Broadening Impact: NSF-Funded Projects at Two-Year Colleges Conference
Marriott Wardman Park Hotel
Washington, D.C.
June 16-17, 2011

CONFERENCE AGENDA

**Wednesday, June 15, 2011**

4:00 – 7:00 p.m.
**Conference Registration**
Registration A

6:00 – 7:00 p.m.
**Poster Session Set-Up**
Thurgood Marshall

**Thursday, June 16, 2011**

7:00 a.m. – 5:30 p.m.
**Registration**
Registration A

7:00 – 8:00 a.m.
**Poster Session Set-Up**
Thurgood Marshall

7:00 – 8:00 a.m.
**Continental Breakfast**
Thurgood Marshall

8:00 – 9:15 a.m.
**Welcome and Opening Session**
Thurgood Marshall

_Eun-Woo Chang, Program Director, National Science Foundation, VA_
_Lynn Barnett, Vice President of Academic, Student and Community Development, American Association of Community Colleges, DC_
_Walter Bumphus, President and CEO, American Association of Community Colleges, DC_
_Cora B. Marrett, Deputy Director, National Science Foundation, VA_

**Keynote Speaker:** Irving McPhail, President and Chief Executive Officer, National Action Council for Minorities in Engineering, NY
9:15 – 9:30 a.m.
Break

9:30 – 10:45 a.m.
PI-Led Breakout Sessions I

Session 1: Sharing Best Practices in Business and Industry Partnerships
Tyler

David Brown, Professor of Chemistry, Southwestern College, CA
Judith Fitzpatrick, Director QA Program, Bergen Community College, NJ
Warren Hioki, Executive Director of Technical Programs and High School Partnerships, College of Southern Nevada, NV

This interactive discussion session is intended to share best practices in establishing, maintaining, and strengthening the mutual benefits of business and industry partnerships, including professional organizations. Participants will be encouraged to network with each other by engaging in group activities designed to identify each other’s best practices and share them across projects.

Discussion questions:
• What beneficial support can business and industry partners contribute to your program or department?
• What can your program or project offer to business and industry partners?
• How does one identify and approach business and industry entities appropriate for building partnerships with academic and technician education programs?
• What roles do professional organizations and societies serve in building, supporting and strengthening collaborations between colleges and business and industry partners?

Session 2: Curriculum Development and Effectiveness Testing - Promising Strategies and Lessons Learned
Madison A
Megan H. Jones, Professor, North Hennepin Community College, MN
Pamela Pape-Lindstrom, Tenured Instructor, Everett Community College, WA
R. John Muench, Associate Professor, Heartland Community College, IL

This discussion session is an opportunity to hear promising strategies and to share insights regarding what works, what doesn’t work, unexpected outcomes, and troubleshooting the development and evaluation of innovative, “active” learning materials and curriculum.

Discussion questions:
• What has worked surprisingly well for your project in regard to curriculum development and effectiveness testing?
• How did your evaluation plan or outside evaluator help guide your progress in curriculum and materials development?
• What obstacles did you encounter and how did you work around them to succeed?
• How did you disseminate your project’s results or outcomes and how did that help you in shaping the remainder of your project’s work?
• What do you need to take your project to the next level of development?
Session 3: Lighting the Fire for Underrepresented Students
Lincoln 2
Elaine Johnson, Bio-Link Director, City College of San Francisco, CA
Karen Woszyna-Birch, Executive Director, Regional Center for Next Generation Manufacturing, CT

This interactive session deals with engaging underrepresented students and provides ideas for supporting excitement and success in STEM Careers. The session facilitators represent ATE centers for biotechnology and advanced manufacturing technologies. Participants will be asked to share their successful strategies as well as some challenges.

Discussion questions:
- Who are the students you are trying to reach?
- How do you reach out to the potential students?
- What are some of the unique needs of these students?
- What are some successful strategies to engage students?
- What evidence do you have that you and the students are successful?

