

CEE 6410
Assignment #1
Literature Review
Due: September 6, 2016

Learning Objectives:

- Review research work and new applications relevant to systems analysis
- Actively participate in your learning by further identifying and exploring a water resources engineering problem of your choosing
- Present your work in a variety of formats required of practicing engineers, including written reports

This assignment has two parts, report each part on a separate page:

1. Search scholarly journals (*Water Resources Research*, *ASCE-Journal of Water Resources Planning and Management*, *Operations Research*, *Engineering Optimization* for starts) on the use of systems analysis or operations research methods applied to a problem area in water resources planning, project design, or management that is of interest to you. Identify the five most relevant articles, write a paragraph that synthesizes (organizes) the content of the article and describes the progression of work. Then include a bibliography at the end in a standard reference format. Include URLs that link directly to the articles (Page 1).
2. Select one of the articles that most interests you, read the article, and write a brief overview of content. Describe the problem being addressed, the type of systems methodology applied, why and how the method was used, the results obtained, and the recommendation(s) that stem from the results. (Page 2)

Resources

- How to Conduct and Write a Literature Review (Rosenberg Faculty Page, <http://www.engr.usu.edu/cee/faculty/derosenberg/documents/ShortGuideToLitReview.pdf>)

Category (Max. Score)	No Evidence	Doesn't Meet Standard	Nearly Meets Standard	Meets Standard	Exceeds Standard	Self-Score	Instructor Score
Title (1)	Absent 0	Evidence of two or less 0	Evidence of three 0	Evidence of four 1	Title – can assess main point from title alone; Name, Instructors' Names, Course, Date, Neatly finished 1		
Introduction (3)	Absent, no evidence 0	There is no clear introduction or main topic. 1	Introduction states the main topic but either: 1. Does not give a full overview, Or: 2. Too detailed, leading to annoying repetition later. 2	The introduction states the main topic and previews the structure of the report. 2	The introduction states the main topic and previews the structure of the report. Good overview of the problem and solution approach. Gives enough detail to motivate the reader to continue reading. 3		
Organization and structural development of the idea (10)	No content provided. 0	Paragraphs fail to develop the main idea. No section headers or guide to help the reader understand how material is organized. 1–5	Organization of ideas not fully developed. Paragraphs lack supporting detail sentences. No transitions and/or ineffective section headers. 6–7	Paragraph development present but not perfected. Each paragraph has sufficient supporting detail sentences. Few transitions. 8	Writer demonstrates logic and sequencing of intro, procedure, results, and conclusions through well-developed section headers, paragraphs, and transitions. The first sentence of each paragraph is the summary sentence. 9–10		
Technical Correctness (70)	Questions not addressed. 3 – 42%	The writer has no clue what they are talking about. 45 – 58%	Sketchy: left out required design points. Did not work on this as much as you should have, and it shows. Many important answers are incorrect. 61 – 79%	Discussion lacks adequate detail, but all the necessary points are covered and nearly all answers are correct. 82 – 88%	Provides what was explicitly asked for. The function of each piece is demonstrated to the reader in adequate, but not overwhelming, detail. Answers are correct and reasonable. 91 – 100%		
	a) Literature review – 5 articles, organized, provides synthesis (25)						
	b) Description of paper						
	- Problem (15)						
	- Systems method used and reasons for use (15)						
	- Results and recommendations (15)						

Category (Max. Score)	No Evidence	Doesn't Meet Standard	Nearly Meets Standard	Meets Standard	Exceeds Standard	Self- Score	Instructor Score
Word Usage and Format (10)	Not applicable	Numerous and distracting errors in punctuation, capitalization, spelling, sentence structure, word usage, significant figures, tables, and figures. Data vomited onto page(s). Unacceptable / unprofessional at the graduate level. <u>1 - 5</u>	Misspelled words, poor English grammar and word choice. Main body of report is either longer or significantly less than one page. Figures are too small and/or under-labeled, although they are usually of acceptable quality and focus. Tables incoherent or not cohesive. Bad font sizes. Too much or too little data in appendices. Could be improved by being more meticulous. <u>6 - 7</u>	Almost no errors in punctuation, capitalization, spelling, sentence structure, word usage, significant figures, and presentation of figures, tables, and appendices. Main body of report is one page or less <u>8</u>	Punctuation, capitalization, spelling, sentence structure, word usage, and significant figures all correct. Main body of report is one page or less. Clear, consistent fonts. Good word processing skills. Figures have adequate contrast. Informative figure and table titles and legends. Figures have appropriate axis tick spacing, labels, units, and legends. Table columns cohesive, labeled, and specify units. Document is stapled. Appendices, if provided, are separated by topic, and each have a title, discussion, and proper formatting and display of information <u>9 - 10</u>		
Conclusion (4)	Absent <u>0</u>	Incomplete and/or not focused. <u>1</u>	The conclusion does not adequately restate the main results. <u>2</u>	The conclusion restates the main results. <u>3</u>	The conclusion restates the main results, and is an effective summary. <u>4</u>		
References (2)	Absent <u>0</u>	Numerous errors, off-the- wall sources used. <u>0</u>	Some errors in citing format; more sources should be cited. <u>1</u>	Prior work cited with few errors. <u>2</u>	All prior work and data sources are cited in the correct format with no errors. <u>2</u>		
TOTAL (100)							