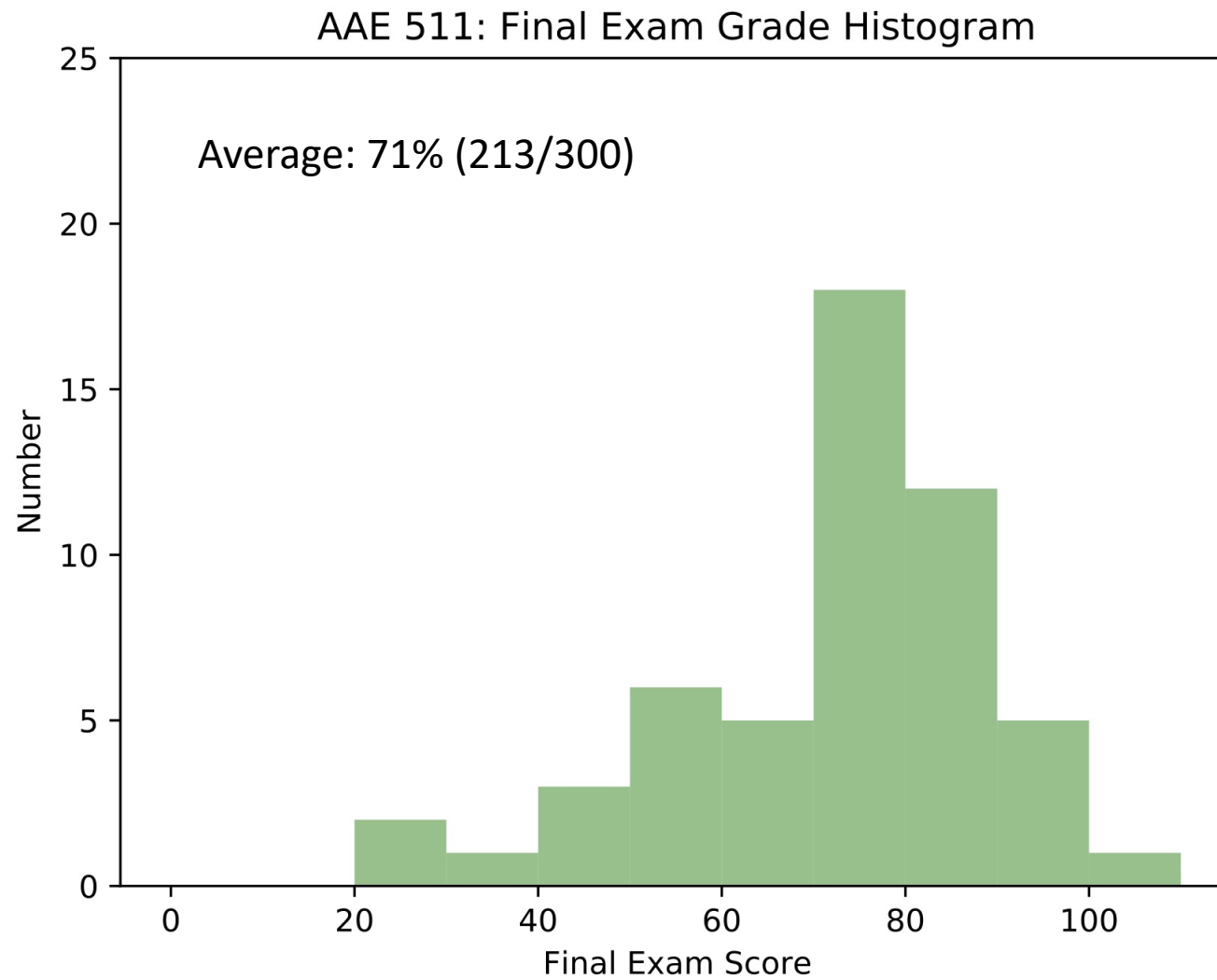


AAE 511

Introduction to Fluid Mechanics

Fall 2021

Final Exam Results



Problem 1

- Average: 81%
- Common errors:
 - Failure to exactly follow instructions
 - Sign error
 - Did not substitute potential gradient for all velocities
 - Index mismatches
 - Cascading errors from using three or more repeated indices
 - Did not name Laplace equation

