InterEng/Medicine 650: Women and Leadership in Medicine, Science, and Engineering
IE Course   496-650 #25388
Med Course 632-650 #40797
Spring Semester 2012

Instructors:

Prof. Molly Carnes, MD, MS   Carol Isaac, PT, PhD
Center for Women's Health Research   Center for Women's Health Research
700 Regent Street, Suite 301   700 Regent Street, Suite 301
mlcarnes@cwhr.wisc.edu   cisaac@wisc.edu

Time and place:
Wednesdays and Fridays, 10:00 - 11:40 am, Room 2355, Engineering Hall

Credits:
Variable, 1-3.
- 1 credit for attending a minimum of 15 class sessions, responding to the course readings, discussion in weekly journal entries, and developing and presenting a case study;
- 2 credits for attending minimum of 20 class sessions, plus activities listed for 1 credit, and writing a 5-page literature review or research proposal;
- 3 credits for attending class every week, plus activities listed for 1 credit, and completing a research project which results in a 10-page paper and in-class presentation.

Course description:
In controlled studies, both men and women preferentially select men over women for leadership positions even when credentials are identical and despite field studies demonstrating women's equivalent or slightly better leadership effectiveness. The assumption that men will make better leaders than women is attributed to the pervasive existence of unconscious stereotypes that characterize both men and leaders as agentic or action-oriented and women as dependent. Multiple professional and scientific groups including the National Institutes of Health, the National Science Foundation, and the Association of Academic Medical Centers have identified the underrepresentation and lack of advancement of women in medicine, science and engineering as a national workforce problem. This course will review and discuss research on evolving perspectives of leadership; validated instruments for assessing leadership effectiveness; gender differences in leadership; how unconscious assumptions about the behaviors and traits of men, women, and leaders impede women's advancement; and what evidence-based approaches prevent activation and application of unconscious biases that may disadvantage women in leadership selection or evaluation of their leadership performance. Specifically, we will read several key papers by leading researchers on leadership and a metanalysis examining transformational, transactional, and laissez-faire leadership styles. Then we will look at papers comparing women and men leaders on validated measures of leadership effectiveness. We will cover some key concepts from leading social cognitive researchers that bear on these issues including role congruity theory of gender and leadership (e.g. Eagly's work), the interrelation of gender and status (e.g. work of Ridgeway; work of Rudman), and the existence of prescriptive gender stereotypic behavior that causes cognitive distortions in evaluating women leaders (e.g. work of Heilman). The course also provides the opportunity to apply these evidence-based perspectives using experiential methods.

For each reading, one student will be assigned to review the paper in depth and lead the class discussion summarizing the hypothesis, the study design, the major findings, and the limitations of the study. They will also be asked to reflect on the relevance of the paper to their own experiences or observations.

1-, 2-, and 3- credit students will journal weekly to reflect on the readings and class discussions (which may include development and discussion of case studies). Journals will be checked at 5- and 10-weeks mid-way through the course to ensure that students are meeting the objectives of the exercises and at the end of the course.

2-credit students will select a topic related to the class and do an in depth review of research on a specific aspect of gender and leadership (e.g. gender differences in the use of humor in leadership effectiveness, literature review on women's leadership in a particular area) or write a proposal for a research project describing the theoretical basis, hypothesis and design for the study. The literature review or research proposal will be described in a paper no longer than 5 pages not including references (1.5 line spacing, 11 point Arial font, 1 inch margins). Students will choose their own research topics, but the **topic must be approved by an instructor**.

3- credit students will also undertake and complete a project. This project will require and may involve primary collection of data (e.g. a survey of leadership perceptions among a convenience sample of a student's peers; review of non-verbal behaviors in women and men leaders giving speeches on YouTube, analyzing political speeches, develop an area-specific IAT). Students will write up this project in a 10 page paper (not including references) and present the project to class. (1.5 line spacing, 11 point Arial

font, 1 inch margins). Students will choose their own research topics, but the **topic must be approved by an instructor**. Research could include a scholarly review of a topic related to leadership or collection of original data. For course purposes only, IRB approval is not required; however, if you intend to publish the results, you will need to submit your protocol for approval to the IRB and take the human subjects training. This weblink has information about the UW-Madison Education and Social & Behavioral Sciences Institutional Review Board (IRB)
http://www.ls.wisc.edu/ors/IRB/IRB_Home.html

