

Facilitators:

Zach Kelehear – Augusta State

Jennifer Leavey – Georgia Tech

Valdosta – Linda de la Garza

- Context
 - Cohort 1.5
 - Chem 1211 (and some 1212)
 - 4 main instructors
- Factors that affect student success in course
 - Pace of course comes up regularly
 - Made a prerequisite course called CHEM 1200 to tech relevant math course and resulted in 10% drop in DFWs and improvement in other grades. Students who have certain math SATs, or don't pass a placement test have to take CHEM 1200.
- High impact practices
 - Use lab to support learning in the lecture. Pair concepts. Labs are introduced during lecture.
 - More group work.
 - Demonstrations
 - Supplemental instruction – especially if peer leaders can be URM.
 - Reflection (metacognition)
- Challenges
 - Hard to get students to complete homework

Kennesaw – Meredith Baker

- Context - Chem 1211 and 1212 – 2500 students/year – 70-150 students/section, 20 instructors, Cohort 2 – working through KPIs
- High Impact Practices
 - CURE – Howard Hughes grant to incorporate undergrad research into lab
 - Supplemental instruction (outside classroom) LA (inside classroom)
 - Some active learning/flipped classrooms/hybrid/learning communities
- Challenges
 - Try to pair lecture and lab but the challenge is that lab is 3-4 weeks behind lecture at first and then gets ahead because it has to finish before lecture.
 - Students can drop the class but they are still in lab and everything is disconnected.
 - Lab space physical constraints limits change
 - Preparation level of students

- Can't make classes smaller so optional supplemental instruction is the only way to have a more intimate experience but don't have enough leaders.

Augusta - Stephanie Myers (called SAM)

- Context - Chem 1211 and 1212 – 6 instructors – Cohort 2 – Just started committees and are working in thorough way.
- High Impact Practices
 - Research project in laboratory (phosphate in surface water or red spectroscopy). 2 week scaffolded project. Was added in response to separated lab and lecture. Initial changes included added lab final exam and inquiry based labs. Inquiry labs didn't work well. Moved toward skill development instead.
 - Regular communication across sections/regular meetings
 - Incorporating more active learning
- Challenges
 - Amount of material that has to be covered limits the ability to course all lab-based
 - Translating what is happening in lab to lecture concepts is very difficult
 - So much unfamiliarity with what goes on in a laboratory setting (what is the equipment, how do you use it, what goes in a lab notebook, how do you stay safe)

Uniformly instructors express frustration with students trying to do “too much”. i.e. working full time and going to school full time and caring for family, etc.

Big challenges:

STEM instructors are not trained in pedagogy

No pressure to make STEM classes smaller

Faulty buy-in/training/adoption