## HW 2 - Report

## General

| Total number of students | 42 |
| :--- | :--- |
| Number of submitted HW | 41 |
| Number of not submitted HW | 1 |
| Number of problems | $7+1$ |
| Average grade (w/o bonus) | 97.64 |
| Standard deviation of grades | 4.02 |
| Undergraduate (wl bonus) |  |
| Average grade | 106.7 |
| Standard deviation of grades | 8.56 |
| Graduate |  |
| Average grade | 97.25 |
| Standard deviation of grades | 3.02 |

Individual problem breakdown

| Problem | 1.41 | 1.70 | 1.73 | 1.75 | 2.44 | 2.64 | 2.87 | C1.4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Average grade | 9.95 | 9.73 | 9.76 | 9.94 | 9.54 | 9.67 | 9.76 | $8.95^{*}$ |
| Standard deviation of grades | 0.19 | 0.67 | 0.62 | 0.32 | 0.67 | 1.42 | 1.56 | $1.85^{*}$ |

*Based on the number of students who attempted to solve the problem

## Grade distribution



## Comments

- Some students did not answer which type of pressure drop is measured by the manometer (P2.44).
- Some students did not multiply the shear stress (F/L2) by the area in order to find the shear force (F). They used the shear stress as a force (P1.41 and C1.4).
- Some students used directly the Navier-stokes equation to find the viscosity instead of a force balance between weight of fluid and shear force (C1.4).
- $72 \%$ of the undergraduate students attempted to solve the comprehensive problem, generally with good results.

