Transforming Undergraduate Education in Engineering

Phase IV: Views of Faculty and Professional Societies

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Transforming Undergraduate Education in Engineering

Curriculum Locations

For the key KSAs identified during the morning sessions, which can/should be addressed through changes in curricular/pedagogy in academia? What are the advantages and disadvantages of such a change? Some potential topic areas are listed below but the list is only a starting point.

- Capstone
- First Year Experiences
- Discipline Specific Coursework
- Laboratoraries
- Online learning
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Curriculum Locations Part I

- Select a recorder and a speaker for the group.
- Each group will be assigned 2 competencies on which to focus.
  - What types of activities could be used to achieve the competencies?
  - You have 20 minutes to generate ideas for development of these competencies in academic settings.
- Prepare a list to post summarizing the ideas discussed.
Curriculum Locations Part II

- Each group will be assigned a perspective of “hat” to use in thinking about the proposed activities. You have 10 minutes to review Part I list posted from your assigned perspective. When time is called, rotate to the next list until all lists have been reviewed.

- Groups will have 10 minutes to prepare a summary for report in relation to their assigned perspective on the proposed activities.

- Speaker for each group will have 4 minutes to report their findings.
Perspectives

- **Factual Perspective:** This group concentrates on the facts - what information and knowledge do you know about the situation? What can you learn about the situation from this information? What info is missing?

- **Pessimistic Perspective:** This group should look for the flaws and obstacles in implementing the activity.

- **Optimistic Perspective:** This group will focus on the benefits to students and the educational gains from the activity.

- **Novelty Perspective:** This group concentrates on the creativity development and the impact of the changes in student learning and outcomes resulting from the activity.