Leadership Development to Promote Equity in Engineering Relationships (PEERs)

ENGR 401

http://www.engr.washington.edu/peers/students/coursepage.html

Spring 2015, Thursday 1:30 – 3:20 pm

Mechanical Engineering Building 234

Course Instructors:

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Teaching Assistant:

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Course description:

The course enlists engineering students' energy, creativity, social conscience, and on-the-ground perspectives in advancing diversity and inclusion in engineering. Students will explore topics such as diversity in science and engineering, impact of unconscious bias, the role of allies, community engagement, and leadership in supporting all current and potential engineers. Students who successfully complete the course can apply for quarter-long internship opportunities as PEER Leaders.

Course objectives:

- Identify and understand individual and structural barriers to equality in engineering, especially as they pertain to women, minorities, and persons with disabilities.
- Identify ally behaviors that create a more supportive and inclusive engineering environment
- Create a community of engineering students across different disciplines
- Acquire skills on how to be a leader in a diverse environment

Structure of class:

Class time will be a mixture of lecture, discussion, small group activities, and guest speakers.

Readings:

Each week, you will have a number of readings that will serve as the basis of classroom discussion. Most readings can be downloaded from UW Libraries Electronic Reserves. Otherwise, links are available via the course syllabus on the website. The quality of this seminar depends on students attending class, participating in discussion, and doing the readings. For this reason, all students must complete the assigned readings before coming to class.

PEERs Reading Catalyst Site: https://catalyst.uw.edu/workspace/peers/49372/361915

Cultural Artifacts and Role Models:
To connect course content with student experiences, students are welcome to bring in current real-world representations of diversity in STEM (e.g., articles, advertisements, videos) and/or examples of successful engineering role models and share them with the class. One or two examples will be shared per week.

Evaluations:
The course is pass/fail. To pass the course, you must keep up with weekly readings, as well as any other assignments, and strive to be an active participant in class discussions. In addition, you will be responsible for posting a weekly response to the readings on Catalyst. Weekly postings will be due on Wednesdays before class at noon. If you are unable to attend class a particular week or turn in a reading, please let one of the instructors know to arrange for a make-up assignment.

Accommodations:
We welcome the opportunity to work with any students with disabilities in this class to ensure equal access to the course. If you have a letter from Disability Resources for Students (DRS) outlining your academic accommodations, please present the letter to either Dr. Cheryan or Dr. Yen so we can discuss the accommodations you might need for this class. To request academic accommodations due to a disability if you do not have a letter from DRS, please contact DRS, 448 Schmitz, 206-543-8924 (voice) or 206-543-8925 (TTY).

Final Project:
Details about the final project will be presented in class.

Discussion Ground Rules:
- Listen actively -- respect others when they are talking
- Speak from your own experience instead of generalizing ("I" instead of "they," "we," and "you")
- Participate to the fullest of your ability -- community growth depends on the inclusion of every individual voice
- Help self and peers to become more self-reflective
- Confidentiality – respect the confidentiality of personal disclosure

Additional ground rule suggestions, other comments and concerns about the course can be made via Catalyst: https://catalysttools.washington.edu/webq/survey/peers/83368

Class Photos:
From time to time PEERs will be taking class photos for use on our program website, in our program presentations, and in other PEERs materials. Please sign the photo release form to indicate whether we may use photos of you in our materials.

Schedule of Topics & Readings

WEEK 1 (April 2) – Introduction to PEERs and Why Diversity is Important

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WEEK 2 (April 9) – State of Engineering and Why Diversity is Important, Part 2

Readings due:

- Moss-Racusin, Corinne, J.F. Dovidio, V.L. Brescoll, M.J. Graham & J. Handelsman. 2012. "Science Faculty's Subtle Gender Biases Favor Male Students." *Proceedings of the National Academy of Sciences of the United States of America* 109(41): 16474-9**.** http://tinyurl.com/ovbjzpm
- Vedantam, Shankar. "In Boardrooms and in Courtrooms, Diversity Makes a Difference." *Washington Post.* 15 Jan. 2007. http://www.washingtonpost.com/wp-dyn/content/article/2007/01/14/AR2007011400720.html
- Malarkey, Susannah. 2014. "Why Diversity Matters in Tech and Engineering." *The Seattle Times,* November 30. http://tinyurl.com/kzdlw95

