



Spring 2004

## Systems Problem 9

### Build I & II

# Propulsion, Payload, Operations Validation and System Acceptance

Handed out:	Thursday, 15 April 2004
Answers due:	Build I Report: Thursday, 22 April 2004, 5:00 p.m. System Acceptance Presentation: Friday, 23 April 2004 Build II Report: Thursday 29 April 2004, 5:00 p.m.

### Objectives

At the end of this systems problem you should be able to:

- Implement and operate a system that you have designed and conceived completing the CDIO process
- Manage, record and report against planned manufacturing and testing plans and procedures.

### Discussion

Time to build! You have now completed the conceptualization and design phases of your competition system. Now it is time to implement your designs. You will have two (2) weeks to build and test your aircraft and competition procedures. You will report weekly on your progress. And you will participate in a validation and system acceptance review.

### Assignment

This is a group assignment. Build and test your aircraft and competition system. A record of your building and testing process and progress is required. Two (2) weekly reports are due for this assignment. The first is due 5 p.m. Thursday 22 April 2004 and the second is due 5 p.m. Thursday 29 April 2004. A *pro forma* for the weekly report contents will be provided in Microsoft Word format. ***Your weekly reports must be submitted in Microsoft Word format.*** A validation and system acceptance review is also required. A *pro forma* for the system acceptance review will be provided in Microsoft PowerPoint format. Validation and system acceptance presentations will take place on Friday 23 April 2004. Sign up times for the validation and system acceptance review will be posted.

### Deliverables

**Build Reports:** A brief outline of the build report *pro forma* follows below:

- I. Build: goals, manufacturing procedures, schedule, time estimates and actuals, status
- II. Test: goals, procedures, schedule, time estimates and actuals, status
- III. Training: goals, procedures, schedule, time estimates and actuals, status
- IV. System performance against predicted goals.

Appendix

- A. Build Log
- B. Test Log

**Validation and System Acceptance Review:** Three or four slides are required for the system acceptance review. You are expected to present the predicted performance of your system, the configuration of your system (product, people, procedures). You must present a three view of your final aircraft design. You must document and justify any production changes that differ from your initial design.

Original: CPColeman, Spring 2001  
Modified: GBarter, CEJohnson, PWYoung, CPColeman, Spring 2002  
CPColeman, OdeWeck, PWYoung, JPixley, Spring 2003  
CPColeman, Spring 2004

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<b>Group Number</b>	<b>Group Name</b>
<b>Name</b>	<b>Time Spent</b>