



Hochschule RheinMain

Summer School August 12 to 25, 2017

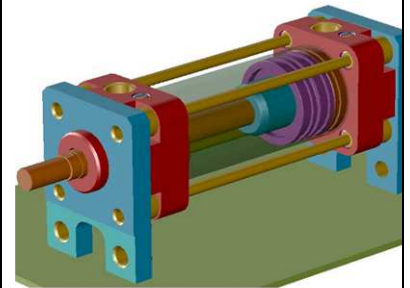
Digitizing – Process Chain for Reverse Engineering

Faculty of Engineering, Rüsselsheim

Scientific Programme:

Lectures and two real hands-on laboratory courses realizing individual projects in collaborative work:

- Digitizing by Optical Scanning of Free Form Objects; Data Clean-up; Inspection (5 days)
- Reverse Engineering: Introduction in 3D CAD; Creation of 3D-Models from Scanning Data (Mesh-Files) and 3D-Printing (5 days)
- Excursions to companies using the technologies
- German language course

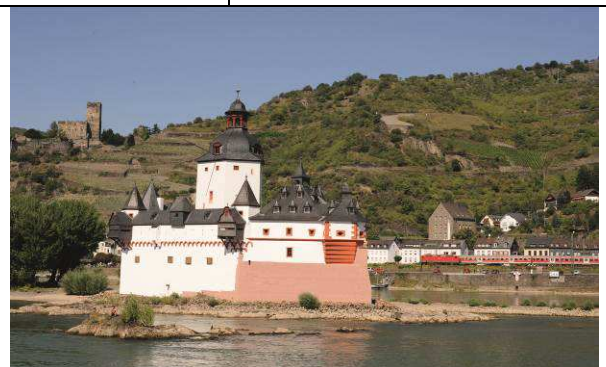


Requirements: General Engineering Knowledge

◆ **Language:** English ◆ **Value:** 3 Credit Points

Cultural Programme:

- Boat trip on the Rhine
- Visit to the big cities in the RheinMain area (Wiesbaden, Mainz, Frankfurt)
- Excursions to companies and tourist attractions
- Meet students from other countries



Costs: 750 € (lectures, labs, excursions, accommodation)

Registration until May 15, 2017

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**See you in
Rhein-Main!**

Digitizing - Process Chain for Reverse Engineering

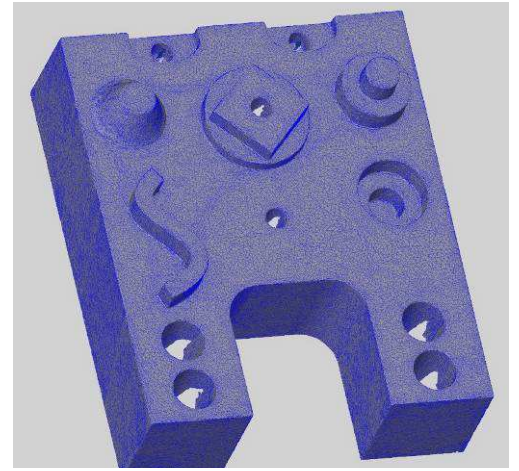
What is Reverse Engineering?

It means not to begin with a sketch but with an object i.g. in clay. This design object is first digitized with an optical scanner, a point cloud arises. From this scanning data it is possible to create a 3D-model with special CAD-software and reproduce it by rapid prototyping (3D-Printing).

Why Reverse Engineering?

Designing complex products is mostly an iterative process until every part fits and is optimized. Several steps of changes are typical. A prototype helps to avoid failure but is expensive and takes time.

Digitizing can thus help accelerate the product design process as well as optimize the production process and improve the product quality.

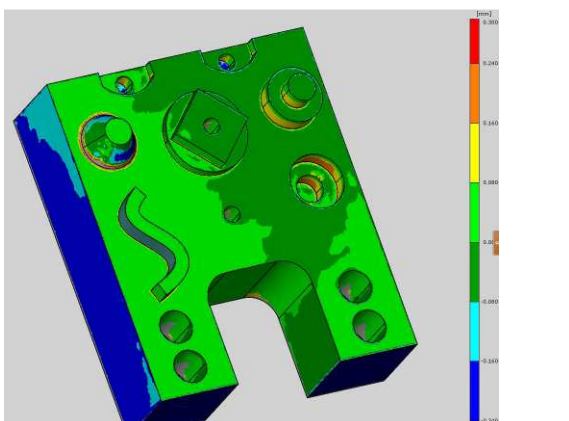
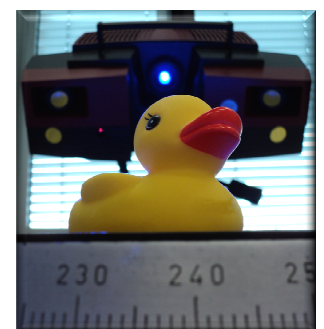
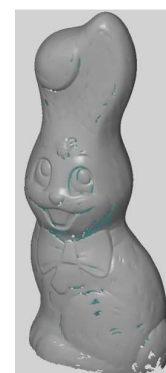


Students will work in teams to experience the process chain of Reverse Engineering by hands on.



Two optical scanners are available in the labs as well as a 3D-printing machine.

If you like:
Bring your own free form object!



Several well-equipped computer-labs provide software for 3D-modelling and data-clean-up and preparation of point clouds and mesh-files.



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