The Learning Actively Mentoring Program

(LAMP) trains instructors in active learning to improve student success

What is LAMP?

LAMP is a comprehensive, sustained mentoring and professional development program with an emphasis on how to best adopt active learning strategies in large-scale active learning classrooms at UW and in classrooms across the state's community colleges.

Program Goals:
- Improve student retention, success, and engagement in STEM classrooms.
- Enable all new and most existing STEM teaching faculty and teaching assistants at UW to become trained in active learning strategies.
- Conduct research on active learning in STEM classrooms to investigate relationships between teaching practices and student success, literacy, and engagement
- Establish professional development and collaboration opportunities for science instructors across the state, including community college instructors and K-12 teachers, to improve learning experiences for all Wyoming students.

Components of LAMP

- **LAMP Fellows Program** - an immersive, year-long educational development opportunity for UW and Wyoming community college instructors
- **LAMP Learning Assistants (LA) Program** - provides UW students with opportunities to assist teaching in science courses taught by LAMP Fellows
- **LAMP Educator's Learning Communities (ELCs)** - at UW and across Wyoming's community colleges, these communitites support previous Fellows in deepening their evidence-based active learning teaching practices further, measuring impacts on students learning, and disseminating their findings through publications, presentations, or establishment of new programmatic elements.

Reach of LAMP (since 2016)

198
fellows from
7
WY institutions of higher education and 2 outside institutions have completed the yearlong training

212
UW students have gained valuable teaching experiences as LAs in
430
active learning courses

162 LAMP-trained educators at UW have impacted
46,000+
students in
1,200+
active learning classes

Fellows from UW came from
43
departments/units across 8 colleges and schools

LAMP Fellow participants at other institutions represented
14
different academic programs

Active learning training for faculty enhances student success in gateway science courses

The implementation of active learning in introductory (or "gateway") science courses has been shown to lower the DWF rate (percentage of students earning a D, W, or F), which is often high in these classes and can hinder student progress in STEM majors. LAMP aims to train faculty to improve student success and retention in these courses. In 2025, we compared DWF rates between course sections taught by LAMP-trained and non-trained instructors: 14 of 19 courses had lower DWF rates in sections taught by LAMP-trained faculty. We also examined instructors' DWF rates before and after LAMP training; 9 of 14 courses showed improvement post-training. Our analysis covers 445 courses (116 taught by LAMP-trained faculty) from Fall 2016 to Spring 2025.

On average, classrooms with LAMP-trained instructors saw a
6.1% LOWER
DWF rate than classrooms with instructors not trained in active learning

On average, individaul LAMP-trained instructors saw a
4% DECREASE
in DWF rates after LAMP training

The courses with the largest decreases in DWF rates were:
- Organic Chemistry II - 14.1% lower
- Calculus I - 11.4% lower
- Algebra & Trig - 11% lower
- Biological Psychology - 9% lower
- Quantitative Analysis - 8.6% lower
- General Biology - 8.4% lower

LAMP participants reflect on their experiences

"The LAMP Summer Institute, commonly known as LAMP Camp, was an intensive and immersive experience that significantly deepened my leadership learning and personal development. Several important outcomes emerged from this in-person gathering that built upon the foundations laid during the online components of the program.

One of the most impactful learning outcomes was the development of a deeper understanding of collaborative and adaptive leadership in real-time settings. The interactive nature of the institute, including group discussions, simulations, and structured activities, provided the opportunity to practice leadership in dynamic, often ambiguous environments. Working closely with diverse peers allowed me to navigate group decision-making, recognize the importance of listening across difference, and adapt my leadership approach based on context, relationships, and shared goals.

The institute also reinforced the importance of vulnerability and authenticity in leadership. Through storytelling exercises, identity work, and reflection sessions, I came to appreciate how personal narrative and lived experience shape our capacity to lead and connect with others. Creating space to share and hear others' stories helped foster mutual trust and community within the cohort, and taught me how powerful it can be when leaders lead with openness, humility, and empathy."
- LAMP Fellow

"This experience as an LA has given me the opportunity to not only learn about how to better help other students, but how to also help myself by using the learning strategies I have learned to deepen my understanding of things I am learning in the classes I am taking. I think this knowledge will help me immensely when I am in grad school because I like to think that I have become a better learner, so I will be more prepared to take on hard classes that I will come across. One example of this that comes to mind is my online biochemistry class. I have never been a very great online learner, and it is particularly difficult for me when the videos are prerecorded and I have to make the material interesting so that I will enjoy learning about it. However, this experience has given me tools to help take on this challenging experience, and I am very grateful for that." - LAMP LA

"One of the biggest impacts LAMP has had on my teaching is introducing me to the concept of the flipped classroom. Using this approach, students interact with preparatory material before class, which allows us to focus on problem-solving during class. I think it's had a major impact on my students' engagement and confidence. This approach is student-centered, encouraging them to take responsibility for their learning. When students go to a traditional lecture they sit, listen, and write notes. In the flipped classroom, they know they're expected to work in their groups, so they have to be prepared. They are also interacting more with each other and me, which helps me get to know them better. It helps me understand their individual needs, as their in-class interactions often reveal their knowledge more than their exam performance does. I have also noticed that students form a strong bond in their groups...Having a group that they feel safe to share ideas with, without fearing being wrong - that motivates students to keep going, even when the material is challenging." - LAMP Fellow