SYLLABUS
WOMEN AND SCIENCE
Spring 2003
BIOL 450 O/W
M&W 5:15-6:45 p.m.

Instructor: Dr. Joan Braddock
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Office Hours: MW 1:30-2:30 or by appointment

DESCRIPTION

This course will broadly address the historical contributions and participation of women in science with an emphasis on the biological sciences. We will additionally discuss the factors affecting female participation in the sciences and how participation of women in the sciences might affect the manner in which science is done. We will focus on several questions including: 1) How have women historically contributed to the sciences? 2) How has the participation of women (or lack of participation by women) affected the historical development of science? 3) Do women do science differently than men? 4) What is the current status of women in science? and 5) What can be done to more fully integrate women in the sciences? The class will be broken down into three broad sections: 1) History of women and science. 2) Sex and the brain. 3) Current issues related to women and science.

INFORMATION ABOUT ORAL AND WRITING INTENSIVE CLASSES

This course is designated as Writing-Intensive (W). The designation means that a majority of the graded work in the course will be derived from writing activities. Here are the general guidelines for the writing expected in this course:

- Students will complete an ungraded writing sample on or near the first day of class to help the teacher assess writing ability and general competence.
- Students will receive comments from the teacher and/or peers on drafts of written work. In other words, students will work through a draft-and-redraft process so that they can apply feedback and become more effective writers.
- Students will meet individually with the instructor at least once during the term to discuss their writing.

This course is also designated as Oral-Intensive (O). The designation for this course means that 15% of the final grade is based on oral communication. In addition 2 presentations (20 minutes each) will be required with a question/answer period. Instructor evaluation and feedback will be given on both formal presentations.
REQUIRED TEXTS


COURSE REQUIREMENTS

20%  Written biography (2-3 pages)
10%  Presentation of biography (15 minutes with 5 minutes for questions)
30%  Research paper (7-10 pages)
10%  Presentation of research topic (15 minutes with 5 minutes for questions)
10%  Participation in discussions and attendance
15%  Daily questions/comments relating to discussion. At least two well thought out questions or comments for each reading assignment to be used in class discussion and handed in.
5%   Oral presentation as discussion leader.

The first writing assignment is a biography. You should think of a topic early in the semester. I encourage you to write about less well-known women. I will OK each proposed subject so that there is no repetition in the class. Please understand that this assignment is not a book report but rather meant to be a research experience. You should use several sources of material for your biography. The written biography will be handed in as a draft (Note: NOT a rough draft; this draft should be your best effort). Two student reviewers will edit this draft first. The biography will then be revised and handed in to me. I will edit each biography and schedule a conference to discuss the biography with the author. The biography will then be edited, turned back in and graded. We will attempt to make these biographies as polished as possible as they will be incorporated in a class booklet. The biography material will also be presented in an oral format. This talk (15 minutes + 5 minutes for questions and answers) will be graded on both content and quality of the presentation. Oral and written skills are essential for everyone no matter what your future plans.

A second formal writing project is a research paper due near the end of the semester. The topic can be any research topic related to women in science but again you should check out your idea with me before beginning. It is expected that substantial thought will go into development of this paper; it is worth 30% of your final grade. The subject matter from your research paper will also be presented in a formal talk of about 15 minutes in duration. As with the first talk an additional 5 minutes will be scheduled for a question and answer period following the research talk.
Many class periods will be devoted to discussions of assigned readings. To help you in thinking about these discussions you will prepare 1-2, 3x5 inch cards BEFORE class for each discussion. On these cards you will prepare discussion questions or thoughts to bring up in discussion about the readings. These cards will be turned in at the beginning of class so you may need to make a second set of notes for yourself. The success of this course is reliant on student preparation and participation. Because of this I will take attendance and keep track of participation. To facilitate discussion I will often break the class into smaller groups with specific assignments from the readings. I will talk more in the first few classes about how these small groups will function. Smaller groups will typically break out for about 20-30 minutes. A leader from each small group will prepare a brief summary of the thoughts discussed by that group. These summaries are then related back to the class in brief (about 5 minute) talks to the class. You will need to plan on taking the responsibility of being a group leader several times during the semester.

A first objective of this course is that, through focusing on the role of women in science, each student will have explored the historical values of science and the development of the manner in which science is done. A second objective is to develop critical thinking skills through analysis of readings and use of discussion. It is also hoped that each student will have improved their ability to communicate their thoughts both in oral presentation and writing.
TENTATIVE SCHEDULE

CLASS     TOPIC

22 Jan.W  Introduction; Video: Barbara McClintock
            ASSIGN BRIEF WRITING EXERCISE

27 Jan.M  Historical perspectives in america: educating women-- Rossiter chap 1-2 (all students)

29 Jan.W  Historical perspective: “women’s work”-- Rossiter chap 3-4 (half of students each)

3 Feb.M   Historical perspective: women’s movement/war—Rossiter chap 5-6 (half of students each)

5 Feb.W   Historical perspective: employment-- Rossiter 7-9 (3 groups—Academia, government and
            industry; 1 chap each)
            BIOGRAPHY SUBJECT DUE TO ME

10 Feb.M  Historical perspective: underrecognition—Rossiter 10-11 (half of students each)

12 Feb.W  Historical perspective: conclusion—Rossiter (all students)
            Careers in Science Today—Academia, government and industry (handouts)

17 Feb.M  PANEL Discussion

19 Feb.W  Sex differences in the brain (Video and/or guest speaker)
            BIOGRAPHY DUE to student reviewers

24 Feb.M  Biological theories about women and men-- Fausto-Sterling chap 1-2 (all students)

26 Feb.W  Biological theories about women and men—Fausto-Sterling chap 3-5 (3 groups)
            BIOGRAPHY back to author

03 Mar.M  Biological theories about women and men—Fausto-Sterling chap 6-7 (2 groups)
            MIDTERM EVALUATIONS/FEEDBACK

05 Mar.W  Presentations of Biographies
            BIOGRAPHIES DUE TO ME

10 Mar.M  Presentations of Biographies

12 Mar.W  Presentations of Biographies
SPRING BREAK

24 Mar.M Modern issues: Have women changed science?-- Schiebinger Introduction (all), chap 1-3 (3 groups)
RESEARCH PAPER TOPICS DUE TO ME

26 Mar.W Modern issues: Have women changed science?—Schiebinger chap 4-5 (2 groups)
EDITED BIOGRAPHIES DUE TO ME

31 Mar.M Modern issues: Have women changed science?—Schiebinger chap 6-9 (4 groups)

02 Apr.W Science education (handouts)

07 Apr.M Science education cont.-- Debate

09 Apr.W Women in academia—Etzkowitz et al., selected chapters

14 Apr.M Women in government and industry-- Handouts

16 Apr.W International comparisons—Etzkowitz et al. chap 15 + handouts

21 Apr.M Balancing career and family (handouts)

23 Apr.W Balancing career and family-- PANEL

28 Apr.M Research Topic Presentations

30 Apr.W Research Topic Presentations
RESEARCH PAPERS DUE

05 MayM Research Topic Presentations