MATHEMATICS 647, SPRING 2016

Homework:

Please turn in all your homework together in one piece and staple it, this is much better for your grader.

Homework will be collected on Fridays and each homework will be worth 20 points. Homework is a major part of the learning process in Mathematics. It is essential that the students work on the problems regularly. It is your responsibility to seek help on all problems that you cannot do. Help is available during office hours or by appointment.

No late homework will be accepted.

- **Homework 1-due Friday, January 22**
  Review of prerequisites Hw

- **Homework 2-due Friday, January 29**
  1.1, 1.10, 1.13, 1.17, 1.19, 2.2.2, 2.2.3

- **Homework 3-due Friday, February 5**
  2.2.17, 2.2.20, 2.3.1, 2.3.3, 2.4.2, 2.4.3
  Hint: For problem 2.3.3 read the discussion of critical time for the onset of the shock on page 36-37 of the book.

- **Homework 4-due Monday, February 15**
  3.1.2, 3.2,1 b), d), g), 3.2.2 b), e), 3.2.6, 3.2.25, 3.2.27, 3.2.32, 3.2.47

- **Homework 5-due Monday, February 29**
  4.1.1, 4.1.4, 4.1.7, 4.2.3 c), d), 4.2.11

- **Homework 6-due Monday, March 7**
  4.3.3, 4.3.6, 4.3.12 a), b), 4.3.15, 4.3.26

- **Homework 7 - due Monday, April 4**
  7.1.1 a),c),d), 7.1.2 a),c),d), 7.2.1, 7.2.3, 7.2.6, 7.3.1 a),b), 7.3.7, 7.3.14, 7.3.15 a),b)

- **Homework 8 - due Monday, April 25**
  8.1.17, 8.1.18, 8.1.19, 8.5.10, 8.5.12, 8.5.17 (hint: use the derivation of soliton solution for the KdV equation on page 333-334)