Session 4: Professional Development of Faculty and Staff for Technical Programs
Lincoln 3
Vince DiNoto, Dean of College and Systemic Initiatives, Jefferson Community and Technical College, KY
Louise Squitieri, Co-Project Director NYC LSAMP, City College of New York, NY

Professional development is an important component to maintain the current and future needs of technical faculty and staff. This session will include discussion about the modes of professional development delivery including in-person, virtual, and hybrid; building community; the appropriate length of professional development opportunities; follow-up mentoring; and the use of stipends to support professional development preparation and success.

Discussion questions:
- As educational institutions offer more virtual and hybrid learning, is it appropriate to deliver professional development virtually? How do you measure success?
- How can virtual professional development build community? What types of content is appropriate, from text-based lessons to video streaming?
- What is the appropriate length of a professional development offering?
- What level of support do faculty need to attend professional development workshops?
- What preparation for a workshop is required to ensure successful participation and outcomes?

Session 5: Strengthening Community College Programs Through Four-Year University Partnerships
Madison B
Deborah Boisvert, Executive Director, BATEC Center for IT, MA
Allison Beauregard Schwartz, Director, Mattie Kelly Environmental Institute, Northwest Florida State College, FL
Mete Kok, Professor, Borough of Manhattan Community College, NY

This session will focus on strengthening community college programs through collaborations with four-year universities. Such partnerships can take the form of individual faculty, departmental, or institution-wide projects as well as transfer and articulation agreements. This session will feature a collective discussion including issues and solutions. Participants will discuss the benefits of partnerships, strategies for developing relationships with four-year partners, and issues or constraints for initiating joint projects or programs.

Discussion questions:
- What are some strategies for identifying and fostering partnerships among faculty across two- and four-year institutions?
- What are some models for transfer agreements between two- and four-year institutions?
- What are the characteristics of the ideal transfer model? Where are the constraints preventing this ideal?
- What are the benefits of partnerships for two-year institutions? For four-year institutions?
Session 6: Serving Diverse STEM Scholars with Grant-Funded Programs
Truman
Candice Foley, Professor of Chemistry, Suffolk County Community College, NY
Nina Leonhardt, Associate Dean for Continuing Education, Suffolk County Community College, NY
Linda Rehfuss, Assistant Professor of Biotechnology and Biology, Bucks County Community College, PA

There is a need for more STEM professionals for the United States to remain competitive in an increasingly global economy. The attainment of full inclusion of students, from a diversity of backgrounds and achievement levels, in STEM education remains a tremendous challenge. This session will bring together participants for the purpose of sharing, enhancing, and developing models for reaching new levels of STEM collaboration and community.

Discussion questions:
- What design features of grant-funded STEM programs will increase the number of people, especially from underrepresented groups, choosing STEM careers, including STEM teaching?
- How can we increase or improve the likelihood of student success in STEM majors through program design and development?
- How can we improve and sustain collaboration across STEM projects—regionally, nationally, and contextually?

Session 7: Successful Grants Depend on Management
Taylor
Jaishri Mehta, Professor, Computer Information Systems, Mount San Antonio College, CA
Ginger Pasley, Instructor, Environmental Science Technology, Wake Technical Community College, NC
Paris Svoronos, Professor of Chemistry, Queensborough Community College, NY

This session will provide a discussion of experiences, challenges, and promising strategies in managing grant projects. Participants will share ideas on successful grant management and discuss the components needed to ensure collaboration on project goals and objectives. Participants will have the opportunity to evaluate and determine some components of a successful management structure.

Discussion questions:
- Does everyone on your project team understand the goals and objectives of your grant?
- Do you have the “right” people to assist you in fulfilling your grant objectives?
- Do you have the support and collaboration that you need to succeed?
- How do you acquire the necessary support when you do not already have it in place?
- Where do you start with successfully managing a grant?

