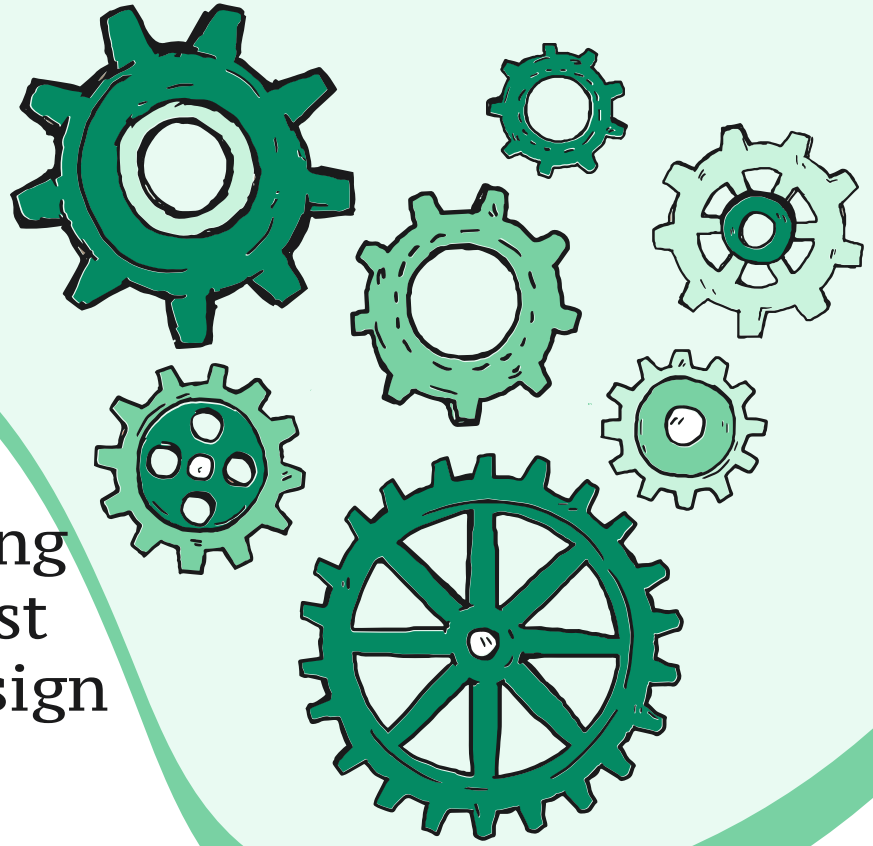
Gearing up for Instruction:

Advocating for and Incorporating Information Literacy into a First Year Engineering Program Redesign



