


Michigan Tech



CM3120 Transport/Unit Operations 2



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Friday Group Project Recap

Assignment 1

Video—10-12 minutes (or approved other medium)

- a. Explain your unit operation to your audience
- b. Audience = your classmates; teach them about your UO
- c. *Prepare them to do well* on response essay set, assignment 2
- d. *Prepare them to do well* on the questions on the final related to the Friday projects
- e. **Stretch:** include a computer simulation you produce as part of addressing this assignment (UniSim, Comsol, Excel, other)

Deadlines

Video: Friday 12 April 2019 (wk 12), midnight, to “Class Drive.”

Response essay set: Friday 26 April 2019 (wk 14), to Canvas **as a set** (not individually)

Project Binder: Friday 26 April 2019 (wk 14), to 304A Chem Sci

Note: We decided to submit to the **Team Drive “Class Drive”** that I shared with you for Dr. Eisele’s video. Be sure to name your video with your group number.

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Assignment 2

1. **Watch 8 videos (one on each "topic")**
 2. **Produce Team Set of Response Essays** (300-400 words).
 Address 5 or (**stretch**) **6-7** units (*4 is ok for groups of 4*). Essays should show comprehension of the UO's:

- Mass and energy streams
- Principles of operation
- What chemicals/processes the UO is used for
- How the UO differs from others used for the same purpose

Submit the essays together, as a set.

Note: We decided to submit to the Team Drive "Class Drive" that I shared with you for Dr. Eisele's video. Be sure to name your video with your group number.

Deadlines

Video: Friday 12 April 2019 (wk 12), midnight, to "Class Drive."
Response essay set: Friday 26 April 2019 (wk 14), to Canvas **as a set** (not individually)
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Topics
1-9

topic id	group number	group number	topic (Spring 2019 Friday Project)
1a		3	Single Effect Evaporator
1b		10	Multiple Effect Evaporators
2a		16	Dryer-batch
2b	9	4	Dryer-Continuous
3a	Not covered		Absorption tower (with a "b")-tray tower
3b		5	Absorption tower (with a "b")-packed tower
4	18	13	Adsorption tower (with a "d")-fixed bed
5a	15	2	Membrane separation-Reverse osmosis
5b		17	Membrane separation-Microfiltration
5c		6	Membrane separation-Ultrafiltration
6		11	Filtration-continuous
7a		19	Conventional distillation
7b		14	Azeotropic distillation
7c	8	7	Multicomponent distillation
8	Not covered		Extraction
9a		1	Centrifugation-batch
9b		12	Centrifugation-continuous

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Friday Group Project Recap

Final two Fridays:

Friday Week 13:

We will discuss the videos, what we learned, how well we learned.

This is an experimental project, so your input to me during this discussion is important. I want to learn too.

I want to be fair in what I ask of you on the final. What is reasonable to ask folks to gather out of the videos? I need your input. This will be your opportunity.

Friday Week 14:

The discussion of what we have learned from the videos continues. Please bring questions you have about the final, either relating to the videos or in general.

