
Connecting with Students

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Cornell

- Ivy league university, but “centrally isolated”
- Few high schools in area
- National student body, largely from northeast
- 700 engineering freshmen admitted each fall
- MSE small department (13) vs. ECE (36), CS (38)

Goals

- Inform students of the opportunities in MSE field
- Grow number of MSE majors to 40 per year
- Recruit best engineering students to MSE major

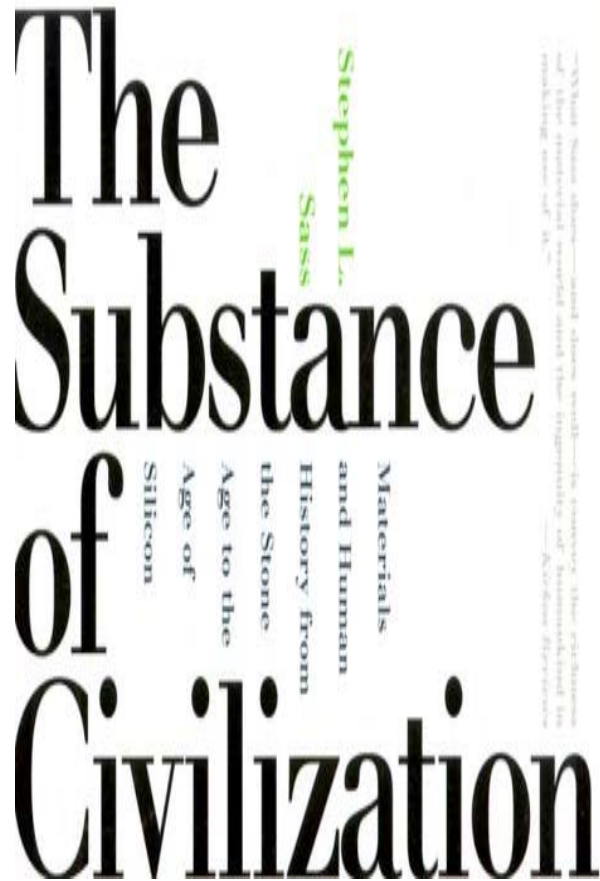
Strategies

- Before arrival of students at Cornell - educate about materials
 - Write to high school councilors
 - Sass book offer**
 - Materials booklet**
 - Web site
 - Write to admitted students - course offering
 - Write to admitted "majors" - welcome

Outreach to the High Schools

- Mailing in the spring to chemistry, physics and guidance chairs at 160 high schools (480 letters)
- Letter includes "Materials Science and Engineering" booklet and offer of a copy of "The Substance of Civilization" by Sass

Materials through the Ages



The Substance of Civilization

Stephen L. Sass

Materials and Human History from the Stone Age to the Age of Silicon

“This book is a masterpiece of scholarship and insight. It is a must-read for anyone interested in the history of materials and the development of civilization.” —Prof. Robert M. Waymouth, University of California, Berkeley

- Discusses materials as they have influenced the development of civilization
- Basis of course to arts majors
- Being used as course text at several universities

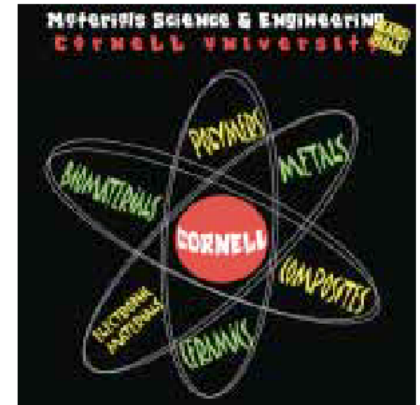
Materials Booklet

- Materials first, department second
 - Focus on students
 - New and exciting aspects highlighted
 - Also discuss traditional aspects of materials
 - Only mention Cornell at end
- Tested at local high schools
- Mailed to students, high schools
- Handed to visiting undergrads
- Web downloadable <http://www.mse.cornell.edu>



Strategies

- After arrival at Cornell - educate students about major
 - ENGR 150 - demonstrations
 - Intro course(s) - nanotechnology
 - Research involvement
 - Involve students in spreading the word
 - Involve UG students as TAs in freshman courses
 - T-shirt design.



Outreach within Cornell

- Mailing in June to all incoming freshman engineers (~700), with "Materials Science and Engineering" flier and colorful poster describing our first semester intro course, "Nanotechnology"
- Materials Science demo show in the fall to typically half the freshman class through weekly tutorial

Outreach within Cornell

- Personal contact with the students is important
- Take all opportunities to speak to visiting high school students
- Schedule dinners/barbeques with undergrads
- Use undergrads to recruit undergrads

Involve New Faculty



Prof. Yuri Suzuki
(Stanford)

Joined in 1997 from Bell Labs

- ONR Young Investigator Award
- NSF CAREER award
- Packard Fellowship

Prof. George Malliaras (Gronigen)

Joined in 1998 from IBM Almaden Research Center

- NSF CAREER award



Prof. Shefford Baker
(Stanford)

Joined in 1997 from Max-Planck-Institut für Metallforschung

- NSF CAREER award

Prof. Uli Wiesner
(Mainz)

Joined in 1999 from Max-Planck-Institut für Polymerforschung

- Ph.D. Award of Hoechst
- Carl Duisberg Memorial Award of the German Chemical Society.



Proposal for National Competition

- Approached by students of Alpha Sigma Mu
- Proposed microscopy competition
 - Administered on web
 - Sub-categories by microscopy method
 - Prizes from companies
- Other ideas for national campaign?