advancing research frontiers with inclusive scientific leadership

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inclusive scientific leadership

“valuing and integrating diverse (scientific) team member perspectives, ensuring fairness in research spaces so that each member produces at the best of their ability”
science is done by people for people (humanity)

taxpayers pay for the doing of science (scientific responsibility)
“if I had one piece of advice to give it’s that although you’ve been hired for your scientific skills and research potential, your eventual success will depend heavily on your ability to guide, lead, and empower others to do their best work.”

Thomas Cech, past president of the Howard Hughes Medical Institute (HHMI),
A Nature survey of 3,200 scientists reveals that poor lab and personnel management by principal investigators (PIs) is one of the strongest contributors to an unhealthy lab culture.

“Nearly half of the principal investigators in the survey want training in managing people or running a lab but haven’t been able to get it recently”
institutional responsibility to cultivate culturally responsive scientific leaders
why the need for critical mass of inclusive scientific leaders

- global interconnectedness
- awareness of inequities
- generational schism
- loss of public confidence in higher education
- social polarization
- financial challenges

CASE STUDY: engaging entire research community in culturally responsive scientific leadership & management

- assessment of needs via regular climate studies
- focus groups, exit interviews, onboarding interviews
- assessment of levels of readiness
department heads, directors & deans

staff & administrators

junior faculty

associate professors

full professors

year 1 graduate students

year 3 graduate students

postdocs & research scientists

institutional leaders

early career

• https://chemistry.illinois.edu/diversity/climate-and-diversity-action-plan
• https://las.illinois.edu/about/diversity/programs/eo
• https://las.illinois.edu/about/diversity/programs/almi
• https://chemistry.illinois.edu/diversity/initiatives/chem-591-introductory-professional-development-chemists
• https://chemistry.illinois.edu/diversity/diversity-climate-initiatives/chem-593-advanced-professional-development-chemists
<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
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<tbody>
<tr>
<td>Jan 24</td>
<td>Clifton Strengths workshop</td>
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<td>Jan 31</td>
<td>InterSECT Job Simulators</td>
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<tr>
<td>Feb 7</td>
<td>Understanding Your Transferable (Non-technical) Skills in Research</td>
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<td>Feb 14</td>
<td>Transforming conflict into collaboration: Part I</td>
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<td>Feb 21</td>
<td>Transforming conflict into collaboration: Part II Managing</td>
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<td>Feb 28</td>
<td>Leading Up and Down</td>
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<td>Mar 7</td>
<td>Cultures of Excellence Intro and Discussion</td>
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<td>Mar 14</td>
<td>Incivility</td>
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<td>Mar 21</td>
<td>Gender Harassment/Bro-Cultures</td>
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<td>Mar 28</td>
<td>Racial Awareness/Microaggressions</td>
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<td>Apr 4</td>
<td>Mental Health and Resilience in Graduate School</td>
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**example curriculum for senior graduate students**

**advanced professional development for chemists**
Session 1: The Special Challenges of the Academic Environment

Session 2: Critical Friends/Group Problem Solving

Session 3: Vibrant Academic Units

Session 4: Difficult Conversations and Personal Scripts

Session 5: Exploring Leadership

Session 6: Negotiation

Session 7: Giving and Receiving Feedback

Session 8: Bullyproofing Academic Units

Session 9: Becoming a Leader Who Makes a Difference

Session 10: Capstone Case and Closing

“The sessions I selected [as favorites] were not just practical for academic department head leadership, rather, have been very helpful to developing who I am as a leader in my research and project groups. I have found the philosophy of leading with intention: understanding the mission and keeping people focused on that”

- Participant
- VPR interdisciplinary labs, centers and initiatives
- diversity in research focus and workforce
culturally responsive scientific leaders

healthy climate that recruits and retains diverse talent that performs at their best

competitive edge in research and funding