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Roundtable on Systemic Change in Undergraduate STEM Education

Kick-Off/Planning Meeting

Draft Agenda

Lecture Room of the National Academy of Sciences (NAS) Building
2101 Constitution Ave NW, Washington, DC
December 20 & 21, 2017

Meeting Goals:

- *Discuss the mission of the roundtable*
- *Get to know each other (and discuss any necessary additions to our collective expertise)*
- *Learn about the current state of undergraduate STEM education and on-going reform efforts*
- *Start to think about future strategies for improving undergraduate STEM education*
- *Consider the role of the roundtable based on our understanding of previous and concurrent efforts*

DAY 1: Wednesday, December 20, 2017

- 4:00 pm **Welcome**
Heidi Schweingruber and Tom Rudin, The National Academies of Sciences, Engineering, and Medicine
- 4:10 pm **Overview of the Meeting**
Ann Austin and Mark Rosenberg, Co-Chairs
- 4:20 pm **Introductions and Reflections on Change in Undergraduate STEM Education**
 - *Members introduce themselves and identify one change they want to see in undergraduate STEM education.*
- 5:10 pm **Presentations on Recent Efforts in Undergraduate STEM Education**
 - *Indicators for Monitoring Undergraduate STEM Education
Mark Rosenberg, Florida International University*
 - *5-Year Status Report on AAU Undergraduate STEM Initiative
Emily Miller, Association of American Universities*
 - *Barriers and Opportunities for 2-Year and 4-Year STEM Degrees
Heidi Schweingruber, The National Academies of Sciences, Engineering, and Medicine*
- 5:45 pm **Discussion of the Future of Undergraduate STEM Education**
- 6:15 pm **Dinner (West Court of the NAS Building)**
- 7:15 pm **The Context for the Roundtable**

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- *What are key drivers compelling us to change undergraduate STEM education? Consider the national and international context, now and what it might look like 20-30 years in the future.*

7:15 pm Discussion in small working groups

7:45 pm Reporting-out from working groups

8:15 pm Adjourn

DAY 2: Thursday, December 21, 2017

8:00 am Breakfast Available (East Court of the NAS Building)

8:30 am **Welcome**

8:45 am **Mapping the Landscape: Initiatives, Stakeholders, and Accomplishments**

- *What initiatives and efforts have contributed to systemic change in STEM undergraduate education?*
- *Who are the key stakeholders contributing to or leading the change efforts?*
- *What worked and what did not work?*
- *What are the key accomplishments?*

8:45 am Discussion in small working groups

9:30 am Reporting-out from working groups

9:45 am Discussion of priorities

10:00 am **Break**

10:15 am **Fostering Systemic Change: Identifying Gaps, Issues, and Challenges**

- *What gaps, issues, and challenges are particularly important to address in order to move forward?*
- *What are the three most important next steps or major questions to address in order to foster systemic change in undergraduate STEM education?*

10:15 am Discussion in small working groups

11:00 am Reporting-out from working groups

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- 11:40 am **Opportunities and Outcomes of Roundtables**
Kerry Brenner, The National Academies of Sciences, Engineering, and Medicine
- 12:00 pm **Lunch (East Court of the NAS Building)**
- 1:00 pm **Lessons about Change**
 - *What are some key lessons learned about how to foster systemic change in undergraduate STEM education?*
- 2:00 pm **Priorities for Action**
 - *Which opportunities are the highest priorities?*
 - *Which opportunities are best suited for action by the roundtable?*
 - *Which could be addressed in the roundtable's workshops?*
 - *Which need more discussion to clarify goals, approaches and priorities?*
- 2:45 pm **Wrapping up and Looking Forward:**
Revisit Roundtable Mission and Discuss how to Achieve It
 - *Is additional expertise needed?*
 - *How can we sustain momentum between meetings?*
 - *What mechanisms should be used to facilitate these conversations?*
- 3:00 pm Adjourn