



Short notes from NETI-3 on how I will teach differently this fall.

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MIME352 - Hydrochemical Processing (Core Course, ~ 50)

- 1) Explain the course plan to the students**
- 2) Clearly lay out the learning objectives in detail**
- 3) Use more frequent testing and lower the % value for each assessment.**

The students will practice the new test method in advance.
- 4) Each lecture will have at least one interactive element**
- 5) After each lecture, students will be encouraged to give feedback on their “muddiest point” that will be the first topic of the next lecture, via a mycourses survey.**

1) Explain the course plan to the students

Confirm the students know how to use mycourse tools

<https://www.mcgill.ca/mycourses/tips-students>

Pre-recorded micro-lectures, practice problem-solving and assignments will be uploaded on mycourses. Discussion boards will be active, office hours through Zoom.

Class time will be time to :

- discuss learning objectives
- review muddiest points
- discuss learning objectives with people in industry
- conduct active learning activities

1) Explain the course plan to the students

Explain my expectation for classroom etiquette.

Practice using Zoom with the students during the first lecture.

Show them the features that I will use, ask them to practice.

Remind them that the lectures will be recorded (video and audio files).

A fun Zoom option – ask for student's favourite songs, and leading up to class time, rotate through their play list.

2) Clearly lay out the learning objectives in detail

Learning objectives for the lecture

Lecture 8 - Reaction Stoichiometry and Rate	Review of reaction stoichiometry
	Definition of kinetics, rate laws
	What are the components of the Arrhenius equation, how are they determined.
	How are homogeneous chemical reaction kinetics measured
	Definition of conversion with respect to chemical equations
	How are chemical reaction kinetics described with mathematical equations
	How to create and interpret a rate plot.

3) Use more frequent testing and lower the % value for each assessment

This is to discourage efforts to cheat.

Some cheating methods include submitting exam questions to Chegg, and paying for a rapid answer to submit on the exam.

Others include communicating with other people during the exam.

Individual exam assessments that take less time and are worth less points may tip the scale towards not putting effort into cheating.

Allow a practice test with whatever method will be used so that students will be less nervous/you can confirm it is operable.

4) Each lecture will have at least one interactive element

The famous Plato (428/427 or 424/423 – 348/347 BC) “taught” through discussion, not instruction.

The expectation was that his students would read, absorb, and understand as much as they could on their own. Then they would interact with Plato to clarify, correct, and debate the subject that they were studying.

Given these pandemic times, I will use Plato’s style to define the roles of instructor/student slightly differently.

The students will take a more active role in their learning, and I will bring active learning techniques to class.

4) Each lecture will have at least one interactive element

Start class with a quick quiz in the format of a poll (Zoom has polls now), or putting students in breakout groups to work on a short problem, then asking random students for answers.

If subject comprehension is not good, point to the pre-recorded lecture that discusses the point/spend some time on it in class.

During the class, include another interactive element – either a poll or a problem/question posed to breakout groups.

Breakout groups are given a few minutes to chat and the designated person will answer the problem for the group.

5) After each lecture, students will be encouraged to give feedback on their “muddiest point”. This can be addressed in the next lecture.

mycourses has a survey option that can be used to send this information to you before class. It can also be anonymized.

https://mcgill.service-now.com/itportal?id=kb_article&sysparm_article=KB0011151

This requires monitoring the survey and preparing to address these points at the beginning of the next lecture.