

Course number: SET 10820 (lecture) SET 10821 (lab) Physics Study Level: Bachelor /

Prof. Dr. Bernd Jödicke Language of Instruction: English ECTS Credits: 5

Undergraduate

Subject-specific competencies:

- The students are familiar with dimensional analysis.
- _ They can set up experiments.
- They can evaluate measurements. _
- They can apply laws of conservation, be it momentum, energy, angular momantum, money, charge oder people by applying balancing equations.

Methodological competencies:

- The students are familiar with important methods of physics.
- They can apply these methods for engineering problems.
- They use units and dimensions.
- They can quickly perform rough calculations without computers, even over large ranges of values.

Personal competencies:

- All methods and contets mentioned above help in engineering courses.

Teaching content:

- Scientific methods of work
- Physical quantities, unit and dimensions
- Computing without computers
- DiagramsPhysics modeling for solving problems
- Measurement and evaluation including student excperiments in laboratory
- Laws of conservation and balancing momentum transfer, charge, angular momentum and more
- Enerav
- Equation of motion