

Today's Three Colleges of Engineering

- Traditional Engineering (CE, ME, EE)
- Information Sciences
- “O”-Engineering

More to Learn in More Diverse Fields

=> Students Choose Major Too Early

⇒ Specialization sacrifices breadth

To accommodate, we have abandoned broad education.

BUT.....only 1/3 graduate in planned field

=> Postpone field decision

.....only 1/8 take professional exam

=> Lessen upper-level field courses

Most use technical skills, becoming **managers, not “hard core”** engineers

Faculty values **interdisciplinary research**, and the world needs smart, broadly educated technical people. So **why are we narrow**?

In any new curriculum we should require:

**-Upper-Level Courses to be taken in all 3
Colleges of Engineering**

**-Interdisciplinary Team Experience in
Design/Research (provide \$ to faculty)**

REVAMP CORE CURRICULUM

Scrap **Introduction to Engineering**,
instead offer to A&S, Aggies, Hotel

Rework **Math**, adding discrete &
computational aspects; 3/4 mandatory

Teach **Physics**, **Chem** and **CS** in **small sections** partly using **engineer faculty** w/
real-life examples. Advisees take at least
one from their advisor. Will require
additional faculty. But such expense is
justified by student/faculty ratio,
rankings

Get Serious about **Engr Distribution**
Now 2 “required” & “encouraged”;
Expand to 4, with 2 required.

Once again, **CU** should **lead** in setting the
US’s **undergraduate engineering curriculum**.

**We should design a broad, interdisciplinary
4-yr engineering curriculum.**