***Environmental Innovation Practicum Course Syllabus – August 31, 2016***

***Course description:*** This Practicum’s goal is to help students discover how cleantech solutions can and are beginning to address our most pressing environmental issues, and learn how they can be part of those solutions. The Environmental Innovation Practicum is part speaker series, part business concept creation. Students will complete required weekly readings and attend a series of talks given by a wide array of cleantech industry experts. Leveraging the class’s cross listing between the Foster School of Business, The College of the Environment and The College of Engineering, students will form cross-discipline teams, identify an environmental problem for which they want to find/develop a solution and, at the end of the quarter as their final project, create videos to present their solution concepts to the class and a panel of expert judges. Student teams interested in developing their concept to compete in the 2016 Alaska Airlines UW Environmental Innovation Challenge will get frequent updates through class announcements on sessions tied to the Challenge. More information on the Challenge is available at: <http://www.foster.washington.edu/centers/entrepreneurship/eic/Pages/eic.aspx>.

***Learning objectives:***

* Gain awareness of our most pressing environmental challenges and how businesses large and small are beginning to tackle them.
* Learn from subject matter experts about solutions emerging in various industries.
* Evaluate business opportunities in cleantech as outlined by guest speakers, required readings and world news
* Gain hands-in experience in developing business solution concepts addressing environmental challenges.

**CLASS PLAN**

The following class plan is a work in progress with only confirmed speakers noted. Speakers, topics and associated required readings/viewings are subject to change. A final class syllabus will be available the week before the start of Fall Quarter.

We have but 10 brief class periods together and a lot of ground to cover. We also are privileged to have an impressive collection of guest speakers generously giving of their time to join us. Therefore, I expect all students to show upmost courtesy to our guest speakers by:

* Doing your very best to be on time for class,
* Slipping -- as inconspicuously as possible -- in or out of class when you have no choice but to be late or leave early, and
* Minimizing coming in and out of the classroom during speaker sessions barring extremely urgent necessity.

Thank you.

Many -- but not all -- classes will include time for structured team work, often with the possibility of consulting with our guest speakers.

**Class #1 Tues., Oct. 4: Doing Vs. Talking. Why Are You Here?**

Readings assigned: None, although to get your creative juices flowing, you could read [Myths and Realities of Clean Technologies](https://canvas.uw.edu/courses/1065218/files/37730539/download), Planet Expert's [The 10 Best Environmental Innovations of 2015! (Links to an external site.)](http://www.planetexperts.com/the-10-best-environmental-innovations-of-2015/%22%20%5Ct%20%22_blank) or maybe [Environmental Innovation: Nice or Necessity? (Links to an external site.)](http://www.huffingtonpost.com/brian-kennell/environmental-innovation-_b_6841866.html%22%20%5Ct%20%22_blank), a Huffington Post piece written by Terapak CEO Brian Kennell, to jumpstart your thinking for your first assignment due next Tues.

Class Period Schedule:

* + - Subject Introduction: How To Go About Changing The World
		- Course Introduction and Overview
		- Student introductions -- Yep! Everybody speaks

**Class #2 Tues., Oct. 11: Rip Roaring and Ready To Go: Ideas Waiting For Commercialization**

**\*\*Area of initial interest paper due at class time on Canvas\*\***

Readings assigned: None.

Class Period Schedule:

Panel discussion with:

* + - *[Sara Hunt](https://www.linkedin.com/in/sara-hunt-7265aa60%22%20%5Ct%20%22_blank)*, Commercialization Manager, Pacific Northwest National Labs
		- [*Forest Bohrer*](http://comotion.uw.edu/profile/bohrer-forest), Ph.D., Manager – Innovation Development, CoMotion at University of Washington
		- [Sanjay Kumar](https://www.linkedin.com/in/sanjaybarca), investor, farmer, thinker, Cascadia Cleantech, Equs Farms, Imagine H2O

Note: The Buerk Center for Entrepreneurship will be hosting an informal reception with our panelists following class, expanding your Q&A access to our guests

**Class #3 Tues., Oct. 18: Team Formation Around Innovation Concepts**

Readings assigned: [Ten Tips for Successful Innovation Teams](http://www.innovationmanagement.se/2012/04/12/10-tips-for-successful-innovation-teams/)

Class Period Schedule:

