**RSCH 361/ ENGR 361- Scientific Research Communication**

**Spring 2021 – Fridays**

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**Office Hours: M/W 9am-11am and by appointment.**

**Prerequisites**: G.E. foundation courses; score of 11 or higher on the GWAR Placement Examination or successfully completed the necessary portfolio course that is a prerequisite for a GWAR Writing Intensive Capstone.

**Course**: Scientific Research Communication

**Class Location**: Online (Zoom & Beachboard)

**Course Description**

Introduction to technical writing for students pursuing research careers. Accessing and using research literature. Writing technical and research reports for various purposes and audiences. Oral presentation of research and scientific information. Includes intensive writing.

**Course Goals/Student Learning Objectives**

1. Appreciate the central importance of clear effective communication in all aspects and stages of research process.

2. Know how to acquire and access scientific information (accessing literature/information data bases).

3. Understand the structure of the research article.

4. Know how to organize and present data in formats (graphs, charts, tables, etc) appropriate to various purposes.

5. Understand basic rules of English grammar and syntax so that writing maximizes clarity and understanding.

6. Understand rhetorical styles that emphasize reader-based texts.

7. Write for a variety of audiences (e.g., research article, textbook, popular science blog).

8. Know how to craft an oral presentation of technical information.

9. Know how to write persuasively: crafting a simple grant proposal.

**Textbooks (required)**

1. Scientific English. A Guide for Scientists and Other Professionals.

Authors: Robert A. Day and Nancy Sakaduski

ISBN: 9780313391941

1. Handbook of Technical Writing

Authors: Gerald J. Alred, Charles T. Brusaw, Walter E. Oliu

ISBN: 9781457675522 (10TH ED. OK)

In-class writing exercises may be evaluated either by the instructor, by another student (peer review), or by open discussion together as a class.

**Grading distribution:**

**Assignment 1: Standards of Your Field (10%) 50**

**Assignment 2: Cover Letter and Resume (5%) 25**

**Assignment 3: Critical Review (15%) 75**

**Assignment 4: Research Report (20%) 100**

**Assignment 5: Research Poster (10%) 50**

**Assignment 6: Written Proposal (15%) 75**

**Assignment 7: Oral Presentation of Proposal (10%) 50**

**Class participation, class exercises,**

**final in-class activity (15%) 75**

**Student Responsibilities**

Read the texts, ask questions, take notes, engage in discussions, and work through the exercises and projects. Your effort to include in all of these aspects of learning will help you prepare for the next step in your career.

**ABET Student Outcomes:**

* **An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors**
* **An ability to communicate effectively with a range of audiences**
* **An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts**
* **An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives**
* **An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions**
* **An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.**

**Teaching Mode:**

*This course is conducted entirely online. You will access the course material and activities on* [*BeachBoard*](https://bbcsulb.desire2learn.com/d2l/home) *and are required to participate in synchronous class meetings via* [*Zoom*](https://csulb.zoom.us/meeting)*.*

*If you need technical assistance at any time during the course or need to report a problem with BeachBoard,* *please contact the Technology Help Desk using their* [*online form*](http://web.csulb.edu/divisions/aa/academic_technology/thd/contact/)*, by phone at (562) 985-4959.*

## Course Communication

We will use BeachBoard to **make announcements,** communicate information. **Please note, it is your responsibility to check** BeachBoard’s dashboard **regularly, as** it will contain **important information about upcoming class assignments, activities, or concerns.**

## Netiquette

You are training to be a professional. A professional engineer is polite, considerate, and respectful of others. When posting on the discussion boards and chat rooms it is important to understand how to interact with one another online, ***netiquette.*** [Please read](https://www.rasmussen.edu/student-experience/college-life/netiquette-guidelines-every-online-student-needs-to-know/) more about the [rules of netiquette](http://www.albion.com/netiquette/corerules.html).