Notes:
- Your project should be in compliance with the UW-Madison Student Code of Conduct.
- For the bibliography you can use any standard **reference style** that shows all authors' names (initials and last name), full title, journal name, volume, year, and pages. Use the same style throughout your paper. Again, use articles we read in class as models for possible formats.
- **Websites:** Be sure to examine the validity and credibility of any websites you use for references. For example, you can use government websites or those from prestigious professional organizations such as the Institute of Medicine.
- **Research reports** should include an abstract and these sections: background & significance, methods, results, discussion and conclusion. Research proposals should include: abstract, background & significance, methods.

Course web page:
Our Learn@UW web page for this course can be accessed through the following URL: http://learnuw.wisc.edu/. Readings will be posted. You are encouraged to check the web page regularly to keep up to date on course news, access course materials, and participate in discussion. A more extensive bibliography of supplemental readings will be on the web page and also available through the WISELI website (wiseli.engr.wisc.edu).

Course Learning Goals:

By the end of this course, students will:
1) Be conversant with several definitions and styles of leadership, as well as with research on how leadership and gender intersect/interact, particularly in an academic context;
2) Reflect on leadership and gender based on readings, discussion, and journaling.
3) Demonstrate knowledge of effective evidence-based leadership strategies.

DATE		TOPIC	READINGS/ASSIGNMENTS
Week 1:			
1/25 (W)	**Introduction** "What is leadership"? Lecture: Carnes	• Introductions and review of course content and requirements. • Informal discussion of what students want from the course. • Handout on journaling. • Handout on Journal/Case Presentations	Complete: • Efficacy for Leadership • Empowerment questionnaire • Academic leadership goals • IRB consent
1/27 (F)	**Lecture: Recap** (11:30 Bias Lit Workshop)	• Introduction of concepts from social and cognitive research relevant to upcoming discussions. (e.g. gender schema, stereotype, descriptive and prescriptive gender norms for behavior). • Describe the case made by Ridgeway regarding how the status of women in society affects the way women are evaluated as leaders.	• IAT: https://implicit.harvard.edu/implicit/ • Valian, V. (1998). Gender schemas at work. In *Why so slow? The advancement of women*. (pp. 1-22). Cambridge, MA, US: The MIT Press. (group assigned) • Eagly, A. H., & Carli, L. L. (2007). Women and the Labyrinth of Leadership. *Harvard Business Review, 85*(9), 63-71. • Ridgeway, C. L. (2001). Gender, Status, and Leadership. *Journal of Social Issues, 57*(4), 637. (References: Menopause and Stunt) • Cheung, F. M., & Halpern, D. F. (2010). Women at the top: Powerful leaders define success as work + family in a culture of gender. *American Psychologist, 65*(3), 182-193.
Week 2:			
2/1 (W)	**Recap** Student Presentations/ Discussion (12:00 Bias Lit	**Topic: Research on Leadership** Objectives. Students should be able to: 1. Describe the differences between transformational, transactional and laissez-faire leadership and how	• Valian, V. (1998). Evaluating men and women. *Why so slow? The advancement of women*. (**pp. 125-144**). Cambridge, MA, US: The MIT Press. (group assigned) • Eagly, A. H., Johannesen-Schmidt, M. C., & van