Session 8: Beyond Access: Leveraging Resources for Retention and Transfer of STEM Majors
Lincoln
Jenni Abbott, Director, Grants and Resource Development, Modesto Junior College, CA
Guillermina Damas, Chairperson, Natural Sciences, Health and Wellness, Miami Dade College, FL
Oscar F. Porter, Executive Director, Mathematics, Engineering, Science Achievement (MESA), University of California, CA

With 60 percent of the nation’s gross domestic product driven by STEM-related occupations and 44 percent of all STEM baccalaureate degree holders attending community college at some point in their academic careers, it is clear that meeting our workforce challenge must begin with strengthening our community colleges. The two-year college remains the principal point of postsecondary education access for first-generation and low income students, and students of color. While access is to be valued, it is not enough. Students must be retained and either complete a certificate or associate’s degree or transfer to a four-year institution to pursue a baccalaureate. This session will present three successful programs that support student retention and matriculation to baccalaureate programs. Session leaders will use these examples to facilitate a discussion of best practices that can be applied in other institutional settings to increase two-year college students’ retention and transfer.
Discussion questions:
- What role can scholarships and grants play in retention and transfer?
- What can be done to help students persist in STEM majors?
- What kind of a campus support environment increases the likelihood of student transfer?
- What role does faculty play in student retention and transfer activities?
- How can leadership, service, and internship opportunities increase retention and transfer?

10:45 – 11:00 a.m.
Refreshment Break
Thurgood Marshall and
Atrium on Lower Level

11:00 a.m. – 12:15 p.m.
PI-Led Breakout Sessions II

Session 9: Would You Like a Slice or the Whole Pie? Different Approaches to Dissemination
Tyler
Marilyn Barger, Executive Director, FLATE Center, Hillsborough Community College, FL
Deb Newberry, Director, Nano-Link Center, Dakota County Technical College, MN

This session will cover the surprising things you need to know about project dissemination before you begin—including how to get started. Case studies, including the Nano-Link Center’s “modularized” approach, will be dissected and shared to reveal some best practices for curriculum dissemination. Session leaders will provide examples of effective dissemination, which will be used as the basis of an interactive discussion to help define a successful plan and process for your project.

Discussion questions:
- What is dissemination and why do we do it?
- What are the components of a good dissemination plan?
- How do you keep your stakeholders engaged?

Session 10: Ideas for K-12 Partnerships and Teacher Preparation within a STEM Context
Madison A
Joe Kotowski, Director, Center for Promoting STEM, Oakton Community College, IL
Gloria Liu, Coordinator and Co-Director, Center for Promoting STEM, Oakton Community College, IL
Ardi Kveven, Executive Director, Ocean Research College Academy, WA
Pamela S. Carswell, Executive Director, Florida Gateway College Math and Science Teachers Project: Teachers of Excellence Program, FL

Discussion leaders will briefly share the various ways they have partnered with K-12 institutions, school boards, and instructors to facilitate a dialog about the challenges faced, strategies employed, and resulting outcomes. Drawing from teacher in-service, preparation for early college, and alternative certification as models for STEM initiatives, session leaders will actively involve participants in conversations about developing successful K-12 partnerships.

Discussion questions:
- How do we establish effective communication with partners?
- What examples do we have of two-way collaborations in which each party has something to give and to get? How do we build on these collaborations for future endeavors?
- What do our stakeholders want from a program or event? How do we keep them coming back?
- How have K-12 education reform initiatives impacted partnerships?
- How do we assist the STEM career changers in successfully transitioning to teaching?
Session 11: Developing Faculty and Student Learning Communities
Lincoln 2
Tracy Knowles, Associate Professor of Chemistry and Environmental Science Technology
Bluegrass Community and Technical College, KY
Thomas O’Kuma, Chair, Math, Engineering, and Science Division, Lee College, TX
Richard Pollak, Department Chair and PI S-STEM, Minneapolis Community and Technical College, MN

This session will address how faculty and student learning communities can promote improvements in undergraduate teaching and learning with a focus on new and emerging technologies and teaching methods. Participants will discuss ways to engage faculty and students, and explore both face-to-face and virtual strategies used to support these communities.

