

**NRES 250: INTRODUCTION TO FISHERIES, FORESTRY AND WILDLIFE RESOURCES  
SPRING SEMESTER 2022 SYLLABUS**

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<b><u>Lecturers:</u></b>	<b><u>Office</u></b>	<b><u>Phone</u></b>	<b><u>Office Hours (or by Appointment)</u></b>
Dr. Justin VanDeHey (JV)	TNR 178	715-346-2090	11 – 12 Thur. (or by appointment)
Dr. Shelli Dubay (SD)	TNR 325	715-346-4178	12 – 1 Tues. and Fri. (or by appointment)
Dr. Rich Hauer (RH)	TNR 323	715-346-3642	10 – 11 Tues. and Thur. (or by appointment)

**Zoom Office Hours Links:**

JV: <https://wisconsin-edu.zoom.us/j/99543929658>? (Passcode: 942867)

SD: <https://uwsp.zoom.us/j/9269849384>

RH: <https://wisconsin-edu.zoom.us/j/93631358494>? (Passcode: 549173)

**Overall Objectives:** This course will introduce students to management practices used to achieve management objectives for fisheries, forestry and wildlife resources. Specifically, the course provides students with skills to:

- 1) Identify the prevailing views toward, and conditions of, the North American fisheries, forestry and wildlife resources from pre-European settlement times to the present,
- 2) Identify key policies and legislation that has guided the management of the resources over time in addition to the reasons for their implementation,
- 3) Describe and/or apply sampling techniques when estimating fisheries, forestry or wildlife attributes,
- 4) Define the term sustainability and identify management techniques that lead to sustainability of fisheries, forestry, and wildlife resources, and
- 5) Evaluate the inter-related nature of managing fisheries, forestry, and wildlife resources identifying synergies and divergences therein.

**Forestry Objectives:** At the end of the course, students should be able to 1) Develop economically, socially, and environmentally sound and science-based forestry practices to meet landowner objectives, including those related to fisheries and wildlife; 2) Select appropriate stand regeneration techniques (intermediate stand management, harvesting options for both even-aged and uneven aged stands, as well as mixed and pure stands) and relate how they can be used; 3) Identify the different forested regions of North America, predominant species present in those regions, describe common tree silvics characteristics; 4) Identify laws, policies, and market place approaches used to solve conservation, preservation, and sustainable questions; and 5) Compare and contrast the role, and management, of individual trees in urban forests and rural forests.

**Fish and Wildlife Objectives:** At the end of the course, students should be able to 1) Describe public attitudes and ethics involved with fish and wildlife management today, 2) Identify techniques used to sample fish and wildlife, 3) Describe the role of recruitment/natality, mortality, and growth in regulating fish and wildlife populations, 4) Describe techniques used to determine the age, sex, and growth rate of fish and wildlife species, 5) Identify techniques used to evaluate, manage, and improve habitat for wildlife and fish species, 6) Identify the various types of harvest regulations used to manage fish and wildlife populations, 7) Identify causes of fish and wildlife population decline and describe measures used to protect endangered populations.

**Attendance:** Attendance/watching recorded lectures is your responsibility, and as a professional and responsible student, you are expected to attend class and familiarize yourselves with all material covered in class. You will not do well in the class if you do not watch recordings and miss lab meetings. Please let Dr. Hauer, coordinator of this class and/or your lab instructor know *as soon as possible* regarding an unavoidable absence from class. If you are unable to take an exam because of a university-sponsored event, you must contact the instructor(s) at least 3 days before the event to arrange an alternative test time. If you miss an exam because of an emergency (health problem or family crisis), you are responsible for contacting Dr. Hauer or your lab instructor *as soon as possible* and arrange a make-up exam immediately. Make-up exams are not available for exams missed for reasons other than emergencies or university-sponsored events.

**Labs:** Meeting times are below and all will meet in TNR 157 unless online or a different location is specified by your lab instructor

