

Faculty of Electrical and Computer Engineering Institute of Solid State Electronics (IFE)
Chair of Deposition Technologies for Electronics

Course notification

Module Plasma Technology, 7 ECTS **Fundamentals, processes, and applications in** **sensors, optics, and electronics**

In Winter semester 2026/2027

Lectures on **Thursdays 4.+5. DS (13:00-16:20)** at **BAR/0E85/U**

Seminars on **Fridays 5. DS (14:50-16:20)** at **BAR/0E85/U**



Course page in OPAL

The lecture is aimed at students of electrical engineering, mechanical engineering, physics, material science, chemistry, and other technical programs.



Course content:

1. Fundamentals
Basics of vacuum technology, physics of low-pressure plasmas and plasma generation, ion-surface interactions, growth of thin films, sputtering, and plasma chemistry
2. Technology and processes
Industrial plasma sources (diode and magnetron sputtering, hollow cathodes, microwaves), industrial plasma processes (reactive and pulsed magnetron sputtering, plasma assisted evaporation, PECVD), design of deposition systems and plasma generation technologies and diagnostics
3. Applications
Surface coatings in electronics, optics, piezoelectric, displays, solar, packaging, and tools; Coatings of different substrates like glass, metal, silicon, plastics, and flexible foils; Surface treatment of organic and inorganic substrates
4. Guest lecture from **Infineon Technologies Dresden**
5. Practical demonstration: Visit of **Fraunhofer FEP** laboratories

Course language: English

Course responsible: Prof. Elizabeth von Hauff, Dr. Agnė Žukauskaitė (IFE)

Lectures by: Prof. E. von Hauff, Dr. A. Žukauskaitė, Dr. S. Saager, Dr. G. Gotzmann, F.H. Rögner, Dr. S. Cornelius, Dipl.-Ing. R. Labitzke & Guest lecturer from Infineon