Discussion questions:
- How can faculty learning communities support or encourage teaching excellence?
- How can technology support and/or facilitate student learning and communication?
- What strategies are being used to encourage faculty and students to participate in learning communities?
- How do we promote a culture of sharing and communal improvement in support of two-year college teaching and learning?

Session 12: Outreach to Community College Instructors – What Can We Learn from Other Disciplines and How Might We Collaborate?
Lincoln 3
Mark Maier, Professor of Economics, Glendale Community College, CA
John R. McDaris, Web Content Developer, Science Education Resource Center, Carleton College, MN

Conference participants involved in discipline-based projects for community college faculty development are invited to share their experiences. This session will encourage brainstorming for ways in which we can learn from one another and create the groundwork for future collaboration across disciplines.

Discussion questions:
- What are the critical issues or challenges in collaborating across disciplines?
- What can we learn from successful outreach and faculty development efforts in other disciplines?
- How might we share these insights?
- How might we collaborate on projects that cross disciplines?
- What steps should be taken to initiate these projects?

Session 13: Strategies for Successful Community College/Four-Year University Partnerships
Madison B
Ronald Eckhardt, Professor, Brooklyn College, City University of New York, NY
Arthur Zeitlin, Professor, Kingsborough Community College, City University of New York, NY
Marshall Milner, Program Director, UMLSAMP Program, University of Massachusetts- Boston, MA

This session will share successful partnership strategies of benefit to two-year and four-year institutions including the development of dual track degree programs, articulation agreements, and faculty-mentored student research projects. Student advising and ways to obtain industry input will be discussed. Attendees will receive ideas on how to design win/win programs that enhance their STEM research skills for students and faculty from both universities and community colleges.

Discussion questions:
- What are some promising strategies to coordinate curriculum for transfer and articulation?
- How can we develop an ongoing dialogue among faculty to foster partnerships across institutions?
- What are the alternate student pathways upon completion of a two-year degree program?
- How can we transform the undergraduate experience in research and science for STEM persistence?
- How can we accelerate students’ technical and research skills inside and outside the box?
Session 14: Creating an Environment for Student Success
Truman
Niccole Villa Cerveny, Residential Faculty, Mesa Community College, AZ
Bart Johnson, Instructor and Program Coordinator of Engineering, Itasca Community College, MN
Linda Powell, Professor and Department Chair of Biology, Community College of Philadelphia, PA

This session will focus on methods for creating a sustainable learning environment and culture to promote student academic achievement. Facilitators will share aspects of their work in generating successful student outcomes both within the classroom and through support outside of the classroom. The discussion will include examples of methods that aid student success in different community college contexts: large urban inner city (40,000 FTE), large suburban (20,000 FTE), and small rural community colleges (1000 FTE).

Discussion questions:
- How can the academic environment and/or culture in community colleges enable sustainable student success?
- What methods are effective in taking students with varied preparation and abilities and developing them into individuals who are ready to move into the workforce or upper division programs at a new institution?
- What methods have you found to be successful in getting students to identify and aspire towards a career in a specific discipline of study?
- What institutional structures or key personnel must be engaged to help support programmatic goals?

Session 15: Implementing Early Undergraduate Research - Approaches and Models
Taylor
Iraj B. Nejad, Professor of Chemistry, Mt. San Antonio College, CA
Miguel Alonso, Associate Professor of Computer and Electronics Engineering Technology, Miami Dade College, FL

Current educational research suggests that “early” undergraduate research plays a pivotal role in STEM students’ persistence to graduation and interest in pursuing graduate school or careers in the sciences. This session will consider the challenges and successes in designing and implementing early undergraduate research experiences that help students succeed in STEM fields. Discussion will include designing a suitable research program; models of different programs in place at colleges and community colleges; seeking support and funding for these programs; preparing students for doing research; engaging and retaining faculty mentors; and addressing administrative challenges.

Discussion questions:
- What kind of research activities can colleges and community colleges develop and implement? Is it any different than at a research institution?
- What constitutes “authentic” research? Are “curricular enhancements” research? Should research be a separate activity or included in the curriculum?
- What are the challenges and barriers toward implementing undergraduate research at a college or community college?
- What are current existing models of research at community colleges? Can they be replicated and are they scalable?