Section 1: Monday 8:00-9:50 – Dr. Melinda Vokoun (TNR 376; 715-346-2342; mvokoun@uwsp.edu)  
Section 5(H): Monday 13:00-14:50 – Dr. Shelli Dubay (TNR 325; 715-346-4178; sdubay@uwsp.edu)  
Section 8: Monday 15:00-16:50 – Dr. Melinda Vokoun (TNR 376; 715-346-2342; mvokoun@uwsp.edu)  
Section 6: Tuesday 13:00-14:50 – Jeremy Natzke (TNR 360A; Phone 715-218-2924; jenatzke@uwsp.edu)  
Section 7: Wednesday 13:00-14:50 – Jeremy Natzke (TNR 360A; Phone 715-218-2924; jenatzke@uwsp.edu)  
Section 4: Thursday 12:00-13:50 – Macayla Greider (TNR 362B; mgreider@uwsp.edu)  
Section 2: Wednesday 8:00-9:50 – Dr. Shuva Gautam (TNR 192; 346-2144; shuva.gautam@uwsp.edu)  
Section 3: Thursday 8:00-9:50 – Dr. Shuva Gautam (TNR 192; 346-2144; shuva.gautam@uwsp.edu)

Note, you are expected to attend only your scheduled lab section. Attending another section is not permissible except for (i.) pre-approved extenuating circumstances or (ii.) health problem or family crisis. Permissions must be granted by your lab instructor and the instructor's whose lab you are trying to attend. See the attendance policy above for valid extenuating circumstances.

**Canvas:** This course will use the Canvas site to provide lecture materials. Use of Canvas in labs will be at the sole discretion of your lab instructor and level of use can vary from lab instructor to lab instructor.

Course Canvas site: <https://uwstp.instructure.com/courses/479498>

**Readings:** Readings will be assigned from the course texts (below) as well as from notes and other materials referenced from time to time in lecture. **Exams can include questions from reading assignments.**

Willis, D. W, C. G. Scalet and L. D. Flake. 2008. Introduction to wildlife and fisheries: An integrated approach. W. H. Freeman and Company, New York, New York, USA. **WS&F**

Young, R. A., and R. L. Giese, editors. 2003. Introduction to forest science. 3<sup>rd</sup> edition. John Wiley and Sons, New York, New York, USA. **Y&G**

**Grading:** The lecture component comprises 60% of your course grade and is based on three non-cumulative and equally weighted lecture exams that each contribute 20% toward your final grade. The remaining 40% of your grade results from the laboratory portion. The laboratory component consists of two lab exams (each contributing 9% toward your course grade), one scientific report (9% of your course grade) two assignments (a combined 7% of your course grade), and lab quizzes (collectively comprising 6% of your course grade).

Your final grade for the course will be assigned based on the final percentage of total points you earned. Categories are as follows:

A	92.6–100%	B+	86.6–89.5%	C+	76.6–79.5%	D+	66.6–69.5%
A–	89.6–92.5%	B	82.6–86.5%	C	72.6–76.5%	D	59.6–66.5%
		B–	79.6–82.5%	C–	69.6–72.5%	F	0–59.5%

Instructors reserve the right to adjust final course grade categories (*only* to your benefit) at semester's end. Direct questions regarding your course grade to Dr. Hauer, the coordinator for NRES 250 this semester.

**Students with Disabilities:** The University has a legal responsibility to provide accommodations and program access as legislated by Section 504 and the Americans with Disabilities Act (ADA). The university's philosophy is to not only provide what is mandated, but also convey its genuine concern for one's total well-being. If accommodations are needed, please contact the lead instructor (Dr. Hauer for this course) as well as the Office of Disability Services, 609 LRC, voice (715) 346-3365 or 4116.

**LECTURE AND LAB SEQUENCE**

**WEEK 1: January 24–28, 2022**

Lec: History of wildlife management (SD)  
Lec: History of fisheries management (JV)  
Lec: Public attitudes, conservation ethics and values (SD)  
Lab: No Scheduled Lab First Week

**Reading Assignments**

WS&F 1.4, 1.5  
WS&F 1.3 – 1.5, 1.8, 17.2, 17.3  
WS&F 16.4 -16.6

**WEEK 2: January 31–February 4, 2022**

Lec: Rectangular Land Survey (RH)  
Lec: History, importance, legislation of forest management (RH)  
Lec: Importance of fisheries and wildlife management (SD)  
Lab: Rectangular Land Survey and Map Reading

Y&G Ch. 245-248  
Y&G Ch. 1, pp. 196-202

**WEEK 3: February 7–11, 2022**

Lec: Sampling fish and wildlife (JV)  
Lec: Animal Behavior I (SD)  
Lec: Animal Behavior II (SD)  
Lab: Scientific Writing

WS&F Ch. 7  
WS&F Ch. 6, 2.8-2.10

**WEEK 4: February 14–18, 2022**

Lec: Sampling forest resources (RH)  
Lec: Forest regions of North America (RH)  
Lec: Uses of marked animals in fisheries and wildlife science (JV)  
Lab: Fish and Wildlife Population Assessment

