Labs marked with an * means that you are going out in the field. Wear clothing appropriate for field work!

<table>
<thead>
<tr>
<th>Date</th>
<th>Lecture Topic</th>
<th>Text Reading Assignment</th>
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<tbody>
<tr>
<td></td>
<td><strong>Section 1: Physical and chemical dynamics of freshwater ecosystems</strong></td>
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<td><strong>Week of Aug. 17</strong></td>
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<td></td>
<td><strong>Lab 1:</strong> Lab overview; What we will do this semester, introduction to lake study and sampling equipment. Make up litterbags. <strong>Primary literature assignment for this week:</strong> Baron et al. 2002 – please read it prior to lab if possible!</td>
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<td>Lectures:</td>
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<tr>
<td>Aug. 17</td>
<td>Lecture 1 - Introduction to limnology</td>
<td>Ch. 1</td>
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<td>Aug. 19</td>
<td>Lecture 2 – Physical properties of water</td>
<td>Ch. 2,3</td>
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<td><strong>Week of Aug. 24</strong></td>
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<td></td>
<td><strong>Lab 2:</strong> Overview of Stream Projects and Stream Project field procedures. <strong>Primary literature assignment for this week:</strong> Poff et al. 1997</td>
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<td>Lectures:</td>
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<td>Aug. 24</td>
<td>Lecture 3 - Hydrology and physiography of wetlands and flowing waters</td>
<td>Ch. 4,5</td>
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<td>Aug. 26</td>
<td>Lecture 4 - Physiography of lakes</td>
<td>Ch. 6</td>
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<td><strong>Week of Sept 1</strong></td>
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<td><strong>Lab 3:</strong> Stream periphyton and Interactions between geomorphology and ecology * <strong>Primary literature assignment for this week:</strong> Walter and Merritts 2008</td>
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<td>Labor holiday on Monday - No Lab this week!</td>
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<td>Lectures:</td>
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<td>Aug 31</td>
<td>Lecture 5 - Southeastern reservoirs</td>
<td>Porter et al. 1996</td>
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<td>Sept 2</td>
<td>Lecture 6 - Chemistry controlling nutrient cycling</td>
<td>Ch. 11</td>
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<td><strong>Week of Sept 7</strong></td>
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<td>Labor holiday on Monday - No Lab this week!</td>
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<td>Lectures:</td>
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<td>Sept. 7</td>
<td>No class</td>
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<tr>
<td>Sept. 9</td>
<td>Lecture 7 – Carbon dynamics in freshwater ecosystems</td>
<td>Ch. 12</td>
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</table>
**Week of Sept. 14**

*Lab 4: Lake field trip*

**Primary literature assignment for this week:** none

**Lectures:**
- Sept. 14: Lecture 8 - N, S, P and other nutrients  
  Ch. 13
- Sept. 16: Exam 1

*Section 2: Freshwater organisms and sources of change to freshwater ecosystems*

**Week of Sept. 21**

*Lab 5: A review of basic chemistry for limnology; pH, SRP and alkalinity from lake study. Collect week 4 litterbags.*

**Primary literature assignment for this week:** Knoll et al. 2003

**Lectures:**
- Sept. 21: Lecture 9 - Toxins and pollutants  
  Ch. 14
- Sept. 23: Lecture 10 – Urbanization and effects on aquatic systems  
  Walsh et al. 2005

**Week of Sept. 28**

*Lab 6: Phytoplankton and chlorophyll analyses from lake study; Review of data analysis required for lake study report.*

**Primary literature assignment for this week:** Winder and Schindler 2004

**Lectures:**
- Sept 28: Lecture 11 - Heterotrophic microorganisms in lakes and streams  
  Ch.s 7, 8 & Meyer 1994
- Sept 30: Lecture 12 - Primary producers in lakes and streams  
  Ch.s 7, 8 & 11 (just pp. 214-228)

**Week of Oct 5**

*Lab 7: Zooplankton identification and counting, Lake study data analyses. Review of guidelines for writing lake study report.*

**Primary literature assignment for this week:** Strayer et al. 1999

**Lectures:**
- Oct. 5: Lecture 13 – Consumers in streams (C.J. Tant)  
  Ch. 9
- Oct. 7: Lecture 14 - Consumers in lakes  
  Ch. 9, 10

**Week of Oct. 12**

*Lab 8: Lake papers due in lab / Aquatic insect identification, Bioassessment and calculation of biotic indices.*

**Primary literature assignment for this week:** McIntyre et al. 2007

**Lectures:**
- Oct. 12: Lecture 15 – Fish Ecology (Dr. M. Freeman)  
  as assigned
- Oct. 14: Lecture 16 – Nutrient use / stoichiometry  
  Ch. 16
Week of Oct. 19

Lab 9: Collect week 8 litterbags. Litterbag processing.
Primary literature assignment for this week: Creed et al. 2009

Lectures:
Oct. 19   Exam 2
Oct. 21   Lecture 17 - Eutrophication

Section 3: Ecology and interactions among freshwater organisms and functioning of freshwater ecosystems

Week of Oct. 26

Lab 10: Stream Project Insect Identification.
Primary literature assignment for this week: Smith and Schindler 2009

Lectures:
Oct. 26   Lecture 18 – Microbial interactions
Oct. 28   Lecture 19 – Herbivory, detritivory, omnivory

Week of Nov. 2

Lab 11: Piedmont fishes – biodiversity and habitat-specificity*
Primary literature assignment for this week: Taylor et al. 2006

Lectures:
Nov. 2   Lecture 20 - Predation in lakes and streams (C. Small)
Nov. 4   Lecture 21 – Community ecology

Week of Nov. 9

Lab 12: Fecal coliform analyses for stream projects. Stream periphyton analyses (stream project samples).
Primary literature assignment for this week: Hall et al. 2003

Lectures:
Nov. 11   Exam 3

Week of Nov. 16

Lab 13: LAB PRACTICAL

Lectures:
Nov. 16   Lecture 23 – Invasive species  Baxter et al. 2004
Nov. 18   Lecture 24 - Tropical vs temperate ecosystems (Dr. A. Covich) as assigned

Week of Nov. 23

No Lab and no class/ Thanksgiving Break
Week of Nov. 31

Lab 14: Stream project papers due in lab / Oral reports given in lab
Primary literature assignment for this week: none

Lectures:
Nov. 30  Lecture 25 – Stream ecosystems  Ch. 22 and Dent et al. 2002
Dec. 2   Lecture 26 - Lake Ecosystems  Ch. 22 and Dent et al. 2002

Week of Dec. 7

No Lab

Dec. 7  Lecture 27 - Restoration of aquatic ecosystems - Bernhardt et al. 2005

Important Dates:

Aug 17 – Classes start
Sept 7 – Labor day
Oct 12, 14 – Lake project papers due in lab
Nov 23-27 - Turkey Days
Nov 30, Dec 2 – Stream project papers due in lab
Dec 14 – Final Exam, 8-11 am
Dec 18 – Grades due