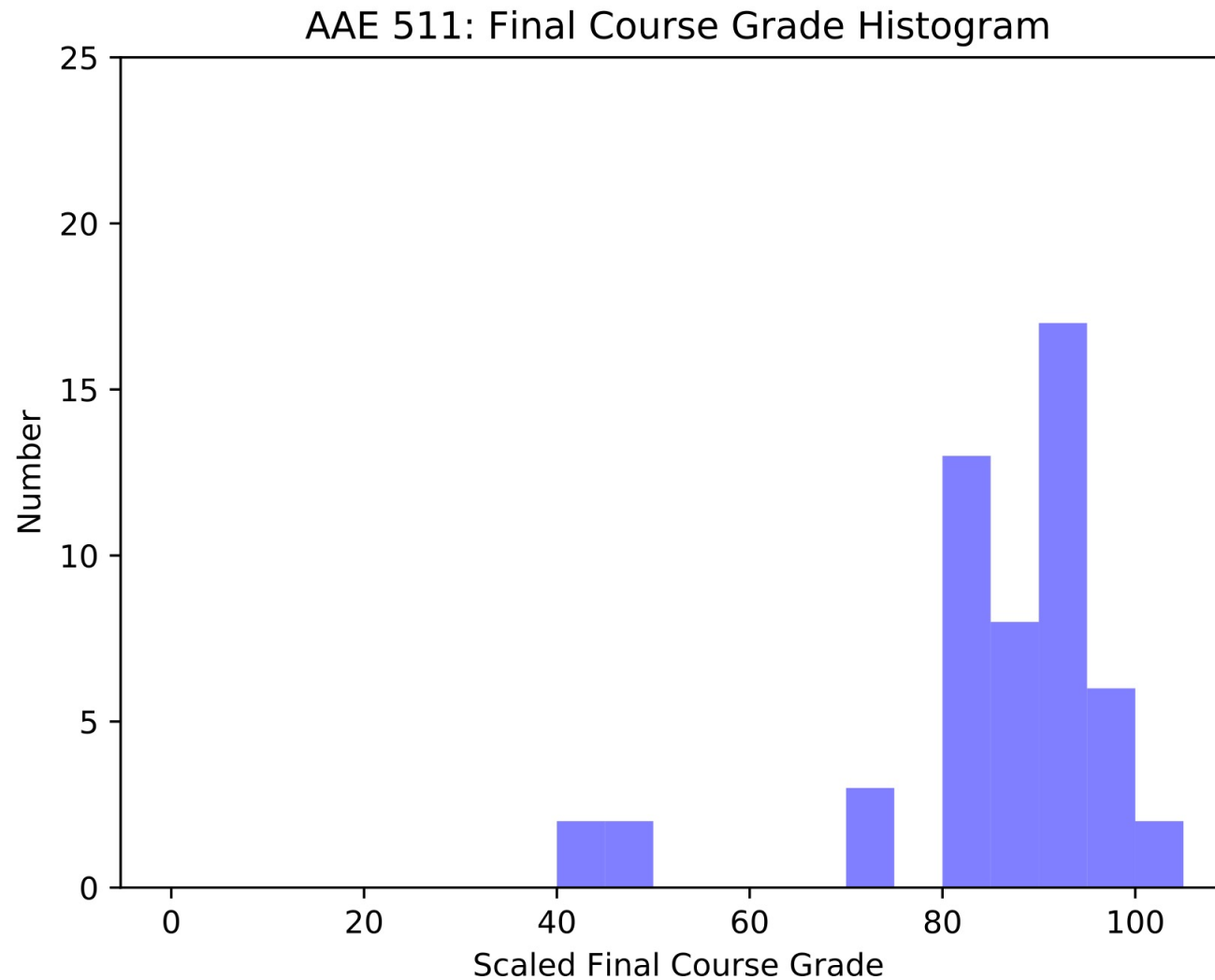
Problem 2

- Average: 63%
- Common errors
 - Failure to exactly follow instructions
 - Confusion of c and a
 - Did not mention circulation
 - Found stagnation point in ζ plane, but not z plane
 - Missed stagnation points entirely
 - Integrated $1/\zeta$ instead of differentiating
 - Dealt with mapping incorrectly