DATE		TOPIC	READINGS/ASSIGNMENTS
	Workshop)	effective leadership can be measured 2. Identify words that describe behaviors or characteristics associated with female and male such as those presented in the article by Bem et al. and how they have or haven't changed.	Engen, M. L. (2003). Transformational, transactional, and laissez-faire leadership styles: A meta-analysis comparing women and men. *Psychological Bulletin, 129*(4), 569-591. (Reference: Rosser) • Carli, L. L. (1999). Gender, Interpersonal Power, and Social Influence. *Journal of Social Issues, 55*(1), 81-99. • Bem, S. L. (1974). The measurement of psychological androgyny. *Journal of Consulting and Clinical Psychology, 42*(2), 155-162. (Reference: Holt)
2/3 (F)	**Lecture:** Why does it matter? Carnes Student Presentations/ Discussion	**Topics: Men and Women as Leaders** 1. Be able to discuss several barriers to leadership. 2. Recognize the progress of women's health as a case of women's leadership.	• Cech, E., Rubineau, B., Silbey, S., & Seron, C. (2011). Professional role confidence and gendered persistence in engineering. *American Sociological Review, 76*(5), 641-666. • O'Neill, O. A., & O'Reilly Iii, C. A. (2011). Reducing the backlash effect: Self-monitoring and women's promotions. *Journal of Occupational & Organizational Psychology, 84*(4), 825-832. • Thomas-Hunt, M. C., & Phillips, K. W. (2004). When What You Know is Not Enough: Expertise and Gender Dynamics in Task Groups. *Personality and Social Psychology Bulletin, 30*(12), 1585-1598. • Carnes, M., Morrissey, C., & Geller, S.E. (2008). Women's Health and Women's Leadership in Academic Medicine: Hitting the Same Glass Ceiling? *J Womens Health*, 17(9), 1453-1462. (group assigned)
Week 3:			
2/8 (F)	**Lecture:** Isaac Isaac- overview of leadership & power, & model. (Catch up)	Leadership Model	Discussion
2/10 (W)	Discuss Article Presentations	**Topics: Stereotype Threat & Leadership Self-Efficacy** 1. Define stereotype threat and its impact on women's leadership. 2. Cite an example of "stereotype threat" and how this phenomenon might impact women performing in traditionally male jobs drawing on the research of Claude Steele's group. 3. How could identity safety be implemented by individuals? 4. Leadership self-efficacy and how it reduces stereotype threat	• Kray, L. J., Thompson, L., & Galinsky, A. (2001). Battle of the sexes: Gender stereotype confirmation and reactance in negotiations. *Journal of Personality and Social Psychology, 80*(6), 942-958. (References: Kray) • Davies, P.G., Spencer S.J. (2005) Clearing the air: Identity safety moderates the effects of stereotype threat on women's leadership aspirations. *Journal of Personality and Social Psychology, 88*(2), 276-287. • Burnette, J. L., Pollack, J. M., & Hoyt, C. L. (2010). Individual differences in implicit theories of leadership ability and self-efficacy: Predicting responses to stereotype threat. *Journal of Leadership Studies, 3*(4), 46-56. (References: Hoyt articles) • Wayne, N. L., Vermillion, M., & Uijtdehaage, S. (2010). Gender Differences in Leadership Amongst First-Year Medical Students in the Small-Group Setting. [Article]. *Academic Medicine, 85*(8), 1276-1281.
Week 4:			
2/15 (W)	**Recap & Lecture:** Carnes		• Eagly, A. H., & Karau, S. J. (2002). Role Congruity Theory of Prejudice Toward Female Leaders.

