Exam 3 Report

12/7/2018

1. Summary

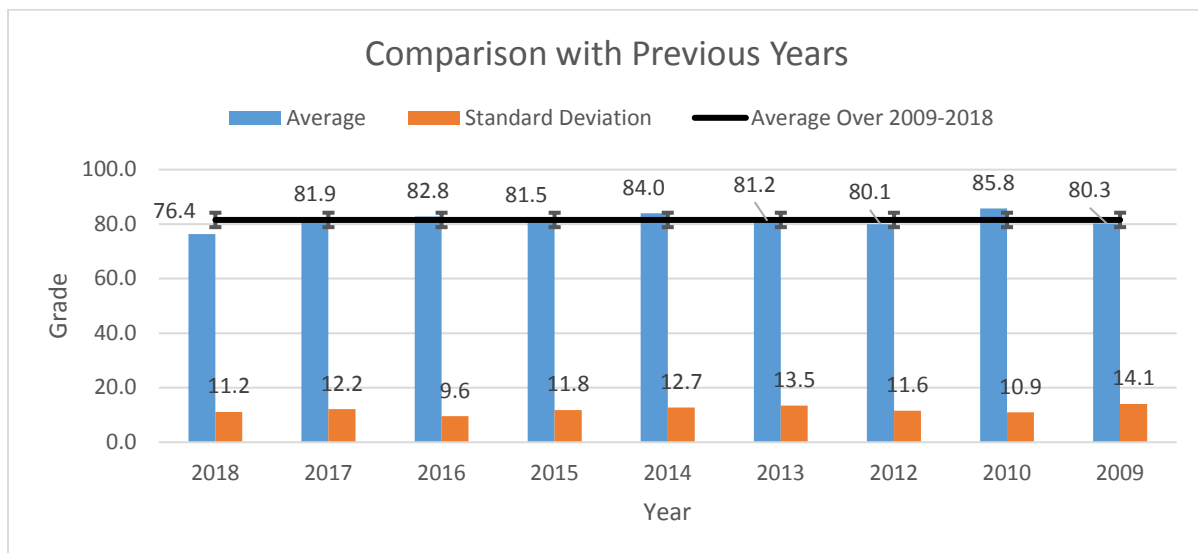|	
Total number of students	12
Attended	12
Missed	0
Number of problems	5
Average grade	76.2
Standard deviation of grades	11.2

2. Grade distribution
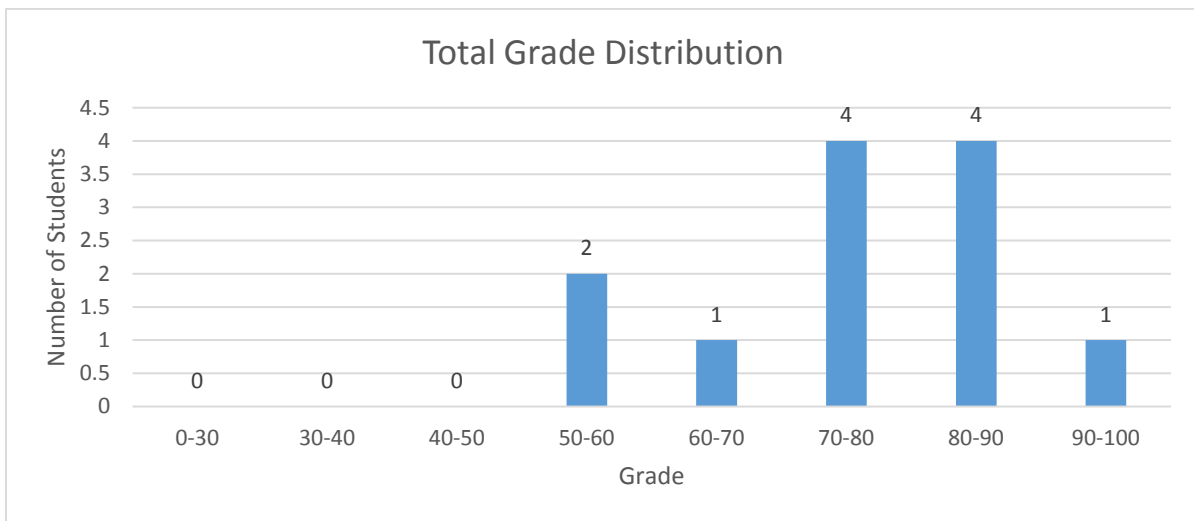
3. Comparison with past years

4. Individual problem breakdown

Individual scores per problem

Problem	Average	Standard Deviation
1	7.98	1.44
2	7.79	2.39
3	7.56	1.56
4	7.42	1.62
5	7.46	1.98