Assignment Due:

- Catalyst Reading Summary: https://catalyst.uw.edu/webq/survey/peers/264284

WEEK 3 (April 16) – Introduction to Expert Jigsaw I: Bias, Stereotypes, and Socialization

Readings due:

- Steele, Claude & J. Aronson. "Stereotype Threat and the Intellectual Test Performance of African Americans." *Journal of Personality and Social Psychology* 69(5): 797—811 (**Read pages 797—801 only for class**). http://tinyurl.com/ko7pqyf
- Vedantam, Shankar. "The Situation of Sexism" *The Hidden Brain: How Our Unconscious Minds Elect Presidents, Control Markets, Wage Wars, and Save Our Lives* New York, NY: Random House Publishing, 2010. Web. http:/thesituationist.wordpress.com/2010/05/17/the-situation-of-sexism
- Steele, Claude. *Whistling Vivaldi: And Other Clues To How Stereotypes Affect Us.* New York: W.W. Norton & Company, 2010. (Chapter 10: The Distance Between Us: The Role of Identity Threat, 191-210). http://tinyurl.com/ku9gagj
- Sommers, Sam. "Chapter 5: Mars and Venus Here on Earth." *Situations Matter: Understanding How Context Transforms Your World*. New York: Riverhead, 2011. (Excerpt from Chapter 5: The Shape I'm In and Rethinking Gender, 163 – 179). http://tinyurl.com/nml5gr6

Assignment Due:

- Catalyst Reading Summary: https://catalyst.uw.edu/webq/survey/peers/264284

WEEK 4 (April 23) – Jigsaw Planning I with Expert Groups

Readings due:

- Readings are specific to the Assigned Jigsaw I Topic (See Syllabus, Page 7)

Assignment Due:

- Catalyst reading response *specific to Jigsaw readings:* https://catalyst.uw.edu/webq/survey/peers/264286

WEEK 5 (April 30) -- Expert Jigsaw I Teaching Session

Readings due:

- Reading specified by groups (Review Week 4 readings as needed)

Assignment Due:

- Prepare for teaching Expert Jigsaw topic
  Evaluate Expert group members: https://catalyst.uw.edu/webq/survey/peers/83684

WEEK 6 (May 7) – Student Panel

Readings due:

- Meaux, J.B., Green, A., & Broussand, L. "ADHD in the college student: A block in the road". *Journal of Psychiatric and Mental Health Nursing* 16, 248-256. Blackwell Publishing, 2009. http://tinyurl.com/l5h3lwl
- Mattlin, Ben. "Wheelchair Guys Are All Alike." *The New York Times*. 10 Mar. 2012. http://www.nytimes.com/2012/03/11/opinion/sunday/wheelchair-guys-are-all-alike.html?_r=0
- Ebert, Jessica. "Scientists with Disabilities: Access All Areas." *Nature.com*. Nature Publishing Group, 02 June 2005. http://www.nature.com/nature/journal/v435/n7042/full/435552a.html
- Loftus, Margaret. "In Their Grasp: Students with Disabilities Seldom Pursue Engineering or Science, But That May Be About To Change." *ASEE PRISM*. American Society for Engineering Education, Summer 2010. http://www.prism-magazine.org/summer10/feature_02.cfm
- Anthony, Charlotte. "The Struggle between Disclosure and Privacy." *UW Daily*, 26 Oct. 2010. http://www.dailyuw.com/features/article_58092b67-1a97-562a-9bed-f8d41273cd4b.html
- Gewin, Virginia. "Equality—The Fight for Access: Scientists with Disabilities Seek Way to Level the Playing Field." *Nature*, 469 (2011): 255-257. http://www.nature.com/naturejobs/science/articles/10.1038/nj7329-255a

Assignment Due:

