

Teaching Measurement Systems Analysis to Engineers Using R

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Measurement Systems Analysis is an important aspect within the statistical education of engineers. While classical design of experiments (DoE) is dealt with in statistical courses for engineers, more specific designs and their analysis to identify the components of variation of measurement systems are rarely discussed. These Gage Repeatability & Reproducibility studies as well as procedures relating to terms such as Bias, Linearity and Gage Capability are subject of national and international standards and obligatory within but not restricted to automotive industry.

Methods utilizing the comprehensive **qualityTools** package, summaries and graphs as well as an example for teaching Measurement Systems Analysis to engineers as part of an obligatory statistics course for engineers are illustrated. The conceptual design of the methods and the relation to national and international standards are presented.

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