DATE		TOPIC	READINGS/ASSIGNMENTS
		Topics: Role Congruity 1. Define what Eagly means by "role incongruity" for women leaders 2. Describe prescriptive gender behavioral norms. 3. Discuss communality deficit and how to address it.	*Psychological Review, 109*(3), 573. • Heilman, M. E. (2001). Description and prescription: How gender stereotypes prevent women's ascent up the organizational ladder. *Journal of Social Issues, 57*(4), 657-674. • Heilman, M.E., & Okimoto, T.G. (2007). Why are women penalized for success at male tasks?" The implied communality deficit. *J Appl Psychol,* 92(1), 81-92. (Reference: Benard, Paik, & Correll) • Heilman, M. E., & Haynes, M. C. (2005). No Credit Where Credit Is Due: Attributional Rationalization of Women's Success in Male--Female Teams. *Journal of Applied Psychology, 90*(5), 905-916.
2/17 (F)	Student Presentations/ Discussion	**Topics: Miscellaneous**	• Rudman, L. A. (1998). Self-promotion as a risk factor for women: The costs and benefits of counterstereotypical impression management. *Journal of Personality and Social Psychology, 74*(3), 629-645. • Sesko, A. K., & Biernat, M. (2010). Prototypes of race and gender: The invisibility of Black women. *Journal of Experimental Social Psychology, 46*(2), 356-360. • Brescoll, V. L., Dawson, E., & Uhlmann, E. L. (2010). Hard won and easily lost: The fragile status of leaders in gender-stereotype-incongruent occupations. *Psychological Science, 21*, 1640-1642. • Brescoll VL, Uhlmann EL. Can an angry woman get ahead? Status conferral, gender, and expression of emotion in the workplace. Psychological Science. 2008;19(3):268-75.
Week 5:			
2/22 (W)	**Carnes Lecture:** Recap - Barriers to Gender Equity	**Miscellaneous (Continued)**	• Parks-Stamm, E. J., Heilman, M. E., & Hearns, K. A. (2008). Motivated to penalize: Women's strategic rejection of successful women. *Personality and Social Psychology Bulletin, 34*(2), 237-247. • Okimoto, T. G., & Brescoll, V. L. (2010). The price of power: Power seeking and backlash against female politicians. *Personality and Social Psychology Bulletin, 36*(7), 923-936. • Sczesny, S. & Stahlberg, D. (2002) The influence of gender-stereotyped perfumes on leadership attribution. *Eur J Soc Psychol,* 32, 815-828. • Banaji, M. R., Hardin, C., & Rothman, A. J. (1993). Implicit stereotyping in person judgment. *Journal of Personality & Social Psychology, 65*(2), 272-281.
2/24 (F)	**Carnes Lecture:** Case presentation- "Prestigious Awards" "How to do case studies" Student Presentations/ Discussion	**Miscellaneous (Continued)** • Describe the process of "semantic priming" and how this affected the evaluation of subsequent targets by gender in the study by Banaji et al. • Discuss the role of self-perceived objectivity in evaluation.	**Weekly reflective journal due** • Marchant, A., Bhattacharaya, A., & Carnes, M. (2007). Can the Language of Tenure Criteria Influence Women's Academic Advancement? *Journal of Women's Health* (15409996), 16(7), 998-1003. • Uhlmann, E. L., & Cohen, G. L. (2007). 'I think it, therefore it's true': Effects of self-perceived objectivity on hiring discrimination. *Organizational Behavior and Human Decision Processes, 104*(2), 207-223. • Uhlmann, E. L., & Cohen, G. L. (2005). Constructed

DATE		TOPIC	READINGS/ASSIGNMENTS
			Criteria. *Psychological Science, 16*(6), 474-480. • Isaac C, Lee B, Carnes M. Do students' and authors' genders affect evaluations? A linguistic analysis of medical student performance evaluations. *Academic Medicine.* 2011 86(1).
Week 6:			
2/29 (W)	Student Presentations/ Discussion	**Topic: Bias Literacy** 1. Describe Devine's theory of automatic stereotyping. 2. Discuss methods of alleviating unconscious bias.	• Devine, P. G. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology, 56*(1), 5-18. • Devine, P. G. (2001). Implicit Prejudice and Stereotyping : How Automatic Are They? Introduction to the Special Section. *Journal of Personality and Social Psychology, 81*(5), 757-759. • Plant, E. A., & Devine, P. G. (2009). The active control of prejudice: Unpacking the intentions guiding control efforts. *Journal of Personality and Social Psychology, 96*(3), 640-652.
3/2 (F)	Lecture: Carnes	Bias Literacy Workshop	Discussion
Week 7:			
3/7 (W)	**Lecture:** Carnes Recap Bias literacy **Lecture:** Systematic Review-Isaac	**Topics: Miscellaneous** 1. Describe in your own words at least 5 interventions that mitigate unconscious gender bias.	**Research proposal or project topic due (2 credit)** • Isaac, C., Lee, B., & Carnes, M. (2009). Interventions That Affect Gender Bias in Hiring: A Systematic Review. *Academic Medicine, 84*(10), 1440-1446. (Read)
3/9 (F)	Student Participation	**Bias Jeopardy|**	Discussion
Week 8:			
3/14 (W)	Carnes –**Recap** Isaac –Leadership views-faculty	Case presentations & discussion	**Research proposal/project outline with at least 5 references due.** Case Study Presentation
3/16 (F)	**Guest Speakers**	*"Women Speaking Up"*	Discussion
Week 9:			
3/21 (W)	Case Studies	Case presentations & discussion	2 Case Study Presentations
3/23 (F)	**Guest Speakers**	Invited women leaders	Discussion
Week 10:			
3/28 (W)	Case Studies	Case presentations & discussion	2 Case Study Presentations
3/30 (F)	TBA	TBA	**Weekly reflective journal due**
SPRING BREAK			
4/4 & 4/6	**SPRING BREAK**	**SPRING BREAK**	**SPRING BREAK**
Week 11:			
4/11 (W)	**Lecture-**1/2 Case Study	Case presentations & discussion	**Research proposal or project -expanded list of annotated references (at least 10) due** Case Study Presentation

