

## Course-specific competences

Course code: TKV18HV01

Course name: Hydromechanics and Thermal Physics

### Competences                      Criteria for Assessment

	1	3	5
Experimental	Can carry out measurements according to instructions and correctly note measurements.	Can plan measurements to achieve a representative spread in values. Can take notes on measured data in a systematic way.	Can carry out measurements in an efficient and systematic way. Can plan measurements and take corrective measures to achieve results of high accuracy.
Uncertainty analysis	Can assess the uncertainty of a measured value. Can calculate uncertainty progression.	Can calculate uncertainty by regression analysis. Can assess the relative impact from the uncertainty of measured variables on the uncertainty of the final result.	Can do uncertainty calculations using linearization of physical relationships.
Presentational	Can write a report that includes all essential structural elements and present results understandably.	Can write a report with essentially correct formalism as regards units, denotations, rounding, table structure and graphical presentation.	Can write a report that is balanced, economic and virtually free from formal errors. Can present data and analysis in a systematic and easy-to-grasp way.
Hydromechanics	Can calculate hydrostatic pressure. Can use the continuity principle. Can, for pipe flow, determine the type of flow.	Can calculate forces on a body in a fluid at rest or in relative motion.	Can do calculation on bodies falling through a fluid.
Thermal physics	Understands the meaning of central quantities and concepts in thermal physics. Can do simple calculations on thermal expansion, gas laws, heat capacity, and heat transfer.	Can do calorimetric calculations. Can apply the ideal gas law to closed systems. Can calculate heat transfer through a plane wall.	Can do calorimetric calculations involving phase change. Can apply the ideal gas law on open systems.

Made by:

Checked by:

Approved by:

Valid in curriculum

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