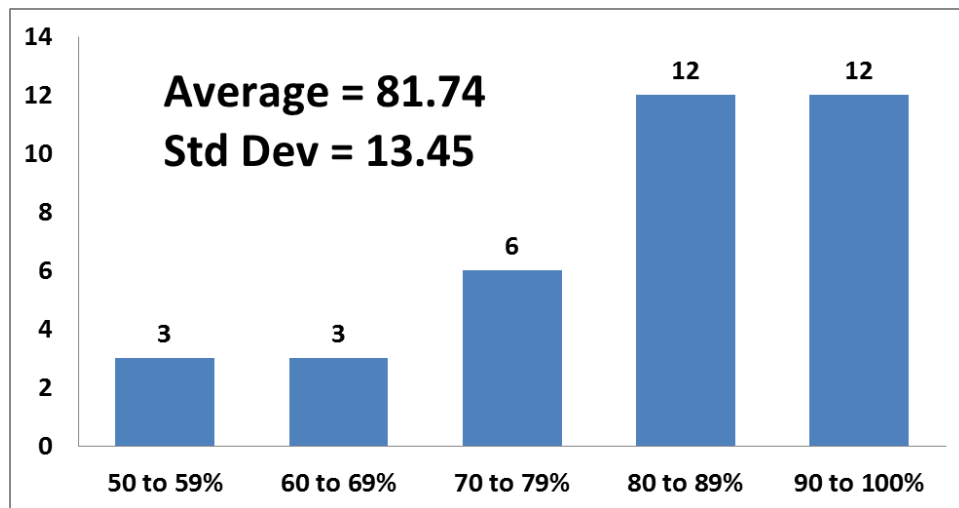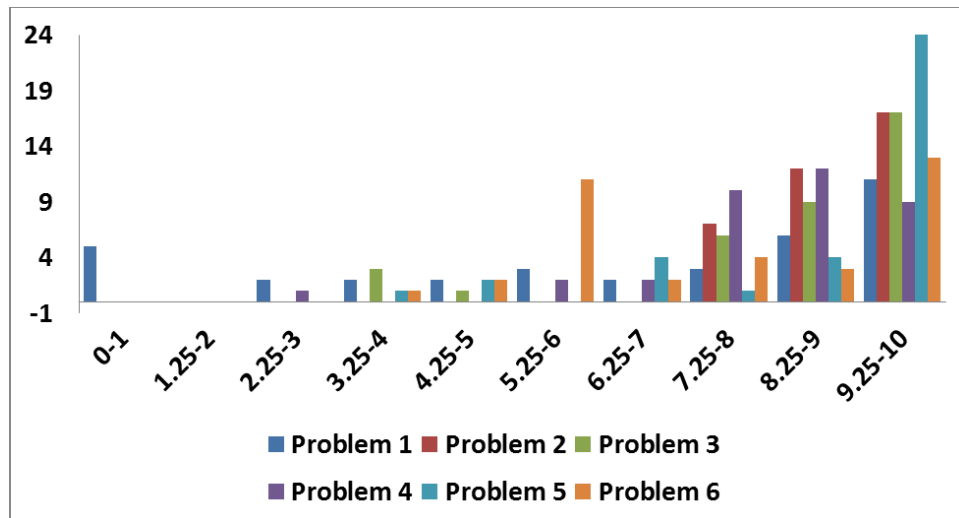# FINAL EXAM REPORT

