ASSESSMENT PLAN
NJ Center for Science, Technology & Mathematics (NJCSTM)

B.S./M.A. Sci & Tech / Instruction & Curriculum Program Statements

The vision is to advance a reputation as a leading program to train scientist-educators by the exemplary and innovative skills of our students and faculty. The mission of the BS/MA five year combined degree program is to train secondary education teachers of biology, chemistry and mathematics who are leaders in education, who have a solid foundation in their content area, and are simultaneously well-versed in innovative pedagogical practices that are rooted in educational theories regarding student learning.

B.S./M.A. Sci & Tech / Instructn & Curriclm, Sci &Tech Student Learning Outcomes (SLOs)

NOTES:
SWR = scored with rubric
2011-12 SLO#2 was merged with 2011-12 SLO#3 as the two objectives were deemed to be interlinked

For Students Earning a B.S./M.A. Degree in Science & Technology / Instr & Curriculum

It is our expectation that graduates from this NJCSTM program will have these characteristics:

• SLO1 (Critical Thinking): Graduates will be professionals in math education or science education with both highly developed practical and critical thinking skills with the potential to further their professional development. (KU 1, KU 2) (GE S4)
  • 3 Direct Measures: Lab practical scored with rubric SWR (STME 1603); oral presentation SWR (STME 4610); GRE general exam score
  • 1 Indirect Measure: graduating student survey

• SLO2 (Content Knowledge & Leadership): Graduates will comprehend their role in society and in math/science as well as the role of scientist-researchers who are their counterparts. (KU 2, KU 3) (GE K1, S3, S5)
  • 4 Direct Measures: Praxis I scores (STME 3610); poster presentation SWR (STME 3610); Praxis II content exam scores (STME 4610); graduate comprehensive exam SWR (EMSE 5564)
  • 2 Indirect Measures: graduating student survey and alumni survey

• SLO3 (Pedagogical Knowledge): Graduates will be future teacher-leaders that are sought after by school districts. (KU 2, KU 3) (GE S1, S2, S4)
• **4 Direct Measures:** MiniTW (EMSE 3220) and sample lesson and lesson plan SWR (EMSE 3230); paper SWR (EMSE 5031); Student teaching evaluations (EMSE 5564); graduate comprehensive exam SWR (EMSE 5564)
• **1 Indirect Measure:** graduating student survey.

SLO4 (Communication): Graduates will articulate that all learners are unique, and that different methods of pedagogy must be employed in their classrooms to enable all learners to learn. (KU 2, KU 3) (GE K2, S2, S4)
• **3 Direct Measures:** oral presentation and written presentation SWR (GE 2024); poster presentation SWR (STME 3610); oral presentation SWR (STME 4610)
• **1 Indirect Measure:** Graduating student survey

SLO5 (Standards): Graduates will be able to verbally express themselves and communicate scientific comprehension and knowledge in both formal oral presentations and in written format clearly, concisely and accurately. (KU 1) (GE K1, K2, S1, S2, S5)
• **3 Direct Measures:** Paper SWR (EMSE 3220/3230); presentation SWR (STME 4610); paper SWR (EMSE 5031)
• **1 Indirect Measure:** Graduating student survey

B.S./M.A. Sci & Tech / Instruction & Curriculum Program SLOs – as aligned with KU SLOs derived from the Institutional Mission* and GE SLOs.** Data from Direct and Indirect Measures collected each spring semester in the Capstone/Culminating Course.

* KU Student Outcomes: Kean University graduates should be able to:

1. Think critically, creatively and globally;
2. Adapt to changing social, economic, and technological environments;
3. Serve as active and contributing members of their communities; and
4. Advance their knowledge in the traditional disciplines (GE) and enhance their skills in professional areas.

**General Education Student Learning Outcomes

*Knowledge:* Students will demonstrate proficiency in knowledge and content by:
(GE K1) applying the scientific method to comprehend natural concepts and processes;
(GE K2) evaluating major theories and concepts in social sciences;
(GE K3) relating historical references to literature; and
(GE K4) evaluating major theories and concepts in the fine arts.

*Skills:* Students will demonstrate the skills necessary to:
(GE S1) write to communicate and clarify learning;
(GE S2) communicate effectively through speech;
(GE S3) solve problems using quantitative reasoning;
(GE S4) think critically about concepts in multiple disciplines; and
(GE S5) show information literacy.

*Values:* Students will exhibit a set of values that demonstrates:
(GE V1) personal responsibility
(GE V2) ethical and social responsibility
(GE V3) social and civic engagement
(GE V4) respect for diverse cultures and perspectives
(GE V5) life-long learning