

**Math 425 / AMCS 525
Assignment 5**

**Dr. DeTurck
Due Tuesday, February 23, 2016**

Topics for this week — Duhamel's principle and other techniques for inhomogeneous problems
Solutions on finite domains - separated solutions Boundary conditions – eigenvalue (Sturm-Liouville)
problems for ODEs

Fifth Homework Assignment - due Tuesday, February 23

Reading: Read sections 3.2, 3.3, 3.4, 4.1 and 4.2 of the text

Be prepared to discuss the following problems in class:

- Page 66 (page 64 in the first ed), problems 1, 3, 9
- Page 70 (page 68 in the first ed), problem 1
- Page 79 (page 76 in the first ed), problems 1, 4, 10
- Page 89 (page 87 in the first ed), problems 2, 3
- Page 92 (page 90 in the first ed), problem 1

Write up solutions of the following to hand in:

- Page 66 (page 64 in the first ed), problems 4, 10
- Page 70 (page 68 in the first ed), problem 2
- Page 79 (page 76 in the first ed), problems 2, 5, 13
- Page 89 (page 87 in the first ed), problems 4, 6
- Page 92 (page 90 in the first ed), problem 2