

## Scientific Research Communication (RSCH 316, ENGR 361)

### Research Article Critical Review

Instructor: Dr. Maryam Qudrat

In this assignment, you will review a research article from a peer-reviewed journal and critique the contents of the article.

Part I. Identify three research articles from recent issues of one or more peer-reviewed journals that publish original work in your area of research. These might be papers in one of the leading journals you identified in the librarian exercises. Papers published within the last 3 years are acceptable. Submit an electronic copy on Beachboard and a hard copy in class with the citations and abstracts (please rank articles by preference, 1 would be your first choice). I will select one of the articles for you.

Part II. Submit an electronic copy on Beachboard and a hard copy in class. Critically evaluate the article according to the questions listed below. Your report should read similar to a book review (or perhaps to an In Depth News article found near the front of each issue of Science)—don't simply answer each question below in itemized fashion. Use headings/sub-headings as appropriate. Assume the reader is scientifically literate but not an expert in the particular research field. You may find that not every question below will apply to the article you are reviewing. If so, then indicate which questions are not applicable. Nonetheless, be as comprehensive as possible in your review. Remember: your focus is to evaluate the strengths and weaknesses of the paper. The critique's length should be no more than 700 words. Follow format and submission guidelines from the syllabus and the rubric below.

Grading will be based on completion of all components of the assignment, submission of all documents by the specified time, and quality of the work (format, readability, and grammar).

#### Rubric for Content of Article Critique Report

A. Page 1                      5 points

Title of the article, journal information

(authors, journal, volume, year, pages)

Your name and date

B. Page 2                      10 points

Write short summary of the article (~100 words)

C. Page 3 Starting on page 3

1. The Problem (~100 words)              5 points

Explain why this work is important.

What specific hypothesis/question is being addressed?

2. Experimental Design and procedures (~150 words) 10 points

Does the design of the study allow an adequate test of the hypothesis?

Is sufficient detail presented to allow one to replicate the study?

What research methodology was used?

What are the variables?

How was data analyzed?

3. Results and Discussion (~150 words) 10 points

Synthesize the results presented

Did findings support the hypothesis and purpose?

Were weaknesses and problems discussed?

How might their study have been improved? Keep this simple.

4. Conclusions and Implications (~100 words) 5 points

Are the conclusions of the study related to the original purpose?

Were the implications discussed?

D. Overall Assessment 5 points

What is your overall assessment of the article? (~ 100 words)

Total 50 points