**Course title**  
Machine Components 2

**Department**  
09 Engineering and Management

**Course objective**  
By the end of the course students will:
- Know advantages and disadvantages of different assembly components.
- Know the structural boundary conditions of the different assembly.
- Are capable to recognise the basic mechanical mode of operation from technical drawings und can derive the mechanical model.
- Are capable to calculate and design different machine components by means of simple formulae.

**Prerequisites**  
Basis knowledge and fundamentals in mathematics and physics

**Recommended reading**  
- Lecture notes (script)

**Teaching methods**

**Assessment methods**  
Written Exam

**Language of instruction**  
English

**Name of lecturer**  
Prof. Dr.-Ing. Eckhard Hoffmann

**Email**  
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**Course content**  
- Features of simple and detachable elements such as springs.
- Features of complex elementary components such as bearings (ball-bearings, roller-bearings, etc.), gears (spur-, bevel-gears, etc.), gearboxes, couplings, brakes, etc.
- Methods of calculation for the different simple and complex elementary components.
- Methods of calculation for secure incorporation of those components, such as vibration, Hertz-pressure, etc.

**Remarks**  
Presence time for lectures and exercises: 30 hours  
Self-studies preparation of lectures and exam: 90 hours