

**BIOLOGY 5337 – ADVANCED LIMNOLOGY**  
**Lecture TR 12:30-13:45, BSB D.105**

**Instructor**

Stephen Powers, Ph.D.      Office hours: by appointment

**Schedule**

Module 1

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Week 1 Overview (Aug 26)

Readings: Pollard et al. 2018

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Week 2 Overview, Water is Weird (Sep 2, 4)

Readings: Kalff Ch.1,2,3

Exercises in Data

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Week 3 Lake Form, Dams (Sep 9, 11)

Readings: Hayes et al. 2017, Kalff Ch.6,7

Exercises in Data

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Week 4 Methods, Life in Lakes (Sep 16, 18)

Readings: NLA field manual, Phillips et al. 2008

Exercises in Data

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Week 5 Light Heat Mixing (Sep 23, 25)

Readings: Kalff Ch.10, 11

**Sharing and peer review of Initial Mini Report proposal**

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Week 6 Methods (Sep 30, Oct 2)

Readings: NLA lab manual

**Mini Report proposal due Fri Oct 2**

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Week 7 No class

**Problem Set #1 due Fri Oct 10** (to be distributed Oct 6)

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Module 2

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Week 8 pH and Inorganic Carbon, Productivity and Metabolism, Oxygen, Redox (Oct 14, 16)

Exercises in Data

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Week 9 pH and Inorganic Carbon, Productivity and Metabolism, Oxygen, Redox (Oct 21, 23)

Exercises in Data

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Week 10 Nitrogen and Phosphorus Cycles, Eutrophication, Ionic Composition, Micronutrients, Phytoplankton, Limits to Growth (Oct 28, 30)  
Exercises in Data

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Week 12 Nitrogen and Phosphorus Cycles, Eutrophication, Ionic Composition, Micronutrients, Phytoplankton, Limits to Growth (Nov 4, 6)  
Exercises in Data

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Week 13 Food Webs and Trophic Cascades, Organic Matter and the Benthos (Nov 11, 13)  
Exercises in Data

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Week 14 No class  
**Problem Set #2 due Fri Nov 21** (to be distributed Nov 17)

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Thanksgiving (Nov 25, 27) No Class

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Module 3

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Week 15 Rivers and Streams, Biodiversity and Conservation, Limnology in a Changing World (Dec 2, 4)  
**Mini Report drafts, peer review**

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Week 16 (Dec 9)  
**Mini Report Presentations due**

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Week 17 No class  
**Mini Report due Tues Dec 16 (last day of "finals")**

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