Human Rights in STEM Education

At a time when many educators say their students crave new ways to apply what they learn in class to global challenges, a growing number of STEM educators are finding that integrating human rights into their teaching sparks their students’ interest in applying research theories and methods, engages them in research on issues of relevance to their community or society more broadly, and gives practical context to scholarly debates around ethical responsibilities, and the roles of stakeholders.

Can a broader adoption of these experimental approaches improve STEM education, including learning outcomes, retention, and diversity? What resources can be drawn from the human rights education movement’s practices and pedagogies? What are the opportunities for collaboration across disciplines to strengthen these efforts? Meeting participants will learn from case examples and contribute to discussions aimed at identifying key challenges, considering potential models for integrating human rights into STEM education, and articulating needs and opportunities for mentoring and other types of support.

Coalition meetings convene scientists, engineers, and health professionals with human rights leaders and policy makers to discuss emerging issues at the nexus of science and human rights. The Coalition serves as a catalyst for the increased involvement of scientific, engineering, and health associations and their members in human rights-related activities.
8:30 a.m.  Registration and Breakfast

9:00 a.m.  Welcoming Remarks (Auditorium)

Introduction:  Jessica Wyndham, AAAS, Scientific Responsibility, Human Rights and Law Program

Speaker:  Rush Holt, AAAS CEO and Executive Publisher of the Science Family of Journals

9:15 a.m.  Keynote Address (Auditorium)

Introduction:  Quincy Brown, AAAS Education and Human Resources

Speaker:  Juan Gilbert, University of Florida

10:00 a.m.  Break

10:30 a.m.  Plenary Session I: Encouraging Evidence-Based Policies and Practices to Support Human Rights in STEM Education (Auditorium)

What are key challenges in STEM education, including learning outcomes, retention and diversity? How are these same challenges being addressed by human rights educators? What current approaches are being developed and tested in both fields to address these challenges? What has been learned from the evaluation of these approaches?

Panelists:  Myles G. Boylan, National Science Foundation
            Glenn Mitoma, University of Connecticut
            Eliza Reilly, National Center for Science & Civic Engagement
            Sara Tolbert, University of Arizona

Moderator:  Lori Diane Hill, American Educational Research Association

12:00 p.m.  Lunch

12:30 p.m.  Concurrent Workshops (please bring your lunch!)

1.  SENCER-ing Your Curriculum (Abelson-Haskins)

SENCER (Science Education for New Civic Engagements and Responsibilities) is the premier activity of the National Center for Science and Civic Engagement, which is a member of the Coalition. This workshop will start with 10 minutes of background and an overview, then proceed to the activity of creating a SENCER-ized course. Participants will be assigned to a small group that will utilize the principles behind SENCER (the SENCER Ideals) and evidence based approaches (How People Learn) to create an integrated science or engineering course with strong social context. Together we will address issues of motivation, civic engagements, content and process and the role of both the scientist and social scientist in creating a course of relevance and impact in student learning.

Facilitator:  Eliza Reilly, National Center for Science & Civic Engagement

2.  Using the Coalition’s Resources to Bring Science and Human Rights to Your Campus (Revelle)

The Coalition's working groups have produced a number of resources including an annotated bibliography of science and human rights, guidelines for scientists working on human rights...
projects, examples of collaborations between scientists and human rights organizations, a primer on scientific freedom and human rights, and more. In this workshop, participants will learn about these resources, how to access them, and how they have been used by scientific associations, educators, and students. Participants will then share ideas and identify new opportunities to use these resources at their own colleges and universities.

Facilitator: Theresa Harris, AAAS

1:45 p.m. Break

2:00 p.m. Plenary Session II: Case Studies (Auditorium)

How are STEM educators integrating human rights, social justice and civic engagement into their curricula? What are their goals in adopting this approach, considering both learning outcomes and substantive understanding of human rights? What have been the outcomes of these approaches? What are the existing tools for measuring impact?

Panelists: Michel DeGraff, Massachusetts Institute of Technology
James Griffith, George Washington University
Diane Husic, Moravian College
Joseph Watkins, University of Arizona

Moderator: Janet Stocks, Trinity University / Council on Undergraduate Research

3:15 p.m. Break

3:30 p.m. Small Group Discussions

Building on the plenary discussions, each group will identify strategic actions Coalition members and their partners can take to help inform their networks and advance human rights in STEM education.

Choose one of the following discussion groups:

- **Key challenges in STEM education** (*Haskins*)
  This group’s task is to come up with an itemized, prioritized list of challenges in STEM education that could be addressed through the integration of human rights in STEM curricula.

