

# **ISU SEEC Internal Advisory Board Meeting**

**Friday, December 3, 2010**

**1:30-3:00 p.m., 114 Marston**

## **NSF STEP Project**

### **SEEC: STEM Student Enrollment and Engagement through Connections**

#### **Iowa State University and Des Moines Area Community College**

Board members present: Elizabeth Hoffman, Sandra Gahn, Doug Gruenewald, Tom Hill, Mary Holz-Clause, Gary Mirka

Team members present: Monica Bruning, Mary Darrow, Mark Laingen, Steve Mickelson, Jason Pontius, Diane Rover, Mack Shelley

1. Provost Hoffman opened the meeting with introductions and comments.
2. Diane Rover provided an overview of project goals and a summary of new student enrollment for Fall 2010.

The new student enrollment in engineering is 1758 students, including software engineering. This is over 150 more students than arrived in Fall 2009. This includes about 100 more freshmen and over 50 additional transfer students. Among freshmen, resident remained about the same, and the increase was divided between nonresident and international students. Among transfers, the increase in number was comparable between resident and nonresident and matched by an increase in international transfers. In terms of diversity, ethnic minority numbers increased by five students, and female numbers by six. There was a decrease in freshmen women, and an increase in transfer women (from 32 to 50). The percentage of ethnic minority students among new students remained about the same at 10%. The percentage of female students dropped from 16.4% to 15.2%.

3. Team members provided summaries of project activities.

Steve Mickelson:

- E-APP participation  
Included in the discussion was an interest in adding faculty interaction to the E-APP program, both student-faculty interaction and faculty-faculty interaction. The faculty-faculty interaction should include non-engineering faculty as well. Tom Hill and Gary Mirka expressed interest.
- ISU learning community participation
- DMACC EGR 100 enrollment
- DMACC pre-engineering enrollment

Monica Bruning:

- Career awareness initiatives with Extension
- Number of E-TEC scholarships awarded

- Recruitment of women

Mack Shelley:

- STEP invited evaluation workshop
- Learning community impact studies

4. Diane Rover presented the results of and response to the NSF third-year review.

NSF Panel Feedback :

- a. A hallmark of the project is learning communities and retention.
- b. The inter-institution learning village concept and E-APP program are innovative.
- c. Key activities cited: networking for DMACC students, engineering orientation course at DMACC, pre-engineering and pre-professional tracks at DMACC, “Changing the Conversation”-based print and web recruiting materials, NSF S-STEM project (E2020) course and integration into learning communities.
- d. Activities are based on best practices.
- e. PIs have been quick to learn and adapt when things do not appear to be working as anticipated.
- f. Use of logic models for project planning is seen as an innovative strategy.
- g. Meaningful partnerships have been established.
- h. Partnership with DMACC has been strengthened and will ensure long-term impact.

NSF Panel Recommendations:

- a. RE: the percentage of women students in engineering at ISU -- Pursue a strategy that is intellectually rigorous based on all available data.

PLTW is not part of ISU’s SEEC strategy. The main SEEC strategy is based on the NAE “Changing the Conversation” study. The E-TEC program with ISU Extension is ongoing. Additional review and planning will be done with PWSE.

- b. RE: project evaluation -- Explore ways to better measure and document the “SEEC Effect”.

5. Mack Shelley described NSF’s interest in the “SEEC effect.” Mary Darrow and Frankie Laanan updated the board on studies they have initiated. Board members suggested expanding the measurement of the SEEC effect. Capturing the SEEC effect is an important element to project sustainability and will continue to be an emphasis during years 4 and 5.
6. Partnerships are another important aspect of sustainability. Several key partnerships were discussed by board and team members. Provost Hoffman recapped these: learning communities, the E-APP program, faculty partnerships, ISU Extension, and department collaboration. The board members also provide key linkages throughout the institution.
7. A late spring meeting will be scheduled.