DATE		TOPIC	READINGS/ASSIGNMENTS
4/13 (F)	**TBA**	TBA	TBA
Week 12:			
4/18 (W)	Case Studies	Case presentations & discussion	2 Case Study Presentations
4/20 (F)	**TBA**	TBA	TBA
Week 13:			
4/25 (W)	Course Overview & Evaluations	Course overview	**Research project/proposal first draft due**
4/27 (F)	**TBA**	TBA	TBA
Week 14:			
5/2 (W)	Catch-up	Research presentations	**Weekly reflective journal due**
5/4 (F)	**TBA**	TBA	TBA
Week 15:			
5/9 (W)	TBA	Research presentations	TBA
5/11 (F)	TBA	Research presentations	**Final draft due-research project**

The UW-Madison is committed to creating a dynamic, diverse, and welcoming learning environment for all students and has a non-discrimination policy that reflects this philosophy. Disrespectful behavior or comments addressed toward any group or individual, regardless of race/ethnicity, sexuality, gender, religion, ability, or any other difference is deemed unacceptable in this class, and will be addressed by the professors.

Other articles of interest:

APPELBAUM, S. H., AUDET, L. & MILLER, J. C. (2003) Gender and leadership? Leadership and gender? A journey through the landscape of theories. *Leadership & Organization Development Journal,* 24**,** 43-51.

BENARD, S., PAIK, I., & CORRELL, S. J. (2008). Cognitive bias and the motherhood penalty. *Hastings Law Journal, 59*, 1359-1374.

BIERNAT, M. & FUEGEN, K. (2001) Shifting standards and the evaluation of competence: Complexity in gender-based judgment and decision making. *Journal of Social Issues,* 57**,** 707-724.

BOWLES, H. R., BABCOCK, L. & LAI, L. (2007) Social incentives for gender differences in the propensity to initiate negotiations: Sometimes it does hurt to ask. *Organizational Behavior and Human Decision Processes,* 103**,** 84-103.

BRAGGER, J. D., KUTCHER, E., MORGAN, J. & FIRTH, P. (2002) The Effects of the Structured Interview on Reducing Biases Against Pregnant Job Applicants. *Sex Roles,* 46**,** 215-226.

BROWN, F. W., MOSHAVI, D. (2002). Herding Academic Cats: Faculty Reactions to Transformational and Contingent Reward Leadership by Department Chairs. *Journal of Leadership Studies, 8*(3), 79-93.

BROWN, V. & GEIS, F. L. (1984) Turning lead into gold: Evaluations of men and women leaders and the alchemy of social consensus. *Journal of Personality and Social Psychology,* 46**,** 811-824.

BUDDEN, A. E., TREGENZA, T., AARSSEN, L. W., KORICHEVA, J., LEIMU, R. & LORTIE, C. J. (2008) Double-blind review favours increased representation of female authors. *Trends in Ecology & Evolution,* 23**,** 4-6.

CARNES, M., HANDELSMAN, J. & SHERIDAN, J. (2005) Diversity in Academic Medicine: The Stages of Change Model. *Journal of Women's Health,* 14**,** 471-475.

CECI, S. J., WILLIAMS, W. M. & BARNETT, S. M. (2009) Women's underrepresentation in science: Sociocultural and biological considerations. *Psychological Bulletin,* 135**,** 218-261.

CEJKA, M. A. & EAGLY, A. H. *Gender-Stereotypic Images of Occupations Correspond to the Sex Segregation of Employment*, Society for Personality & Social Psychology.

DUEHR, E. E., & BONO, J. E. (2006). Men, women, and managers: Are stereotypes finally changing? *Personnel Psychology, 59*(4), 815-846.

GILLESPIE, B. L. & EISLER, R. M. (1992) Development of the feminine gender role stress scale: A cognitive-behavioral measure of stress, appraisal, and coping for women. *Behavior Modification,* 16**,** 426-438.

GLICK, P., LARSEN, S., JOHNSON, C. & BRANSTITER, H. (2005) Evaluations of sexy women in low- and high-status jobs.