- Catalyst Reading Summary: https://catalyst.uw.edu/webq/survey/peers/264284

WEEK 7 (May 14) – Introduction to Expert Jigsaw II: Stuck in the Shallow End

Readings due:

- Margolis, Jane. 'Chapter 1- An Unlikely Metaphor: The Color Line in Swimming and Computer Science'" *Stuck in the Shallow End: Education, Race, and Computing*. Cambridge, MA: MIT, 2008. 17-25. http://bit.ly/14nxjl4
- Zernike, Kate. "The Reluctant Feminist." *The New York Times*. The New York Times, 08 Apr. 2001. http://www.nytimes.com/2001/04/08/education/the-reluctant-feminist.html?pagewanted=all

- Scalzi, John. "Straight White Male: The Lowest Difficulty Setting There Is." *Whatever.scalzi.com*. 15 May 2012. http://whatever.scalzi.com/2012/05/15/straight-white-male-the-lowest-difficulty-setting-there-is/
    - Optional follow-up: Allen, S. "All Skulls On: Teaching Intersectionality through Halo." *Borderhouseblog.com.* 23 Apr 2013. http://borderhouseblog.com/?p=10617
- Duckworth, Angela Lee. "The Key to Success? Grit." Lecture. TED. *Ted.com*. May 2013. http://www.ted.com/talks/angela_lee_duckworth_the_key_to_success_grit.html.
- "Privileged: Social Justice Mondays." Abused Deaf Womens's Advocacy Services. https://www.youtube.com/watch?v=xDF_6TV3X9g

Assignment Due:

- Catalyst Reading Summary: https://catalyst.uw.edu/webq/survey/peers/264284

WEEK 8 (May 21) – Jigsaw Planning II with Expert Groups

Readings due:

- Readings are specific to the Assigned Jigsaw II Topic (See Syllabus, Page 8)

Assignment Due:

- Catalyst reading response *specific to Jigsaw readings:* https://catalyst.uw.edu/webq/survey/peers/264286

WEEK 9 (May 28) – Expert Jigsaw II Teaching Session

Readings due:

- Reading specified by groups (Review Week 8 readings as needed)

Assignment Due:

- Prepare for teaching Expert Jigsaw topic
  Evaluate Expert group members: https://catalyst.uw.edu/webq/survey/peers/83684

WEEK 10 (June 4) – How to Deal with Resistance, How to be an Ally and Class Evaluation Forms

Readings due:

- Broido, Ellen M. "Issues and Strategies for Social Justice Allies (and the Student Affairs Professionals Who Hope to Encourage Them)." *Developing Social Justice Allies: New Directions for Student Services*. By Robert D. Reason. 1st ed. Vol. 110. San Francisco: Jossey-Bass, 2005. 81-89. http://bit.ly/154L9GM
- SPLC. Six Steps to Speaking Up Against Everyday Bigotry. "Responding to Everyday Bigotry Speak Up!". *Southern Poverty Law Center*. 77–79. www.splcenter.org/sites/default/files/downloads/publication/splcspeak_up_handbook_0.pdf
- Barres, Ben A. "Does Gender Matter?" *Nature.* 442.7099 (2006): 133-36. *Nature.com*. 12 July 2006. http://tinyurl.com/o7dmz22

- Friedman, Anne. "How Do You Change A Bro-Dominated Culture?" New York Magazine (2013) http://nymag.com/thecut/2013/09/how-do-you-change-a-bro-dominated-culture.html
- Jackson, Katz. "Violence Against Women-It' s a Men's Issue: Jackson Katz, Ph.D. at TEDxFiDiWomen" *YouTube.* 11 Feb. 2013. Excerpt minutes 11-19. http://www.youtube.com/watch?feature=player_embedded&v=KTvSfeCRxe8
- Bahadur, Nina. "Video Blogger Franchesca Ramsey Perfectly Explains How To Be An Ally." *The Huffington Post.* [video] http://tinyurl.com/ngt783g
- Plaut, Vicky. "3 Myths Plus a Few Best Practices for Achieving Diversity." *Scientific American* (2014), http://www.scientificamerican.com/article/3-myths-plus-a-few-best-practices-for-achieving-diversity/

