



Engine Testing	
Course Number	5638
Hours per week:	2
ECTS:	2
Scheduled:	Winter Term
Format:	Lecture including some exercises on engine test bench if possible
Examination:	Written exam
Lecturer:	Prof. Dr.-Ing. Kai Borgeest
Objectives:	knowing and understanding how to use engine test benches and measurement equipment to test and improve internal combustion engines and hybrid drives
Contents:	Basic Principles of internal combustion engines Overview of engine test benches Brakes and dynos Speed and torque measurement Exhaust gas analysis Measurement of Pressures and Temperatures NVH testing Hybrid testing Test bench automation Design of Experiments Data evaluation Test bench buildings
Pre-requisites:	Engineering Fundamentals
Recommended Reading:	A.J. Martyr, M.A. Plint: "Engine Testing", Butterworth-Heinemann, 2007, ISBN 978-0750684392 K. Borgeest: "Messtechnik und Prüfstände für Verbrennungsmotoren", 2016, ISBN 978-3-658-10117-6