

THE NATIONAL ACADEMIES

Advisers to the Nation on Science, Engineering, and Medicine

TENTATIVE AGENDA

WORKSHOP #1 ON CHALLENGING COURSES AND CURRICULA

April 17-19, 2005

Keck Center, Washington, DC

Sunday, April 17

1:00 pm	Welcome and Introductions
1:30 pm	Can We Recognize a Challenging Course or Curriculum When We See One? In this session, participants will view some video examples of different courses and participate in a facilitated discussion. The facilitator will help participants “unpack” what they consider to be characteristics of challenging courses and curricula. This session will also use the paper prepared by Iris Weiss and posted recently on MSPNet about the characteristics of challenging courses and curricula (available at http://hub.mspnet.org/media/data/MSP_CCC_Framing.pdf?media_000000001275.pdf) and subsequent discussions (see http://hub.mspnet.org/index.cfm/11111) as starting points for this discussion.
2:45 pm	Break
3:00 pm	Continuation of previous facilitated discussion or case study
3:45 pm	Perceptions of Challenging Courses and Curricula from the Perspectives of K-12 and Higher Education Partners The purpose of this facilitated session is to allow participants from K-12 and from higher education to articulate more clearly how they characterize “challenging” from their perspectives. The two sectors will meet separately and see if they can reach some consensus about the five most important descriptors for what constitutes “challenging” as the term relates to courses, curricula, and learning outcomes for <i>all</i> students. The two groups will then reconvene, report out, and engage in a facilitated discussion about their ideas. The conversation that emerges from this discussion also will serve as a basis for the next day’s activities.
5:30 pm	Adjourn for the day and dinner for all participants

Monday, April 18

7:45 am	Full Breakfast
8:30 am	What are the Implications and Applications of Research on Learning on Making Courses and Curricula Challenging? This session will focus on the implications and applications of the findings in <i>How People Learn</i> as they apply to designing challenging courses and curricula. In addition, participants may explore some of the research in the area of gifted and talented students and the design of courses and curricula.
10:00 am	Break
10:15 am	What are the Implications and Applications of Research on Assessment of Learning and Pedagogy/Instruction in Making Courses and Curricula Challenging? Participants will be engaged in two concurrent sessions: one focusing on the applications of the research on assessment of learning to the issue of making courses and curricula challenging, and the other session focusing on applications of research on pedagogy and instruction. Participants will be able to participate in one or the other, with the recommendation that teams split up.
11:45 am	MSP teams meet over lunch to discuss what they learned in the morning sessions and the implications and applications of research to their MSP projects. We will distribute meal vouchers so that participants can get their lunch and then adjourn to the 3 rd floor atrium, the 10 th floor outdoor patio, or reserved breakout rooms for discussions among themselves. Teams can request a facilitator to join them if they so desire.
1:15 pm	Concurrent Sessions Participants may choose from three concurrent, interactive sessions with facilitators that will focus on learning, assessment, and pedagogy/instruction, respectively. The task for each session will be to think about the characteristics that make a course, curriculum, or program “challenging” as discussed at the end of Sunday afternoon. Participants in each session will think about how the habits of mind and action can be translated into learning goals, appropriate assessments, and effective instruction for both K-12 and higher education faculty (both pre- and inservice). How can such habits of mind and action be woven into an educational framework that allows students to become increasingly mature in these attributes as they advance through the educational system? The goal for each concurrent session will be for participants to develop the beginnings of a framework that will help their MSPs, and the larger MSP community, think more deeply about these habits of mind and action as they attend to developing specific courses or programs for their projects. The products that emerge from these sessions and the ones that follow on Tuesday morning will be posted on MSPNet and serve as the basis for further comment and refinement

	by the larger MSP community.
4:30 pm	Adjourn for the evening. Dinner on your own.

