

BIOL 612

Freshwater Ecology COURSE SYLLABUS

FALL 2018

Time: MWF 10:30, T 1:30-4:20 lab

Location: Lecture EH 218; Lab AK 228

Instructor: Walter Dodds

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Email: wkdodds@ksu.edu

Office Hours: by appointment or walk in

Assistant: James Guinnip Office: 108 Bushnell Email: jguinnip@ksu.edu Hours: by appointmentText: *Freshwater Ecology: Concepts and Environmental Applications 2nd edition*

Lab Manual: available for copying, or download from the course web page.

Course Web Page Address: Kstate online + google drive

<https://drive.google.com/open?id=18UxzHPWRTNSAk3Ukmi01uz00jTURbNxD>

Course materials: Videos of lecture are available, though they are from 2012 so the student still has the final responsibility for determining what was said in class this year that is what will be tested on. The list of youtubes is found here <http://www.k-state.edu/dodds/lab/limnology/limnology.html>. Lecture powerpoints are also available.

I. Course Requirements

| | | | |
|-----------|-----|---------------------|-----|
| Midterm 1 | 15% | Questions | 5 % |
| Midterm 2 | 15% | Laboratory notebook | 20% |
| Midterm 3 | 15% | Final practicum | 10% |
| Final | 15% | Paper reports | 5% |

II. Course Goals

To provide students with an understanding of the applied and theoretical aspects of aquatic systems. This includes some general ecological principles and basics of stream, lake, wetland, and groundwater ecology and management. Environmental issues will be covered. Synthetic understanding is the goal.

III. Lectures

Please come to class prepared to discuss the materials, schedule is tentative, except exam dates

| Day | Date | Lecture | Reading |
|-----|--------|--|------------|
| M | Aug 20 | Introduction | Chapter 1 |
| W | 22 | Properties of Water | Chapter 2 |
| F | 24 | Properties of Water | Chapter 3 |
| M | Aug 27 | Hydrology and Physiography Groundwater | Chapter 4 |
| W | 29 | Wetland Physiography | Chapter 5 |
| F | 31 | Physiography Streams | Chapter 6 |
| M | Sep 3 | University Holiday | |
| W | 5 | Physiography Lakes | Chapter 7 |
| F | 7 | Organisms intro | Chapter 8 |
| M | 10 | Organisms Microbes/ Plants | Chapter 9 |
| W | 12 | Organisms Microbes/ Plants | |
| F | 14 | Organisms Animals | Chapter 10 |
| M | 17 | Biodiversity | Chapter 11 |
| W | 29 | Biodiversity | |
| F | 21 | First exam | |

| | | | | |
|---|-----|----|--|------------------------------------|
| M | | 24 | General Chemistry & Redox | Chapter 12 (last drop day w/o a W) |
| W | | 26 | Oxygen | |
| F | | 28 | Photosynthesis | |
| M | Oct | 1 | Carbon | Chapter 13 |
| W | | 3 | Nitrogen | Chapter 14 |
| F | | 5 | Sulfur | |
| M | | 8 | Phosphorus and iron | |
| W | | 10 | Extreme or Unusual Environments | Chapter 15 |
| F | | 12 | Toxic Chemicals | Chapter 16 |
| M | | 15 | Toxic Chemicals | |
| W | | 17 | Second exam | |
| F | | 19 | Extreme Environments | |
| M | | 22 | | |
| W | | 24 | Nutrient use | Chapter 17 |
| F | | 26 | Nutrient Limitation | (last day to drop) |
| M | | 29 | Eutrophication | Chapter 18 |
| W | | 31 | Eutrophication | |
| F | Nov | 2 | Eutrophication | |
| M | | 5 | Guest lecture | |
| W | | 7 | Micro-ecology | Chapter 19 |
| F | | 9 | Micro-ecology | |
| M | | 12 | Predation | Chapter 20 |
| W | | 14 | Predation | |
| F | | 16 | Other interactions | Chapter 21 |
| M | | 19 | University Holiday | |
| W | | 21 | University Holiday | |
| F | | 23 | Thanksgiving | |
| M | | 26 | Community | Chapter 22 |
| W | | 28 | Ecosystems | Chapter 24 |
| F | | 30 | Third exam | |
| M | Dec | 3 | Ecosystems | |
| W | | 5 | Scaling landscapes | Chapter 25 |
| F | | 7 | Prospects for the future, final review | Chapter 26 |

Weds 12 Final examination 11:50

'Question of the day' is required for every class. Each question is worth 2 points, 1 point for effort and one for content. Percent will be calculated as total points / (total classes * 2 - 12). There will also be 1 extra credit test point for each unique error found in the text. We will schedule in 2 paper reports and you can choose from a list. This will be 1 paragraph written what you liked and did not like, and a 3-5 minute class presentation. The link for this schedule is: <https://drive.google.com/open?id=1KxKp94dLCoHA93-zQiYzFWMMWTOI2nvdXgQdop9Ja2U>

Required Statements:

1. 1. Statement Regarding [Academic Honesty](#)

Kansas State University has an Honor and Integrity System based on personal integrity, which is presumed to be sufficient assurance that, in academic matters, one's work is performed honestly and without unauthorized assistance. Undergraduate and graduate students, by registration, acknowledge the jurisdiction of the Honor and Integrity System. The policies and procedures of the Honor and Integrity System apply to all full and part-time students enrolled in undergraduate and graduate courses on-campus, off-campus, and via distance learning. The Honor and Integrity System website can be reached via the following URL: www.k-state.edu/honor. A component vital to the Honor and Integrity System is the inclusion of the Honor Pledge which applies to all assignments, examinations, or other course work undertaken by students. The Honor Pledge is implied, whether or not it is stated: "On my honor, as a student, I have neither given nor received unauthorized aid on this academic work." A grade of XF can result from a breach of academic honesty. The F indicates failure in the course; the X indicates the reason is an Honor Pledge violation.