Helen Power, USask

WILU 2023

Agenda

01

Introduction

Engineering and information literacy at USask

02

Promotion

Advocating for IL inclusion in the first-year program

03

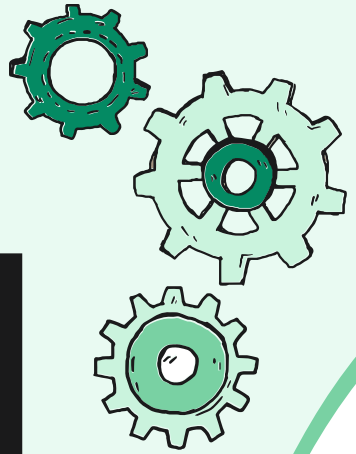
Integration

Developing lesson plans and resources

04

Reflection

Assessment, best practices, and lessons learned

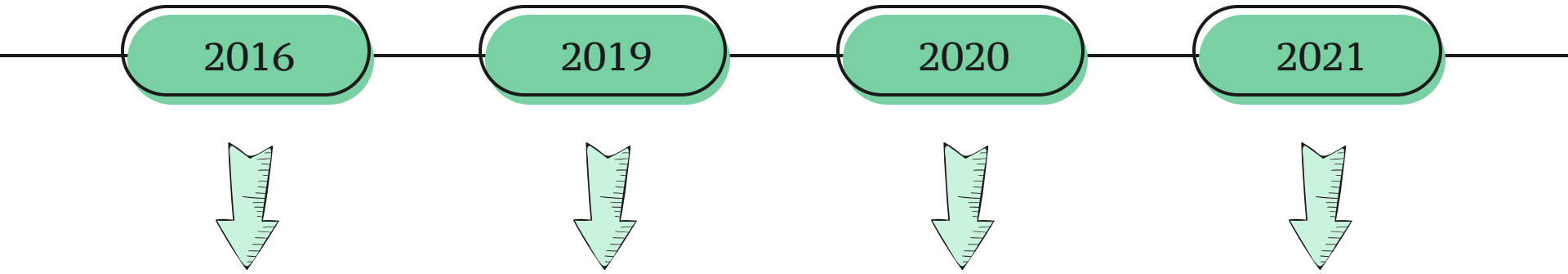


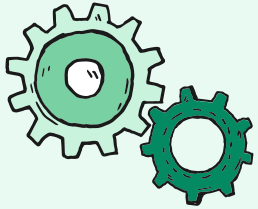
01 Introduction

Engineering and information literacy at USask

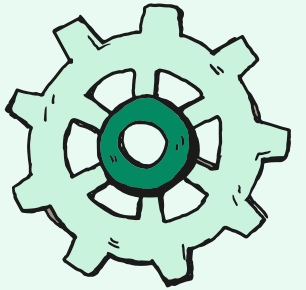
Engineering at the University of Saskatchewan

Timeline


2016
2019
2020
2021
Engineering Library's books removed, study space added
Embedded librarian hired (me!)
Consultations, planning, creation of materials
First year students start in new program

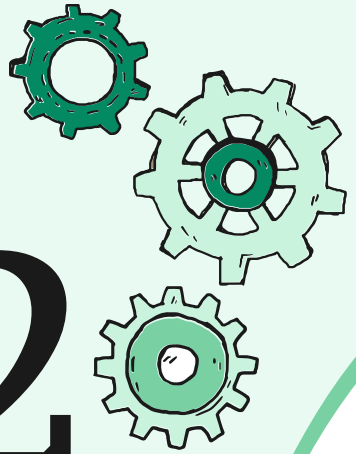


The New First Year Program



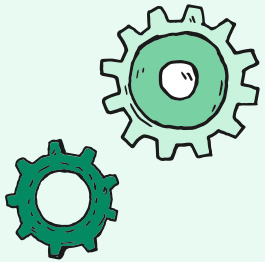
- Modules instead of courses
  - Varying lengths
  - Applying what is learned in one class in another class soon after

- Competency-based assessment
  - Type A
  - Type B
  - Type C

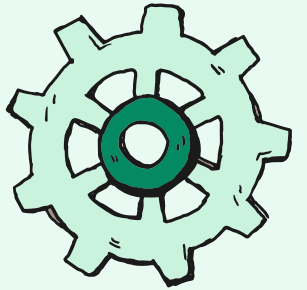


02 Promotion

Advocating for IL inclusion in the first-year program



Finding Library Champions



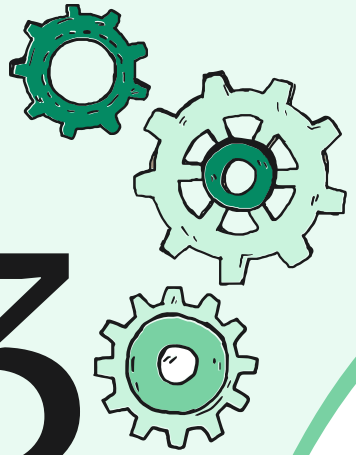
- Conversations around the watercooler
- Faculty council meetings
- Finding an “in”
- Use evidence to back up ideas if available
  - From the literature
  - Past experience
  - Consultation stats

Making a Pitch

- Learn the language of the discipline
  - Ex. “critical appraisal”
- Frame in a way so they’ll care
  - Graduate attributes for accreditation
- Make it easy for them
  - Online syllabi, mapping to courses, tailoring their asks to assignments and course-level learning outcomes

Tips for Advocating

- Show up where they are
- Examples from the literature
- Be flexible!
- Stats & anecdotes from past examples (assessments)
- Schedule follow-ups, different formats
- Try, try again

