

**BIOL 468**  
**Ecology of Rivers and Streams**  
**Summer 2012**

**Instructor:**

Patrick Ciccotto: Office Biological Sciences 402, phone 455-3477, email:c76@umbc.edu

**Office Hours:** By appointment

**Class time:** 9:00-11:50 AM Tuesday and Thursday, Math and Psychology 102  
9:00-11:50 AM Friday, Biological Sciences 051

**Method of student evaluation:**

Lab Practical (June 29)	10%
<i>The lab practical will be a test of taxonomic skills based on specimen material examined in the Friday section.</i>	
Student Presentations	10%
<i>Each student will give an 8-10 minute presentation on a federally endangered stream species. Presentations will cover the basic biology/life history, threats, and conservation of a listed species. Those species that are the focus in primary literature articles should be selected. Species should be chosen by Friday June 8 with my approval.</i>	
Quizzes (June 5, June 12, June 19, June 26, July 3)	30%
<i>Quizzes are worth 6% each and will cover material covered in lecture, lab, and paper discussions from the previous week.</i>	
Short paper reviews	10%
<i>We will read 1-2 papers from the primary literature each week. A short (one page maximum) synopsis of one of the papers will be due at the beginning of the class prior to the in-class paper discussion.</i>	
Class Participation	15%
<i>This is based on attendance and active participation in lectures, labs, and field exercises.</i>	
Final Exam (July 6)	25%

## **Course Schedule and Assignments**

### **Week 1**

May 29 (Tue.) - Introduction to Fluvial Ecosystems, Streamflow/Geomorphology

May 31 (Thu.)- Stream Chemistry, Abiotic Environment, Primary Production

June 1 (Fri.)- Paper Discussion #1, Aquatic Insects

### **Week 2**

June 5 (Tue)- Quiz #1, Aquatic Insects, Trophic Ecology, Energy Flow/Nutrient Dynamics

June 7 (Thu.)- Paper Discussion #2, River Continuum Concept/Maryland Stream Habitats

June 8 (Fri.)- Field Trip I

### **Week 3**

June 12 (Tue.)- Quiz #2, Species Interactions (Competition, Grazing, Predation), Drift

June 14 (Thu.)- Paper Discussion #3, Lotic Communities, Student Presentations

June 15 (Fri.)- Benthic Macroinvertebrates II

### **Week 4**

June 19 (Tue.)- Quiz #3, Crayfishes/Mussels, Ichthyology

June 21 (Thu.)- Paper Discussion #4, Ichthyology, Student Presentations

June 22 (Fri.)- Fishes I

### **Week 5**

June 26 (Tue.)- Quiz #4, Ecology of Fishes, IBIs

June 28 (Thu.)- Paper Discussion #5, Stream Amphibians and Reptiles, Student Presentations

June 29 (Fri.)- Fishes/Macroinvertebrates, *Lab Practical*

### **Week 6**

July 3 (Tue.)- Quiz #5, Conservation and Management

July 5 (Thu.)- Paper Discussion #6, Final Exam Review

July 6 (Fri.)- Final Exam

## Field Trips

We will be going out into streams on/near campus twice to practice physical habitat and biological sampling techniques (plan to spend ~6 hours on these days). These trips are mandatory, so if there are any issues on the tentative dates please let me know at the beginning of the semester. ***We will be going into streams and getting wet so prepare appropriately!*** An old pair of sneakers will work, or you can purchase a pair of waders or boots for under \$30 at Walmart:

<http://www.walmart.com/ip/Wenzel-Stocking-Foot-Waders/20592825?findingMethod=rr>  
<http://www.walmart.com/ip/Wenzel-Knee-Boots/20592836>

If you have any questions about boots/waders, feel free to ask. I also recommend bringing sunscreen, a towel, water, and a packed lunch when we head into the field.