

# NREM 5424 Fisheries Techniques Fall 2009

11:30am -12:45pm MW Rm 19 AGH, 2:30pm – 5:20pm Tue Rm 14 AGH

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**Office hrs: by appointment**

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**Text:** Fisheries Techniques, second edition. Murphy and Willis, 1996. American Fisheries Society.

**Course objectives:** This course will cover the theory and application of techniques and methods used in fisheries science. The class will focus on data collection, equipment, and techniques commonly used by researchers and managers in fisheries agencies. Students will learn the advantages and disadvantages of various techniques and methods in order to understand how to select the optimal method for a given research objective.

**Grading:** Student's performance will be evaluated by three examinations (Cumulatively worth 70% of your grade), their participation in laboratory exercises and performance on several laboratory reports (20% of final grade), and a term paper comparing/contrasting available sampling methods from a literature review in order to develop a sampling protocol to address a research question that the students chose (10% of final grade).

## Lecture Schedule:

Week	Topic	Reading assignment
1	Overview of fisheries management, Introduction to sampling	Chp 1 & 2
2	Introduction to sampling	Chp 2, 3, & 5
3	Passive capture techniques	Chp 6
4	Passive capture techniques, Active capture methods	Chp 6 & 7
5	Active capture methods	Chp 7
6	Active capture methods, Electrofishing, <b>End Material for Exam I</b>	Chp 7 & 8
7	Electrofishing	Chp 8
8	Sampling with toxicants, Hydroacoustics	Chp 10 & 13
9	Standardized sampling, <b>End material for Exam II</b>	
10	Age and Growth metrics	Chp 16
11	Age and Growth Metrics, Tagging and marking fish	Chp 16, 12
12	Tagging and marking fish	Chp 12
13	Biotelemetry	Chp 19
14	Biotelemetry	Chp 19
15	Bioenergetics model	Supplemental
16	Topics as time permits: Diet analyses; Field examination and disease identification; Keeping fish in the Lab;	Chp 17 or supplemental

**Lab Schedule:**

<b>Week</b>	<b>Topic</b>
1	<b>no lab-lecture in rm 014 agh</b>
2	Boating safety and operation/knots, net mending
3	Working with spreadsheets (Excel exercise)
4	Passive fish capture
5	Passive fish capture
6	Active fish capture
7	Active fish capture
8	<b>Makeup rain date or No class--fall break</b>
9	Stream sampling or Active capture cont'd
10	Analyze data from previous labs
11	Analyze data from previous labs
12	Age & Growth
13	Mark-recapture / fish tagging
14	Radio & ultrasonic telemetry
15	Bioenergetics model
16	Diet analysis calculations or TBA

**Class policies:**

Attendance at all class meetings is expected. Students are responsible for any announcements made or assignments given in class even if they are absent. Assignments are due at the beginning of class, late points will be taken off of assignments turned in late based on how many days they are past due. All assignments are to be done individually. While you may discuss concepts related to the lab assignments with other members of the class (e.g., you can help each other figure out how to perform the needed calculations), each student is to perform their own work. Any assignment where it appears more likely than not that the student has copied work from another student (current or former) will be handled in accordance with the OSU Academic Integrity Policy. This course will adhere to additional information listed in the Syllabus Attachment (including disability statement) posted online at: <http://osu.okstate.edu/acadaffr/aa/syllabusattachment-Fall.htm>