings for transport
5. Describe the ways of storing seedlings for long and short term periods
6. Select the factors for seedling spacing
7. Identify the tools and methods used in hand planting
8. Describe the time to collect conifer cones
9. Describe the procedures for seed treatment before seeding
10. Match seeding applications to methods of seeding
11. Identify the planting zones for each tree species
12. Identify the requirements needed for certified tree seed

O. Timber Stand Improvement

1. Match terms and definitions associated with timber stand improvement
2. Select the correct classifications of intermediate cuttings
3. Select the correct methods of cleaning, liberation, and recommendations for improvement
4. List the agents of damage that require salvage cutting
5. Select the factors influencing pruning
6. Identify tools and equipment for herbicide application
7. Describe the needs and uses for sanitation cutting

P. Harvesting Timber

1. Match term and definitions associated with harvesting timber
2. List factors associated with location and accessibility of a timber stand
3. Identify correct procedures used in felling and bucking timber
4. Identify tools and equipment associated with harvesting timber
5. Select the correct uses of various types of equipment
6. Identify safety procedures for harvesting timber
7. Describe the correct procedures for skidding, loading, and hauling timber
8. Demonstrate the ability to design skid trails, access roads, and skyline corridors
9. Demonstrate the proper use and maintenance skills for a chain saw

Q. Fire Fighting

1. Match terms and definitions associated with fire fighting
2. Name the elements of the fire triangle
3. Name the purposes of fire control organizations
4. Select the means of fire prevention
5. Name the classes of fire
6. Name the methods of fire attack
7. Name the methods of crew organization using hand tools
8. Identify the tools used in fire fighting

R. Prescribed Burning

1. Identify the tools used for prescribed burning
2. Match terms and definitions associated with prescribed burning
3. Select the reasons for prescribed burning
4. Select the most desirable wind direction and velocity
5. List the range of preferred relative humidity and the effects of temperature change on humidity
6. Name the desired range of temperatures for prescribed burning
7. Identify an anemometer and a psychrometer

8. List the steps of a pruning plan
9. Select the factors that determine the type of fire techniques to be used in a prescribed burn
10. Demonstrate the ability to determine weather factors related to burning
11. Demonstrate the ability to determine the prescribed pruning technique to be used

S. Forest Protection

1. Match terms and definitions associated with forest protection
2. List the reasons for identifying pest damage
3. Match the symptoms and causes for damage
4. Identify common insect pests in Idaho forests
5. Identify diseases prevalent in northwest forests
6. Match the problems with the control factors for pests such as insects, diseases, livestock, big game, and rodents for Idaho forests

T. Forest Business Methods

1. Match terms and definitions associated with forest business methods
2. List the categories of records necessary in a forestry business
3. List the basic items necessary in a timber sale
4. Arrange the steps in a bidding procedure
5. Select the elements of an offer
6. Select the items that might result in the termination of an offer
7. Identify the parts of a contract compliance
8. Inspect a timber sale for contract compliance
9. List the components of a timber sale appraisal

U. Importance of Wildlife Management

1. Understand the ecological benefits of wildlife
2. Understand the economic benefits of wildlife
3. Identify the aesthetic benefits of wildlife

V. History of Wildlife and Fish Management

1. Identify historical aspects of wildlife management
2. Identify the historical development of fish management

W. Ecological Concepts

1. Understand ecosystems
2. Understand carrying capacity and population effects

X. Identify Wildlife and Fish Species

1. Examine animal species, including fur bearers
2. Identify fish species (fresh and salt water)
3. Identify fowl species
4. Identify exotic game

Y. Management of Wildlife and Fish Populations

1. Explore water, food and cover requirements of wildlife
2. Examine and develop habitats for wildlife production
3. Discuss the management of wildlife populations
4. Discuss the management of fish populations

Z. Natural Resources for Outdoor Recreations

1. Identify recreational enterprises
2. Identify methods of developing recreational enterprises
3. Discuss the management of recreational enterprises
4. Review state and federal policies concerning recreational activities

AA. Career Opportunities

1. Identify career opportunities in wildlife management
2. Identify career opportunities in outdoor recreation management