

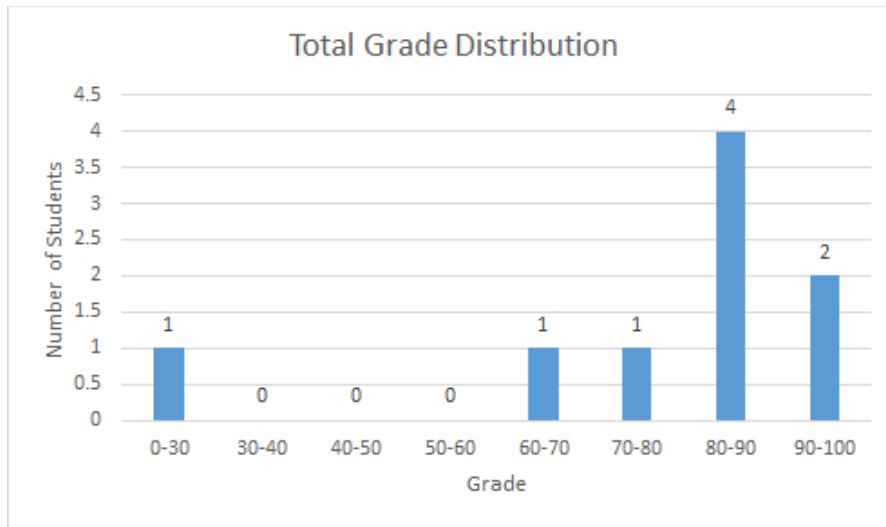
# Final Exam Report

12/15/2020

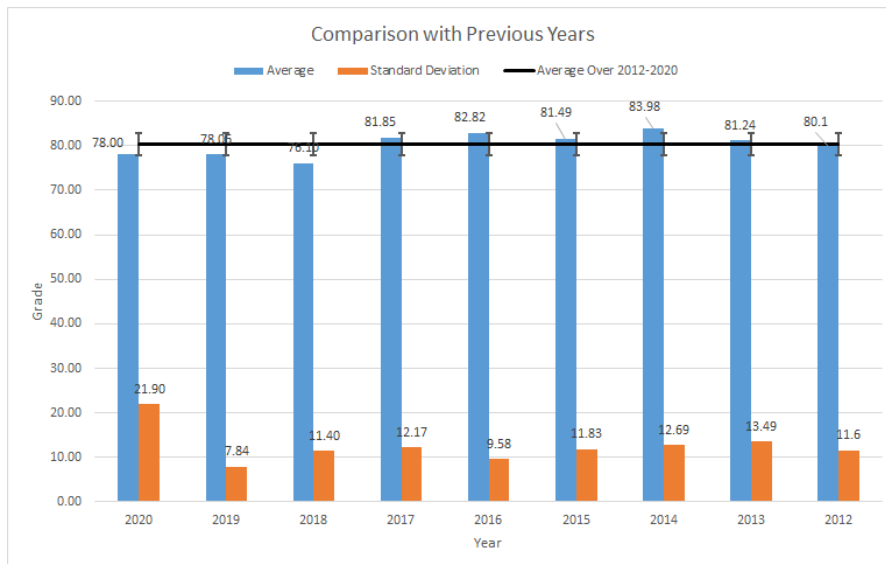
## 1. Summary

Total number of students	10
Attended	9
Missed	1
Number of problems	5
Average grade	78.00
Standard deviation of grades	21.90

