



Hochschule Osnabrück
University of Applied Sciences

Measurement and Quality

Modul 11M0675 (Version 3.0) vom 29.09.2015

Module number

11M0675

Level

4

Mission statement

High quality products are necessary for the marketability of products. Metrology is the information acquisition for the Quality assurance. To assure a high quality production it is necessary to measure the input quality of the materials, to monitor the whole production process and to measure or check the output quality of the products. Therefore, to produce high quality products, knowledge about metrology, measurement and instrumentation is necessary.

Course content

Knowledge about metrology, static and dynamic characteristics of measurement devices, knowledge about errors and uncertainties, random and systematic errors, computer aided separation of random and systematic errors, statistical description of errors, error propagation, evaluation and presentation of series of measurements, computer aided calibration, optimisation of calibration with the aim to reduce the number of standards by equal quality of the results. Selected examples from the fields: mechanical and geometrical quantities, temperature, flow rate, filling level, density, humidity, analysis technologies e.g.

Learning outcomes / skills

The students should be able to use the knowledge about metrology, measurement and Instrumentation to assure the production of high quality products or materials.