

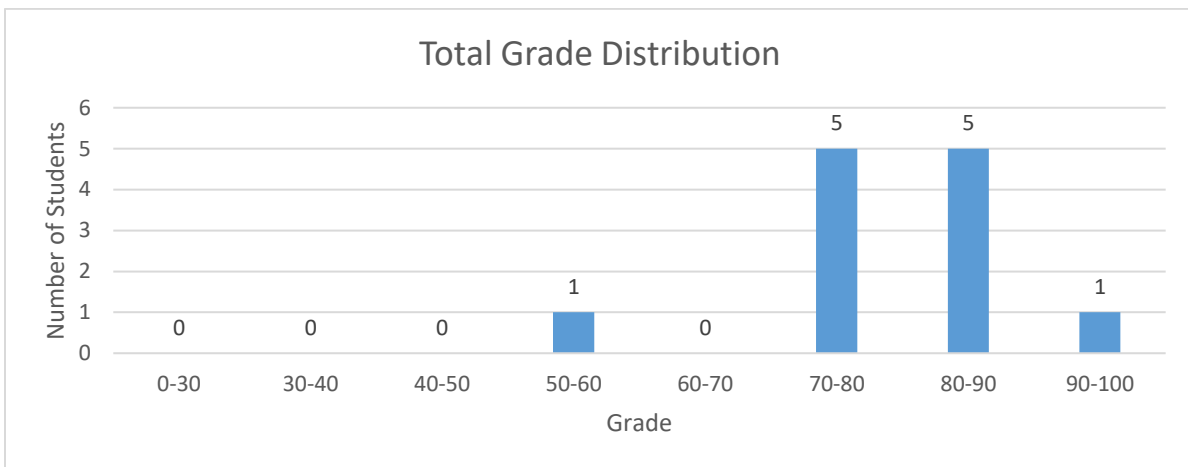
Exam 2 Report

11/20/2019

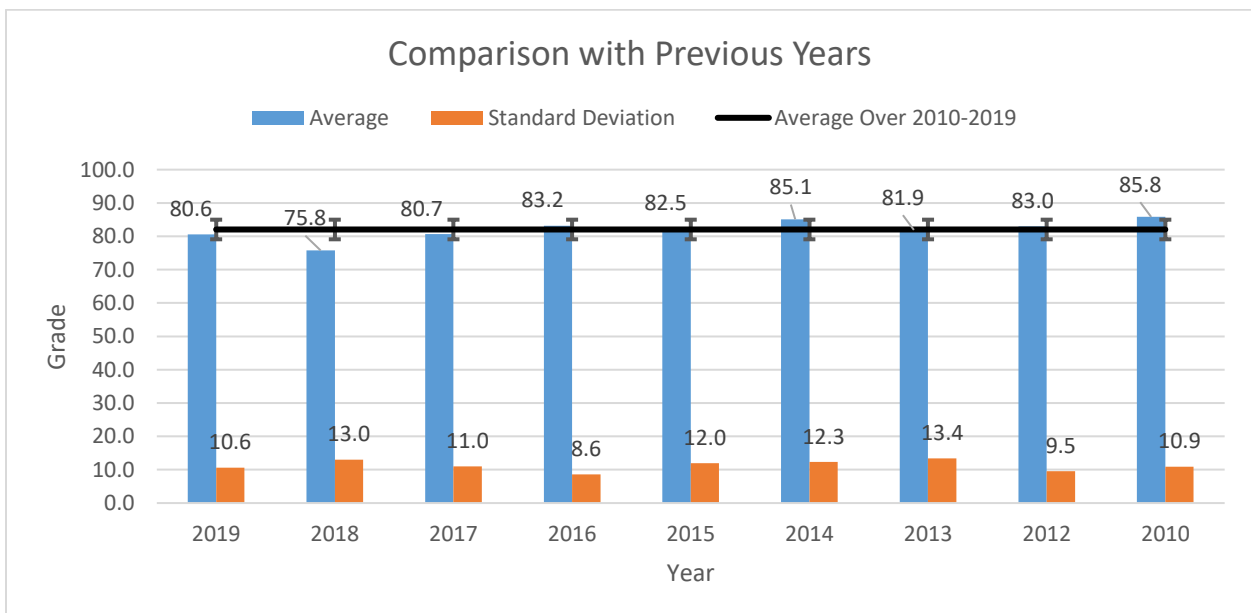
1. Summary

Total number of students	12
Attended	12
Missed	0
Number of problems	3
Average grade	80.56
Standard deviation of grades	10.62

