

Ichthyology Lab Syllabus WFS 453 – Fall 2015

Instructor: Sara Mueller (sjm5467@psu.edu)

Meeting time: Tuesday, Thursday 3:35 – 6:30

Meeting Place: 101 Forest Resources Building

Office: 421 Forest Resources Building

Office Hours: By appointment

Course Description: This course is designed to teach students how to identify fishes of PA.

Course Objectives:

Identify the external anatomy of Pennsylvania fishes

Identify the families of Pennsylvania fishes

Use field guides to identify Pennsylvania fishes to species

Use and design dichotomous keys to identify Pennsylvania fishes to species

Learn the identification and scientific nomenclature of Pennsylvania fishes

Required Materials:

Peterson's Field Guide to Freshwater Fishes

PA Fishing License

Optional Materials:

Audubon's Field Guide to Freshwater Fishes of North America

Fishes of Pennsylvania (E.L. Cooper 1983)

Waders

Evaluation

Quizzes (9 @ 75 pts each)	675
Dichotomous Keys (7 @ 15 pts)	105
Field Notes (5 @ 4 pts)	20
Total	800

Quizzes: There will be 9 quizzes throughout the course. The anatomy and families quizzes will serve as a basic understanding of the framework upon which the rest of the course will be built. The fish group quizzes are cumulative and focus on the most recent group of fishes learned; however, all previous material will be fair game. Each quiz will focus on fish identification with some ecology/life history lecture based questions.

Spelling counts. There will be no make-up quizzes and no quiz grades will be dropped.

Dichotomous Key Assignment: Each student will design a dichotomous key for each fish group (1-7). The goal of this assignment is to give students the opportunity to become more familiar with the use and design of dichotomous keys. Each student will construct **his/her own** dichotomous keys. Be careful of working together. These are designed to aid in your learning and should only help your grade. Sloppiness, late submission, and incompleteness will all result in loss of points. Keys will be submitted prior to the quiz for that group of fishes.

Field Notes: Field note pages will be provided to you. It is expected that you legibly fill out one field note for each field trip. Further details will be provided in the field.

Note on Participation: It is expected that students will be present during all class periods, field trips, and quizzes. Attendance is to your benefit. Looking at pictures alone cannot be a substitute for looking at jarred or live specimens and will be a disservice only to yourself.

Grading Scale:

A	93-100%	B	83-86.9%	C	70-76.9%
A-	90-92.9%	B-	80-82.9%	D	60-69.9%
B+	87-89.9%	C+	77-77.9%	F	<60%

Academic Integrity:

Penn State and the College of Agricultural Sciences take violations of academic integrity very seriously. Faculty, alumni, staff and fellow students expect each student to uphold the University's standards of academic integrity both in and outside of the classroom.

Academic integrity is the pursuit of scholarly activity in an open, honest and responsible manner. Academic integrity is a basic guiding principle for all academic activity at The Pennsylvania State University, and all members of the University community are expected to act in accordance with this principle. Consistent with this expectation, students should act with personal integrity, respect other students' dignity, rights and property, and help create and maintain an environment in which all can succeed through the fruits of their efforts. Academic integrity includes a commitment not to engage in or tolerate acts of falsification, plagiarism, misrepresentation or deception. Such acts of dishonesty violate the fundamental ethical principles of the University community and compromise the worth of work completed by others (see Faculty Senate Policy 49-20 and G-9 Procedures) <http://studentaffairs.psu.edu/conduct/codeofconduct>).

Academic Integrity Guidelines for the College of Agricultural Sciences can be found at <http://agsci.psu.edu/students/resources/academic-integrity>.

A lack of knowledge or understanding of the University's Academic Integrity policy and the types of actions it prohibits and/or requires does not excuse one from complying with the policy.

Disability Statement:

Penn State welcomes students with disabilities into the University's educational programs. Every Penn State campus has an office for students with disabilities. The Office for Disability Services (ODS) Web site provides contact information for every Penn State campus:

<http://equity.psu.edu/ods/dcl>. For further information, please visit the Office for Disability Services Web site: <http://equity.psu.edu/ods>.

In order to receive consideration for reasonable accommodations, you must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: <http://equity.psu.edu/ods/guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with an accommodation letter. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. You must follow this process for every semester that you request accommodations.

Course Schedule:

Date		Class Topics
25-Aug	T	Evolution and Anatomy of Fishes, Introduction to Families
27-Aug	R	Fish Families
1-Sep	T	<i>FIELD TRIP</i>
3-Sep	R	Families Quiz/Anatomy Quiz
8-Sep	T	Introduction to Group 1
10-Sep	R	<i>FIELD TRIP</i>
15-Sep	T	Group 1
17-Sep	R	Group 1 Quiz
22-Sep	T	<i>Night Boat Electrofishing - meet at 7pm</i>
24-Sep	R	Introduction to Group 2
29-Sep	T	Group 2
1-Oct	R	Group 2 Quiz
6-Oct	T	<i>FIELD TRIP</i>
8-Oct	R	Introduction to Group 3
13-Oct	T	Group 3
15-Oct	R	Group 3 Quiz
20-Oct	T	<i>FIELD TRIP</i>
22-Oct	R	Introduction to Group 4
27-Oct	T	Group 4
29-Oct	R	Group 4 Quiz
3-Nov	T	Introduction to Group 5
5-Nov	R	Group 5
10-Nov	T	Group 5 Quiz
12-Nov	R	Introduction to Group 6
17-Nov	T	Group 6
19-Nov	R	Group 6 Quiz
24-Nov	T	<i>No class - Thanksgiving</i>
26-Nov	R	<i>No class - Thanksgiving</i>
1-Dec	T	Introduction to Group 7
3-Dec	R	Group 7
8-Dec	T	Group 7 Quiz
10-Dec	R	Extra Credit Day

****This syllabus is subject to change, but I will make sure you are notified in advance****

Fish Group Designations

Fish Group 1 – Petromyzontidae, Acipenseridae, Polyodontidae, Lepisosteidae, Amiidae, Anguillidae, Clupeidae, Hiodontidae, Sciaenidae (19 Species)

Fish Group 2 – Salmonidae, Osmeridae, Umbridae, Aphredoderidae, Percopsidae, Fundulidae, Poeciliidae, Atherinidae, Gasterosteidae, Esocidae (28 Species)

Fish Group 3 – Catastomidae and Ictaluridae (21 species)

Fish Group 4 – Centrarchidae and Moronidae (19 species)

Fish Group 5 — Percidae and Cottidae (24 species)

Fish Group 6 – Cyprinidae I (43 species in 2 groups)

Fish Group 7 – Cyprinidae II (43 species in 2 groups), Channidae, Lotidae, Gobiidae