REPORT OF CFD LAB 2

	Number of Students
Total	41
Submitted	41
Not Submitted	0



GRADE DISTRIBUTION

COMPARISON WITH PREVIOUS YEARS





COMPARISON OF CFD LAB (FALL 2015)



1) Common Mistakes

- CFD Process
 - Many students didn't mention about the boundary conditions. Description for at least two boundary conditions was needed to get the full credit for this report. However, describing all the boundary conditions is recommended.
- EFD & CFD error source
 - Many students mentioned about possible error source for either one of the methods. At least one error source was required for each to get full credit.
 - Many students didn't mention about the numerical and modelling error. Simply mentioning human error couldn't get the full credit.
- V&V
 - Few students did not refer to 'P' when they check if the scheme is close to asymptotic range.
- C_L convergence
 - \circ Few students picked the last iteration as a minimum iteration required to produce constant C_L .

2) Feedback

- Positive
 - Students knew how to verify or validate the CFD results against EFD's.
 - Students could see the details of the flow fields near the airfoil.
 - Students could study the effect of angle of attack on drag and lift.
 - Students found out that the effect of domain size, grid resolution and discretization scheme are not negligible.
 - ANSYS's GUI was useful for the parametric study.
- Negative
 - Several students had hard times finding the source of the problems when their results were not in good shapes.

3) Student Suggestions

- A couple of students still think more background knowledge about ANSYS program is needed.
- Many students know the concept of V&V. However, they needed more guidelines to understand about each parameter used in the V&V procedure.