

Teaching Excellence Institute

David Gries
Associate Dean of Engineering for Undergrad Programs

Kathryn Dimiduk, Director, TEI

Teaching Excellence Institute

2006: Investigated support of faculty in teaching at Cornell

Institution	No. of full-time faculty	Staff allocated to faculty teaching excellence	Faculty/staff ratio
Cornell	1600	1	1600
MIT	1551	6	258
CMU	1404	5	280
Illinois	2047	11	186
Michigan	3920	25	157
Harvard	1905	14	136

(Cornell's CTE, now under supervision of Vice Provost.
Recruiting for a second person.)

Why a Teaching Institute in Engineering?

Create sustained support for effort to improve teaching

- Support for new faculty
- Traditional lecture style not always effective
- New and useful research in pedagogy
- Students have different learning styles
- New technologies allow different kinds of interaction

CoE Strategic Plan

Create Teaching Institute that enhances teaching excellence through seminars, workshops, and consulting opportunities

Director: Kathryn Dimiduk

BS Physics, Cornell
MS Applied Physics, Stanford
PhD Applied Physics, Stanford



Weber Teaching Excellence Award, A&S, UNM 2007
Excellence in Teaching Award, UNM Physics Dept. 2006
Adjunct/Lecturer Teacher of the Year Award UNM 2005

TEI Goals and Progress

- Workshops for new faculty
 - Oct. 08
 - Jan. 09
- Workshops for faculty on aspects of teaching, e.g. learning styles, active learning strategies, informal classroom assessment, technology
 - Jan. 09
 - Jan. 10
- Lecture/seminar series on teaching
 - 6 seminars so far

TEI Goals and Progress (continued)

- Work with Cornell's Center for Teaching and Learning
- Provide assistance to faculty on request
 - ~40 individual faculty in 13 departments
 - 7 new faculty
 - assisted with 10 grant proposals
- Intensive work with courses "in distress"
 - 5 courses so far from 4 different departments

Example of New Faculty Course in Distress

- Mid-semester request for help by ugrad coordinator
 - Faculty frustrated, students upset
- TEI led mid-semester student feedback
- Did classroom observations
- Coached professor
 - Assisted in restructuring one lecture/week in advance of class
 - Suggested strategies for various problems arising in the course

Students see improvement in the course:

- After the midterm evaluation Prof. xxx changed ... teaching style which greatly improved the quality of the lectures.
- Professor improved very much for a first time teacher... clicker questions helped keep students focused
- Lectures became noticeably better after mid-term evaluations. iClicker questions kept me engaged.
-improved dramatically, ... lectures have become very useful

TEI: McCormick Teaching Grants

Shane Henderson, Chair ORIE
 ENGRD 2700. Probability and Statistics
 Updating and improving examples
 Adding active learning
 Archiving for use by multiple instructors



Tobias Hanrath, Asst Prof, CBE
 ChemE. 3130. Thermodynamics
 Adding simulations
 Adding Wacom tablet



Impact of TEI on CoE Teaching

- Intensive work with courses in distress impacted nearly 1000 students
- Resulting impact noticeable in course evaluation comments
- Faculty buy-in
 - 20% of faculty have used TEI already
 - Faculty are recommending TEI to other faculty
 - Chairs and Ugrad coordinators request help for courses with significant mid-semester complaints