Tuesday, April 19

8:00 am	Full Breakfast
8:45 am	Reporting Out from Concurrent Sessions and Group Discussion
9:45 am	Break
10:00 am	<p>Groups in Monday’s Concurrent Sessions reconvene to refine their draft frameworks</p> <p>The purpose of this session will be to use the feedback in the reporting out session to further revise or refine the frameworks that they developed. Working groups also will begin to suggest ways of applying the frameworks to MSP subject areas (mathematics and science). These final products will be made available to all participants following the workshop and, in cooperation with the leaders of MSPNet, posted for further comment and refinement by the MSP community. They also will serve as the starting point for work at the September workshop.</p>
11:15 am	Break
11:30 am	Next Steps – Discussion with Leaders of MSPNet About the Comment and Discussion Phase of this Project
12:00 pm	<p>Final Thoughts and Comments</p> <p>Committee members and participants offer final ideas and comments for inclusion in the workshop <i>Proceedings</i></p>
12:30 pm	Adjourn – Lunch vouchers available

April through August: In collaboration with MSPNet, comment and refinement of the frameworks developed at the April workshop will be solicited from the MSP community. The discussion forums will be closed by the end of August so that comments can be collated, analyzed, and synthesized for use during the September workshop.

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WORKSHOP #2 On CHALLENGING COURSES AND CURRICULA

September 25-27, 2005

Keck Center, Washington, DC

Sunday, September 25

1:00 pm	Welcome and Introductions
1:30 pm	Review of April Workshop and Discussion Forums on MSPNet In this session, the goals and objectives for the workshop series will be reiterated for the benefit of those participants who did not attend the April workshop and reinforce those goals and objectives for people who did participate.
3:00 pm	Break
3:15 pm	What Are the Implications of Applying These Frameworks Into Challenging Courses and Curricula? Thinking Systemically This session would be devoted to either an appropriate case study or to some kind of S.W.O.T. Analysis (Strengths, Weaknesses, Opportunities, Threats; for more information about this approach, see for example http://www.quickmba.com/strategy/swot/). The purpose of this session will be for people to broaden their thinking about the kinds of issues they will face in attempting to apply the frameworks into specific subject areas or within and across grade levels. The discussion should set the stage for the concurrent sessions that will begin on Monday morning.
4:45 pm	MSP teams meet to discuss what they learned in the afternoon sessions and the potential implications and applications of research to their MSP projects. Facilitators will be available.
5:30 pm	Adjourn and Dinner for All Participants

Monday, September 26

7:45 am	Full Breakfast
8:30 am	Concurrent Sessions I: Applying the Frameworks to MSP Subject Areas I-A: Mathematics I-B: Science

	<p>These facilitated sessions will allow participants to begin to apply the principles to what MSPs are being asked to do in providing challenging courses in science and mathematics. They will be asked to incorporate principles in the frameworks for learning, assessment, and instruction/pedagogy into one subject area at the K-12 level and one subject area taught at the introductory college level in math or science. How would those courses change from what is commonly offered now? In what ways will they be made more challenging? Challenging for whom?</p> <p>Another objective for these facilitated sessions would be for participants to focus on how the development of increasingly sophisticated habits of mind and actions could be applied to make articulation between pre-college and higher education more seamless in mathematics and science for all students.</p> <p>Each session will be expected to report out on how each of their courses would be restructured during the session following lunch.</p>
11:15 am	Lunch in the Keck Atrium
11:45 am	Reports from the Morning Concurrent Sessions
1:00 pm	Break and Move to Concurrent Sessions II
1:15 pm	<p>Concurrent Sessions II: What Changes in Teacher Education and Professional Development (for both K-12 and higher education faculty) Will Be Needed to Enable Teachers and Schools to Offer More Challenging Courses and Curricula?</p> <p>II-A: Mathematics II-B: Science</p> <p>This session will either be two completely separate concurrent sessions or consist of one session devoted (45-60 minutes) to a common discussion about teacher education issues as they relate to challenging courses and curricula followed by separate sessions that would focus on either mathematics or science teaching.</p>
4:15 pm	Reporting Out from Concurrent Sessions II
5:15 pm	Adjourn and Dinner on Your Own

Tuesday, September 27

7:45 am	Full Breakfast
8:15 am	How To Help K-12 and College-Level Teachers/Faculty Design Challenging Courses

9:45 am	Break
10:00 am am	<p>MSP team meetings to discuss what they learned in Monday’s morning and afternoon sessions and the implications and applications of research to their MSP projects. Facilitators will be available.</p> <p>The goal of this session will be for each team to decide on three “actionable” items for their MSP project. One item should be what they plan to do within the first six weeks following the workshop, the second should be what they plan to implement within six months, and the third within 12-18 months.</p>
11:00am	MSP teams report their goals
11:45 am	<p>Committee and Participants’ Final Comments</p> <p>Discussion with MSP and MSPNet officials about continuing the conversation with the MSP community</p>
12:30 pm	Adjourn. Meal vouchers available for lunch in the Atrium.