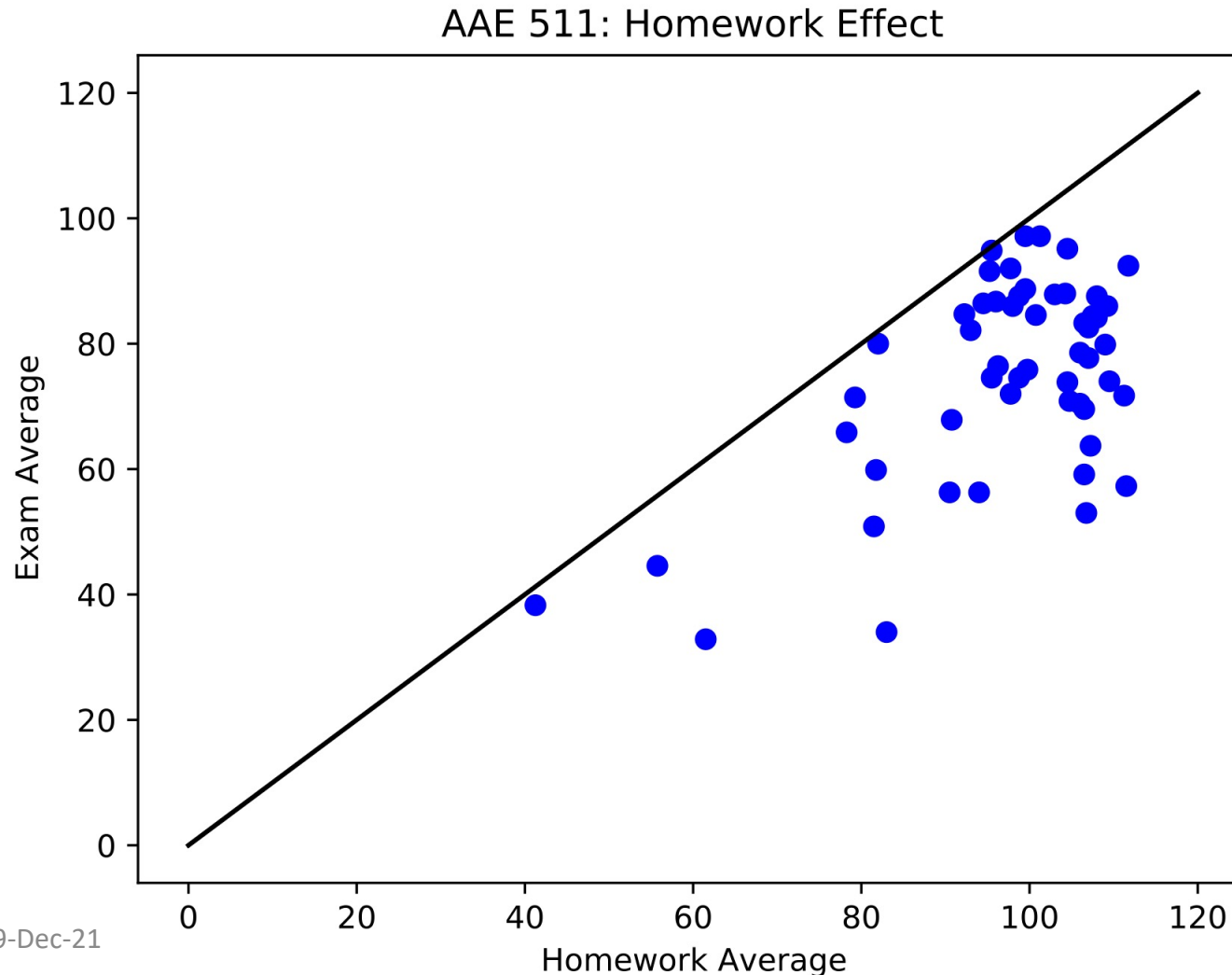
Problem 3

- Average: 69%
- Common errors:
 - Failure to exactly follow instructions
 - Found simplified partial differential equations but nothing else
 - Incorrect boundary conditions
 - Failed to find two roots, $m = +1$ and $m = -1$
 - Failed to correctly find velocity field

Final, Scaled Course Grade



Effect of Doing the Homework



- Homework score was allowed to exceed 100%
- Some did well on the homework, but poorly on the exams
- No one did poorly on the homework, but well on the exams