

# me263 – Fluids and Heat Transfer

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## Midterm Test – Review

The test will be:

- Duration: 1 hour and 50 minutes
- Open Notes, Calculator, Formula Sheet
- An individual Effort (no 'teamwork')
- The style and focus of the questions will be similar to the assignment questions

The following assignments and important labs have had solutions posted.

That means their content **WILL POSSIBLY BE ON THE MIDTERM** (with exceptions notes).

### Assignment 1

- Class I Series Pipelines: Determine the magnitude of the fluid's motive influence)

### Assignment 2

- Class II Flow Systems: Find flowrate

### Assignment 3

- Class III Flow Systems: Find inlet and discharge diameters, select an appropriate pump and ensure that the inlet to the pump will work properly using NPSH
- Parallel Flow Systems and Hardy Cross: 3 and more parallel paths – **NOT ON MIDTERM**

### Lab 2

- Parallel Flow analysis: 2 pipe parallel flow systems – **NOT ON MIDTERM**

### Assignment 4

- Ordinary Heat Transfer: Finding R, calculating heat transfer rate

### Assignment 5

- Finned Cooling/Heating
- Selecting an appropriate heat sink
- Special Case heat transfer (pipes in dirt, etc.)

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Solutions have **not** been posted for the following.

That means questions like the following will **NOT BE ON THE MIDTERM**.

### Assignment 6

- Finding the convective heat transfer coefficient 'h'
- Transient heating and cooling

### Assignment 7

- Designing a heat sink and heat transfer flow system