* + - Project Concept Idea Pitching
		- Networking for team formation
		- Collaborative Problem Solving session with*[Rocky Mountain Institute’s Martha Campbell](http://www.rmi.org/martha_campbell%22%20%5Ct%20%22_blank)*

**Class #4 Tues., Oct. 25: The Circular Economy**

Reading assigned: [Remaking the industrial economy](http://www.mckinsey.com/insights/manufacturing/remaking_the_industrial_economy%22%20%5Ct%20%22_blank), McKinsey Quarterly

Recommended viewing: [Life Cycle Thinking TEDTalk](https://www.ted.com/talks/leyla_acaroglu_paper_beats_plastic_how_to_rethink_environmental_folklore?language=en" \t "_blank)

Class Period Schedule:

Panel Discussion with:

* + - [James Connelly, Director, Living Product Challenge](http://living-future.org/james-connelly%22%20%5Ct%20%22_blank)
		- [Stacy Fynn, CEO and Co-founder of Evrnu](http://www.evrnu.com/about/%22%20%5Cl%20%22stacy-flynn%22%20%5Ct%20%22_blank)
		- [Joshua Gary - Vice President, Operations, Vartega Carbon Fiber Recycling](http://www.vartega.com/about-us/)

**Class #5 Tues., Nov. 1: Product Design and the Theory of Change**

Readings assigned: TBD <https://www.wickedproblems.com/5_theory_of_change.php> ?

Class Period Schedule:

* + - Guest lecturer: [Julian Marshall, UW Professor of Environmental and Civil Engineering](http://www.ce.washington.edu/people/faculty/faculty.php?id=132" \t "_blank)
		- Team time

 **Class #6 Tues., Nov. 8: Water Innovation**

Reading assigned: *Charting Our Water Future, Executive Summary*

Class Period Schedule:

Guest lecturer: [William Wescott, PhD, Founder, Brain Oxygen](http://www.braino2.com/about-us-1/%22%20%5Ct%20%22_blank)

**Class #7 Tues., Nov. 15: Energy, Fuel and How We Use It**

Reading assigned:[A Farewell to Fossil Fuels: Answering the Energy Challenge](http://www.rmi.org/Knowledge-Center/Library/2012-01_FarewellToFossilFuels%22%20%5Ct%20%22_blank)

Class Period Schedule:

Panel Discussion With:

* + - [Jared Silvia](https://www.linkedin.com/in/jared-silvia-63b9777), PhD, Product Manager, Doosan GridTech, automatic management and optimization of distributed energy resources
		- [Sephir Hamilton](https://www.linkedin.com/in/sephir), Interim Officer, Engineering & Technology Innovation, Seattle City Lights
		- [Rich Feldman](https://www.linkedin.com/in/rafeldman), New Business Development Manager, Proterra, makers of zero-emission, battery-electric buses

 **Class #8 Tues., Nov. 22: Greening the Built Environment**

Viewing assigned: [The Tradeoffs of Building Green](http://www.ted.com/talks/catherine_mohr_builds_green?language=en" \t "_blank), TEDTalk

Class Period Schedule:

* + - Guest lecturer: [Dr. Rob Peña, University of Washington Department of Architecture](http://arch.be.washington.edu/school/people/rbpena%22%20%5Ct%20%22_blank)
		- Team time

**Class #9 Tues., Nov. 29: Land Use: Forests, Food & ... Fishes?**

Readings assigned: TBD

Class Period Schedule:

* + - Guest lecturer: [Dr. Sally Brown, Research Assoc. Professor, University of Washington School of Environmental and Forest Sciences](https://environment.uw.edu/faculty/sally-brown/)
		- Team time

**\*\*\*TEAM VIDEO FILES DUE ON CANVAS BY MIDNIGHT, WED., NOV. 30TH\*\*\***

**Class #10 Tues., Dec. 6: Final Presentations with Judging Panel**

Readings assigned: None

Class Period Schedule:

"Movie" of all team presentation videos

Comments and Counsel from a Panel of Judges

Note: The Buerk Center for Entrepreneurship will be hosting an information reception with our panelists following class, expanding your Q&A access to our guests

**REMAINING ASSIGNMENTS DUE ON FRI., DEC. 9TH:**

* Confidential Peer Evaluations
* Individual Reflection Papers

***ANOTHER DATE TO REMEMBER:*** Dec. 17th is the deadline for applying for prototype funding for teams wishing to continue to the Environmental Innovation Challenge. Go for it!