

**UMBC LA Mini Grant Renewal: Nudging CHEM 101 Students with
myUMBC Personal Posts**

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We propose to build on Dr. Carpenter's prior UMBC [Learning Analytics mini-grants and renewals](#) to [advance student metacognition and responsibility for learning](#) in CHEM 102 "Principles of Chemistry II" (Spring 2021 CFP), as well as conducting [student focus groups](#) about their perceptions of the process as preparation for CHEM 351 "Organic Chemistry I" (SP 2022 CFP).¹

Specifically, for the 2023-24 academic year, we will use myUMBC's "personal post" functionality in the "Student Success" group to nudge students in their initial exposure to and use of course resources for practice and exam preparation in CHEM 101 "Principles of Chemistry I," which we are co-teaching in Fall 2023. DoIT staff have [also worked with Math and Psychology faculty](#) to use myUMBC personal posts in this way to scale course-based nudging of students. As such, working with DoIT staff, we will at least focus on key course milestones, student behaviors and customized messaging, including but not limited to the following:

Milestone	Assignment	Criteria or Behavior	Nudging Focus
9/13 (day 10)	Any to date	"0" grade or no participation	Wake Up!
9/22	Exam #1 (Units 1-6)	Raw score or letter grade	• General debrief to class showing grade distribution by practice or SP usage. • Specific nudge to students in each grade band, varied by outcome earned.
10/13	Exam #2 (Units 7-12)	Same	Same
11/3	Exam #3 (Units 13-17P)	Same	Same
12/1	Exam #4 (Units 17-24)	Same	Same

Nudging Requirements (provided by Carpenter & Bass to DoIT staff) | [myUMBC PP Demo](#)

¹ Note: Findings from both of these LA mini grant studies were incorporated into a recent chapter, ["Banking on adaptive questions to nudge student responsibility for learning"](#) in [Data Analytics and Adaptive Learning](#) (2023), as well as a [recent proposal](#) for NSF's "Engaged Student Learning" (ESL) track for its [Improving Undergraduate STEM Education](#) (IUSE) solicitation.

- CSV file of student CampusIDs to receive the nudge and/or
- Bb CHEM 101 gradebook column containing assignment or activity score.
- Grade or activity criteria that should trigger the nudge message
- Text of the nudge message per grade score or activity ([sample post](#) | [proposed posts](#))
 - Ideally with a “call to action” student can take to 1) demonstrate active understanding of the nudge, and 2) perhaps trigger follow up nudge if they don’t.

Suggested Guidelines for *myUMBC* Personal Posts for Nudging (excerpted from a [cheat sheet](#))

- **Target the message.** Use institutional data to refine recipients and nature of content.
- **Get personal.** Address the recipient by name and sign post.
- **Keep it simple.** Embed direct deep links when it makes sense.
- **State the call-to-action.** Give the reader a link to accomplish the task.
- **Compel the reader.** Develop a subject line that motivates the reader to open the post.

Coding Tips (to be handled by DoIT staff unless otherwise indicated or requested by faculty)

- To add a link use: Text of Link
- Don't forget the {{ and }} around fields, and no spaces inside them
- You can use fields in the body and the subject
- **Review a few users before publishing to make sure your fields are working properly**
- **Advanced:** [Liquid Template Syntax](#) for better personalization based on your data.
- **Tags (optional):**
 - Separate tags with spaces.
 - Only letters, numbers, and dashes are allowed.
 - **Not shown to recipients**

Assessment & Dissemination Plan

At the end of the semester, we will work with DoIT staff to do the following:

- Correlate exam and course outcomes with students’ use of spaced practice or course resources.
- Identify any changes in student practice behaviors (e.g., time, activity, etc) or performance patterns (e.g., scores) following *myUMBC* personal post nudges.
- Survey students on the experience and effectiveness of *myUMBC* personal post nudges designed by faculty and delivered by DoIT.
- Reflect on lessons learned and consider if and how the use of *myUMBC* personal posts should continue to be used in General Chemistry courses
- Share our findings in at least one of the following venues or activities:
 - [UMBC Learning Analytics Community of Practice](#) (LACOP) mtg.
 - [UMBC Scholarship of Teaching and Learning](#) (SoTL) meeting
 - Conference presentation or paper
 - Final report (2-3 pages)