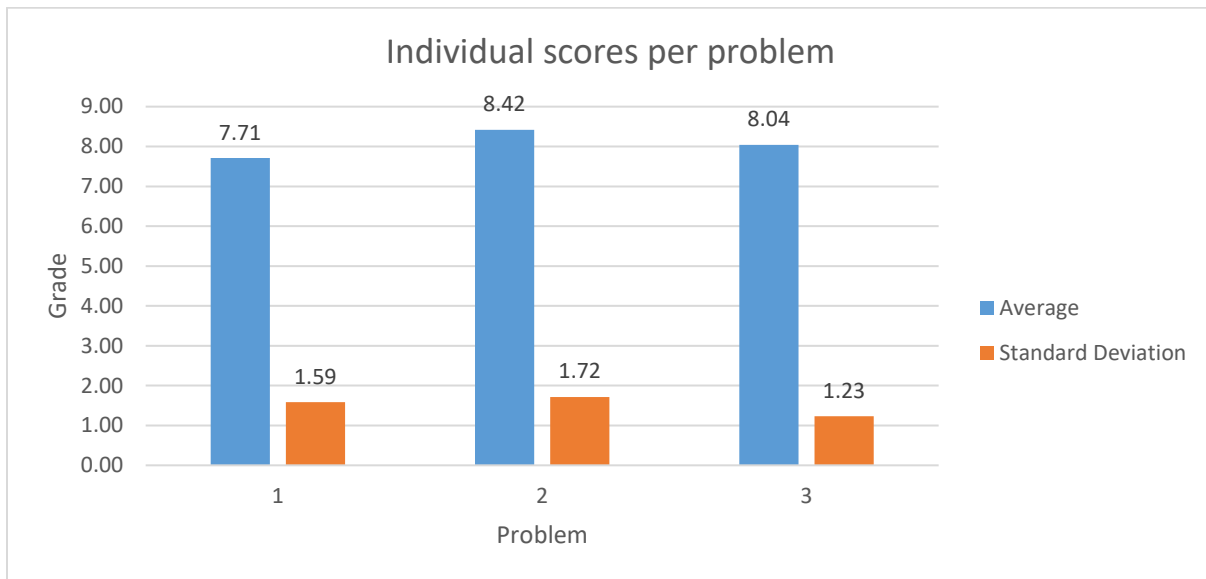
2. Grade distribution



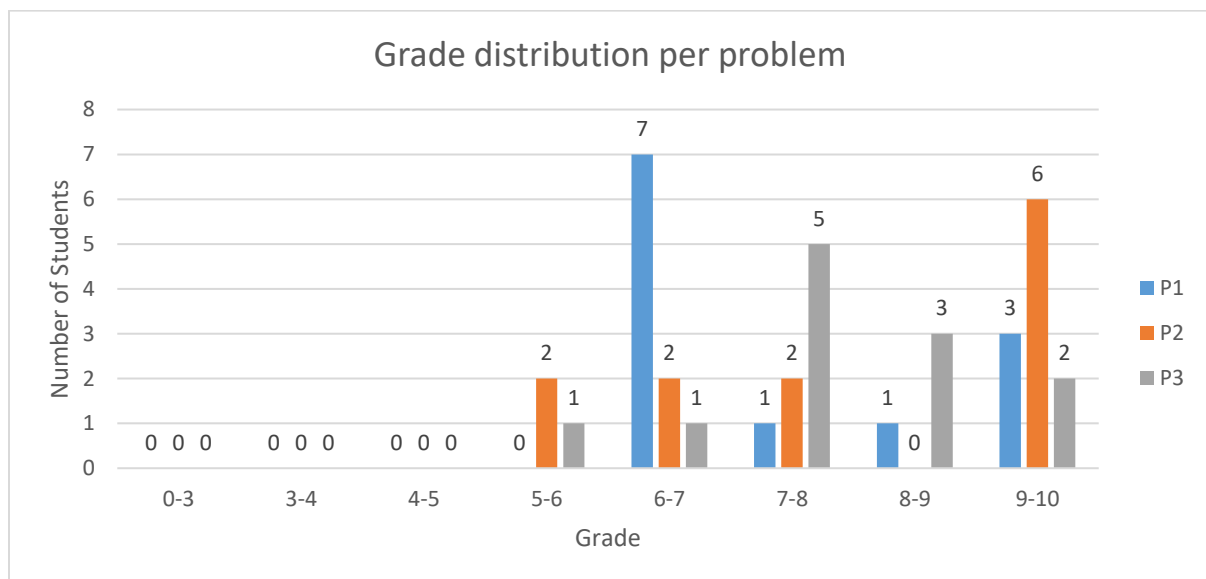
3. Comparison with past years



4. Individual problem breakdown



5. Grade distribution per problem



6. Comments

PROBLEM 1

- Some of students made mistake when they integrate velocity profile.
- Several students could not cancel out each terms correctly in NS equation.
- Although θ Momentum Equation need to be used, some of students used other direction's momentum equation.
- One student indicated two answers, but one of them was wrong.

PROBLEM 2

- One student used wrong unit for frequency.
- Some of students used inappropriate Non-dimensional values when they calculate model scale's velocity.
- It seems like that some of students do not know how to use Buckingham Pi theorem correctly.

PROBLEM 3

- Several students could not consider the Dynamic pressure term in Energy equation.
- Some of students used wrong sign for Head provided by turbine.
- Several students did not consider the minor losses at Entrance and Valve. Also some of students didn't consider the turbine efficiency.
- One student thought that V_2 value is fixed in Energy equation.
- Some of students multiplied turbine efficiency to the turbine head. But the turbine efficiency need to be considered as denominator. $(h_t \eta \Rightarrow \frac{h_t}{\eta})$