Women and Minorities in STEM, BIOL 4V90/PHYS 4350  
Spring 2019  
MWF 11:00 – 11:50, LSC 159  

Instructors  
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MWF 10-11, T 2-3  


Course Description: Women and Minorities in STEM is designed to explore the unique positions women and members of minority populations hold within the scientific domain, the historical and global contributions of women and minorities to scientific advancement, and the continued challenges women and minorities face as scientists. Students will be exposed to content that will challenge their pre-existing conceptions of what science is, who has contributed to science, and how knowledge is generated.  

Course Goals:  
1. Students will gain a broader and more complex understanding regarding the contributions of women, minorities, and individuals from non-Western cultures to the STEM disciplines.  
2. Students will challenge their current worldviews in order to increase their intercultural knowledge and competence.  
3. Students will analyze the ethical, social, and environmental components of global STEM-related problems and to develop personally and socially responsible actions informed by interdisciplinary knowledge, cultural and religious differences, and multiple worldviews.  

Student Learning Outcomes:  
1. Students will articulate, orally and in writing, the perspectives of multiple worldviews within the context of STEM disciplines.  
2. Students will be able to analyze historical and contemporary issues in the STEM disciplines related to gender, race, class, religion, and culture.  
3. Students will be able to utilize interdisciplinary thinking to address areas of inequity in the STEM disciplines across gender, race, class, religion, and culture.  
4. Students will be able to identify and explain contributions to the STEM disciplines from various groups, particularly women, minorities, and individuals from non-Western cultures.  

Course Expectations: This course is not designed to be primarily content delivery, but rather discussion and discovery. As such, it is imperative that each student do the assigned readings, attend, and participate in class discussions. Attendance will be taken every class period and we will keep a record of class participation. Every student is allowed two non-penalized absences; after the second absence, 2% of the total course points will be deducted for each class period missed.  

Remind 101 Course Code: @womenminor  
Everyone is expected to join Remind 101. This will be the primary way we communicate with you outside of class. You can download the app to your phone or use the web version. Send @womenminor to 81010 to join the class.
Assignments

Journals: Over the course of the semester, students will reflect on class readings and discussions in written journal submissions, for a total of 5. The journal entries will be submitted to Blackboard and are due on assigned Sundays by 11:59pm.

Biography: Each student will choose a female or minority scientist (acceptable fields include biology, chemistry, physics, astronomy, math, computer science, engineering, psychology) and prepare a 5-10 minute oral presentation. Details regarding the presentation expectations will be provided on a scoring rubric.

Lavatory Lessons: Each student will be expected to prepare 2 flyers related to the course objectives (1 should be from the biography assignment) that are designed to inform the UCA community about Women and Minorities in STEM. These flyers will be printed by the course instructor and hung (on a rotating basis throughout the semester) in the restrooms in Lewis Science Center and the Conway Corporation Center for Sciences.

Final Assessment: Using evidence from class readings, lectures, and assignments, reflect on 1) what you have discovered this semester regarding the hegemony of Western science, 2) the contributions of non-Western people and cultures to scientific knowledge and advancement, and 3) the ways in which your own worldview may have shifted related to how knowledge is generated, how people do or do not gain access to the scientific community, and what factors influence who we remember and learn about in our textbooks.

Please write five to eight double-spaced pages, complete with in-text citations and works cited (a minimum of 5 academic sources). Your paper will be assessed according to the AAC&U Global Learning rubric, Intercultural Knowledge and Competence rubric, and the Written Communication rubric. The assignment is worth 100 points and the aggregate score from the three rubrics will determine your grade.

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<thead>
<tr>
<th>Assignment(s)</th>
<th>Percentage of total grade of assignment(s)</th>
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<tbody>
<tr>
<td>Journal Entries</td>
<td>5 @ 10pts each; 16.67% of total course grade</td>
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<tr>
<td>Female or minority scientist biography presentation</td>
<td>50 pts; 16.67% of total course grade</td>
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<tr>
<td>Lavatory Lesson flyers</td>
<td>2 @ 25pts each; 16.67% of total course grade</td>
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<tr>
<td>Final Paper</td>
<td>100 pts; 33.33% of total course grade</td>
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<tr>
<td>Class participation</td>
<td>25 pts; 16.67% of total course grade</td>
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Service-Learning: Women and Minorities in STEM is a service-learning course. Our project is the planning and facilitation of our annual Women in STEM day, to be held on March 1. Participation in planning and facilitating this event is required and will count toward your course participation points. We will assign jobs and tasks very early in the semester.

