ENGR 4520/6520
Fall 2017
Term Paper/Presentation

In this course you have become acquainted with a wide variety of separation and purification methods. A central concept is that the approach used to separate and purify any product depends on the specific chemical/physical characteristics of that product. Thus, different products follow vastly different routes of separation and purification that are influenced by chemistry, required purity and end-use, scale, and economics. Furthermore, so-called downstream processes must be integrated to achieve a final desired level of purity.

You are to select a specific compound (e.g., lysine, chymosin), a class of compounds (e.g., monoclonal antibodies, β-lactam antibiotics), or a complex biological product (e.g., starch, vaccine, a food). You are to describe how that product in its crude form is separated and purified to obtain the ultimate product. The product you select should have 2 or 3 specific processes involved in separation and purification.

Evaluation will be based on:

1) a formal oral presentation of 13-16 minutes in length covering your findings
2) a written report (10-14 pages).

For the oral presentation and written report, the target audience is your peers (recently graduated engineers who have completed this course).

In your report and presentation, you should focus on the key downstream processes for your particular product, and relate why these processes are advantageous or well-suited to that product. Remember the focus must be on the "downstream" processing, and **<u>not</u>** on the upstream manufacturing of the product. The manufacturing portion of production is only of interest in so far as it leads to impurities that must be removed from the final product.

<u>Evaluation:</u>

Oral Presentation:	50%
Written Report:	50%

<u>Due Dates:</u>

Selection of Topic:	Friday, November 10, 2017
Oral presentation:	8:00 – 11:00 am, Monday, December 11, 2017 Order by "drawing straws"
Written report:	5:00 pm, Tuesday, December 12, 2017 (LATE REPORTS WILL ABSOLUTELY NOT BE ACCEPTED)