- **Models for integrating human rights into STEM education** (*Revelle*)
  This group’s task is to articulate creative options for how human rights could be integrated into STEM curricula.

- **Mentoring junior faculty – opportunities and best practices** (*Abelson*)
  This group’s task is to articulate best practices in mentoring junior faculty with regard to teaching practices, and to identify opportunities created by the Coalition to provide mentoring support.

4:30 p.m. Break

4:45 p.m. Report Back from Small Group Discussions (Auditorium)

5:15 p.m. Closing Remarks (Auditorium)

5:30 p.m. Reception (2nd Floor)

7:00 p.m. Meeting Adjourns for the Day
In keeping with the Coalition's commitment to action and measurable outcomes, Coalition members and affiliates contribute to projects that connect networks, build capacity, engage individuals, and promote awareness. The working meetings provide an opportunity for members to define new projects and move forward with existing initiatives. **Unless otherwise noted, all are welcome to attend these working meetings, which will be conducted according to the Chatham House Rule regarding attribution.**

If you are a member of the Executive Directors’ Circle, please see the security desk upon your arrival to pick up a security badge. A badge is necessary to access the 12th floor.

8:30 a.m.  Breakfast

8:30 a.m.  Executive Directors’ Circle *(invitation only)* *(12th Floor Boardroom)*

   Chair:  Rush Holt, AAAS

9:00 a.m.  Student Meeting *(Revelle)*

   This session will provide an opportunity for students to meet each other and to discuss the Coalition’s student engagement projects. Currently, these projects include the student essay and digital media competitions and developing a step-by-step guide for launching campus groups focused on science and human rights.

   Facilitators:  William Lenart, Case Western Reserve University Science and Human Rights Coalition
   Lucas Hackl, American Physical Society

10:00 a.m.  Break

10:15 a.m.  Project Team Meetings *(concurrent)*

   During this session, Coalition project teams will work towards their project objectives, identify responsibilities for key activities, and develop a timeline for work to be completed before the July 2018 Coalition meeting. A list of project teams that will be meeting is provided below; room assignments will be posted on the second floor. If you would like to suggest a new project, please speak with the Secretariat staff before this session so we can announce the topic to participants and arrange a meeting location.

   • **Human Rights, Science, and Disability: Attitudes of Health Professionals and Scientists**
     This project aims to measure how health professionals and scientist innovators understand and employ human rights principles as related to their clients’ enjoyment of the benefits of scientific progress: 1) the level at which human rights topics or language are present in the extant literature of health care providers, and 2) the attitudes and knowledge of health care professionals concerning human rights within the context of disability, science and technology. Team members are developing a literature review, survey and interview guide, and final manuscript. **Team Leader: Anne Bryden**

   • **Program Evaluation Workshops for Human Rights Organizations**
     This project team is developing a series of workshops/webinars intended to provide information of use to human rights organizations in designing and executing systematic evaluations of their programs and projects. **Team Leader: Oliver Moles**
• **Indicators of the Right to Science**
  The Indicators Group seeks to develop a database of measures that form indicators of the right to science, along with a codebook and information about reliability, validity and other concerns. The Indicators Group plans to hold two working conferences over the project's existence that will enable the Indicators Group to move forward efficiently and energetically in developing the database, codebook and other materials, as well as disseminating this information for review and use.

• **Rapid Response for Scientists**
  This project team shares information about actions Coalition member associations are taking to protect the human rights of scientists. The project team also provides a forum to develop shared strategies. One focal point for the team right now is protecting the rights of scientists in Turkey. **Team Leader: Lori Brown**

• **Science, Engineering and Human Rights: A Select Annotated Bibliography**
  This project team is updating and expanding an annotated bibliography of human rights resources in scientific disciplines. The bibliography is meant as a starting point for scientists, engineers, human rights practitioners, educators and interested students to begin to explore the larger literature. **Team Leader: Sheryl Luzzadder-Beach**

• **Coalition Awards Program**
  This group will explore possibilities for one or more honorary awards to be given by the Coalition and to make recommendations to the Coalition Council for next steps. **Team Leader: Bill Mawby**

11:45 a.m. **Plenary Discussion: Project Team Reports** *(Abelson-Haskins)*
  During this session, project team leaders will share progress they have made, identify opportunities for collaborations between the teams and invite Coalition members to contribute to the projects.

12:30 p.m. **Council Lunch** *(Council Members and Student Delegates only) (Abelson-Haskins)*

1:00 p.m. **Council Meeting** *(Council Members only) (Revelle)*

5:00 p.m. **Meeting Adjourns**