Course Overview

• Follow-on to first term work
  – Complete systems development, systems integration
    → Finish systems testing
    → Flight tests

• Plan parallel effort on research projects by small groups
  – Projects that integrate back into the overall design

• Incorporate “lessons learned”
  – Students, faculty, staff
Goals For This Term

• Complete project goals

• Professional experience in systems development, systems engineering, systems test

• Increased lateral communication between teams and team members

• Greater student role for planning and execution
Spring Course Framework

• Combination of:
  – “16.62x-like” tasks and tests by sub-groups
    • 2-3 person teams, fast-moving tasks
    • ½ semester timeline
    • Progress documented in memos to teammates (~ every 3 weeks)
  – “Capstone-like” integrated tests and analyses
    • Combined efforts of multiple teams

• Common to both:
  – Pre-planning, documented procedures, post-test write-ups
    • Designed to be memos to other students
  – Post-test analysis memos of the four major tests will count towards the CIM grade.
Class Meeting Format

• Thursday classes:
  – Individual student to be designated to brief top-level project status to project team, faculty, and staff
    • Technical summary briefing giving overall progress and plans
      – “Stop light” status - green, orange, red
      – Focus on major issues: possible impacts, resolutions, and overall schedule progress
    • 45 minutes max ➔ then discuss next steps
  – Lead role will be pre-assigned on rotating basis
  – Responsibilities of others: provide subsystem status internal coordination, assist as needed

• **Goal**: Increased “horizontal communication”

• **Note**: These shorter in class presentations do not count towards the CIM grade, but student participation/contributions to all class meetings will be graded (scale of 1 - 3)
Class Meeting Format

• Tuesday class - focus on the sub-group projects
  – **Goal**: have sub-groups provide periodic information summaries to the overall team
    • Not a designated CI activity, but presentation should be clear
    • Technical summary briefing giving subsystem progress and plans
      – “Stop light” status - green, orange, red
      – Focus on major issues: possible impacts, resolutions, and overall schedule progress
  – 10-15 min for each sub-group
Major Deliverables

• Lab notebook (~ every 2 weeks) [not CI]

• Subsystem memos (2-5 pages every 3 weeks) [CI]
  – group effort, with annotations to identify the author

• Test plans [not CI] and post-test reports [CI]
  – group effort, with annotations to identify the author

• Final oral presentation [CI]
  – Discuss flight results & overview of subsystems results

• Final report: Operating and software manual [CI]
  – group effort, with annotations to identify the author

• Flying prototype
  – All performance predictions verified/validated/documentated
Course Grade

• Course credit split: 25 % CI, 75% technical

• CI:
  – Sub-group memos (3): 40%
  – Final oral presentation: 20%
  – Reports (Post-analysis (4) and final): 40%

• Technical:
  – Notebooks: 20%
  – In-class participation: 20%
  – Sub-group memos (3): 20%
  – Final oral presentation: 15%
  – Reports (Post-analysis (4) and final): 25%
# Faculty and Staff Support

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<thead>
<tr>
<th>Name</th>
<th>Email</th>
<th>Phone</th>
<th>Extension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof Jon How</td>
<td><a href="mailto:jhow@mit.edu">jhow@mit.edu</a></td>
<td>x3-3267</td>
<td>33-328</td>
</tr>
<tr>
<td>Prof Mark Drela</td>
<td><a href="mailto:drela@mit.edu">drela@mit.edu</a></td>
<td>x3-0067</td>
<td>37-475</td>
</tr>
<tr>
<td>Peter Young</td>
<td><a href="mailto:pwyoung@mit.edu">pwyoung@mit.edu</a></td>
<td>x3-5340</td>
<td>33-240</td>
</tr>
<tr>
<td>Jennifer Craig</td>
<td><a href="mailto:jcraig@mit.edu">jcraig@mit.edu</a></td>
<td>x2-3841</td>
<td>37-441</td>
</tr>
<tr>
<td>Dave Robertson</td>
<td><a href="mailto:droberts@mit.edu">droberts@mit.edu</a></td>
<td>x3-7216</td>
<td>33-017A</td>
</tr>
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