Session 16: Recruitment, Retention, and Transfer Assistance for Underrepresented Groups in STEM
Lincoln 4
Richard Bankhead, Engineering Department Coordinator, Highline Community College, WA
Kristine Kozuch, Coordinator of Disability Services, Springfield Technical Community College, MA
Robert Twardock, Engineering Department Chair, College of Lake County, IL

This session will focus on issues related to recruitment and retention, career awareness, and transfer to four-year schools for underrepresented populations in STEM disciplines. The facilitators will share their experience centered on sharing proven methods of success in each area. Challenges particular to community colleges will be addressed.
Discussion questions:
- What are you doing at your college to recruit and attract students to STEM-based disciplines? What is working well?
- What are you doing at your college to retain students in STEM-based disciplines? What is working well?
- What works best at your college to help students transfer successfully to four-year institutions in STEM fields?

12:15 – 1:15 p.m.
**Lunch Networking Session**
Thurgood Marshall

1:15 – 1:30 p.m.
**Break**

1:30 – 2:45 p.m.
**Panel Session: Broadening the Impact of STEM Education**
Thurgood Marshall
Debra Bragg, Director, Office of Community College Research and Leadership, University of Illinois, IL
Arlen Gullickson, Emeritus Researcher, The Evaluation Center, Western Michigan University, MI
Vanessa Smith Morest, Dean of Institutional Effectiveness, Norwalk Community College, CT
Moderator: Margaret Weeks, Senior Evaluation Associate, The Evaluation Center, Western Michigan University, MI

Panelists will provide an overview of the impact and effectiveness of STEM education programs. They will share their research and knowledge of STEM education including: broadening impact through strengthening and building STEM pathways, and the applied baccalaureate; broadening impact through evaluation planning; the use of data in the development of STEM programs/projects; community college STEM metrics; and accountability.

2:45 – 3:00 p.m.
**Introduction of Small Group Breakout Sessions**
Thurgood Marshall
Steve Brigham, Chief Operating Officer, America Speaks, DC

3:00 – 3:15 p.m.
**Refreshment Break**
Thurgood Marshall and Atrium on Lower Level

3:15 - 5:30 pm
**Small Group Facilitated Breakout Sessions**
(Please refer to the back of your name tag for your room and table assignment. The agenda and discussion questions for these sessions can be found on page 16 of the conference program.)

<table>
<thead>
<tr>
<th>Small Group Breakout 1:</th>
<th>Truman</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Group Breakout 2:</td>
<td>Taylor</td>
</tr>
<tr>
<td>Small Group Breakout 3:</td>
<td>Tyler</td>
</tr>
<tr>
<td>Small Group Breakout 4:</td>
<td>Madison A</td>
</tr>
<tr>
<td>Small Group Breakout 5:</td>
<td>Madison B</td>
</tr>
<tr>
<td>Small Group Breakout 6:</td>
<td>Lincoln 2</td>
</tr>
<tr>
<td>Small Group Breakout 7:</td>
<td>Lincoln 3</td>
</tr>
<tr>
<td>Small Group Breakout 8:</td>
<td>Lincoln 4</td>
</tr>
<tr>
<td>Small Group Breakout 9:</td>
<td>Lincoln 5</td>
</tr>
<tr>
<td>Small Group Breakout 10:</td>
<td>Lincoln 6</td>
</tr>
</tbody>
</table>

5:45 – 8:00 p.m.
**Poster Session and Reception**
Thurgood Marshall
Friday, June 17, 2011

7:00 - 8:15 am
Continental Breakfast
Thurgood Marshall

7:30 – Noon
Registration
Registration A

8:15 - 9:30 am
Plenary Session
Thurgood Marshall SW
Dr. Barbara Olds, Acting Deputy Assistant Director and Senior Advisor, Directorate for Education and Human Resources, National Science Foundation, VA

Keynote Speaker: Jane Oates, Assistant Secretary of Employment and Training Administration, U.S. Department of Labor, DC

9:30 - 9:45 am
Break

9:45 - 11:00 am
NSF Program Director-Led Sessions
(Advance sign-up for sessions required.)

