

Scientific Presentation



Scientific Communication



Scientific Writing



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BTEC 5100

Instructors:

Dr. Susan San Francisco, Center for Biotechnology and Genomics, **834-4752**

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Dr. Stephanie Lockwood, Department of Biological Sciences, **742-2710 ext 233**

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Classroom: ESB, Room 120; Wednesday 5:00 – 5:50 PM

Class Description: Students will read research papers and will be expected to evaluate, summarize and integrate information. Written assignments will be used to enhance the ability of students to interpret, effectively recognize, and summarize key points from published primary literature. This information will be presented and discussed in a short, formal presentation and a poster presentation. Students will be evaluated for effectively communicating information in these formats.

Expected Learning Outcomes: This class focuses on many different aspects of scientific communication. Not only must scientists research complex theories and hypothesis, they must effectively convey their results and conclusions of their research to advisors, supervisors, and to the public. Scientists must be able to synthesize published literature into clear, concise summaries for research proposals. This course aims to prepare you for many of the forms of scientific communication you will need to utilize to communicate effectively in your future academic and professional careers. Upon successful completion of this class, you will be able to:

- Demonstrate how to research scientific literature databases and resources and construct a reference list of primary literature.
- Interpret, effectively recognize, and summarize key points from primary literature.
- Compose a clear, concise summary based on primary literature.
- Develop and present a poster presentation.
- Prepare and orally present a 10 minute PowerPoint presentation
- Prepare a resume and cover letter directed toward a potential market of interest.

Methods for Assessing Expected Learning:

Assignments		Points
Writing Assignments:	References & Paragraph	5%
	Resume & Cover Letter	15%
	Research Summary	20%
Presentations:	Formal Oral Presentation	15%
	Poster Presentation	15%
Participation*:		30%
		100%

(* - Includes quality commentary, questions and discussion, attendance, following directions for use of Career Center and Writing Center resources, Piazza, etc.)

A final letter grade will be determined by performance on the above criteria, with consideration given to performance of the class as a whole. A grade of “I” (Incomplete) will be awarded by the instructor prior to the end of the semester only when failure to complete the work has been due to causes beyond the student’s control and when class performance has been satisfactory. Texas Tech regulations require that a form explaining the reason for the Incomplete and the method to be used to make up the missed work be submitted, after being signed by both the student and instructor, to the Registrar. Incomplete grades that are not replaced by an A, B or C grade within one year are automatically replaced by an F.

Reading Assignment (Jan. 29) - Mobus, E. and E. Maser. (1998). Molecular cloning, overexpression, and characterization of steroid-inducible 3 α -hydroxysteroid dehydrogenase/ carbonyl reductase from *Comamonas testosteronii*. J. Biol. Chem. 273(47): 30888-30896.

Resume & Cover Letter (Mar. 5) - An internship/research experience is a required component of your degree, and this exercise will prepare you for the internship/research position application process. **1)** Identify a job of interest and print off this job listing (submit this with your resume & cover letter). **2)** Prepare a resume and cover letter for this position. **3)** Between Feb. 12th and Mar. 8th take your resume & cover letter to the TTU Career Center for editing. **4)** As a package submit job posting, edited resume/cover letter, and edited resume/cover letter.

References & Paragraph (Feb. 12) - Your research topic will be presented in 3 ways: research summary, Power Point presentation, and a poster presentation. You will submit a paragraph telling us why you chose this topic and a reference list (3-5 primary literature references; original research articles) in the proper format (See pg. 4)

Research Summary (Mar. 26) - Research summaries should be based on current **primary literature references**. In preparing your papers, bear in mind that we are most interested in what

you have learned from the references you have read. Hence, heaviest influence in grading will be placed on how well you take the information from the references you read and express that information **in your own words**. Summaries will be 2 pages double spaced, 12pt font, times new roman, 1" margins. You should have between 3 to 5 references. Summaries will be submitted online through: <http://www.turnitin.com> Course ID: 4678372; Password: cloning

Oral Presentation (Apr. 2, 9, 16) - You will present your research topic as a 10 minute Power Point presentation, with 2 minutes for questions. Oral presentations will be graded Dr. San Francisco (33.3%), Dr. Lockwood (33.3%), and your fellow class mates (33.3%).

Poster Presentation (Final – Apr. 30) - You will present your research topic as a 2 x 3ft scientific poster. Posters will be presented during our Final Poster Session. Poster will be judged by various TTU faculty.