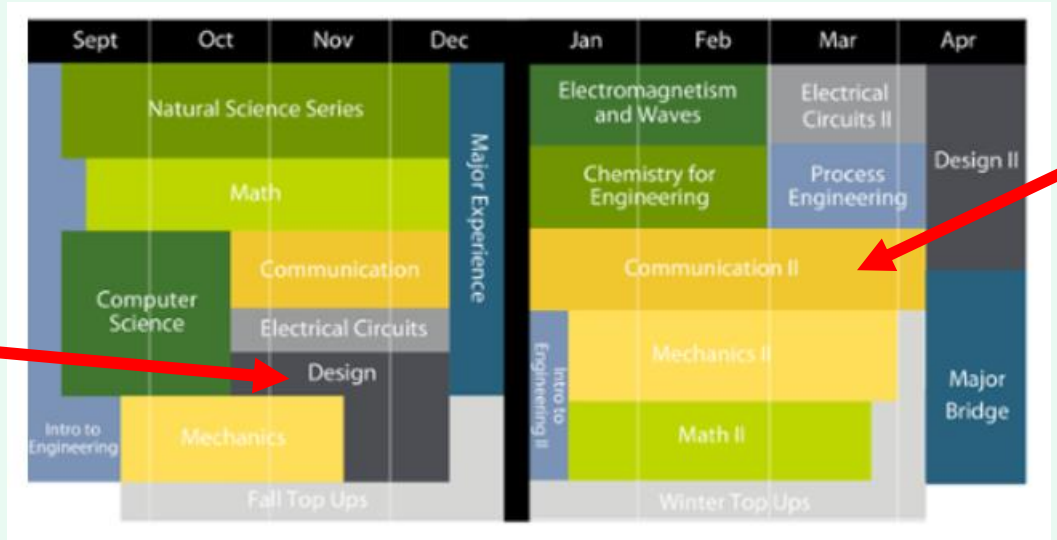


03 Integration

Developing lesson plans and resources

Look at the Program Holistically

- Where can information literacy foundations be laid out?



https://engineering.usask.ca/programs/Academic/re-engineered.php#Timetable

Fall Term: Design 1

- Beginning of a design project
- Looking at what's already been done
- Searching the literature
- Crafting a "problem statement"

Course learning outcome: "make a convincing case to undertake a specific engineering design problem"

My Session's Learning Objectives

- Recognizing me as the embedded librarian
- Able to demonstrate where to go if they need help (myself, the library's "learning hub", Engineering library guides)
- Searching the library website

Lesson Plan

30-minute session (X 2 sections)

- Introduction to the library resources
- Evaluating resources
- Activity
- Searching the library's "USearch"

HOME STAFF OFFICE WHAT WE TREAT CONTACT US PATIENT EDUCATION PHOTO GALLERY
BEFORE AND AFTER VIDEO GALLERY FAQ

Gentle Touch Foot Care
BRUCE THEALL, D.P.M.
AUDREY SNELL, D.P.M.

Activity: Evaluating a resource
Think, Pair, Share

PARALYMPIC SWIMMER RELIES ON ANKLE-FOOT ORTHOTIC

posted: Oct. 16, 2012.

Seventeen year old Alyssa Gialamas was thrilled to compete in the 2012 London Paralympics swimming events. Gialamas was born with arthrogryposis, a congenital condition affecting the joints and muscles. Out of the pool Gialamas relies on her leg-foot-ankle orthotics to stabilize her joints and support her muscles. Gialamas competed with 34 other elite U.S. swimmers at the games.

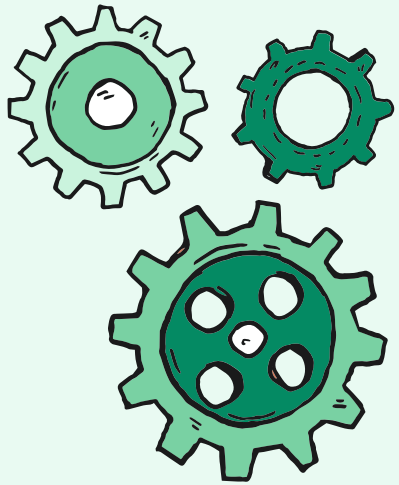
Gialamas shows that foot and ankle **orthotics** can allow anyone to regain full mobility. Her condition did not force her to sideline herself for the games, and now she proves that foot conditions and foot injuries are something that can be overcome. If you have a need for ankle-foot orthotics, it is highly recommended to seek the care of a podiatrist, like **Dr. Bruce Theall** of **Gentle Touch Foot**

https://www.drtheall.com/blog/292634-paralympic-swimmer-relies-on-ankle-foot-orthotic

Winter Term: Communications II

- Research module
- Provided feedback on:
  - Course level learning outcomes
  - Assignment

- Provided “Type A” questions for tests



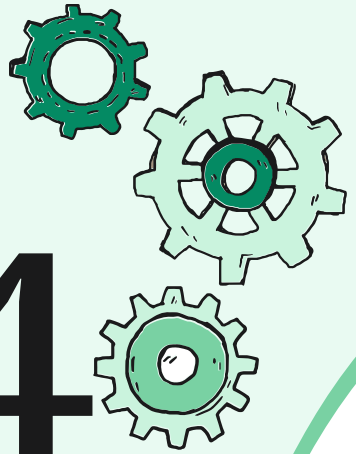
Materials

- Created two videos for Canvas
- Embedded quiz questions

Topics:

- Evaluating resources
- Searching the database platform “Engineering Village”