*Psychology of Women Quarterly, 29***,** 389-395.

HIRSHBEIN, L. D. (2006) Are women residency supervisors obligated to nurture? *Medical Education,* 40**,** 1159-1161.

HOLT, C.L. & ELLIS J.B. Assessing the current validity of the Bem Sex-Role Inventory. *Sex Roles.* 1998;39(11):929-941.

HOYT, C. L., JOHNSON, S. K., MURPHY, S. E., & SKINNELL, K. H. (2010). The impact of blatant stereotype activation and group sex-composition on female leaders. *The Leadership Quarterly, 21*(5), 716-732.

HOYT, C. L., & BLASCOVICH, J. (2007). Leadership efficacy and women leaders' responses to stereotype activation. *Group Processes & Intergroup Relations, 10*(4), 595-616.

KOCH, S. C. (2005) Evaluative affect display toward male and female leaders of task-oriented groups. *Small Gr Res, 36***,** 678-703.

KRAY, L. J., GALINSKY, A. D., & THOMPSON, L. (2002). Reversing the gender gap in negotiations: An exploration of stereotype regeneration. *Organizational Behavior and Human Decision Processes, 87*(2), 386-409.

KRAY, L. J., REB, J., GALINSKY, A. D., & THOMPSON, L. (2004). Stereotype reactance at the bargaining table: The effect of stereotype activation and power on claiming and creating value. *Personality and Social Psychology Bulletin, 30*(4), 399-411.

LOWE, K. B., KROECK K. G, SIVASUBRAMANIAM, N. (1996) Effectiveness correlates of transformation and transactional leadership: A meta-analytic review of the MLQ literature. *Leadership Quart,* 7**,** 385-425.

PALUCK, E. L. & GREEN, D. P. (2009) Prejudice reduction: What works? A review and assessment of research and practice. *Annual Review of Psychology,* 60**,** 339-367.

PETERS, S., KINSEY, P. & MALLOY, T. E. (2004) Gender and Leadership Perceptions Among African Americans. *Basic & Applied Social Psychology,* 26**,** 93-101.

PHELAN, J. E., MOSS-RACUSIN, C. A. & RUDMAN, L. A. (2008) Competent yet out in the cold: Shifting criteria for hiring reflect backlash toward agentic women. *Psychology of Women Quarterly,* 32**,** 406-413.

PORTER, N., GEIS, F. L. & JENNINGS, J. (1983) Are Women Invisible as Leaders? *Sex Roles,* 9**,** 1035-1049.

ROBERSON, L., & KULIK, C. T. (2007). Stereotype threat at work. *Academy of Management Perspectives, 21*(2), 24-40.

ROSSER, V. J. (2003). Faculty and Staff Members' Perceptions of Effective Leadership: Are There Differences Between Women and Men Leaders? *Equity & Excellence in Education, 36*(1), 71.

SALAS, E., SIMS, D. E., & BURKE, C. S. (2005). Is there a 'Big Five' in Teamwork? *Small Group Research, 36*(5), 555-599.

SCZESNY, S., SPREEMANN, SANDRA; STAHLBERG, DAGMAR (2006) Masculine = Competent? Physical appearance and sex as sources of gender-stereotypic attributions. *Swiss J Psychol,* 65**,** 15-23.

SEVO, R. & CHUBIN, D. E. (2008). *Bias literacy: A review of concepts in research on discrimination*: AAAS Center for Science & Engineering Capacity.

STEELE, C.M. (1997). A threat in the air: How stereotypes shape intellectual identity and performance. *American Psychologist, 52*, 613-629.

STEINEM, G. (2002) October 1978: If men could menstruate. *Ms.,* 12**,** 41.

STEINPREIS, R., ANDERS, K. A. & RITZKE, D. (1999) The Impact of Gender on the Review of the Curricula Vitae of Job Applicants and Tenure Candidates: A National Empirical Study. *Sex Roles,* 41**,** 509-528.

TILCSIK, A. (2011). Pride and prejudice: Employment discrimination against openly gay men in the United States. *American Journal of Sociology, 117*(2), 586-626.

WENNERAS, C. & WOLD, A. (1997) Nepotism and sexism in peer-review. *Nature.* Nature Publishing Group.