

ENGR 102: Freshman Academy – Fall 2009

Instructor: Prof. Andrea Armani, Dept. of Chemical Engineering and Materials Science, VHE 712, (213) 740-4428, armani@usc.edu

Coaches:

Section: 28516, Shefali Gupta (shefalig@), Kimy Wong (kimbermw@usc)
Section: 28508, Yakshita Desai (ydesai@usc), Kat La Chapelle (klachape@usc)

Class hours:

Section: 28516, Wednesday 1:00-2:50pm, RTH 109
Section: 28508, Thursday 3:00-4:50, RTH 115

Office Hours: immediately after class

Additional Notes:

Both class sections are cancelled the week of Thanksgiving break.

Course goals & Objectives:

The main goal is to introduce freshman engineering students to various aspects of engineering, including technical, political, ethical and societal impacts of the field. There will be a focus on the following themes:

- **Thinking like an engineer:** *developing problem-solving and teamwork skills*
- **Social and historical context:** *understanding social and historical context of engineering*
- **Potential of engineering:** *understanding vast potential of engineering and rewards of engineering profession*
- **Ethics:** *understanding ethical issues related to engineering through discussion of real events and related activities*
- **Grand challenges for engineers:** *discussing the 14 grand challenges for engineers as identified by the NAE*
- **Transition to college:** *peer mentoring to achieve a successful transition from high school to college*

Textbook: None.

Class Requirements and Grading Policy:

The course will consist of one lecture per week and will include readings, films, discussion, team activities or projects, and guest lectures. The course will be grading C/NC according to the following:

1) Homework assignments (75%):

- Students are required to participate in 2 of the 3 large (All Academy) lectures and attend 50% of the out of class activities planned by the coaches.
- Additional homework assignments will also be posted.
- You may substitute one homework assignment with participation in the Fall 2009 Engineering Career Conference. Visit RTH 218 to register for the event. Submit a copy of your resume signed of by Kristen Todd or Lilian Rivera.

3) Participation (25%):

- Students are required to participate in discussion, respond to email requests, and act as responsible colleagues to others in the class. Because this class only meets once a week, attendance is vital. If you plan on missing a class meeting or activity, please let one of the coaches know.

Course Outline (Tentative):

8-26/27:	Breaking Ice
9-2/3:	Careers in Engineering Panel
9-9/10:	Career Planning
9-16/17:	Structural Engineering, Tactile Sensors and Robotics Lab tours
9-23/24:	Stevens Institute of Innovation
9/30-10/1:	Graduate School (already?)
10-7/8:	Trip to HSC (meet at JEP @1:00 sharp) – MD/PhD Programs
10-14/15:	Coaches Day
10-21/22:	Nanofabrication, 3-D visualization, and Micro-imaging Lab tours
10-28/29:	Engineering Failures
11-4/5:	Science Museum Field Trip
11-11/12:	Flash of Genius
11-18/19:	Engineering Ethics
11-25/26:	No Class
12-2/3:	End of Semester Discussion

Statement of Students with Disabilities:

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to me (or the TA) as early in the semester as possible. DSP is located in STU 301 and is open 8:30am – 5:00pm, Monday through Friday. The phone number for DSP is (213) 740-0776.

Statement on Academic Integrity:

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. All students are expected to understand and abide by these principles. SCampus, the Student Guidebook, contains the Student Conduct Code in

Section 11.00, while the recommended sanctions are located in Appendix A. Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any suspicion of academic dishonesty.