Academic dishonesty/plagiarism: The University of Central Arkansas affirms its commitment to academic integrity and expects all members of the university community to accept shared responsibility for maintaining academic integrity. Students in this course are subject to the provisions of the university's Academic Integrity Policy, approved by the Board of Trustees as Board Policy No. 709 on February 10, 2010, and published in the Student Handbook. Penalties for academic misconduct in this course may include a failing grade on an
assignment, a failing grade in the course, or any other course-related sanction the instructor determines to be appropriate. Continued enrollment in this course affirms a student’s acceptance of this university policy. Please refer to the Academic Integrity portion of the UCA Student Handbook for additional information and procedures regarding this policy.

All academic work is conducted under an honor code. Any student caught cheating or giving assistance on a test, exam or written report or assignment can be dropped from the course with a WF. The chairman of the department and the admissions committee for the student’s proposed major will also be notified. **PLAGIARISM IS CONSIDERED CHEATING.**

**Student handbook policies:** Please refer to the *Student Handbook* regarding the sexual harassment policy (pp116-117) and the academic policies (p38). Each student is responsible for all policies and procedures in the *Student Handbook*. [http://www.uca.edu/divisions/student/handbook/](http://www.uca.edu/divisions/student/handbook/)

**Americans with Disabilities Act:** *The University of Central Arkansas adheres to the requirements of the Americans with Disabilities Act. If you need an accommodation under this Act due to a disability, please contact the UCA Office of Disability Services, 450-3613.*

**Student Evaluations:** Student evaluations of a course and its professor are a crucial element in helping faculty achieve excellence in the classroom and the institution in demonstrating that students are gaining knowledge. Students may evaluate courses they are taking starting on the Monday of the twelfth week of instruction through the end of finals week by logging in to myUCA and clicking on the Evals button on the top right.

**Building Emergency Plan:** An Emergency Procedures Summary (EPS) for the building in which this class is held will be discussed during the first week of this course. EPS documents for most buildings on campus are available at [http://uca.edu/mysafety/bep/](http://uca.edu/mysafety/bep/). Every student should be familiar with emergency procedures for any campus building in which he/she spends time for classes or other purposes.

**Title IX Disclosure:** If a student discloses an act of sexual harassment, discrimination, assault, or other sexual misconduct to a faculty member (as it relates to “student-on-student” or “employee-on-student”), the faculty member cannot maintain complete confidentiality and is required to report the act and may be required to reveal the names of the parties involved. Any allegations made by a student may or may not trigger an investigation. Each situation differs and the obligation to conduct an investigation will depend on those specific set of circumstances. The determination to conduct an investigation will be made by the Title IX Coordinator. For further information, please visit: [https://uca.edu/titleix](https://uca.edu/titleix). *Disclosure of sexual misconduct by a third party who is not a student and/or employee is also required if the misconduct occurs when the third party is a participant in a university-sponsored program, event, or activity.*

**Disclaimer:** Every attempt will be made to keep within the schedule set forth by this syllabus; however, the instructor reserves the right to make changes as necessary.

**Additional Resources:**


*Blazing the Trail: Essays by Leading Women in Science,* by Emma Ideal and Rhiannon Meharchand

*Women in Science: Then and Now,* by Vivian Gornick

*Has Feminism Changed Science,* by Londa Schiebinger
Women Scientists: Reflections, Challenges, and Breaking Boundaries, by Magdolna Hargittai

Why So Slow? The Advancement of Women, by Virginia Valian

Hidden Giants, by Sethanne Howard

**Documentaries**
Equal Means Equal, 2016  
Code: Debugging the Gender Gap, 2016  
The Mask You Live In, 2015

**Websites**
4000 years of women in science  
http://4kyws.ua.edu/