

## UOAC Minutes 1/25/2011

The Undergraduate Outcomes Assessment Committee held its eighth meeting of the year at 2:00 pm Monday, January 25, 2011 in the Peterson Room of the Campus Center.

Present: Peter Christopher, Chrys Demetry, Peter Hansen, Art Heinricher, Lance Schachterle

1. The committee approved the minutes of the meeting of November 29, 2010. The committee discussed how to articulate what the data from the National Survey of Student Engagement (NSSE) means.
2. Art Heinricher reported that the NEASC self-study preparation is on-going. In particular, he is preparing the E-2 Forms for NEASC that identify every major program, the learning outcomes for each program, and who is responsible for monitoring them. The committee discussed whether this issue should also be referred to CGSR for appropriate action regarding graduate programs.
3. Art Heinricher reviewed the Outcomes Assessment Matrix updated with recent NSSE data. In addition to the data from NSSE, information from a recent report on the IQP by Ron Miller (Colorado School of Mines) should be incorporated into the outcomes related to the IQP.

A summary matrix of the results from the NSSE distributed by Art Heinricher highlighted the particular questions in which WPI NSSE responses were at least 0.1 standard deviations higher or lower than the mean for the AITU-NSSE peer group. The AITU-NSSE peer group includes Drexel, Embry Riddle, Olin, Harvey Mudd, Michigan Tech, Milwaukee Eng, Polytechnic of NY, Rose-Hulman, Stevens. WPI students outperform the AITU peers in a number of areas, especially Outcome #5, graduates will function effectively individually and in teams, and for Outcome #6, graduates will be able to identify, analyze, and solve problems creatively through sustained critical investigation. The greatest variance in comparison to AITU-NSSE peers involves study abroad: the percentage of WPI students who study abroad (50%) outperforms our peers by +1.11 standard deviations.

WPI students underperform relative to the AITU-NSSE peer group in several areas. The survey responses indicate WPI students do not ask questions in class or contribute to class discussions as frequently as their peers. In addition, our students report that their experience at WPI contributed to the development of a personal code of values or ethics at levels well below our peer institutions. These responses are directly related to our progress in achieving Outcome #4, effective communication, and Outcome #9, personal, societal and professional ethical standards.

The committee discussed the difficulty of weighing responses above the mean in some questions against significant underperformance in other questions related to the same outcome. For example, the message is mixed for Outcome #8, graduates will be aware of how their decisions affect others. WPI students gave responses above the AITU-NSSE mean in response to questions regarding having serious conversations with students of a different race or ethnicity, or different religious beliefs, political opinions or personal values, and at the mean for a similar question on encouraging contact

among students from different backgrounds. In addition, WPI has higher percentages of students who study a foreign language or study abroad. However, the responses given by WPI students to six other questions were well below the mean (the effect sizes, or mean difference divided by the pooled standard deviation, are in parenthesis).

- Understanding how my future professional work will impact society (-.18)
- Understanding current social issues, e.g. political, social, cultural, economic (-.34)
- Able to make decisions consistent with the health, safety and welfare of the public (-.16)
- Knowing how to identify and when to disclose factors that might endanger the public or the environment (-.25)
- Included diverse perspectives (different races, religions, genders, political beliefs, etc.) in class discussions or writing assignments (-.38)
- Understanding people of other racial and ethnic backgrounds (-.39)

In total, six of the eleven indicators taken from the NSSE for Outcome #8 are well below the mean, sometimes by statistically significant margins.

There were two (and only two) individual questions where the direction of the WPI to AITU comparison “flipped” from negative 2006 and to positive in 2009 and both of these questions are associated with Outcome #8. The questions where the data improved are:

- Had serious conversations with a student of different race or ethnicity than your own (from -0.06 to +0.13)
- Had serious conversations with students who are very different from you in terms of religious beliefs, political opinions, or personal values (-0.07 to +0.15)

WPI’s goal for each of these indicators is to be at or above the mean in comparison to our AITU-NSSE peers. When the indicators for a particular outcome fall significantly below this criterion, it indicates a weakness that ought to be addressed. The committee agreed to continue this discussion in future meetings.

4. The meeting adjourned at 3:00 pm.

Respectfully submitted,

Peter Hansen, Secretary