

*The National Academies of*  
**SCIENCES • ENGINEERING • MEDICINE**

Roundtable on Systemic Change in Undergraduate STEM Education  
**Workshop on the Future of Undergraduate STEM Education**

September 12-13, 2019  
500 Fifth St NW, Washington, DC  
Keck 100  
Public Agenda

*Meeting Goals:*

- Solicit input and advice on current roundtable work to improve teaching evaluation and evidence-based instruction.
- Learn more about trends impacting higher education and reflect on how we can incorporate these ideas into future roundtable plans

1:00 pm **Welcome and Overview of Roundtable Meeting**

*Mark Rosenberg and Ann Austin, Co-Chairs*

1:15 **Transforming Teaching Evaluation**

**Improving recognition and evaluation of science teaching in higher ed**

*Emily Miller, AAU*

*Moderator: Noah Finkelstein, CU Boulder*

**Panel Discussion on Teaching Evaluation**

- How will the ideas presented above be received on campus?
- How do they fit with ongoing conversations nationally or on campus?
- What role can the roundtable play?

*Commentators: Annette Parker, South Central College*

*Chris Rasmussen, San Diego State University*

*Mica Estrada, UCSF*

*Moderator: Noah Finkelstein, CU Boulder*

2:15 **Questions, Discussion, and Commentary from the larger group**

*Moderator: Noah Finkelstein, CU Boulder*

2:30 **Closing Remarks on Teaching Evaluation**

*Ann Austin and Mark Rosenberg*

2:45 Break

3:00 **Presentation on Evidence-based Teaching: Change Agents acting on and off campus**

*Jim Swartz, Grinnell College*

*Cassandra Horii, Caltech*

*Kacy Redd, APLU*

*Moderator: Mark Rosenberg*

3:20	<b>Q&amp;A</b>
3:30	<b>Panel on Scaling Evidence-Based Teaching: Perspectives from Disciplinary Societies</b> <ul style="list-style-type: none"> <li>▪ What does your society do to support evidence-based instruction?</li> <li>▪ How could the roundtable help advance evidence-based instruction?</li> </ul> <i>Amy Chang, American Society for Microbiology</i> <i>Ashley Donovan, American Chemical Society</i> <i>Bob Hillborn, American Association of Physics Teachers</i> <i>Aisha Lawrey, American Society for Mechanical Engineering</i> <i>Moderator: Cassandra Horii</i>
4:10	<b>Break Out Groups on Disciplinary Societies and Higher Education</b> <ul style="list-style-type: none"> <li>• What topics in undergraduate STEM education are of most interest to disciplinary societies?</li> <li>• How can the roundtable connect and support societies' work in education?</li> </ul>
5:00	<b>Report back from Break Out Groups</b>
5:20	<b>Wrap Up and Plans for Tomorrow</b> <i>Mark Rosenberg</i>
5:30	<b>Hors D'oeuvres Reception</b>

**Friday, September 13th**

9:00	<b>Welcome, Day 1 Overview, and Preview of Day 2</b> <i>Ann Austin</i>
9:15	<b>Artificial Intelligence and Higher Education</b> <ul style="list-style-type: none"> <li>▪ How does/will AI affect how students learn? how faculty teach? and what students need to be prepared for the workforce?</li> </ul> <i>Andreas Oranje, General Manager, ETS</i> <i>Moderator: Mark Rosenberg</i>
9:35	<b>Q&amp;A</b>
9:50	<b>International Students in Higher Education</b> <ul style="list-style-type: none"> <li>▪ What are the critical issues the roundtable should attend to in order to help the system of higher education provide quality learning experiences to all students?</li> </ul> <i>Sharon Fries-Britt, Department of Counseling, Higher Education, and Special Education, University of Maryland</i>

*Jenny Lee, Center for the Study of Higher Education, University of Arizona  
Moderator: Ann Austin*

10:15	<b>Q&amp;A</b>
10:30	<b>Break</b>
10:45	<b>Workforce Preparation in a time of Globalization and Technological Change</b> <ul style="list-style-type: none"><li>▪ How are workforce needs changing? What role can the roundtable play in helping higher ed navigate these changes and helping them to provide appropriate undergraduate STEM education to all students?</li></ul> <p><i>Allyson Knox, Senior Director of Education and Policy Programs, Microsoft Grace Diana, Policy Advisor for Workforce Development and Special Assistant White House Office of Science and Technology Policy Erik Noble, Senior Policy Advisor at the White House Office of Science and Technology Policy Dorn Carranza, Innovation &amp; Industrial Partnerships, VentureWell Moderator: Susan Singer</i></p>
11:15	<b>Q&amp;A</b>
12:00pm	<b>Lunch</b>
1:00	<b>Break out Groups on incorporating these new perspectives into roundtable work group plans</b> (All participants will join one of these three groups for this session) <ul style="list-style-type: none"><li>▪ Meeting Students Where They Are <i>Ann Gates</i></li><li>▪ Systemic Change in Higher Education <i>Erin Dolan</i></li><li>▪ Preparing the Future Workforce <i>Susan Singer</i></li></ul>
2:30	<b>Reporting Back from Small Groups</b> <i>Moderator: Mark Rosenberg</i>
2:45	<b>Closing remarks</b> <i>Mark Rosenberg and Ann Austin</i>
3:00	<b>Adjourn</b>