



AMERICAN CHEMICAL SOCIETY
MEETINGS & EVENTS

Building more bonds and widening our reach: Strategic expansion of chemical information skills instruction for undergraduates using the online environment

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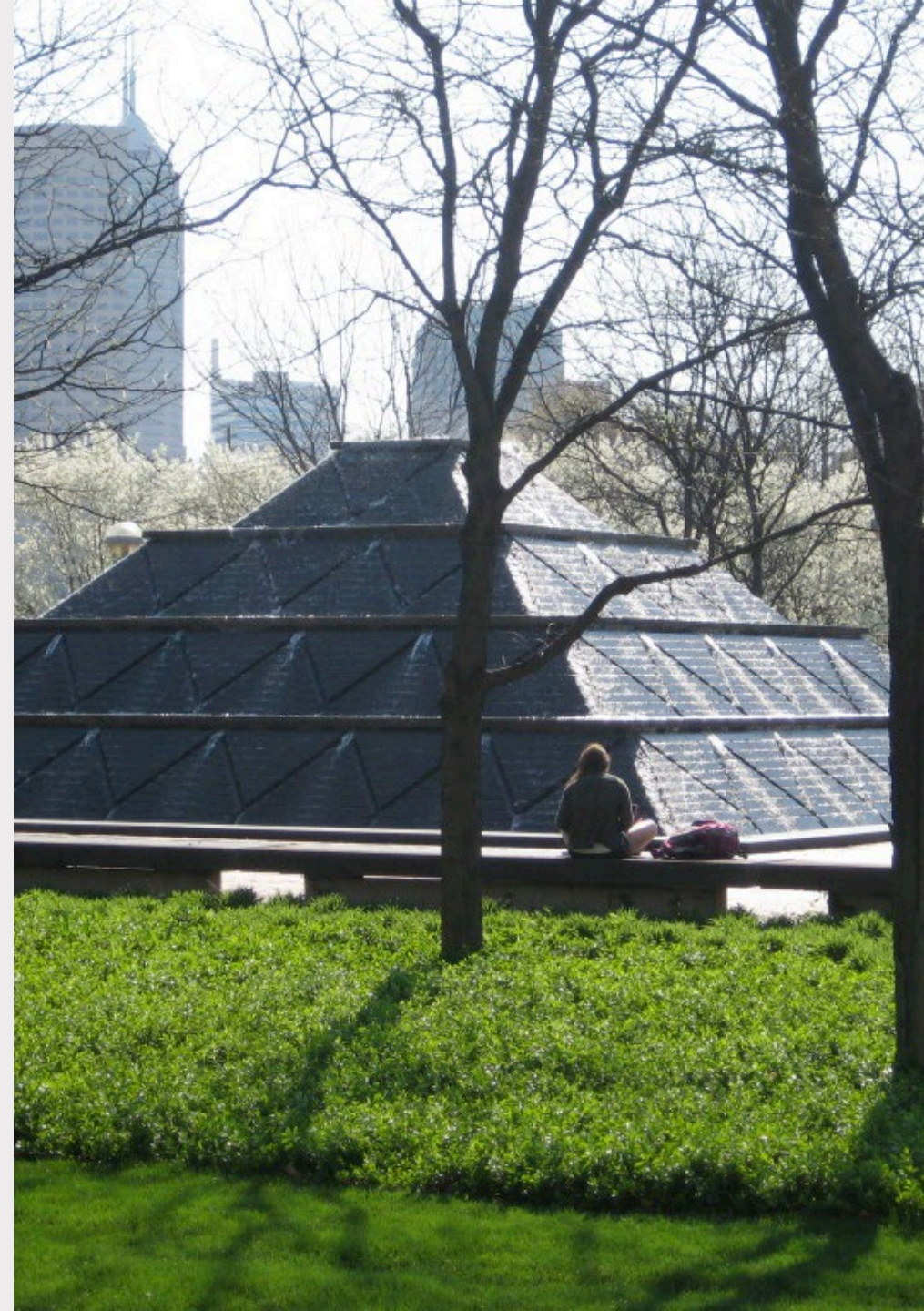
April 8, 2021

American Chemical Society Spring 2021 Meeting
Macromolecular Chemistry: The Second Century



Overview

1. Examine an example of a library curricular instructional plan for chemistry undergraduates
2. Explore various methods to expand library instruction using online platforms
3. Investigate the Transparency of Learning and Teaching framework and how it can improve assignments





Curricular plan – Chem. Info. skills instruction

Collaborative effort

Used a template adapted from an ACRL workshop*

For each course, outlined

- Learning outcomes
- Assessments
- Teaching strategies

* created by Steven Hoover (Syracuse), Jennifer Fabbi, Anne Zald, Erin Rinto (UNLV)





Pre-pandemic

100

Intro Course

200

Cornerstone

300

Organic Lab 2

400

Capstone



Pre-pandemic

Yellow highlight = ONLINE COMPONENT

100

Intro Course

- 1 session
(2 hr)