**Additional Resources**

There are many services on campus to help you achieve success in your courses. Links to the following services are also available in BeachBoard course homepage under “CSULB Student Resources”:

* [Counseling and Phychological (CAPS)](http://web.csulb.edu/divisions/students/caps/)
* [Disabled Student Services](http://web.csulb.edu/divisions/students/dss/)
* [Enrollment Services](https://www.csulb.edu/enrollment-services)
* [Financial Aid](https://www.csulb.edu/financial-aid)
* [Learning Assistance Center](https://www.csulb.edu/academic-advising/the-learning-center)
* [Student Health Services](http://web.csulb.edu/divisions/students/shs/?utm_source=website&utm_medium=homepage&utm_content=footerlink&utm_campaign=web)
* [Tutoring at CSULB](http://web.csulb.edu/divisions/students/student_resources/tutoring.html)
* [University Library](https://www.csulb.edu/university-library)
* [Writers Resource Lab](https://www.csulb.edu/university-writing-center)

If you know you need to review or improve your skills in English communication, it is essential

that you take responsibility for your own success in this course by using an English handbook or consulting Web resources such as Purdue’s OWL online (http://owl.english.purdue.edu/).

Please notify the instructor if you believe this poses a problem.

**Formatting & Submission of Assignments**

1. All written work should be typed, double-spaced, with 1” margins on all sides, using a 12-point Arial font (unless otherwise specified).

2. Label your work with only your 9-digit CSULB student ID number (in the document header).

Include your name only if instructed to do so in the assignment handout.

3. Include date and suitable concise title (in the header), and page numbering (in the Footer).

4. Figures and tables, when present, should be properly inserted into your documents and should include proper labels, titles, and legends (unless otherwise specified).

5. Accepted bibliographic styles for references and in-text citations must be used, as will be discussed in class.

6. All assignments are to be submitted in hard copy format at the beginning of class and also submitted to BeachBoard/DropBox/Turn-It-In by 5pm on the specified due date (unless otherwise specified). Plan ahead as BeachBoard is sometimes unavailable.

Plagiarism/Academic Integrity Policy

Work that you submit is assumed to be original unless your source material is documented appropriately, such as a Works Cited page. Using the ideas or words of another person, even a peer, or a web site, as if it were your own, is plagiarism. Students should read the section on cheating and plagiarism in the CSULB catalog -http://www.csulb.edu/divisions/aa/catalog/current/academic\_information/cheating\_plagiarism.html.

At a minimum, any student caught cheating will receive no credit for the work concerned, and will receive a reduction of one letter grade from their final course grade. If you are caught plagiarizing more than once you will be given a letter grade of “F” for this course. Severe cases of cheating or plagiarism will be referred to Judiciary Affairs for possible disciplinary action.

Students in this course are expected to comply with the California State University, Long Beach Policy on Academic Integrity. Any student suspected of violating this obligation for any reason during the semester will be required to participate in the procedural process, initiated at the instructor level, as outlined in the University

Technical Assistance

If you need technical assistance at any time during the course or need to report a problem with BeachBoard, please contact the Technology Help Desk using their online form -

http://www.csulb.edu/divisions/aa/academic\_technology/thd/contact/ or by phone at (562) 985-4959 or visit them on campus in the Academic Service (AS) building, room 120.

Inform me of Any Accommodations Needed

Students with disabilities who need reasonable modifications, special assistance, or accommodations in this course should promptly direct their request to the course instructor. If a student with a disability feels that modifications, special assistance, or accommodations offered are inappropriate or insufficient, they should seek the assistance of the Director of the CSULB Disabled Student Services, please see their website - http://www.csulb.edu/divisions/students/dss/ or contact them via email at [dss@csulb.edu](mailto:dss@csulb.edu) or by phone at (562) 985-4635.

**Schedule overview\***

**Dates Week Topic**

28 Aug 1 Introduction to scientific writing & Library Workshop

4 Sept 2 Library workshop

11 Sept 3 Routine communications

18 Sept 4 Writing reader-based texts (writing for understanding)

25 Sept 5 The elements of scientific writing

2 Oct 6 The elements of the research paper

9 Oct 7 The process of effective writing

16 Oct 8 Crafting sentences and use of punctuation

23 Oct 9 Graphic presentation of information and the scientific poster

30 Oct 10 Persuasive writing: research proposal writing

6 Nov 11 Best practices: news writing

13 Nov 12 Putting together an oral presentation

20 Nov 13 Fall Break, Thanksgiving Holiday

27 Nov 14 Peer Review of proposals

4 Dec 15 Oral Presentations

11 Dec 16 Oral Presentations

18 Dec 17 Final In-class activity (TBD)

\*Syllabus Changes: All schedules, assignment due dates are subject to change to accommodate pace of the course. The instructor reserves the right to amend the schedule as necessary. Changes will be announced as they are made.