

ASEN 5007 Homework Assignment #4

Chapters 8–10 of Notes

Due **Tu Sep 29**, 2008 for on-campus students — **Tu Oct 6** for CAETE students

Please don't forget to attach this cover sheet to your returned homework and write your name(s) on it

This three-chapter HW is long (6 exercises, several involving programming). But extra time is given (1 1/2 weeks instead of 1). Returning it by Tu Sep 30 will allow graded HWs to be returned by Th Oct 2, well in time for the Part I review on Oct 7. The following HW, on Chapters 11,12 and 14 of Part II will be due Oct 16 (week after first midterm).

Exercises:

8.2

9.1

9.5

9.6

10.2

10.6 (not assigned before, so you are guinea pigs)

Grading weights: given at the start of each Exercise.

Exercise 9.6 was included in 2004, expanded from a ASEN Ph.D Preliminary Exam question given in 1998 and 2001. Most of the work here is understanding what is being asked. If you need clarification, please contact instructor in person or by email.

Exercises 8.2, 9.1 and 10.2 require programming. For 9.5 it is optional but it will speed up solving the symbolic systems.

For 10.2, use *Mathematica* if possible. Program *CondenseLastFreedom* may be downloaded from the web and used as Notebook template. Reprogramming in another CAS (e.g. MathCAD or Matlab Symbolic Toolbox) is allowed but involves extra work.

Exercise 10.6 could be done by hand, Mathematica, MathCAD or Matlab, since it is numeric. Note: additional partial answers placed in the Exercise statement (page 10–12) on 9/24/09.

First Midterm Exam Announcement

Midterm Exam #1 will be given on **Thursday October 8** at class time to on-campus students. *Exam is open book*: posted lecture notes and homeworks are allowed. Review class on Tuesday October 6.

Exam covers selected material from Part I:

Ch 1: none. Ch 2: all. Ch 3: §3.1 through §3.4, and §3.6.1. Ch 4: none. Ch 5: §5.1–§5.2. Ch 6: skim for terminology but no specific questions on it. Ch 7: all. Ch 8–9: both but skip all sections marked with *. Ch 10: only §10.2.

CAETE students have two options: (1) take it on campus, or (2) remotely through an EO. If (1) please contact instructor as to how the on campus exam will be proctored and arrange time to take it (one obvious option is to do it at the same time as the on-campus students). If (2), exams will be given to the CAETE office by Oct 5 to email to each EO, with the due mail back date placed on the CAETE exam cover sheet.