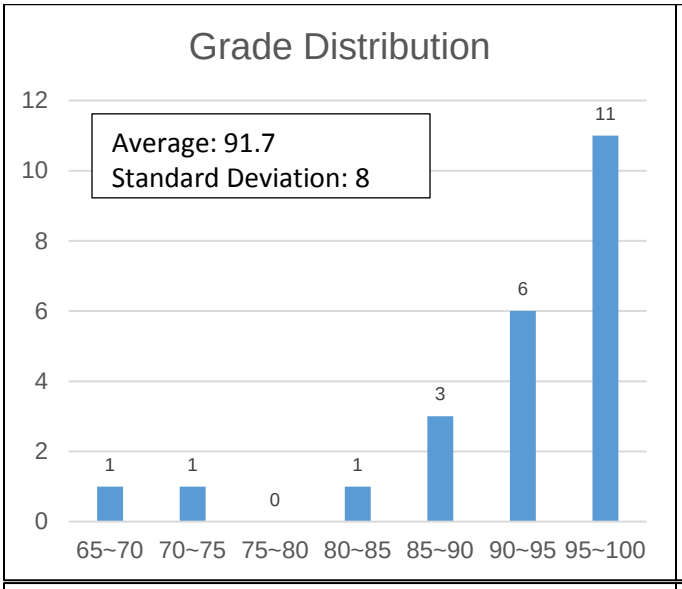
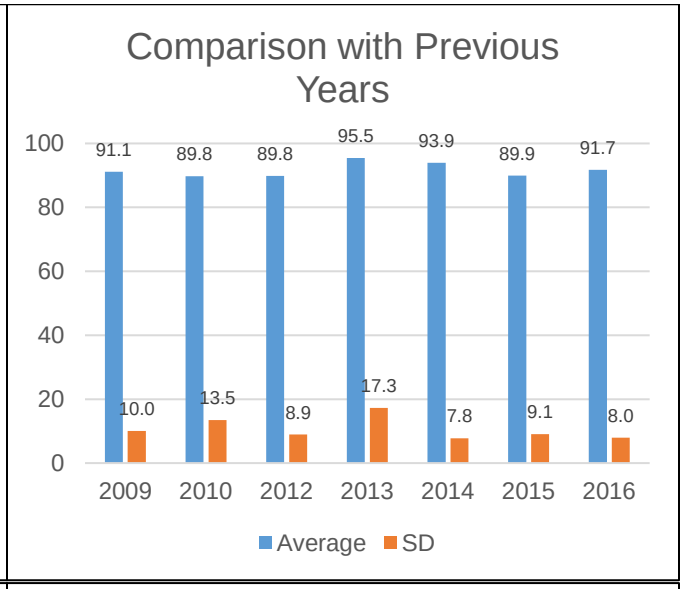
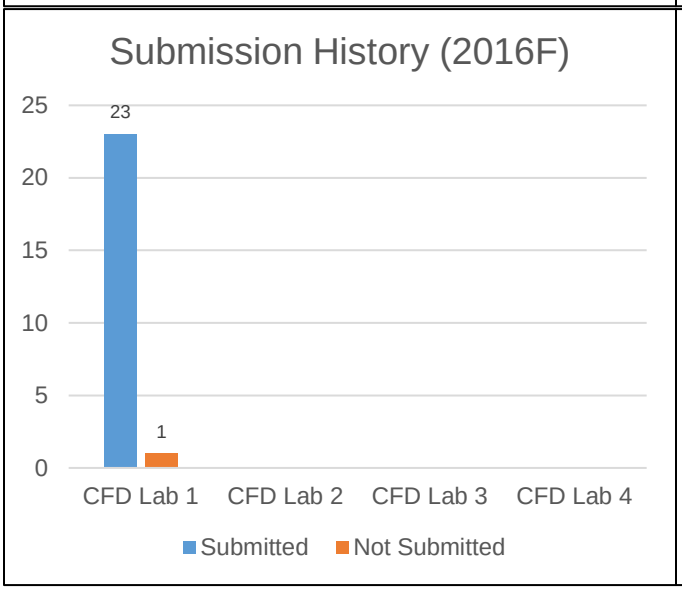
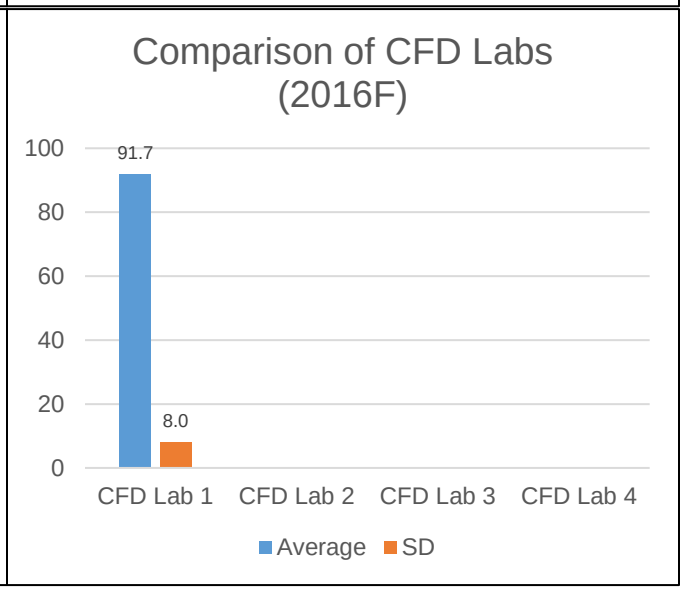
REPORT OF CFD LAB 1

	Number of Students
Total	24
Submitted	23
Not Submitted	1









1. Common Mistakes

a. **A couple of students didn't follow the report format**

b. **For the last question of problem 9.2, few students compared % error with the uncertainty which is divided by nothing (refer the formula inside the cells in the excel file). To compare the error and uncertainty, the denominator should be matched.**

c. **For problem 9.3, many students answered that the grid sets containing grid #8 is more sensitive respect to the refinement ratio. Grid sets containing grid #4 is more sensitive because the uncertainty change is larger as grid refinement ratio increases.**

d. **CFD's possible source of error should be more discussed by referring CFD lecture PPT. Modelling & Numerical errors are main parts need to be discussed.**

2. Feedback

a. **Positive**
   i. **First experience to use ANSYS**
   ii. **Better understanding of CFD process**
   iii. **Visual representation & reinforcement of what he/she learned from the class**
   iv. **Uncertainty analysis was new and interesting**
   v. **Pipe flow was a good topic**
   vi. **Learned how to compare simulated data with the actual data**
   vii. **Learned about the difference between laminar and turbulent flow**
   viii. **Learned about CFD's accuracy and usefulness**
   ix. **It was a good experience to do hands-on part**

b. **Negative**
   i. **Required materials are located at the end of the manual**
   ii. **Statements in the exercise are not clear**

3. Student's Suggestions

a. **Working on a more complex geometry like bended pipe, 3D pipe would be interesting**
b. **Comparing with 2D channel flow would be interesting**
c. **More detailed explanation is required for some of the steps like V&V**
d. **Explanation is needed on why k-epsilon is chosen as a turbulent model**