Piazza - Piazza is an Italian word meaning “meeting place” or “town square”. Piazza is an online (www.piazza.com), academic tool that will serve as a “virtual meeting place” or online classroom for this course. Piazza is FERPA compliant, so your information will not be released to third parties. Mobile apps (Android & iPhone) are available to keep you up on class alerts. Piazza is also a question-and-answer platform specifically designed to get you answers fast. The quicker you begin asking questions on Piazza (rather than via individual emails to a classmate or me), the quicker you'll benefit from the collective knowledge of your classmates and instructors. We encourage you to ask questions when you're struggling to understand a concept—you can even do so anonymously. **Getting Started: (Jan 17th)** You will receive an email (using your tech email address) from us inviting you to Scientific Communication's class on Piazza. To begin, enroll in the class and then set up your personal profile (Add a profile picture). Under the "Welcome" topic, create a short post introducing yourself to the class.



Student Accessibility: OP 34.22: Any student who, because of a disability, may require special arrangements in order to meet the course requirements should contact the instructor as soon as possible to make any necessary arrangements. Students should present appropriate verification from Student Disability Services during the instructor's office hours. Please note instructors are not allowed to provide classroom accommodations to a student until appropriate verification from Student Disability Services has been provided. For additional information, you may contact the Student Disability Services office in 335 West Hall or 806-742-2405.

Academic Integrity: It is the aim of the faculty of Texas Tech University to foster a spirit of complete honesty and a high standard of integrity. The attempt of students to present as their own any work not honestly performed is regarded by the faculty and administration as a most serious offense and renders the offenders liable to serious consequences, possibly suspension.

“Scholastic dishonesty” includes, but not limited to, cheating, plagiarism, collusion, falsifying academic records, misrepresenting facts, and any act designed to give unfair academic advantage to the student or the attempt to commit such and act.

Cheating: Dishonesty in examinations, quizzes, or home work assignments, illegal possession of examinations, the use of unauthorized notes during an examination or quiz, obtaining information during an examination from the examination paper or otherwise from another student, assisting others to cheat, alteration of grade records, illegal entry to or unauthorized presence in an office are instances of cheating.

Plagiarism: Offering the work of another as one’s own, without proper acknowledgement, is plagiarism; therefore any student who fails to give credit for quotations or an essentially identical expression of material taken from books, encyclopedias, magazines, internet web sites, and other reference works, or from the themes, reports or other writings of a fellow student is guilty of plagiarism.

Civility in the Classroom: Students are expected to assist in maintaining a classroom environment that is conducive to learning. In order to ensure that all students have an opportunity to gain from time spent in class, unless otherwise approved by the instructor students are prohibited from using cellular phones or beepers or engage in any other form of distraction. Inappropriate behavior in the class room will result in a request to leave the class.

Attendance: It is expected that you will **attend and participate** in every scheduled class.

There are no makeup classes. If there is a reason for missing a class you must contact the instructor as soon as possible to make necessary arrangements to discuss the outcome of the absence. You may need to provide a note from your physician excusing your absence if you are absent from a class more than a day due to an illness.

Religious Holy Day: By OP 34.19, a student who intends to observe a religious holy day should make that intention known in writing to the instructor **prior** to the absence. A student who is absent from classes for the observance of a religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence

Citations & References

Citations

Cite references in the text by name and year in parentheses. Citations with several references should be in chronological order from oldest to most recent.

Examples:

- This topic research has many different applications (Thompson 2011).
- Thompson (2011) identified topic research...
- This topic research has been widely studied (Lockwood 2006; San Francisco and San Francisco 2009; Thompson et al. 2012).

References

Reference list entries should be *alphabetized by the last names of the first author* of each work.

Books - **Author, A. and A. Author (Year)** Name of Book. Name of Publisher. City, State of Publisher. #of pages in book.

Ex: **San Francisco, S. and S. Lockwood (2013)** The Best Book Ever! Texas Tech University Press. Lubbock, TX. 500 pp.

Journals - **Author, A. and A. Author (Year)** Name of article. Name of Journal Volume(Issue): page number(s).

Ex: **Lockwood, S., J. Tripathy and S. San Francisco (2013)** The best article ever. Greatest Journal Ever 1(1):1-20.

Websites - **Author, A (Year)** Name of website. Website address Date accessed.

