Applied Environmental Finance  
PUBA 787 / ENVR 787 / PLAN 787  
Spring Semester 2018  
Mondays and Wednesdays, 4:40 PM – 5:55 PM  
Room 3301, Knapp Sanders Bldg, School of Government  
Last Updated 1/10/18

Instructor Contact Information

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Office Hours: By Appointment

Overview and Class Format

Course Description & Format
How can governments, communities, organizations, and businesses fund environmental services? This applied course looks at the diverse tools and strategies that environmental service providers use to pay for their programs. The course will focus on environmental services related to:

- Drinking Water  
- Wastewater  
- Stormwater  
- Watershed Protection  
- Energy Efficiency  
- Renewable Energy  
- Sustainability  
- Wetlands

The course will also examine the policy implications of deciding how to pay for environmental services. Who pays for the service? Who benefits? If they are not the same, why is that? Coursework will include policy analysis, writing, presenting, and financial analysis.

This is a very applied course and will focus on studying financing systems that are currently in operation or under development across the country and across the world. We will study the financing tools and strategies that are being used for each system including the use of tax incentives, governmental funding programs, traditional bonds, green bonds, rates and fees, environmental taxes, and market mechanisms. The course material is drawn from the instructors’ work with the Environmental Finance Center.

At the completion of the course, students should be able to participate better in the design and evaluation of environmental financing systems. This course is appropriate for students studying public administration, planning, environmental studies/management, economics, business, public policy or finance who are interested in learning how finance tools can be applied to environmental management.

Course Expectations and Resources

- **Class Participation**: Students are expected to come to class on time and participate in discussions. Students are expected to refrain from texting, emailing, or web browsing during class, and we ask that you silence all cellphones. To insure this, we require that all programs
not directly linked to the class be completely shut down on computers. **If instructors detect the use/abuse of software (web browsers, email clients) that is not directly related to the session during class (even if it is just on your screen), a student’s participation grade will suffer, and we may enact a no computer policy during class.**

- **Readings:** There will be required readings for each class meeting which will be posted on Sakai under the Resources tab in advance. The readings are drawn largely from primary documents, case studies, reports and professional journals on the various finance systems that we will study in class. We will only assign readings that are relevant to the topics for that particular class, and students are expected to have the reading completed in order to participate fully in the class discussion. **Please note that any student can be asked to lead discussion on assigned readings without prior notice.** The US EPA’s Environmental Finance Guidebook is a good resource for general information about environmental finance. The Guidebook can be found on the Sakai site under Resources.

- **Assignments:** Over the course of the semester, students will complete a number of small individual assignments as well as larger group project focusing on developing a finance system to solve an actual pressing environmental need. Assignments will be posted on the Sakai site under the Assignments tab. In addition, there is a standing assignment to find stories related to environmental finance from the news to share at the beginning of each class.

- **Attendance:** Attendance for the class is mandatory. Students are expected to attend *every* class session, and attendance will be recorded. If you are unable to attend a particular class for a legitimate reason, you must inform one of the instructors ahead of time.

- **Honor Code:** The University’s honor code strictly applies. Please review the Instrument of Student Judicial Governance for the University of North Carolina here: [http://instrument.unc.edu/](http://instrument.unc.edu/)

- **Changes to the Syllabus:** This syllabus is subject to revision as deemed necessary by the instructors. **It is the responsibility of each student to be in class for any announcements relating to readings, assignments, grading, or other aspects of this course.**

**Grading**

Course grades will be based on class participation, periodic assignments, and a group project using the following weights:

- 25 percent for class participation and demonstration of commitment to the course material
- 50 percent for periodic assignments – 6 to 9
- 25 percent for the small group project on environmental finance system. This portion of the grade will be based on a written report and an oral presentation.

Grades will be assigned on the H/P/L scale for graduate students and the A/B/C/D/F scale for undergraduate students. The expectation for the course is that students will work hard, come to class on time and prepared for discussion, and positively contribute to the collective learning process. The work you turn in should reflect critical thinking, intellectual effort, and attention to
detail. Many assignments will be open ended and allow students to spend anywhere from a modest to quite significant amount of time completing depending on student interest in the topic. A final grade of P or B indicates that you have met these expectations, while a final grade of H or A is reserved for truly outstanding work that merits special recognition.

**Course Sessions**

1. W 1/10 Introduction to Environmental Finance

**M 1/15 MLK Day, No Class

2. W 1/17 Who Provides Environmental Services?
   a. **Assignment 1 due**


5. M 1/29 Energy Efficiency Finance Overview

6. W 1/31 Drinking Water/Wastewater Finance Overview

7. M 2/5 Drinking Water/Wastewater Finance US EPA Programs

8. W 2/7 Water Utility Rates

9. M 2/12 Debt/Bonds!!!
   a. **Assignment 3 due**

10. W 2/14 Debt/Bonds!!!!
    a. **Assignment 4 due**

11. M 2/19 Special Taxes, Lotto Proceeds, and Specialty License Plates

12. W 2/21 Hot Topics in Environmental Finance

13. M 2/26 Using Cost Savings To Fund Projects
    a. **Assignment 5 due**

14. W 2/28 Permit Fees and Other Regulatory Fees

**Th/F 3/1,2 UNC Clean Tech Summit (bonus!)**
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<tr>
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<td>M 3/5</td>
<td>Public Funding Options</td>
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<td>16. W 3/7</td>
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<td>Debt Revolving Loan Programs</td>
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<td><strong>M 3/12</strong></td>
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<td>17. M 3/19</td>
<td>M 3/19</td>
<td>Taxes and Tax Incentives</td>
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<td>a. Assignment 6 due</td>
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<td>19. M 3/26</td>
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<td>Affordability of Environmental Services, Part II</td>
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<td>21. M 4/2</td>
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<td>Carbon Tax and Cap-and-Trade</td>
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<td>23. M 4/9</td>
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<td>Environmental Impact Fees/Taxes</td>
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<td>24. W 4/11</td>
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<td>Mitigation Banking/Work Session</td>
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<td>27. M 4/23</td>
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<td>Hot Topics in Environmental Finance</td>
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<td>29. M 4/30</td>
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<td>Group Project Presentations 4 PM to 7PM—Final Exam Period</td>
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