

# **TUEE** Transforming Undergraduate Education in Engineering

## **Phase IV: Views of Faculty and Professional Societies**



# 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
- Laboratories
- 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.

# Curriculum Locations Part II

## 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.