

**SUL ROSS STATE UNIVERSITY
WOMEN IN SCIENCE (AKA WOMEN IN STEM) - BIO 5307 - FALL SEMESTER 2018**

PROFESSOR: Jim Zech
Office: 218 Warnock Science
Phone: 837-8114
E-MAIL: jzech@sulross.edu
OFFICE HOURS: By appointment *or* MW: 9:30 – 11:00 A.M.; T: 9:30 – 11:30 A.M.

TIME AND PLACE: Web Delivered, you time and your place

Readings: Rosalind Franklin: *The Dark Lady of DNA* and a second biography of your choice.

POINT DISTRIBUTION:

Introductory e-mail: =	5
STEM parts, definition and description: 4 @ 5 =	20
4 Powerpoints @ 25 women each: =	100
Interview Research Paper: =	100
Compare and Contrast Biographies Paper: =	100
Final Exam: =	100

TOTAL POINTS: = 425

GRADING:

Your final grade in Evolution will be determined by the total points you receive divided by the total points possible and the scale listed below, with no deviation from this scale.

Grading Scale (percent of total points): A: 90-100; B: 80-89; C: 70-79; D: 60-69; and F: 59 and lower

IMPORTANT DATES:

28 AUG: SYLLABUS AND POWERPOINT AVAILABLE

5 SEPT: INTRODUCTORY E-MAIL DUE

12 SEPT: STEM PARTS, DEFINIAITON AND DESCRIPTION DUE

12 OCT: 4 STEM POWERPPPOINTS DUE

16 NOV: Last day to drop with a W

5 DEC: INTERVIEW RESEARCH PAPER DUE

5 DEC: COMPARE AND CONTRAST BIOGRAPHIES PAPER DUE

10 DEC: Final Exam Available

11 DEC: Final Exam Due

RULES TO LIVE BY:

Don't plagiarize. Your words should be your own.

Don't just cut and paste from the internet.

Use citations for the material that you have used (format is your choice).

No team work, work alone.

The library and archive staff may not be asked to find answers to assignments.

Similar to exact assignments will receive zero points for all parties involved.

Watch those deadlines (see dates listed above)!

No late assignments will be accepted.

Anything that isn't clear, contact Dr. Zech (jzech@sulross.edu; 432-837-8114).

Messages will be sent via e-mail and/or posted on blackboard, get in the habit of checking both.

ASSIGNMENTS:

POWERPOINTS:

For each of the four areas of STEM, conduct some research and construct a Powerpoint presentation. Each Powerpoint should include 25 women. That's 25 for the S, 25 for the T, 25 for the E, and 25 for the M. Again, in four separate Powerpoints. You must include the following:

- At least a single photo of each woman covered.
- At least 2 slides of text for each woman covered.
- At least 3 sources for each woman covered that are indicated on the slide.
- No slide should include text only.

Be creative! Consider floating images, illustrations that serve as the slide background, text laid over an image, and . . . ?

INTERVIEW RESEARCH PAPER:

Conduct a written interview (you don't have permission to record in any manner!) with 10 women in STEM (That's 10 from all of STEM, not 10 from each area). Ask them all the same questions (minimum of 10) so your data are comparable. Then analyze the data, and write a research paper, following the format of the *American Journal of Botany* (available online). I've chosen *American Journal of Botany* because the format and instructions are detailed, and your paper may be appropriate for publication within this journal. I'm placing some of my favorite Women in Science interviews within Blackboard. Use them as a reference of the kinds of questions you might ask, and you may even borrow some of my original questions. This is definitely not a last minute assignment (are any?) so start early!

COMPARE AND CONTRAST BIOGRAPHIES PAPER:

Read Brenda Maddox's amazing (it's OK if you don't find it as amazing as I do!) book, *Rosalind Franklin: The Dark Lady of DNA*. Then choose another biography of a woman in STEM (you have many to choose from, so choose your favorite!), read it, and write a paper comparing and contrasting the two women. Find the books at your favorite bookseller (I have not requested any for the SRSU Bookstore). I'm looking for a classic compare and contrast paper with detail, detail, detail!

STUDENT LEARNING OUTCOMES:

- Understanding and implementation of scientific methodology.
 - Utilization of field techniques toward addressing scientific questions.
 - Be able to utilize statistics toward the analysis of data within the discipline.
 - Be able to effectively disseminate scientific findings using both written and oral communication.
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OBJECTIVES OF THIS COURSE:

- Address current topics including evolution vs. intelligent design.
 - Understand the role of key figures and events in the history of evolution.
 - Study *Origin of Species* in order to understand its content and impact.
 - Explore natural selection, genetic drift, gene flow, and mutation as mechanisms of evolution.
 - Compare and contrast micro- and macroevolution.
 - Explore the different speciation concepts.
 - Research and present current knowledge surrounding the evolution of a particular topic.
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DISTANCE EDUCATION STATEMENT:

Students enrolled in distance education courses have equal access to the university's academic support services, library resources, and instructional technology support. For more information about accessing these resources, visit the SRSU website. Students should submit online assignments through Blackboard or SRSU email (e-mail for WIS!), which require secure login information to verify students' identities and to protect students' information. The procedures for filing a student complaint are included in the student handbook. Students enrolled in distance education courses at Sul Ross are expected to adhere to all policies pertaining to academic honesty and appropriate student conduct, as described in the student handbook. Students in web-based courses must maintain appropriate equipment and software, according to the needs and requirements of the course, as outlined on the SRSU web-page.

DISABILITIES INFORMATION:

Qualified students with disabilities needing academic or other accommodations to ensure full participation in the programs, services and activities at SRSU should contact Counseling and Accessibility Services, 112 Ferguson Hall, Box C-122, 432-837-8203.