

INTRODUCTORY EXPERIMENTS FROM SCRATCH

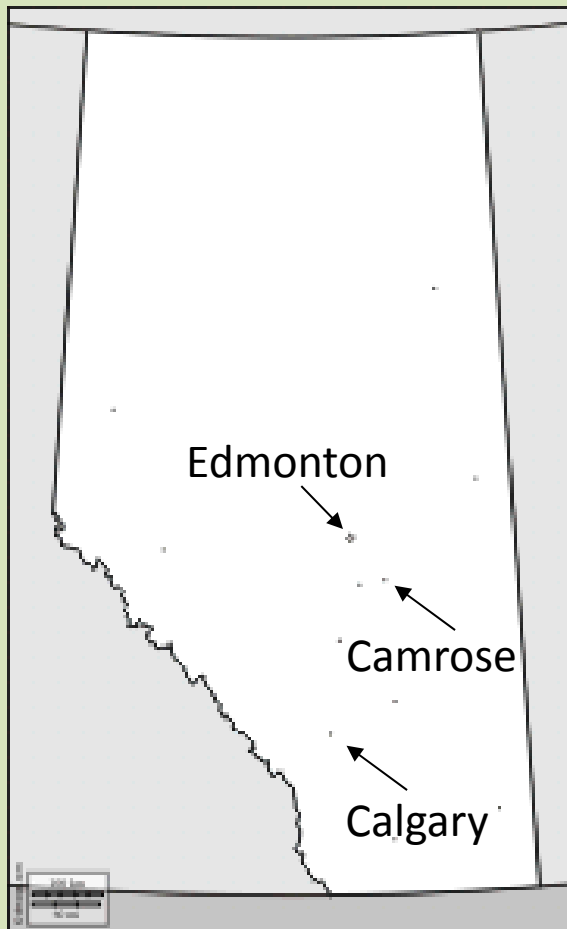
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University of Alberta**

OUTLINE

- (1) The Augustana “3-11” timetable**
- (2) IDS 137: a new science course**
- (3) Research opportunities**

Augustana



**Undergraduate, liberal arts
campus of the UofA,
~1000 students**

“3-11”

Starting in 2017-18:

3 week blocks in September and January where students and faculty only have one course

“3-11”

Starting in 2017-18:

11 week sessions in fall and winter where students take up to four courses

3 week block courses

- mandatory First Year Seminar**
- allow off campus experiences**
- immersive pedagogy**
- very few traditional lecture+lab science courses**

IDS 137

“Science Laboratory Experiences”

- a lab-only science course for non-science students**
- 4 days in each of biology, chemistry, and physics**
- focus on scientific literacy, not specific content**

4 physics experiments

- (1) Measuring fluid viscosity**
- (2) Determining absolute zero with a gas thermometer**
- (3) Finding the pattern in musical frequencies with an oscilloscope**
- (4) Investigating light polarization**

skill themes

- following written instructions**
- uncertainties in data and results**
- making and interpreting graphs**
- numeracy**
- scientific communication**
- philosophy of science**

assessment tasks

- short online quizzes prior to labs**
- written lab records and reports**
- 1-on-1 interviews**
- graphing exercises**
- other readings and analysis**
- web search exercises**

Research Opportunity

On the first and last days of the course, we plan to administer a test (graded only for participation) to measure the evolution of scientific skills and attitudes.

What might this test look like?

Ideas? Suggestions? Cautions?

I'd love to hear from you...

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