

Breakout Groups

Group A

Kon-Well Wang (F)	Sheri Sheppard
Uwe Kortshagen (R)	Robert Warrington
Jim Duderstadt	Stan Wei
Matthew Goekner	Suhada Jayasuriya
Dan Mendelsohn	

Group B

Galip Ulsoy (F)	Karen Thole
Mario Roteo (R)	Bill Wepfer
Placid Ferreira	H.A. Whitworth
Tod Laursen	Eduardo Misawa
Dick Smith	

Group C

Adnan Akay (F)	Jessica Townsend
Fritz Prinz (R)	Warren Seering
Mikael Enelund	Ann McKenna
Dan Hirleman	Allen Soyster
Allan Kirkpatrick	

Group D

Gretar Tyggvason (F)	Joseph Rencis
C. Srinivasan (R)	William Predebon
Frank Kulacki	Siriam Sundararajan
John Lienhard	Ping Ge

Notes:

1. F = facilitator
2. R = Recorder and Reporter
3. Your group (A, B, C or D) is indicated on your badge. Also, for the dinner on Thursday night please sit at the table with your group number, so you will have a chance to meet with other group members.

Questions for Breakout Sessions

Included in the recommendations of the 5xME Workshop are the following key points:

1. The bachelors degree should introduce engineering as a *discipline*, and should be viewed as an extension of the traditional liberal arts degree where education in natural sciences, social sciences and humanities is supplemented by education in the discipline of engineering for an increasingly technological world.
2. This bachelors degree in the *discipline* of engineering can be viewed as the foundational stem upon which several extensions can be grafted: (1) continued professional depth through a professional masters degree in engineering, and (2) transition to non-engineering career paths such as medicine, law, and business administration.
3. The masters degree should introduce engineering as a *profession*, and become the requirement for professional practice. This is where educational institutions and professional societies can build an awareness of the profession, as opposed to producing graduates who view themselves merely as employees.

Morning breakout session: In the context of the recommendations from the 5xME Workshop, please answer the following:

- (1) What are the 5 subjects central to an ME curriculum (excluding prerequisites)?
- (2) What are 5 subjects, from disciplines outside of ME, which should be in the curriculum (excluding prerequisites)?
- (3) What are the 5 key professional skills that should be in the ME curriculum?
- (4) Identify 5 subjects in a typical ME curriculum that are not essential.
- (5) What is the role of project-based learning in the ME curriculum?
- (6) How do current and emerging technologies influence student learning and curricular content?
- (7) What are the major constraints on developing a new ME curriculum (e.g., accreditation, finance, job market, duration)?

Afternoon breakout session: In the context of the recommendations from the 5xME Workshop, each breakout group is asked to tackle one of the following tasks:

- A) Assuming a blank slate, describe the content of the recommended bachelors degree plus masters degree
- B) Given our current curriculum, plan a transitional curriculum (bachelors and masters) that will move towards this goal
- C) Alternatively, starting with a blank slate, plan a 4-year bachelors curriculum (rather than a bachelors plus masters) that achieves the same goals.

Note that it is the structure and outline of a curriculum (i.e., prerequisites, subjects to be included), rather than the full details (e.g., courses, credits, etc.) that we are looking for.