

Technical and soft skill courses, which will be of use for the respective IRTG student, will be determined as part of the Education&Supervision Plan (ESP) and will be coordinated by the IRTG secretary. As a general guideline, every student will have to participate in **two technical** courses and **two soft skill** offers during the three year program.

1. Technical courses

During the three year program, IRTG fellows have to participate in technical courses, which cover techniques which are not directly encountered during their practical thesis work. Every project leader should be prepared to offer at least one technical course per year.

2. Soft skills courses

Courses in soft skills will be offered by the “Zentrum für Promovierende an der Universität Osnabrück” (ZePrOS), which offers a broad course program including language courses, courses in oral and written presentations, and career development courses.

Technical courses

Ungermann (Biochemistry):

- In vitro analysis of curvature-dependent association with liposomes
- Purification and analysis of large protein complexes
- Determination of nucleotide exchange activity of small GTPases
- In vitro protein-protein interaction using GST pull-down
- Organelle purification and In vitro fusion of yeast vacuoles

Scheibe (Plant Physiology):

- Protein purification
- Enzyme assays
- Blue native gel electrophoresis
- Immunoelectrophoresis

Brandt (Neurobiology):

- Live cell imaging of mammalian cells
- Theory and practice of 2P-microscopy
- Genotyping of transgenic mice

Hensel (Microbiology):

- microscopy techniques for live cell imaging, especially spinning disk, wide-field microscopy, TIRF, FRAP
- Mikromanipulation
- Development of live cell experiments and optimization
- Analysis and illustration of live cell imaging in 3D und 4D

Piehler (Biophysics):

- Multi-parameter solid phase detection for probing biomolecular interactions
- Single molecule imaging and tracking
- Fluorescence correlation spectroscopy
- Biofunctionalization of surfaces and nanoparticles

Wieczorek (Animal Physiology):

- Use of radioisotopes in Biology

Zachgo (Botany):

- Whole-Mount-Expressionsanalyse