2. Statement Regarding [Students with Disabilities](#)

Students with disabilities who need classroom accommodations, access to technology, or information about emergency building/campus evacuation processes should contact the Student Access Center and/or their instructor. Services are available to students with a wide range of disabilities including, but not limited to, physical disabilities, medical conditions, learning disabilities, attention deficit disorder, depression, and anxiety. If you are a student enrolled in campus/online courses through the Manhattan or Olathe campuses, contact the Student Access Center at accesscenter@k-state.edu, 785-532-6441; for K-State Polytechnic campus, contact Academic and Student Services at polytechnicadvising@ksu.edu or call 785-826-2974.

3. Statement Defining Expectations for Classroom Conduct

All student activities in the University, including this course, are governed by the [Student Judicial Conduct Code](#) as outlined in the Student Governing Association [By Laws](#), Article V, Section 3, number 2. Students who engage in behavior that disrupts the learning environment may be asked to leave the class.

Optional Syllabi Statements:

1. *If Course Materials are Copyrighted, also include:**

Statement for [Copyright](#) Notification

Copyright 20xx([your name here]) as to this syllabus and all lectures. During this course students are prohibited from selling notes to or being paid for taking notes by any person or commercial firm without the express written permission of the professor teaching this course. In addition, students in this class are not authorized to provide class notes or other class-related materials to any other person or entity, other than sharing them directly with another student taking the class for purposes of studying, without prior written permission from the professor teaching this course.

* You may wish to inform students regarding copyright of your lecture materials or that you do not permit student note taking for subsequent posting on commercial websites. You also may wish to orally draw attention on the first day of classes to any such statements that you include in your syllabus. In addition to giving the notice of copyright, you should take steps to assure that your lectures are fixed in a tangible medium of expression, and hence protectable under the copyright laws. For this purpose, you can make detailed lecture notes, use detailed overheads, slides or online presentation slides, or tape record your lectures. These steps will strengthen your right to claim copyright in your lectures and will notify students of restrictions on their use. If you have lecture notes posted on a website, you may wish to protect them with a copyright notice as well. You can simply add the following information to any lecture materials or to your website: Copyright 20xx (your name here).

*You also may wish to inform students that the K-State Student Conduct Code prohibits any illegal or unauthorized taking, selling, or distribution of class notes. Students violating this provision will be subject to discipline under the conduct code, including but not limited to possible expulsion from K-State.

2. *Academic Freedom Statement*

Kansas State University is a community of students, faculty, and staff who work together to discover new knowledge, create new ideas, and share the results of their scholarly inquiry with the wider public. Although new ideas or research results may be controversial or challenge established views, the health and growth of any society requires frank intellectual exchange. Academic freedom protects this type of free exchange and is thus essential to any university's mission.

Moreover, academic freedom supports collaborative work in the pursuit of truth and the dissemination of knowledge in an environment of inquiry, respectful debate, and professionalism. Academic freedom is not limited to the classroom or to

scientific and scholarly research, but extends to the life of the university as well as to larger social and political questions. It is the right and responsibility of the university community to engage with such issues.

3. Weapons Policy Statement

The language in the following statement should not be altered if faculty choose to use it. However, the sentence in the second to last paragraph may be omitted if it is not applicable to a particular course, and if applicable, specific example activities can be inserted into the sentence where shown.

Kansas State University prohibits the possession of firearms, explosives, and other weapons on any University campus, with certain limited exceptions, including the lawful concealed carrying of handguns, as provided in the University Weapons Policy, found at <http://www.k-state.edu/police/weapons/index.html>.

You are encouraged to take the online weapons policy education module (<http://www.k-state.edu/police/weapons/index.html>) to ensure you understand the requirements of the policy, including the requirements related to concealed carrying of handguns on campus. Students possessing a concealed handgun on campus must be 21 years of age or older and otherwise lawfully eligible to carry. All carrying requirements of the policy must be observed in this class, including but not limited to the requirement that a concealed handgun be completely hidden from view, securely held in a holster that meets the specifications of the policy, carried without a chambered round of ammunition, and that any external safety be in the “on” position.

If an individual carries a concealed handgun in a personal carrier such as a backpack, purse, or handbag, the carrier must remain within the individual’s exclusive and uninterrupted control. This includes wearing the carrier with a strap, carrying or holding the carrier, or setting the carrier next to or within the immediate reach of the individual.

During this course, you will be required to engage in activities, such as (INSERT YOUR EXAMPLE), that may require you to separate from your belongings, and thus you should plan accordingly.

Each individual who lawfully possesses a handgun on campus shall be wholly and solely responsible for carrying, storing and using that handgun in a safe manner and in accordance with the law, Board policy and University policy. All reports of suspected violation of the weapons policy are made to the University Police Department by picking up any Emergency Campus Phone or by calling 785-532-6412.

4. Campus Safety Statement

Kansas State University is committed to providing a safe teaching and learning environment for student and faculty members. In order to enhance your safety in the unlikely case of a campus emergency make sure that you know where and how to quickly exit your classroom and how to follow any emergency directives. To view additional campus emergency information go to the University's main page, www.k-state.edu, and click on the Emergency Information button, located at the bottom of the page.