

February 22, 2015

Dear EECE 503 students,

The material that we covered last week dealt with non-isothermal operation of ideal reactors. It and represents applications of the energy balance on reacting systems (combined with species mass balances) to: i) isothermal systems (to evaluate the heating or cooling requirements) ii) adiabatic systems to assess the adiabatic temperature rise in given systems and or find the needed reactor size or estimate operating points in a system of given size, iii) general non-isothermal system with cooling/heating for all of the above. To gain more proficiencies with these topics, especially if you are not a CHE by background read the Lectures 8, 9, 10,11,12 in Chee 471 on the course web page at <http://classes.engineering.eec.wustl/che471/> . In particular go over example problems. I did cover the safe reactor operation in class (Lecture 11 and 12). Unfortunately the OMNIBOOK does not have chapters dedicated to these topics. Please, prepare the summary of how to deal with these topics!

, especially if you are not a ChE by training.

This week, February 24 and 26 we will deal with non-ideal reactors and concepts of RTDs and micromixing. Thus, you may want to download from our course webpage the section on Non-ideal flow and RTD theory: Chapters 1, 2 and 3 which I plan to cover in class.

ON Thursday February 26 we will stop the lecture at 5 PM so those of you interested in the Midlin Lecture can attend the reception at 5 PM and then the lecture at 5:30 PM.

See you in class soon.

Mike D.