

Scientific Presentation



Scientific Communication



Scientific Writing



Scientific Communication

BTEC 5100

Fall 2015

Instructor:

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

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

I. 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. Information will be presented and discussed in short, formal presentations. Students will be evaluated for effectively communicating information in these formats.

II. 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 the student for some of the forms of scientific communication which are utilized to communicate effectively in academic and professional careers. Upon successful completion of this class, the student will be able 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.
- Prepare and orally present a 10 minute PowerPoint presentation
- Prepare a resume and cover letter directed toward a potential market of interest.

III. Methods for Assessing Expected Learning:

A final letter grade will be determined by performance on the criteria below, 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.

Writing Assignments:

- References & Paragraph
- Resume & Cover Letter
- Research Summary

Presentations: Includes formal 10 minute oral presentation

Participation: Includes quality commentary, questions and discussion, attendance, following directions for use of Career Center and Writing Center resources, etc.)

A. Reading Assignment (August 27) - 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.

B. References & Paragraph (September 10) - Your research topic will be the basis for several different presentation formats. You will submit a paragraph telling why you chose this topic and a reference list (3-5 primary literature references; original research articles) in the proper format (See pg. 4)

C. Resume & Cover Letter (October 8) - 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 September 10 and October 1 take your resume & cover letter to the TTU Career Center for editing.
- 4) As a package, submit job posting, original resume/cover letter with editorial comments, and the final, edited resume/cover letter.

D. Research Summary (October 22) - Research summaries should be based on current **primary literature references**. In preparing your summaries, 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://library.ttu.edu/ithenticate/ithenticate.php>

E. Oral Presentation (November 5, 12, and 19) - You will present your research topic as a 10 minute Power Point presentation, with several minutes for questions. Oral presentations will be evaluated and comments will be provided.

IV. 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.

V. 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.

VI. 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.

VII. 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.

VII. 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:

Date	Topic	Speaker	Assignments Due
Aug. 27	Introduction <ul style="list-style-type: none">• Importance of Scientific Communication How to read a scientific paper <ul style="list-style-type: none">• Structure of scientific paper• Discerning hypothesis, aim, etc.	Dr. Susan San Francisco, Center for Biotechnology and Genomics	<i>Assigned reading for class discussion</i>
Sept. 3	Interview skills	Carol Trigg, TTU Career Center	
Sept. 10	Writing a resume and cover letter	Dr. Susan San Francisco	<i>References & Paragraph for topic</i>
Sept. 17	Writing an effective summary	Dr. Kristin Messuri, TTU Writing Center	
Sept. 24	"The Information Matrix"	Dr. Cliff Fedler, TTU Graduate School	
Oct. 1	Effective data presentation	Dr. Jatindra Tripathy, Center for Biotechnology and Genomics	
Oct. 8	Effective Power Point presentation	Dr. Rich Strauss, Department of Biological Sciences	<i>Edited resume & cover letter due</i>
Oct. 15	Effective poster design	Dr. Susan San Francisco	
Oct. 22	Scientific messaging for the non-science, public audience	Dr. Melanie Sarge, College of Media and Communication	<i>Checked & corrected summary due (submit through iThenticate)</i>
Oct. 29	Discussion of written summary	Dr. Susan San Francisco	
Nov. 5	Power Point presentations		<i>Group 1</i>
Nov. 12	Power Point presentations		<i>Group 2</i>
Nov. 19	Power Point Presentation		<i>Group 3</i>

