

The Evergreen State College
**Sustainable Infrastructure:
Public Works for the 21st Century**
MPA, Fall 2017
Syllabus
Last Update: August 4, 2017

Instructor: Rhys Roth
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Office Hours: By appt

Dates:

Friday, November 17 (5-9pm) Saturday, Nov 18 (9am-5pm) Sunday, Nov 19 (9am-5pm)

Location: TBD

Course Description:

Many organizations are in need of new talent, thinking, and tools that enable decision-making leading to more sustainable outcomes. This 2-credit intensive course will explore sustainable decision-making, in particular as it applies to the context of public works and infrastructure spending and investment. Infrastructure represents the vital circulatory systems of society; decision-making on infrastructure investment has major implications for long-term quality of life, economic vitality, social equity, climate change, public health, and more. We will study leading edge thinking and key challenges, and develop practical, hands-on experience with decision tools designed to yield more sustainable, affordable outcomes with multiple community-wide benefits. Team projects will focus on real-world decisions by municipal, tribal, and state agencies.

Assigned readings for this course are listed below.

Learning Objectives:

This course will focus on four learning objectives:

1. Understanding modern concepts and tools for applying sustainability concepts and advancing sustainability goals in a professional context
2. Building working knowledge of leading edge concepts and current sustainability and financial challenges in public infrastructure systems
3. Developing capacity to envision whole-system, integrated solutions and analyses
4. Gaining exposure to contemporary challenges of public infrastructure managers in the local, tribal, and state government contexts

Instructor

Rhys co-founded and helped lead for over 15 years the non-profit group [Climate Solutions](#). He pioneered several of its innovative programs and partnerships which were instrumental in positioning clean energy at the top of the Northwest's economic development agenda. These included "Harvesting Clean Energy" which worked with the agriculture and rural development communities, and "Poised for Profit in Clean Energy" working with the technology and investor communities. In 2013, he was honored as a "Sustainability Trailblazer" by the Sustainable Path Foundation.

Late in 2013, he returned to his alma mater, The Evergreen State College, over 20 years after graduating with a Masters of Environmental Studies, to lead the College's new [Center for Sustainable Infrastructure](#) to help bring innovation, new tools, and sustainability excellence to infrastructure planning and investment in the Pacific Northwest. The Center envisions a future for the Pacific Northwest of smart, affordable, sustainable and resilient infrastructure systems, providing vital services accessible to all, which support healthy, prosperous, and beautiful communities.

Required Readings

In advance of the first class, students will complete the following readings and submit a 600-1000 word reflective essay describing how the readings changed, challenged, enhanced, and/or reinforced their understanding of sustainable decision-making:

REPORTS:

1. CHOOSE 1 of the Center for Sustainable Infrastructure's special reports:
 - [Infrastructure Crisis, Sustainable Solutions: Rethinking Our Infrastructure Investment Strategies](#), November 2014
 - [Rewiring the Northwest's Energy System: An Integrated Vision and New Investment Strategy](#), February 2016
 - [A Northwest Vision for 2040 Water Infrastructure: Innovative Pathways, Smarter Spending, Better Outcomes](#), April 2017
2. [Evaluating Transportation Diversity: Multimodal Planning for Efficient and Equitable Communities](#), by Todd Litman, Victoria Transportation Policy Institute, July 2017.
3. [2015 Climate Action Plan](#) – City of Portland/Multnomah County, [pages 1-55](#), June 2015.

BRIEF ARTICLES:

- [Applying Elements of Resilience to Prioritization and Decision-Making](#), S. Moddemeyer, CollinsWoerman, Seattle, October 2015
- [What are the social justice implications of urban ecology...?](#), The Nature of Cities, multiple authors, February 3, 2014
- [Social Equity: The Forgotten Leg of Sustainability](#), Jessica Chapman, Sustainable City Network, May 12, 2014

- [*Limited Resources and the Vision of a Circular Economy*](#), Bob Graves, *Governing*, October 25, 2016.
- [*Finding Balance in Everything: Diary of a Public Works Director*](#), *APWA Reporter*, Michael Mucha, May 2009, pages 32-36

WEBSITES, SLIDE DECKS, and VIDEOS:

- Orion Magazine's "[Reimagining Infrastructure](#)" site. Please study these three features: "The Future of Infrastructure"; "The City and the Sea"; and "The Art of Infrastructure."
- [Tribal Sustainability: Green Projects in Indian Country](#), by Gepetta S. Billie, Tribal Energy Program Review, May 2015.
- Green Stormwater Infrastructure Creates Jobs and Opportunity, Green for All, Video: <https://www.youtube.com/watch?v=bHeVgRzOGis>

Credit Requirements

For credit in this class, students are required to:

1. Complete all the assigned readings in advance and submit by 5pm on the first day of class a 600-1000 word reflective essay describing how the readings changed, challenged, enhanced, and/or reinforced your understanding of sustainable decision-making and infrastructure.
2. Attend all three days of class and actively participate in all activities and discussions.
3. Participate actively in creation of a collaborative small team 'homework' assignment. Details on the assignment goals and requirements will be discussed in detail during class.
4. Submit within two weeks of the last day of class a 800-1200 word final essay – focus to be discussed in detail during class.
5. Consistent with MPA program requirements, students will prepare a self-evaluation and an evaluation of the instructor. The student evaluation shall emphasize the one major take-away from the course and how it will influence thinking. Please do not summarize the course material. This will play a major part in your success at receiving credit for this class. The Instructor evaluation should focus on what Rhys should do more of, less of and continue doing.
6. All late submittals that are not previously arranged will be noted in student's course evaluation.