

Elective module “CNC Machine Tools”

Lecturers	Professor Dr. Hans-Reiner Ludwig Professor Dr. Thomas Rollmann
Module Components	3 weekly hours* lecture on Machine Tools 1 weekly hour* on Investment Appraisal ½ weekly hour* laboratory (acceptance of machine tools)
Preliminary Examination	Laboratory exercises with written assignment, processing time 6 hours
Module Examination	Written examination (90 minutes)
Further Information	none

**Equivalent hours, please watch the semester schedule of the module*

Keep in mind to register for every preliminary and module examination on the HIS-platform within the published time frame.

Winter term 2021/2021: preliminary examinations: latest registration October 21st

Short Outline of elective module contents

CNC Machine Tools are the backbone of any industrial production.

Lecture: Answer those questions:

- Which are the most common types of CNC Machine Tools?
- What about the design principles of CNC Machine Tools?
- Stiffness, dynamics, thermal stability, guidance systems, bearings, drives, instrumentation, numerical control (NC) and automation?

Laboratory practice: Learn methods, how to verify the properties of Machine Tools.

Investment Appraisal: How will you convince your enterprise, to spend up to **€ 1.000.000** for a CNC Machine Tool?



*Example:
Index Traub MS 22 multi-spindle machine*