Y&G pp. 249-260, WS&F 13.5  
Y&G Ch. 3  
WS&F Ch. 9.10 – 9.14

**WEEK 5: February 21–25, 2022**

Lec: Dynamics of fish and wildlife populations (JV)  
Lec: Agricultural practices and wildlife management (SD)  
**Lec: 1st LECTURE EXAM**  
Lab: The Scientific Method - Testing Hypotheses

WS&F Ch. 3  
WS&F 2.11, 14.4, 18.9

**WEEK 6: February 28–March 4, 2022**

Lec: Factors influencing forest growth: tree morphology (RH)  
Lec: Forest ecology and the forest ecosystem (RH)  
Lec: Environmental physiology of tree growth (RH)  
Lab: **WORK ON LAB REPORT**

Y&G pp. 75-85  
Y&G pp. 114-118, 127-130  
Y&G pp. 85-86, 261

**WEEK 7: March 7–11, 2022**

Lec: Modeling and statistics in fish and wildlife populations (JV)  
Lec: Population Genetics in fisheries and wildlife (JV)  
Lec: Determining age, growth, and sex of fish and wildlife (JV)  
Lab: Distance and Direction Using Compass and Pacing

WS&F Ch. 9  
WS&F Ch. 4  
WS&F Ch. 8

**WEEK 8: March 14–18, 2022**

Lec: Silviculture and stand regeneration techniques (RH)  
Lec: Even vs. uneven-aged approaches to forest mgmt. (RH)  
Lec: Intermediate forest management practices (RH)  
Lab: **MIDTERM LAB EXAM**

Y&G pp. 285-293  
Y&G pp. 285-293  
Y&G pp. 293-312, Ch. 16

**LECTURE AND LAB SEQUENCE (continued)**

**SPRING BREAK: March 21–25, 2022**

**WEEK 9: March 28–April 1, 2022**

Lec: Impacts of diseases on forests, fish, and wildlife (SD)  
Lec: Wildlife and Forest Management I (SD)  
Lec: Wildlife and Forest Management II (SD)  
Lab: Comparing GPS to Compass and Pacing

**Reading Assignments**

Y&G 148-160, WS&F 10.9, 391-  
Y&G Ch. 14, WS&F 13.7, 14.5, 15.1

**WEEK 10: April 4–8, 2022**

Lec: Jobs in Natural Resources (Bobbi Kubish)  
Lec: Range management and grazing systems (SD)  
**Lec: Attend CNR Undergraduate Research Symposium**  
Lab: Tree Identification

Y&G Ch. 15; WS&F 15.1

**WEEK 11: April 11–15, 2022**

**Lec: 2nd LECTURE EXAM**

Lec: Lake and reservoir habitat management (JV)  
Lec: Wetland management (ALL)  
Lab: Forest Resource Measurements

WS&F Ch. 15.3

WS&F 12.2, 14.6, 15.2, 15.6

**WEEK 12: April 18–22, 2022**

Lec: Urban forestry and urban forest ecosystems I (RH)  
Lec: Urban forestry and urban forest ecosystems II (RH)  
Lec: Case study – crane research in Wisconsin (SD)  
Lab: Forest & Timber Cruising (Schmeckle Reserve)

Y&G Ch. 22

**WEEK 13: April 25–29, 2022**

Lec: Trout stream management (JV)  
Lec: Manipulating fish & wildlife resources: harvest management (JV)  
Lec: Manipulating fish & wildlife resources: stocking & removals (JV)  
Lab: Snags and Woody Debris (Schmeckle Reserve)

WS&F Ch. 15.4

WS&F Ch. 17, 19

WS&F Ch. 10

**WEEK 14: May 2–6, 2022**

Lec: Harvest management Case studies (JV)  
Lec: Case study: Lake whitefish in Lake Michigan (JV)  
Lec: Wildlife mgmt. in urban settings: benefits and problems (SD)  
Lab: Forest Succession (Schmeckle Reserve)

WS&F 14.3

**WEEK 15: May 9–13, 2022**

Lec: Forest protection and managing natural resources (RH)  
Lec: Sustainable forestry, ecosystem management & BMPs (RH)  
Lec: Management of depleted species (SD)  
**Lab: FINAL LAB EXAM**

WS&F, pp. 290-291

Y&G pp. 181-193, 307-312

WS&F Ch. 11

**FINAL LECTURE EXAM: Monday, May 16 from 8:00 AM-10:00 AM** (third exam, not cumulative)