

# HW 13 – Report

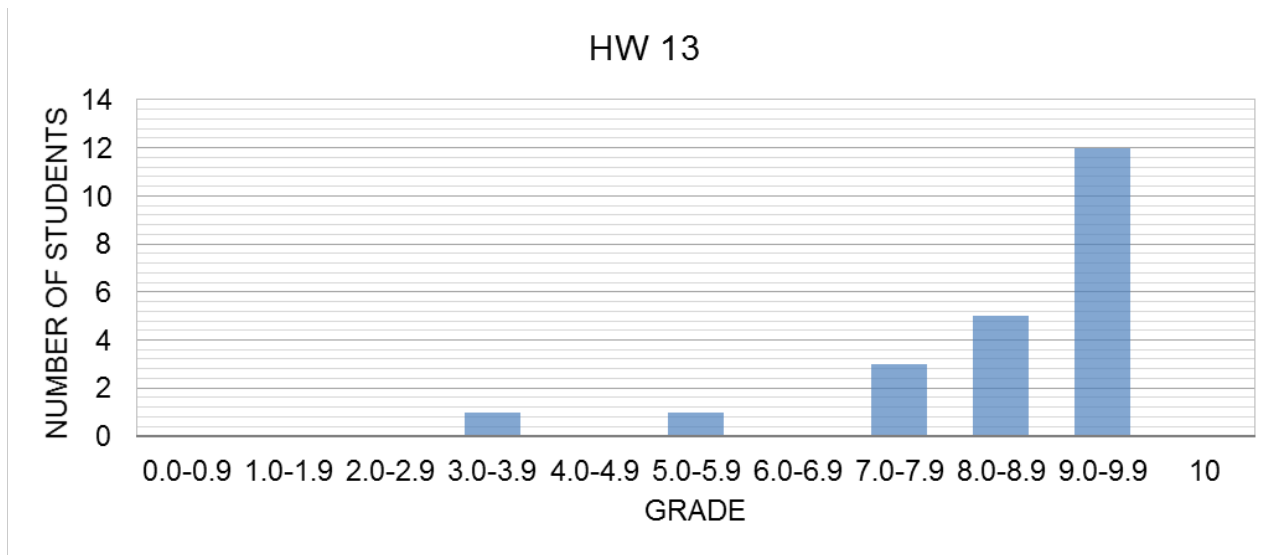
## General

|   |       |
|---|-------|
| Total number of students                          | 23    |
| Number of submitted HW                            | 22    |
| Number of not submitted HW                        | 1     |
| Number of problems                                | 6+1   |
| Average grade (without bonus for undergrads)      | 82.99 |
| Standard deviation of grades                      | 15.36 |
| <b>Including bonus for undergraduate students</b> |       |
| Average grade                                     | 89.73 |
| Standard deviation of grades                      | 19.93 |