Ex: **iParadigms (2013)** Turnitin. <http://turnitin.com/> Accessed 12 Nov. 2012

Tentative Schedule:

Week	Date	Topic	Speaker	Assignments Due
1	Jan. 15	Introduction • Importance of Scientific Communication	Dr. San Francisco Dr. Lockwood	
2	Jan. 22	Library Demonstration • ILLIAD • @ Library - Croslin Area	Innocent Awasom, TTU Library	
3	Jan. 29	How to read a scientific paper • Structure of scientific paper • Discerning hypothesis, aim, etc.	Dr. San Francisco	<i>Assigned reading for discussion</i>
4	Feb. 5	Writing a resume and cover letter	Dr. San Francisco	
5	Feb. 12	Interview skills	Carol Trigg, TTU Career Center	<i>References & Paragraph</i>
6	Feb. 19	Writing an effective summary	Elizabeth Bowen, TTU Writing Center	
7	Feb. 26	"The Information Matrix"	Dr. Cliff Fedler, TTU Grad School	
8	Mar. 5	Effective data presentation	Dr. Jatindra Tripathy	<i>Edited resume & cover letter due</i>
9	Mar. 12	Effective Power Point presentation	Dr. Rich Strauss, Biology Dept.	
10	Mar. 19	----- SPRING BREAK -----		
11	Mar. 26	Effective poster design	Dr. Lockwood	<i>Checked & corrected summary due</i>
12	Apr. 2	Power Point presentations		<i>Group 1</i>
13	Apr. 9	Power Point presentations		<i>Group 2</i>
14	Apr. 16	Power Point presentations		<i>Group 3</i>
15	Apr. 23	Computer lab - poster help		
16	Apr. 30	Poster presentations ESB, 2nd floor		<i>Posters Due – Apr. 28th @ 10:0am</i>

PowerPoint Rubric:

	1	3	5	Total Points
Organization	Student's presentation presents inadequate information and/or so much is missing that the presentation makes little sense and there is no logical sequence.	Student's presentation presents adequate information in a logical sequence; however, more information would be helpful.	Student's presentation presents clear and detailed information in a logical, concise sequence.	
Graphics	Student's presentation includes no graphics or graphics are unrelated to the subject or distract from the message.	Student's presentation graphics relate to text and presentation.	Student's presentation graphics explain and reinforce text and presentation.	
Mechanics	PowerPoint presentation has four or more spelling and/or grammatical errors.	PowerPoint presentation has no more than two spelling and/or grammatical errors.	PowerPoint presentation has no misspellings or grammatical errors.	
Time Management	Student's presentation was short by more than four minutes.	Student's presentation was short by more than two minutes.	Student effectively used all of their time.	
Presentation	Student mumbles, incorrectly pronounces terms, and speaks too quietly for most audience members to hear. Student reads all of PowerPoint with no eye contact.	Student's voice is clear. Student pronounces most words. Most of audience members can hear presentation. Student maintains eye contact, but still reads most of the PowerPoint.	Student uses a clear voice and correct pronunciation of terms so that all audience members can hear presentation. Student maintains eye contact, seldom returning to notes.	
	<p style="text-align: right;">Total = _____ (out of 25)</p> <p style="text-align: right;">x 4 = _____ %</p>			

Poster Presentation Rubric:

	1	3	5	Total Points
Organization	Student's poster presents inadequate information and/or so much is missing that the presentation makes little sense and there is no logical sequence.	Student's poster presents adequate information in a logical sequence; however, more information would be helpful.	Student's poster presents clear and detailed information in a logical, concise sequence.	
Graphics	Student's poster includes no graphics or graphics are unrelated to the subject or distract from the message.	Student's poster graphics relate to text and presentation.	Student's poster graphics explain and reinforce text and presentation.	
Mechanics	Poster has four or more spelling and/or grammatical errors.	Poster has no more than two spelling and/or grammatical errors.	Poster has no misspellings or grammatical errors.	
Presentation Skills (NO reading off of poster)	Student reads all of poster with no eye contact.	Student maintains eye contact, but still reads most of the poster.	Student maintains eye contact, seldom returning to notes.	
Presentation	Student mumbles, incorrectly pronounces terms, and speaks too quietly for most audience members to hear.	Student's voice is clear. Student pronounces most words. Most of audience members can hear presentation.	Student uses a clear voice and correct pronunciation of terms so that all audience members can hear presentation.	
	<p style="text-align: right;">Total = _____ (out of 25)</p> <p style="text-align: right;">x 4 = _____ %</p>			