2.007 Section 8

Section Instructor: Prof. Kripa Varanasi
UA: Kevin Plumer
Agenda

• Introductions
• Section Logistics
• Peer Groups & Reviews
• Schedule & Milestones
• Grading and Expectations
Section Logistics

• Lab Duration: 1-4pm
• Meet Promptly at 1pm (quick 10 min meeting)
• One-on-one reviews (10-15 min); Kevin will help on the shop floor
• Lab Notebooks due in my AA’s office every Wednesday by 11 am
• My goal is to maximize your productivity in the lab

We are here to help, but expect you to meet deliverables and milestones
Peer Groups & Reviews

• Peers review your work (important industry practice).
• Could do this at peer-group meetings: present your ideas/analysis to the rest of the group or you can rotate notebooks.
• Want to promote interactions, collaborations, team work (very important in industry).
• Mark up your colleague's notebook with critical reviews and sign your name (used towards your grade).
• Acknowledge your peers.
• Verbatim copying will not be tolerated.

Collaboration & team work will significantly enhance the quality of your product.
Schedule and Milestones

• Schedules & Milestones rule in industry
  – E.g., toll-gate process
• Project fail due to poor planning – *Please stick to schedule*

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<th>Activity</th>
<th>Month</th>
<th>Feb</th>
<th>March</th>
<th>April</th>
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<tbody>
<tr>
<td>1 Explore kit &amp; contest</td>
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<td>2 Build sample car &amp; preliminary strategy</td>
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<td>3 Design Concept</td>
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<td>10 Demonstration of integrated machine</td>
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<td>13 Demonstration of improved machine</td>
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Tasks 1-4 will have a big impact on following task – pay lots of attention
Linear Schedule; Schedules in industry are lot more complicated
Grading and Expectations

• Grading: Lab sections: 50%
• Lab Notebooks
  – Concise summary of analysis, experiments, etc. (within 4-6 pages)
  – Quantitative justification
  – Pictures/sketches are highly encouraged
• e.g., Strategy selection
  – If you chose can crushing, I’ll look for:
    • How does this play into your overall scoring strategy
    • What alternate methods were explored
    • Physics-based analysis behind your design
    • Will it satisfy constraints (eg, geometry, energy, time, etc)
    • Any preliminary proof-of-concept experiments

Quality of your work is important – not Quantity
This week’s review

• Kit Exploration Deliverable
  – Summarize initial directions and conclusions

• Strategy Deliverable
  – Summarize three strategies

• Car Deliverable
  – Drawing of your car design
This Week’s Activities

• Finalize your Strategy
  – Estimate what your score would be
  – Analysis-backed design (is the design feasible, time, energy constraints, etc.)

• Car Manufacture
  – Think of car as a platform for other modules (where will they go → center of gravity, weight, etc..)

• CAD component

• Today in the lab build a simple car
HAVE FUN !!!