E101 – Introduction to Engineering and Problem Solving
Dr. Bill Hunt, PE
Sections 002 & 003
Monday, September 7, 2008

Agenda – 07Sep08
• Assign Seats & Student Teams (EA’s)
• Student Q&A
• Review Course Schedule
• HW #1: Resumes
• What is an Engineer?
• Engineers in History
• Going to Mars
• Characteristics of an Engineer
• Reminders/ Info Sessions

Course Schedule: Sec 002 & 003
• www.bae.ncsu.edu/people/faculty/hunt
• Highlights:
  – Midterm on Nov. 17
  – FEDD on Nov. 25
  – No Class Oct. 6
  – Final Exam is FEDD oral presentation

Homework #1 - Resume
http://courses.ncsu.edu/e101/lec/040/docs/resume.pdf

Class Schedule
http://www.bae.ncsu.edu/people/faculty/hunt

HW #1: Sec 002 & 003 Changes
Dr. Hunt: Recommends but does not require you to share your resume with a classmate.
Do NOT write a short essay.
YOUR grading rubric will be:
– 15 points resume (10 content, 5 appearance)
– 5 points Personal Profile in e-Pack
HW #2 – Plan of Work

- Due on Monday, September 22, 2008
  - At beginning of class
  - Please review assignment and bring questions on it to class next week.
- Short Summary:
  - Plan classes for your first 4 academic semesters
  - Answer Self-reflection questions
  - Grading Rubric for Sections 002 & 003 the SAME as listed on assignment.

To Be An Engineer

- Problem Solver using Math, Science, and Economics
- Based on Medieval System: Apprentice, Journeymen, Professional (student), (EI), (PE)
- It's a long process, study what you WANT to study.

What is an Engineer?

Engineers in History

(From Encyclopedia Britannica)

Engineers in History

(From United Nations)

Engineers in History

(From the United Nations)
How do we feed all these people?

“...the world’s absolute food supply is almost certainly sufficient for six billion or more people now and in the future”

“yet some 841 million people—nearly one sixth of the world’s population—are chronically malnourished today”

— from UN Report

The Automobile...
- Mechanical Engineers – create the product
- Industrial Engineers – create the product efficiently (assembly line)
- Chemical Engineers – power the product
- Civil Engineers – give the product room to move
Class Exercise: Going to Mars

- What types of engineers are needed to take people from Earth to Mars?

From Planet-Mars.com

Going to Mars

- List Engineer Type
  - EX: Aerospace Engineer

Characteristics of a Good Engineer (work in Teams)

- List Characteristic
  - EX: Open Mind

Characteristics of a Good Engineer

- Communication
- Competence
- Perseverance
- Honesty
- Curiosity
- Creativity
- Leadership
- Dependability
- Organization
- Continuing Education
- Community Involvement
- Logical & Quantitative Thinking

Final Reminders

- Homework #1 due at BEGINNING of class on 9/15
- Homework #2 due at BEGINNING of class on 9/22
  - Preview this week & Bring Questions to next class
- Co-op Sessions this & next week:
  - September 11 – 1pm – 301 Clark Hall
  - September 17 – 3:30pm – 301 Clark Hall