

The Move to Online: More of the Same or Re-Creating Engineering Education?

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If Online Education is the Answer, What is the Question??

- What is your goal?
 - *What is the motivation driving your interest in online learning?*
 - *What needs, opportunities, and constraints are part of the puzzle?*
- Online education can be a means, but is not an end
- Let your end be a vision worth your university's very best people and efforts



Going Online: A Typical Scenario

- Starts with a desire to increase institution's revenues
- Instructors understandably want a model that requires as little change as possible to their teaching practices
- Goal is to have online courses be “as good as existing on-campus courses”
- The result
 - Record and stream existing lecture-based courses
 - More of the same
- *What's wrong with that?*



Is “As good as classroom instruction” an Adequate Goal?

- **Going online can remove/reduce barriers to education**
 - Who learns
 - Who teaches
 - When teaching and learning happen
 - How teaching and learning happen
- **Done well, online education practices can improve classroom practices**
- **Can be a game-changer for colleges and departments**



How do you envision online learning?

- A digital file cabinet



How do you envision online learning?

- A one-way hose for streaming course recordings and related content



How do you envision online learning?

- An opportunity to create a new learning space
 - collaborative
 - engaging
 - authentic
 - new freedom in where, when, and how learning occurs





Using “the Move to Online” to Re-Create Engineering Education

- *Decide to use your initiatives in distance education as strategic opportunities to **make major advances in the nature and quality of education** offered by your institution.*
- *Decide (really decide) to **make meeting the needs of students as the #1 priority.***
- *Engage experienced, capable instructional designers in the design of programs and each course.*

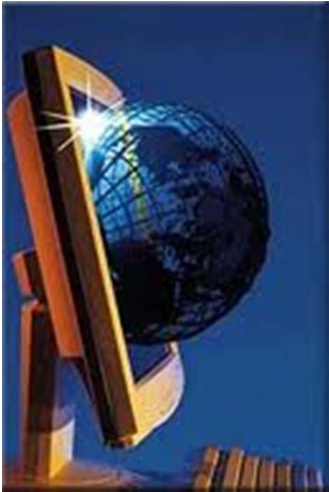




Using “the Move to Online” to Re-Create Engineering Education

- *Effectively support faculty throughout course development, delivery, and evaluation.*
- *Use online formats and tools to **build effective, meaningful community** in support of learning*
- *Integrate learning and professional practice as part of coursework*





Using “the Move to Online” to Re-Create Engineering Education

- *Use what you learn and new learning assets for online courses to **improve all courses***
- ***Build new and deeper connections** between your faculty’s research and industry*



Some Practical Advice



- *Use **group projects** in online courses to develop skills needed to lead and contribute to globally distributed teams*
- *Thoughtfully complement asynchronous learning with **interactive web conferences***
- *Have students contribute meaningfully to online learning*
 - *Lead web conference presentations*
 - *Lead asynchronous discussion forums*



Some Practical Advice



- *Provide free access to **tools that enable student groups** to meet and work effectively anytime, anywhere*
 - *Project groups*
 - *Study sessions, etc.*
- *Use online tools to **engage alumni** in networking, learning, and teaching*
- ***Engage the best faculty, speakers, and resources, wherever they are***



Re-Creating Engineering Education



- Create a vision worthy of your faculty
- Create a path and stepping stones to get there
- “You must be the change you wish to see in the world”

– *Mohandas Gandhi*





- **“There is no passion to be found playing small – in settling for a life that is less than the one you are capable of living.”**

– *Nelson Mandela*