- Pre-test (prior knowledge probe)



- Post-test



Pre-pandemic

200

Cornerstone

- 1st session
(online async.)
- 2nd session
(1.5 hr)



Pre-pandemic

200
Cornerstone

- 1st session
(online async.)
- 2nd session
(1.5 hr)

- Discussion question (prior k. probe)
- Discussion question (prior k. probe)





Pre-pandemic



300

Organic Lab 2

- 1st session
(2 hr)
- 2nd session
(2 hr)





Pre-pandemic



400
Capstone

- Individual research consults



Pre-pandemic

100

Intro Course

- 1 session
(2 hr)

200

Cornerstone

- 1st session
(online async.)
- 2nd session
(1.5 hr)

300

Organic Lab 2

- 1st session
(2 hr)
- 2nd session
(2 hr)

400

Capstone

- Individual
research
consults



During pandemic

100

Intro Course

- 1 session
synch.
(Zoom)

200

Cornerstone

- 1st session
asynch.
(Modules)
- 2nd session
synch.
(Zoom)

300

Organic Lab 2

- 1st session
asynch.
(Modules)
- 2nd session
asynch.
(Modules)

400

Capstone

- Individual
research
consults
(Zoom/email)





During pandemic

100 Intro Course

- 1 session
synch.
(Zoom)

200 Cornerstone

- 1st session
asynch.
(Modules)
- 2nd session
synch.
(Zoom)

300 Org. Lab 2

- 1st session
asynch.
(Modules)
- 2nd session
asynch.
(Modules)

400 Capstone

- Individual
research
consults





During pandemic

100 Intro Course

- 1 session
synch.
(Zoom)

200 Cornerstone

- 1st session
asynch.
(Modules)
- 2nd session
synch.
(Zoom)

300 Org. Lab 1

- 1 session
asynch.
(Modules)

300 Org. Lab 2

- 1st session
asynch.
(Modules)
- 2nd session
asynch.
(Modules)

400 Capstone

- Individual
research
consults





Transparency in Learning and Teaching in Higher Education (TILT)

Improving assignments by making explicit the

- Purpose
- Tasks
- Criteria for Success





Transparency in Learning and Teaching in Higher Education (TILT)

Examples of assignments and resources

<https://tilthighered.com/tiltexamplesandresources>





TILTed assignment

Introduction to Techniques in Chemical Information Retrieval: Library Project Day 1

Overall Purpose

The ability to locate, evaluate, and use information effectively are key components in problem solving, effective decision making, and lifelong learning, all of which are necessary for one to thrive in any science profession. This information retrieval short course introduces you to several search tools and techniques commonly used in chemical and other scientific research.

Overview





Transparency in Learning and Teaching in Higher Education (TILT)

Part 1. Searching for analytical data on a compound.

Purpose: There are many occasions where it is vital to have on hand key analytical data for a chemical substance. For example...



Transparency in Learning and Teaching in Higher Education (TILT)

Task: #1a. Searching SciFinder for analytical data on a substance

Watch the video – SciFinder: Substance search

Librarian, Eric Snajdr, walks you through steps in searching SciFinder for analytical data on a substance.

- [\[Video link\]](#) 2:12 min

Following the steps outlined in the video, search for **your assigned compound** in **SciFinder**, by **“Substance”** to locate the

- CAS Registry number
- alternative names for substance
- number of references for substance





Transparency in Learning and Teaching in Higher Education (TILT)

Criteria: Following the examples in the sample lab report (mockup), add this information to your own report.





Post-pandemic?

100	200	300	300	400
Intro Course	Cornerstone	Org. Lab 1	Org. Lab 2	Capstone
<ul style="list-style-type: none">• 1 session	<ul style="list-style-type: none">• 1st session asynch. (Modules)• 2nd session	<ul style="list-style-type: none">• 1 session asynch. (Modules)	<ul style="list-style-type: none">• 1st session• 2nd session	<ul style="list-style-type: none">• Individual research consults



References

Committee on Professional Training, Undergraduate Professional Education in Chemistry. ACS Guidelines and Evaluation Procedures for Bachelor's Degree Programs; American Chemical Society: Washington, DC, 2015.

Curricular Library Educational Services Plan Framework was adapted from “Meet Us On the Corner of Intentional and Strategic” workshop presented at ACRL April 12, 2013 by Steven Hoover (Syracuse), Jennifer Fabbi, Anne Zald, Erin Rinto (UNLV)

Snajdr, E. *Science Information Literacy Instruction across the Undergraduate Curriculum*. The 5th Annual True North Science Bootcamp 2019. Ottawa, Canada. May 31, 2019. <http://hdl.handle.net/1805/21398>

Snajdr, E. *Curricular Library Educational Services Plan for Undergraduates in Chemistry*. 2020. <https://scholarworks.iupui.edu/handle/1805/23177>

TILT Higher Ed, Transparency in Teaching and Learning. <https://tilthighered.com/> (accessed April 2021).



Thank you!

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