Meeting Overview

- Gateway to Success: Improving the MSU STEM Gateway Experience
- Did You Know? STEM Education Programs and Events at MSU
- SEA Changes: STEM Education Alliance Planning and Organization
What is the STEM Gateway?
STEM Gateway

The early curricula and experiences that students pass through on their way to obtaining a STEM degree.
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The Typical STEM Gateway Curriculum

- Required, entry level, introductory courses in physics, chemistry, biology, and math

- May also include other required, introductory courses
  - Introduction to the history, philosophy, and sociology of science
  - Introduction to Engineering Design
  - Introduction to Engineering Modeling

- Prepare students for upper level courses in STEM
Alternative Pathways to the Gateway Curriculum

- A course or experience may motivate a student to pursue a STEM degree
- Integrative Studies in Biological Sciences
- Integrative Studies in Physical Sciences

STEM Gateway

The curricula and *experiences* that students pass through on their way to obtaining a STEM degree.
The STEM Gateway Experience

- Co-curricular Activities
- Advising and Academic Support
- Extracurricular Activities, Work
- STEM Gateway Curricula
- Psychosocial Factors
Why focus on the STEM Gateway?
The Current Gateway

- Research suggests the typical gateway experience deters capable students.
- The introductory courses are not well integrated and there is little communication among faculty across disciplines.
- The path through the gateway is full of obstacles for many students.
GOAL: Create a Coherent and Welcoming STEM Gateway Curriculum and Experience

MSU’s 4-H Children’s Garden
MSU Efforts to Improve the STEM Gateway Curricula and Experience

- MSU's AAU Project: CREATing a Coherent STEM Gateway
- STEM Gateway Fellowship Program
- Several College-level efforts
- STEM Education Alliance
The STEM Gateway Experience

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