**Made use of bookmarks for ease of finding relevant parts of the videos, captions for accessibility and searching*



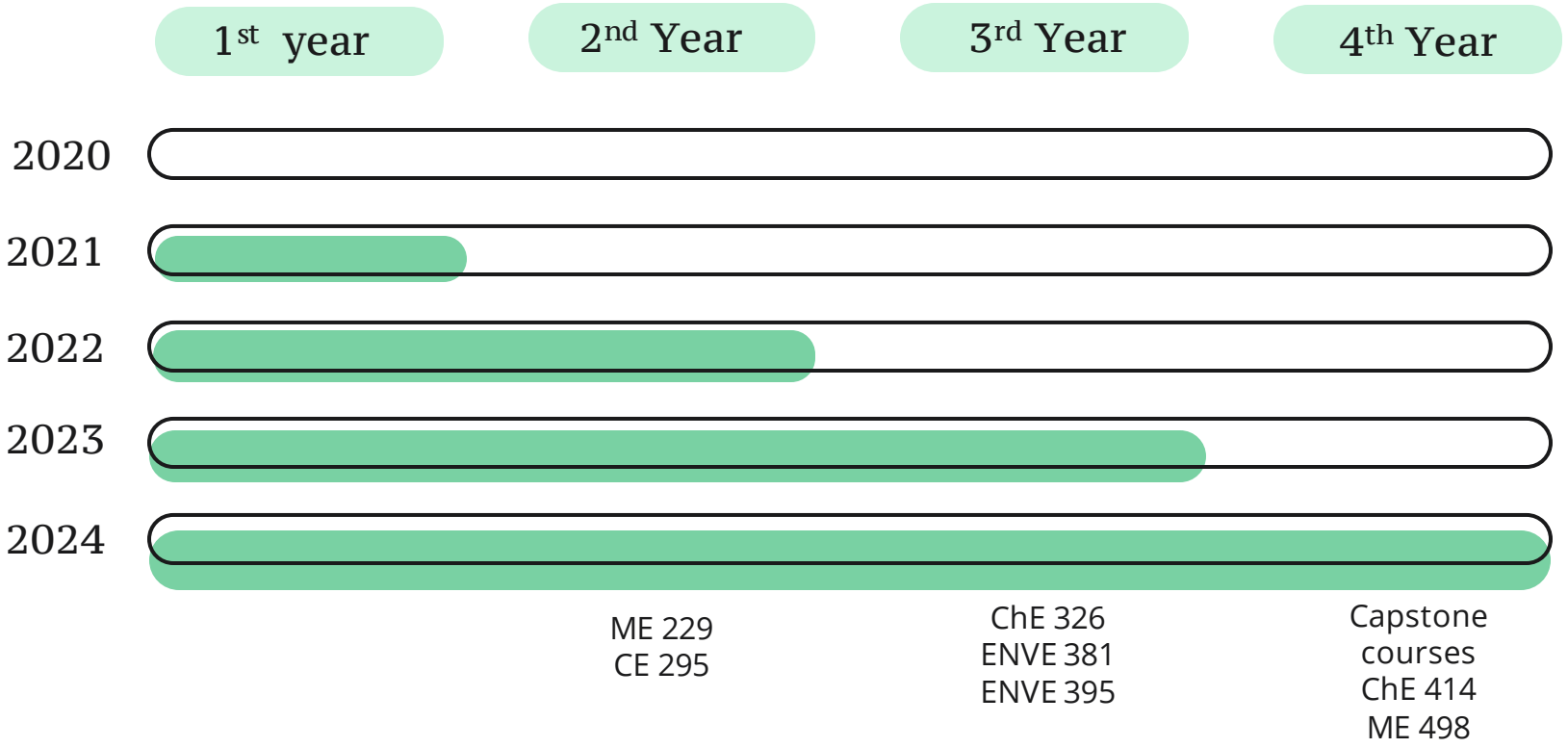
04 Reflection

Assessment, best practices, and lessons learned

Prior to 1st year redesign

	1st year	2nd year	3rd year	4th year
Mechanical engineering	✗	✓	✗	✓
Chemical Engineering	✗	✗	✓	✓
Civil, Geological Engineering	✗	✓	✓	✓
Electrical, Computer	✗	✗	✗	✓
Environmental	✗	✗	✓	✓
General	✗	✗	✗	✓

Impact on later years



Assessment

- Anecdotal evidence
  - First-year students using more scholarly and reliable resources
  - Students still finding picking keywords challenging
- End of session surveys
- Impact on course-level assignments
- Scaffolding information literacy outcomes—impact on later years

Next Steps

- Assessing and adjusting lesson plans
- Hour-long workshop in Research module
  - Flipped classroom – after watching videos we'll do keywords activities
- Mapping out future classes as changes to first year trickle down
- New second-year program?

Best Practices

- Keep nudging!
- Plan for last minute prep
- Make it easy for them to say “yes”
- Be readily available for conversations
- Assessment is cyclical

Thanks!

helen.power@usask.ca

References

College of Engineering. (n.d.). *Re-engineered: A first-year engineering program focused on your success.* Retrieved May 12, 2023, from https://engineering.usask.ca/programs/Academic/re-engineered.php#Timetable

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