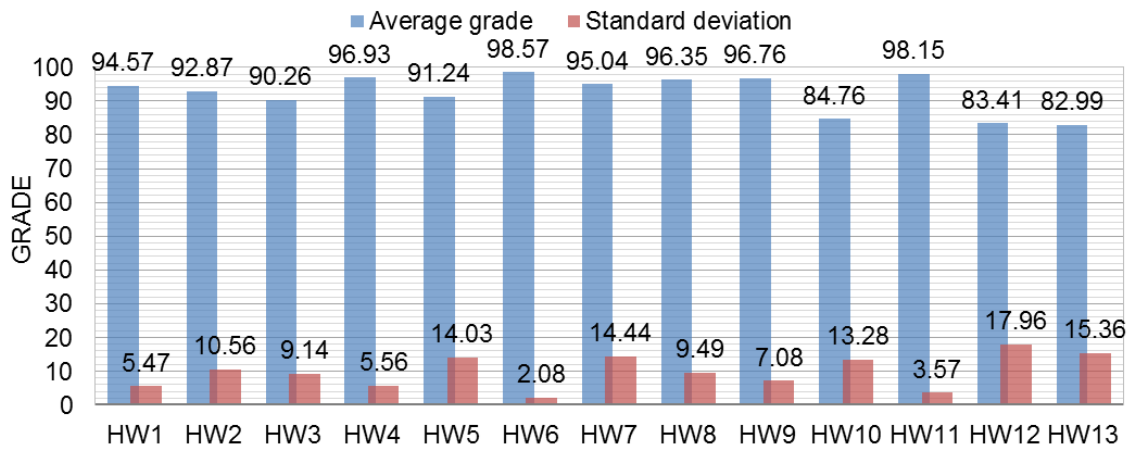
## Individual problem breakdown

| Problem                      | P8.15 | P8.26 | P8.40 | P8.45 | P8.54 | P8.73 | C8.7 |
|------------------------------|-------|-------|-------|-------|-------|-------|------|
| Average grade                | 9.68  | 9.91  | 9.50  | 7.40  | 9.23  | 7.14  | 9.88 |
| Standard deviation of grades | 1.09  | 0.29  | 0.95  | 2.05  | 1.34  | 2.12  | 0.31 |

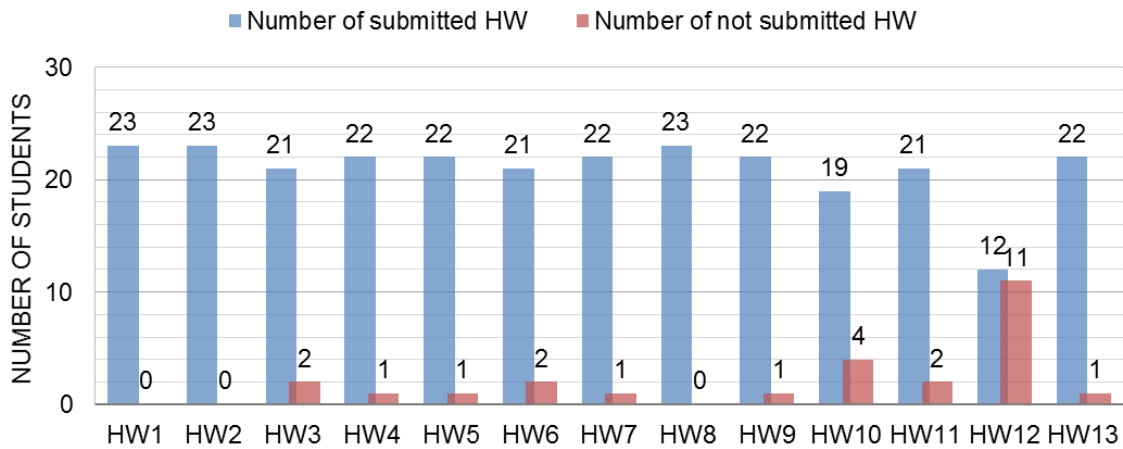
## Grade distribution



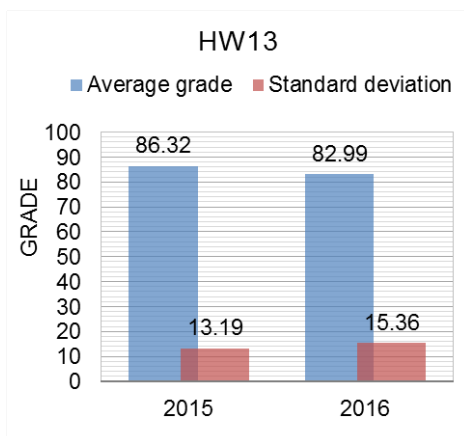
## Grade history



## Submission history



## Comparison with last year



## Comments

- Some students did not solve the system of non-linear equations (by iteration) to find the thickness of the Rankine oval in P8.40.
- Many students did not calculate the free stream velocity in order to identify  $K$  in P8.45; instead, they assumed it equal to 6 m/s.
- Few students did not attempt to estimate the power in P8.54.
- Many students found the wrong solution in P8.73; often, calculation steps were not shown, making difficult assessing where the mistake was made.
- 50% of undergraduate students who submitted the assignment solved the comprehensive problem C8.7; almost all who attempted could solve the problem correctly.