

1.1.2 Relation to Other Courses

- ▶ The graduate course "Semiconductors" interacts with several other courses in the materials science curriculum. A certain amount of overlap is unavoidable.
- ▶ Of course, "semiconductors" relates to the truly basic courses in materials science, like *thermodynamics*, *analytics*, or *solid state physics* (all of which are required for all students) - it simply relies on the stuff covered there.
 - Below is a list of courses that are electives (at least for some), but have some relation to "Semiconductors".
- ▶ **Electronic Materials** (Werkstoffe der Elektrotechnik und Sensorik I; Prof. Föll) or its successor **Advanced Materials B..**
 - Required for Masters students.
 - Focuses on a short introduction to Silicon technology and materials but covers mainly dielectric and magnetic materials.
- ▶ **Si Technology I + II** (Prof. Wagner)
 - Elective for Master students.
 - Covers **Si** and **Si** technology (with emphasize on **MEMS**), which is not included in this course.
- ▶ **Quantum Theory for Materials Scientists** (Dr. Carstensen)
 - Elective for all students
 - A *must* if you really want to understand semiconductors
- ▶ **Thin Solid films I** (Various lecturers)
 - Elective for Masters students
 - Perfectly complements the technological part of "Semiconductors".
- ▶ **Defects in Crystals** (Prof. Föll)
 - Elective for all students
 - Most semiconductors except **Si** are plagued by crystal defects, so some basic knowledge of crystal lattice defects is helpful but not really necessary.