5. Grade distribution per problem

Grade distribution per problem

Grade	P1	P2	P3	P4	P5
0-3	0	1	0	0	1
3-4	0	0	1	0	0
4-5	0	0	0	1	0
5-6	2	1	0	3	2
6-7	1	1	3	3	2
7-8	4	1	4	0	3
8-9	2	6	3	3	2
9-10	3	2	1	2	2
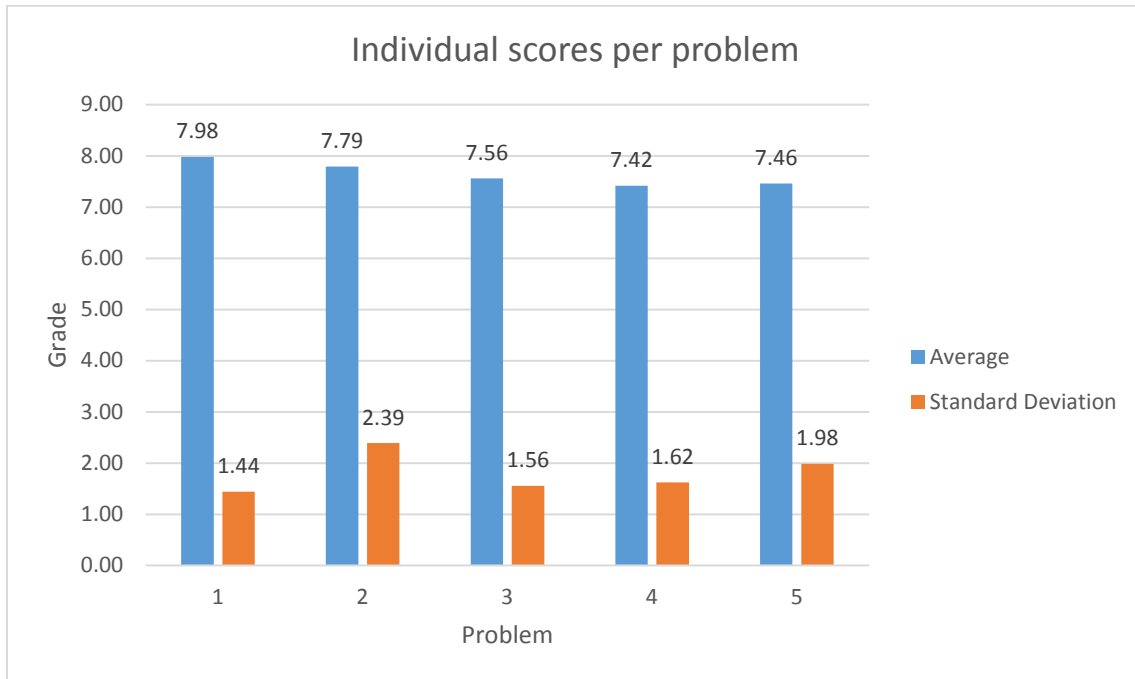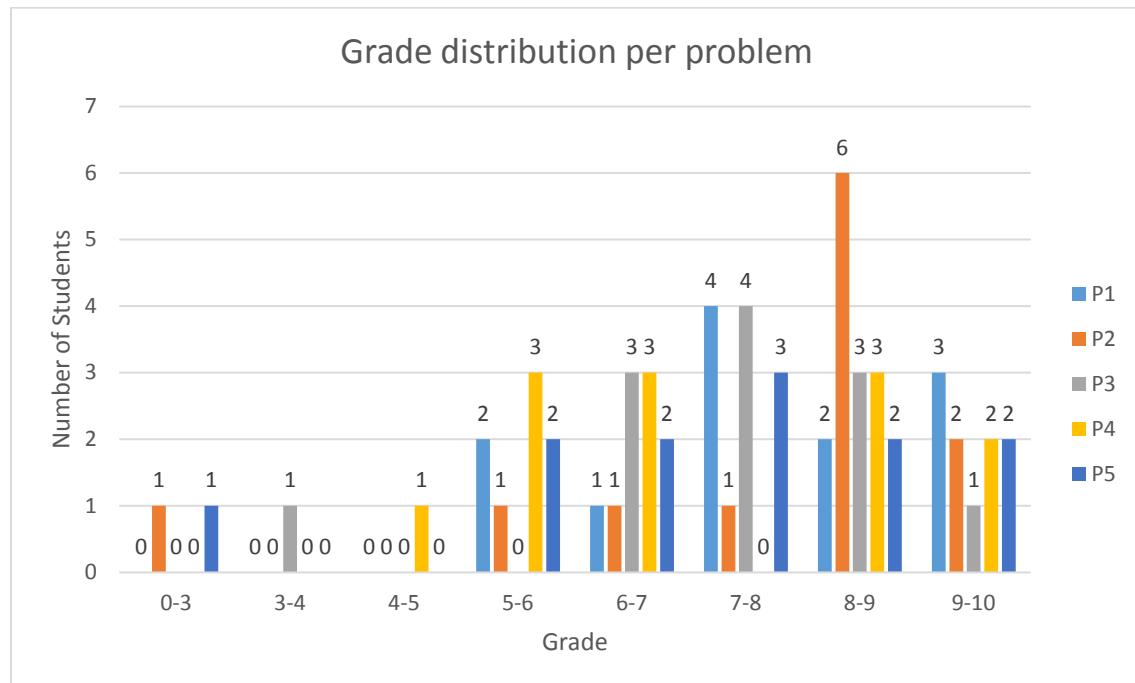
6. <u>Comments</u>

- Some students did not complete problems due to difficulty and/or time constraint

PROBLEM 1

- Some student did not calculate the radius or the angle
- Some student did not use the Bernoulli equation for pressure calculation

PROBLEM 2

- Many student did not know the definition of friction velocity
- Some student did not calculate the local Reynolds number correctly
- Some student did not use the correct equations for the friction factor calculation

PROBLEM 3

- Few student made wrong assumption when simplifying the N-S equation
- Many student had difficulty solving the simplified N-S equation
- Some students did not apply correct B.C.'s

Problem 4
- Many students had difficulty applying the energy equation for non-uniform velocity profile
- Some students did not know they needed to use CV method for drag calculation

Problem 5
- Some students made mistakes when calculating the PI terms
- Some student did not calculate moment about point 1 to calculate drag
- Many student struggled to setup and solve system of equation for the velocity calculation (I suspect this is due to the time constraint)