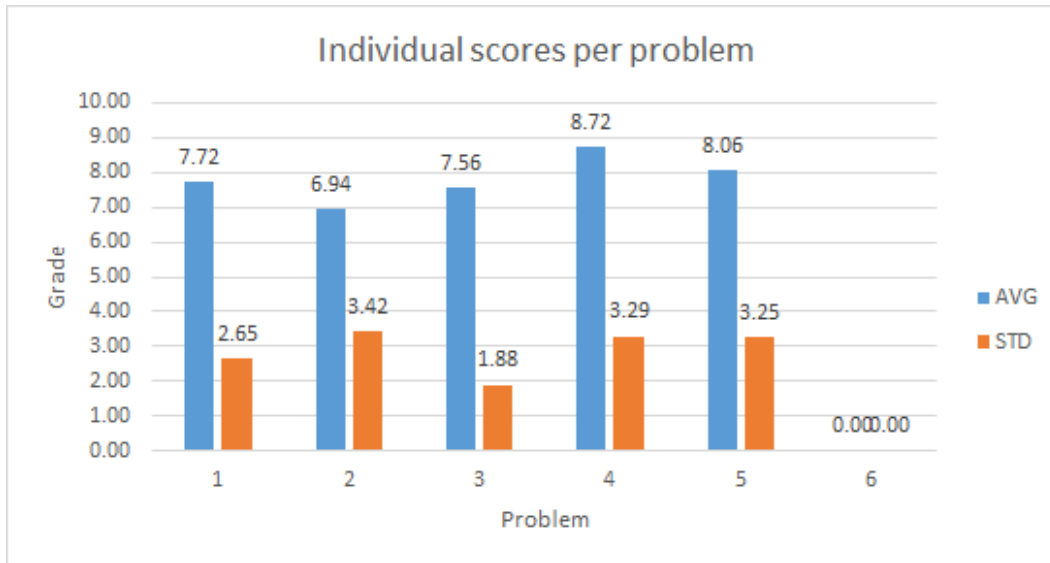
## 2. Grade distribution



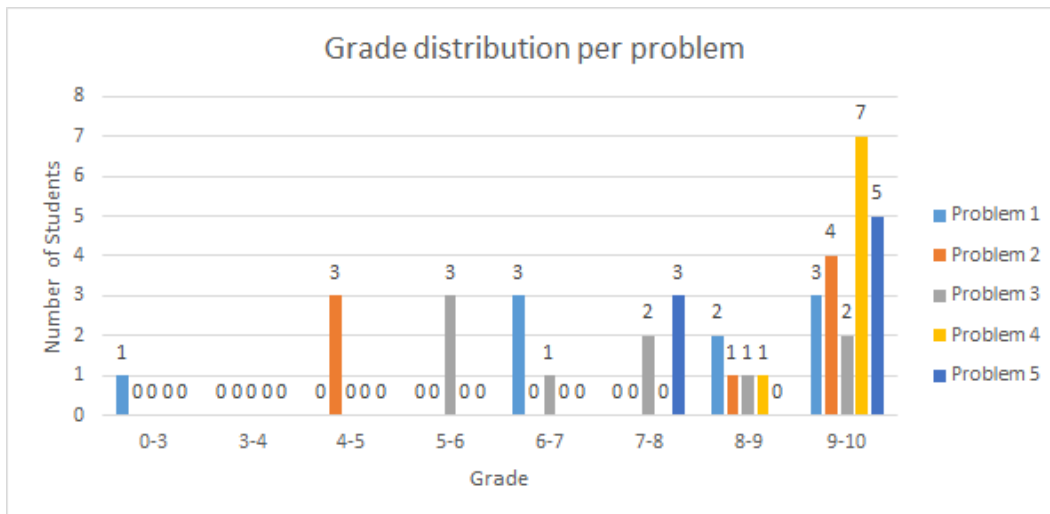
## 3. Comparison with past years



**4. Individual problem breakdown**



**5. Grade distribution per problem**



## 6. Comments

### PROBLEM 1

- Several students could not solve the momentum equation correctly.
- some of students made minor mistake when they calculate Drag and lift force
- It appears to be shown that one student do not know how to approach to solve this type of problem

### PROBLEM 2

- Some of student made mistake when they derived Non-dimensional variable
- One student did not solve this 2<sup>nd</sup> problem
- One student did not answer for sub questions of (b) and (c) and another student didn't answer for sub question of (a)
- Some of students used the radius of golf ball to calculate moment of it which is wrong.

### PROBLEM 3

- Several students could not derive the velocity of pipe A correctly
- Some of students derived wrong equation for sub question of (b)
- Some of student could not use moody diagram correctly to find the velocity of pipe
- Three students missed almost entire problem and did not answer for each sub questions clearly

### PROBLEM 4

- Most students solved this problem well except a few people
- One student didn't solve this problem
- One student used wrong constant to calculate shear stress
- One student answered friction coefficient only for sub question of (c) and didn't answer it with Force unit

### PROBLEM 5

- Some of student calculate  $v_r$  only. But it should be  $\sqrt{v_r^2 + v_\theta^2}$
- Also, calculated wring pressure at point 'A' because of wrong velocity at that point
- One student didn't solve this problem