Assignment Due:

- Catalyst Reading Summary: https://catalyst.uw.edu/webq/survey/peers/264284
- Evaluate Home group members: https://catalyst.uw.edu/webq/survey/peers/83684

FINAL PRESENTATIONS: Friday, June 12 from 2:30 – 4:20 p.m. in Husky Union Building (HUB) #214

Expert Jigsaw I Topics (Week 4)

Implicit Bias/Individual Bias

Reading:

- Berdik, Chris. "Invisible Bias." *Boston Globe* 19 Dec. 2004. http://tinyurl.com/mnbqeyn
- Hill, Catherine, Christianne Corbett, and Rose Andresse. St. "Chapter 8: Why So Few?" *Why so Few?: Women in Science, Technology, Engineering, and Mathematics*. Washington, D.C.: American Association of University Women. 2010. 73-79. http://bit.ly/17qTqFc
- Women in Science & Leadership Engineering Institute University of Wisconsin-Madison. "Reviewing Applicants: Research on Bias and Assumptions." 2006. http://bit.ly/130Ik6v
- Russ, Travis, Cheri Simonds, and Stephen Hunt. "Coming Out in the Classroom... An Occupational Hazard?: The Influence of Sexual Orientation on Teacher Credibility and Perceived Student Learning." *Communication Education* 51.3 (2002): 311-24. http://bit.ly/130Irih
- Jaschik, Scott. "The Bias for White Men." Inside Higher Ed. 24 April 2014. http://tinyurl.com/m4t4ps6

- Assignment: Implicit Association Test (Gender-Science Demo) https://implicit.harvard.edu/implicit/demo/

Stereotypes and Belonging

Readings:

- Gladwell, Malcolm. "Primed for Action." *Blink: The Power of Thinking without Thinking*. 1st ed. New York: Little, Brown and, 2005. 52-61. http://bit.ly/1dKoykA
- Hill, Catherine, Christianne Corbett, and Rose Andresse. St. "Chapter 3: Stereotypes." *Why so Few?: Women in Science, Technology, Engineering, and Mathematics*. Washington, D.C.: American Association of University Women, 2010. http://bit.ly/12TdSdg
- ABC's *What Would You Do (Bike Thief)*. 2010. Film. http://www.youtube.com/watch?v=S0kV_b3IK9M
- Steele, Claude. *Whistling Vivaldi: And Other Clues To How Stereotypes Affect Us*. New York : W.W. Norton & Company, 2010. (Chapter 9 "Reducing Identity and Stereotype Threat: A New Hope" page 152 – 190) http://tinyurl.com/nmsexkd
- Cheryan, Sapna. "Stereotypes as Gatekeepers." TEDxSeattle. 16 April 2010. https://www.youtube.com/watch?v=TYwI-qM20x4

Biology and Socialization (Nature vs. Nurture)

Readings:

- Valian, Virginia. "Chapter 2: Gender Begins – and Continues – at Home." *Why so Slow?: The Advancement of Women*. Cambridge, MA: MIT, 1998. 23-46. http://bit.ly/13qysWJ
- Crowley, Kevin, Maureen A. Callanan, Harriet R. Tenenbaum, and Elizabeth Allen. "Parents Explain More Often to Boys than to Girls during Shared Scientific Thinking" *Psychological Science,* vol. 12 issue 3. P. 258-261. http://bit.ly/13TEUZy
- Shanahan, Marie-Claire, and Zahra Hazari. "Can We Declare Victory in the Participation of Women in Science? Not Yet." *American Physical Society*. 2011. *Aps.org*. National Science Foundation. http://tinyurl.com/7482glm
- Sommers, Sam. "Chapter 5: Mars and Venus Here on Earth." *Situations Matter: Understanding How Context Transforms Your World*. New York: Riverhead, 2011. 147-79. http://bit.ly/198fA2Q
- Wade, Lisa. "The Truth About Gender and Math." *Sociological Images.* 7 Mar. 2013. Web. 19 Sept. 2013. http://thesocietypages.org/socimages/2013/03/07/the-truth-about-gender-and-math/
- Day, Lori. "The Little Girl from the 1981 LEGO Ad is All Grown Up, and She's Got Something to Say." *Women You Should Know*. 11 February 2014. http://tinyurl.com/ojdy5zs