	Number of Students
Total	36
Submitted	36
Not Submitted	0

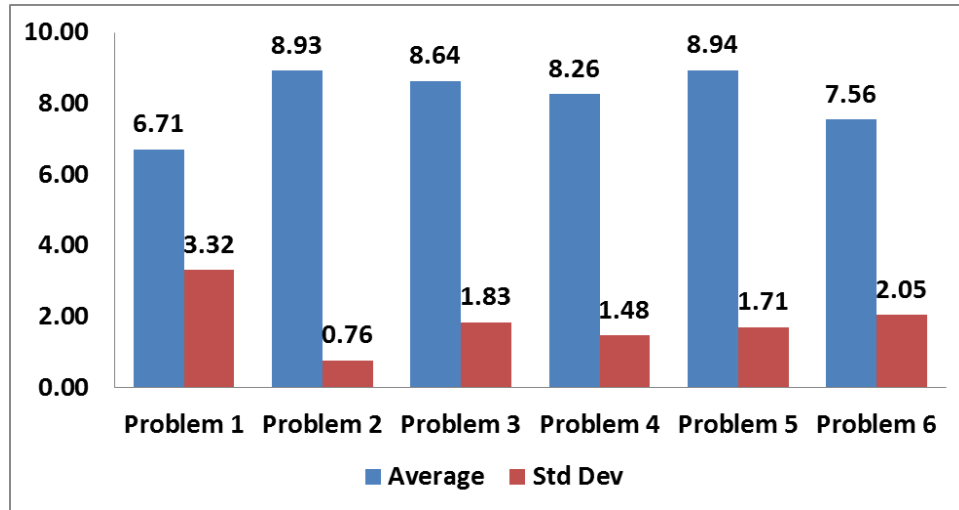## GRADE DISTRIBUTION

Average = 81.74
Std Dev = 13.45

DISTRIBUTION PER PROBLEM
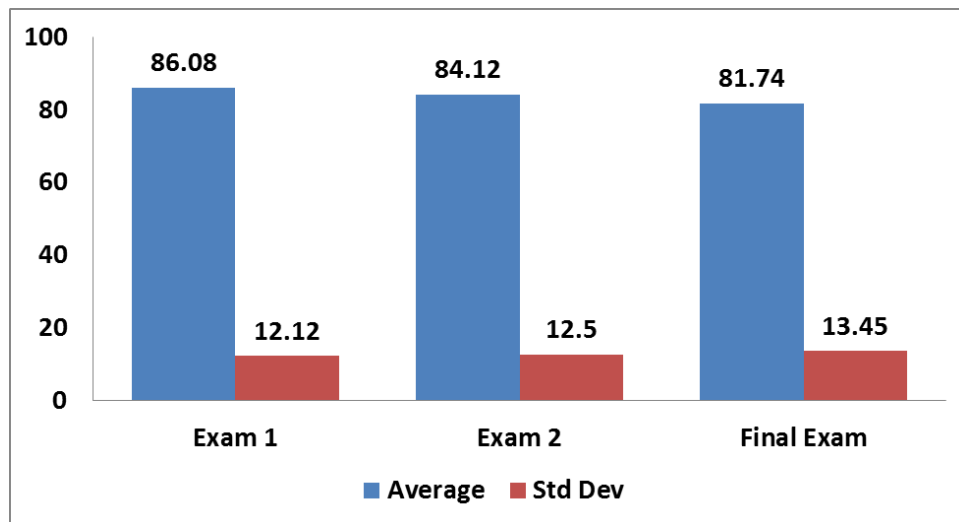
INDIVIDUAL PROBLEM BREAKDOWN

	Problem1	Problem 2	Problem3	Problem4	Problem5	Problem6	Total
Average	6.71	8.93	8.64	8.26	8.94	7.56	81.74
Std Dev	3.32	0.76	1.83	1.48	1.71	2.05	13.45

COMPARISON OF EXAMS IN FALL 2014

COMPARISON WITH LAST 4 YEARS
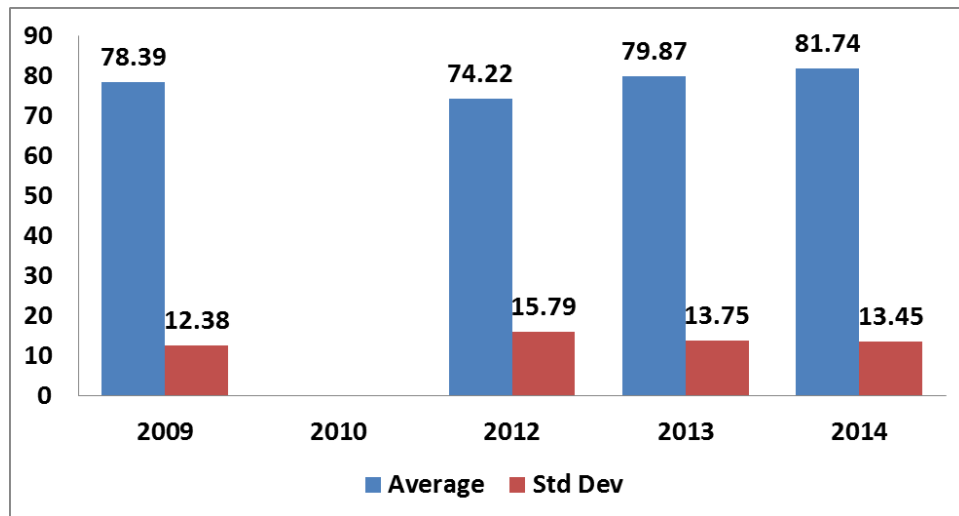
SPECIAL COMMENTS

Problem 1

- A lot of students did not figure out the problem is about CV. Mostly they tried to solve with Cd and Cl coefficient.
- Some of students did not consider flux for inlet in the momentum equation.

Problem 2

- Some students did not use BCs to show that v=0
- Some students did not use v=0 and/or gy=0 for y-momentum equation
- Some students did not substitute correctly for gx=-g
- A few students did not use correct boundary conditions to find C1 and C2

Problem 3

- Some students did not set up the correct Bernoulli equation to solve for the pipe velocity
- Some students did not use the correct transitional Reynolds number (2000 or 2300) to determine if flow was laminar or turbulent resulting in the incorrect friction factor

Problem 4

- A lot of students did not figure out what the problem is for in (a). They used blade radius in the local Reynolds number definition instead of chord length.
- Many students failed to convert rpm to rad/s unit.
- Many students used critical Reynolds for the turbulent flow given in (a) to solve the problem (b).
- Many students did not notice Rex is a function of U when they solve problem (c). So, they did not derive the equation correctly.

Problem 5

- A few students did not use correct equation for area
- A few students did not realize that D=W
- Some students did not find model velocity by equating Re for model and prototype
- Some students did not equate CD values for model and prototype to find the total weight

Problem 6

- A few students did not realize they need to use Bernoulli equation to find pressure at point 2
- Many students did not find velocity components by differentiating the velocity potential function
- Some students did not calculate the total velocity using the u and v velocity components