Session 1: Dissemination Strategies
Lincoln 2
Russ Pimmel, Program Director, National Science Foundation, VA
Richard Alo, Program Director, National Science Foundation, VA
Louis Everett, Program Director National Science Foundation, VA

This session will discuss active and effective strategies for sharing your curriculum materials, educational research, and faculty development efforts with the larger community of educators.

Session 2: Project Sustainability
Lincoln 3
Mary Lee Ledbetter, Program Director, National Science Foundation, VA
Joyce Evans, Program Director, National Science Foundation, VA

What will happen to your project when its funding period ends? This session will address the sustainability challenge. What does the NSF expect in terms of institutional commitment, and how can you work with your administration to ensure such a commitment?

Session 3: Communication with NSF
Lincoln 4
Terry Woodin, Program Director, National Science Foundation, VA
Janis Terpenny, Program Director, National Science Foundation, VA
Celeste Carter, Program Director, National Science Foundation, VA

Have you ever wondered what information you should include in your annual or final reports and how they are read and used? Or, have you ever wondered how to contact your program officer or others for information or to let them know of good things happening in your project? If so, this session is for you. Presenters will discuss general rules and specific examples of what should and should not be in a report as well as timelines for completing them.
Session 4: Evaluation Strategies
Madison AB
Connie Della-Piana, Program Director, National Science Foundation, VA
Sue Fitzgerald, Program Director, National Science Foundation, VA
Susan Finger, Program Director, National Science Foundation, VA

Informative evaluation is essential for demonstrating the effectiveness of your work. This session will discuss elements of an informative evaluation, advice on working with evaluators, and strategies for utilizing formative assessments to improve an ongoing project.

Session 5: NSF Funding Opportunities in the Directorate for Education and Human Resources (EHR)
Lincoln 5
Corby Hovis, Program Director, National Science Foundation, VA
Eun-Woo Chang, Program Director, National Science Foundation, VA
Jim Hamos, Program Director, National Science Foundation, VA
John Yu, Program Director, National Science Foundation, VA

Program directors from NSF’s Division of Undergraduate Education (DUE), Division of Human Resource Development (HRD), and Division of Research on Learning in Formal and Informal Settings (DRL) will discuss EHR programs that may be of special interest to two-year colleges.

Session 6: NSF Funding Opportunities Beyond the Directorate for Education and Human Resources (EHR)
Lincoln 6
Hannah Sevian, Program Director, National Science Foundation
Diana Elder Anderson, Program Director, National Science Foundation
Charles Pibel, Program Director, National Science Foundation
Charles Sullivan, Program Director, National Science Foundation, VA
Sue Kemnitzer, Program Director, National Science Foundation, VA
Jong-on Hahm, Program Director, National Science Foundation, VA
Steve Schreiner, Program Director, National Science Foundation, VA
Kathy McCloud, Program Director, National Science Foundation, VA
Dean Evasius, Program Director, National Science Foundation, VA

In addition to EHR, NSF has six other directorates and four offices that support science and engineering research and education. These units include Biological Sciences; Computer and Information Science and Engineering; Engineering; Geosciences; Mathematical and Physical Sciences; Social, Behavioral, and Economic Sciences; Cyberinfrastructure; International Science and Engineering; Polar Programs; and Integrative Activities. Program directors representing several of these units will discuss education-related programs that may be of special interest to two-year colleges.

11:00 -11:15 am
Refreshment Break
Thurgood Marshall

11:15 am – Noon
Results from Small Group Discussions and Closing Remarks
Thurgood Marshall
Steve Brigham, Chief Operating Officer, America Speaks, DC
V. Celeste Carter, Lead ATE Program Director, National Science Foundation, VA
Katherine J. Denniston, Acting Director, Division of Undergraduate Education, National Science Foundation, VA

Noon
Adjourn