Expert Jigsaw II Topics (Week 8)

Structural Bias

Readings:

- Sandel, Michael. "Episode 08, Part 1: What's a Fair Start?" *Justice with Michael Sandel*. Harvard University, 08 Sept. 2009. http://www.justiceharvard.org/2011/02/episode-08/
- Edsall, Thomas B. "The Reproduction of Privilege." *The New York Times*. N.p., 12 Mar. 2012. http://campaignstops.blogs.nytimes.com/2012/03/12/the-reproduction-of-privilege/
- Finley, Klint. "New Study Exposes Gender Bias in Tech Job Listings." *Wired.com*. Conde Nast Digital, 11 Mar. 2013. http://www.wired.com/wiredenterprise/2013/03/hiring-women/
- Margolis, Jane. "Introduction: The Myth of Technology as the 'Great Equalizer.'" *Stuck in the Shallow End: Education, Race, and Computing*. Cambridge, MA: MIT, 2008. 1-16. http://bit.ly/14nxjl4
- Stephens, Nicole M., MarYam Hamedani & Mesmin Destin. "Talk About Class." *Inside Higher Ed*. 18 March 2014. http://tinyurl.com/naualae

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Talent, Hard Work, & Grit

Readings:

- Hill, Catherine, Christianne Corbett, and Rose Andresse. St. "Chapter 2: Beliefs about Intelligence" *Why so Few?: Women in Science, Technology, Engineering, and Mathematics*. Washington, D.C.: American Association of University Women, 2010. http://bit.ly/13HsRHr
- Gladwell, Malcolm. "The 10,000 Hour Rule." *Outliers: The Story of Success*. Boston, MA: Little, Brown, and Company, 2008. 35-68. http://bit.ly/12Q1aAR
- Hyde, Janet S., Sara M. Lindberg, Marcia C. Linn, Amy B. Ellis, and Carolin C. Williams. "Gender Similarities Characterize Math Performance." *Science*. Vol. 321. Pgs. 35-68. 25 July 2008. http://www.sciencemag.org/content/321/5888/494.short
- Lehrer, Jonah. "Which Traits Predict Success? (The Importance of Grit)." *Wired.com*. Conde Nast Digital, 12 Mar. 2011. Web. http://www.wired.com/wiredscience/2011/03/what-is-success-true-grit/

- Activity: 8 item Grit scale: http://www.sas.upenn.edu/~duckwort/images/8-item Grit 081011.pdf

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Privilege

Readings:

- Lopez, Gilda, and Nancy Chism. "Classroom Concerns of Gay and Lesbian Students." *College Teaching* 41.3 (1993): 97-104. http://bit.ly/1bwV8d2
- McIntosh, Peggy. *White Privilege: A Personal Account of Coming to See Correspondent through Work in Women Studies*. Working paper. Center for Research on Women, 1988. http://www.iub.edu/~tchsotl/part2/McIntosh White Privilege.pdf
- Wise, Tim J. "Preface." *White Like Me: Reflections on Race from a Privileged Son*. Brooklyn, NY: Soft Skull, 2008. vii-xi. http://bit.ly/1bx2gpT
- O'Doherty, Susan. "The Privilege of Not Recognizing Privilege." *Inside Higher Ed*. 24 Jan. 2010. http://www.insidehighered.com/blogs/mama_phd/the_privilege_of_not_recognizing_privilege
- Krings, Mike. "Study: Privilege Not Indicator of Women's Success in STEM Fields." *University of Kansas News Release.* 05 Mar. 2012. http://archive.news.ku.edu/2012/march/5/stem.shtml

- Activity: Distance from Privilege worksheet: http://tinyurl.com/oc5d3m7