

## Engineering Research Report Assignment

For this report you will choose an engineering discipline you are interested in and research the job outlook, salary, common job tasks, specific academic requirements, schools that offer a degree in your chosen discipline, and any logistics that are involved with completing a degree in this engineering discipline. Email the report to me as an attachment to your email by the due date listed on the class website.

The objective of this assignment is three-fold; 1) to do objective research and exploration of an engineering discipline you are interested in; and 2) develop your report writing skills; and 3) get a realistic understanding of the logistical requirements for entering this discipline.

In the report, please write why you are interested in this discipline, what the job outlook is like, average salary you could expect, % of engineers in that discipline, major industries that employ engineers in the discipline, potential employers, and professional associations for that discipline. *Note: one of your sources must be from the library.* Find two schools that offer a degree in that engineering discipline and find the courses required from those schools and list in the report. Make a table that shows which courses you believe will transfer from LCSC and their corresponding courses where you transfer and list those that remain to be completed.

The reports are independent works – it's great to collaborate on resources and please, please, help each other with writing and editing. LCSC also has a writing center available to students located in Spaulding room 115. This report provides a great opportunity to use those services as well as help you fine-tune your writing. You will need to find at least one library reference in addition to others you find (a few resources are listed below). Please cite any resources you use at the end of the report under the heading "References." Your references need to be complete enough that I could easily find them.

Yes, writing, formatting, and appearance are as important as the content. There is no page requirement as I would prefer (and your clients and supervisors will probably also prefer) that you be concise yet clear in your writing. Write enough to fully cover all the required information but don't add a bunch of fluff just to make your report fatter. ***Do not simply cut and paste from other websites – write in your own words!*** Follow the guidelines listed in the grading rubric for formatting your report.

Some resources to get you going...

The Career & Advising Services Center and the College Library are key campus resources where you can find a wealth of reading material on careers, either *in print* or *on-line*. Here are some of the most useful sources of written information on careers:

- *Dictionary of Occupational Titles (DOT)*

This is the largest printed resource on careers; it contains concise definitions of over 17,000 jobs. It also includes such information as:

- specific work tasks that people in the career typically perform on a regular basis;
- type of knowledge, skills, and abilities that are required for different careers;

- the interests, values, and needs of individuals who find working in their careers to be personally rewarding;
- background experiences of people working in different careers that qualified them for their positions.

- *Occupational Outlook Handbook (OOH)*(<http://www.bls.gov/oco>)

This is one of the most widely available and frequently used resources on careers. It contains descriptions of approximately 250 positions, including information on the nature of work, work conditions, places of employment, training/education required for career entry and advancement, salaries, careers in related fields, and sources of additional information about particular careers (e.g., professional organizations and governmental agencies). A distinctive feature is that it contains information about the *future employment outlook* for different careers.

- *Encyclopedia of Careers and Vocational Guidance* (Chicago: Ferguson Press)  
As the name suggests, this is an encyclopedia of information on qualifications, salaries, and advancement opportunities for a wide variety of careers.
- *Occupational Information Network (O\*NET) Online* (<http://online.onetcenter.org>)  
This is America's most comprehensive source of *on-line* information about careers. It contains an up-to-date set of descriptions for more almost 1,000 different careers, plus lots of other information similar to that found in the *Dictionary of Occupational Titles (DOT)*.

***Any other questions, please ask as other students probably have the same question...***

Your report will be graded according to the following rubric:

Total Points	Category	Sub-category	Points
50	Discipline content	Why interested	10
		Stats: (one of these must be from the library)	15
		<ul style="list-style-type: none"> <li>● projected job out look/ # of openings, jobs</li> <li>● Salary</li> <li>● % of engineers in that discipline</li> <li>● Major industries where employed</li> <li>● Typical activities</li> </ul>	
		One school that offers the discipline with required engineering course list	10
		Potential employers (10)	10
	Professional associations (2)	5	
50	Writing	Title page	10
		Intro/body/conclusion	10
		Spelling/grammar	10
		Logic, flow, paragraph structure	20