

The National Academies of Sciences, Engineering, and Medicine
Graduate STEM Education for the 21st Century
National Campus Engagement Tour: Bringing National Issues to a Local Context
September 2018-May 2019

In May 2018, the National Academies of Sciences, Engineering, and Medicine released the report [*Graduate STEM Education for the 21st Century*](#). The report framed the recommendations through a lens of systemic change and includes specific actions for all stakeholders in graduate STEM education, from policymakers to leaders to faculty and students themselves. As part of the dissemination strategy for the report, committee members and National Academies staff have committed to working with universities to discuss the ways in which the report recommendations resonate with academic leadership, faculty, and students at campuses across the country.

Options and Opportunities to Engage

The National Academies seeks institutions who are interested in hosting conversations that connect the recommendations in the report with existing efforts and discuss the direction of future initiatives. A sample half-day agenda is included on the following page as an example. The staff will work with each institution to determine the event duration and logistics, which may include any combination of the following options:

- **Public Forum:** Panel discussions or fireside chats to share the report findings and highlight the ways in which the host institution's efforts align with the recommendations. NASEM staff would work to bring a committee member to represent the report and the institution could appoint a moderator or panelist(s) to participate.
- **Workshops:** Smaller group discussions to allow deeper dives into the material. The target audiences for the workshop could be by positions (students, postdocs, faculty, etc.) or by any other designation deemed appropriate by the host.
- **Flash Talks:** These short format talks can highlight report findings or institutional initiatives to raise awareness.
- **Direct Meetings:** National Academies staff and committee members welcome the opportunity to have discussions with smaller groups on campus as requested (i.e. department chairs, a group of student leaders, etc.)

Inclusion of Recent National Academies Reports

The National Academies has had a number of other reports issued in 2018 whose themes intersect with the Graduate Education report. These projects also have ongoing engagement strategies, and if the host institution is interested, the National Academies staff can work to arrange for multiple reports and ongoing projects to be represented during the event:

- [*The Integration of the Humanities and Arts with Sciences, Engineering, and Medicine in Higher Education: Branches from the Same Tree \(2018\)*](#)
- [*The Next Generation of Biomedical and Behavioral Sciences Researchers: Breaking Through \(2018\)*](#)
- [*Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine \(2018\)*](#)
- [*Closing the Equity Gap: Securing Our STEM Education and Workforce Readiness Infrastructure in the Nation's Minority Serving Institutions \(Forthcoming, December 2018\)*](#)
- [*The Science of Effective Mentoring in Science, Technology, Engineering, Medicine, and Mathematics \(STEMM\) \(Forthcoming, fall 2019\)*](#)
- [*Roundtable on Systemic Change in Undergraduate STEM Education \(ongoing activity\)*](#)

Curious? Guiding Questions

If you are interested in hosting an event, please refer to the list of questions to guide the thinking around hosting an event:

- **Institutional Issues:** Which departments or initiatives on campus would serve as hosts? What would be the goals of the session? Who would the institution target as the audience(s)? Are there guests from outside of campus you would like to engage, including other regional universities, non-profits, employers, alumni, or other affiliates?
- **National Academies Reports:** Which of the National Academies reports would you like represented on your campus? Are there particular aspects that you would like to highlight?
- **Basic Logistics:** Are there months that work better for your institution or other events (Board meetings, annual events) that you would like to connect with this event? How long do you envision it would last? Is there a point of contact who handles logistics that can be involved to address the day-to-day detail?
- **Budget:** The National Academies has received modest dissemination funding from the National Science Foundation to support dissemination activities that can cover a limited number of trips for committee and staff. Depending on the scope of the event, the host institution may wish to consider additional funds to support additional travelers, the target audience(s), and general scale.

Contact Information and Setting up a Conversation

Please contact Layne Scherer, the study director for *Graduate STEM Education for the 21st Century*, at lscherer@nas.edu to arrange a 30-minute discussion regarding the basic outline of the event's goals and scope. If you have additional reports you would like involved, she will invite the relevant staff to attend and in their absence, will relay information to them after the call.

Sample Agenda A: Half Day Agenda

Half-day event featuring the *Graduate STEM Education for the 21st Century* and *The Next Generation of Biomedical and Behavioral Researchers: Breaking Through*

University of Michigan's Workshop on Graduate and Postgraduate STEM Training for the 21st Century

Hosted by: U-M Biosciences Initiative and Rackham Graduate School

September 20, 2018

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| 1:30-3:00 | Public Forum: Key Themes from the National Academies of Sciences, Engineering, and Medicine
<i>Welcome remarks from the University of Michigan, 15-20 minutes of remarks from each presenter, and Q&A with audience</i> <ul style="list-style-type: none">• Mary Sue Coleman, President, AAU; <i>Graduate STEM Education for the 21st Century</i>, Committee member• Ron Daniels, President, Johns Hopkins University; <i>The Next Generation of Biomedical and Behavioral Researchers: Breaking Through</i>, Committee chair |
| 3:15-4:15 | Concurrent Workshops: Community responses to the recommendations from the National Academies' reports <ul style="list-style-type: none">• Educational Leaders Panel• Postdoctoral Researchers• Graduate Students |
| 4:30-5:30 | Executive Summary Reports followed by Reception and Networking Hour |

Sample Agenda B: Full Day Agenda

Full-day event featuring the *Graduate STEM Education for the 21st Century; The Integration of the Humanities and Arts with Sciences, Engineering, and Medicine in Higher Education: Branches from the Same Tree, Sexual Harassment of Women: Climate, Culture, and Consequences in Academic Sciences, Engineering, and Medicine; Closing the Equity Gap: Securing Our STEM Education and Workforce Readiness Infrastructure in the Nation's Minority Serving Institutions; and The Science of Effective Mentoring in Science, Technology, Engineering, Medicine, and Mathematics (STEMM)*.

Catalysts for Change: A Conversation on Complex Challenges in Higher Education

November 28, 2018 from 8:30 am – 6:30 pm at the Beckman Center in Irvine, CA
(Breakfast, Lunch, and Light Reception included)

- 8:30 **Breakfast and Opening Remarks**
- 9:10 **The National Academies Tour of Higher Education Reports:** The National Academies representatives from the committees and staff will provide a brief overview of the themes and synergies from recent reports on higher education.
- 9:45 **Taking Action at University of California, Irvine:** This session will highlight on recent initiatives at the University of California, Irvine that exemplify the types of change recommended in the reports.
- 11:15 **National Issues and Local Impact: Deep Dive Conversations:** A set of concurrent sessions will extend earlier conversations by pairing each of the University of California Irvine initiatives with a representative from the National Academies.
- 12:30 **Lunch**
- 1:40 **Deep Dive Reflections:** Share findings from small group discussions
- 2:00 **Empowering Change Agents in Higher Education**
- **Concurrent Session I:** The Science of Mentoring
 - **Concurrent Session II:** Minority Serving Institutions in the National Higher Education Landscape
- These sessions will be offered twice (1-hour each) to allow students and faculty to discuss mentoring in separate spaces.
- 3:50 **Full Group Reflection:** Sharing key themes from the Empowering Change Agent sessions.
- 4:30 **Fireside Chat on Sustainable, Institutional Change:** This session will provide a synthesis of the event grounded in broader theory and practice of sustainable, systemic and institutional change and context for broader societal impacts.
- 5:30 **Concluding Remarks and Invitation to Reception**
- 6:30 **Reception Ends**

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