



Practical Research Course / Engineering Project at the Chair of Aerospace Structure Design:

Advanced Object-Oriented Python Programming

At the Chair of Aerospace Structure Design several programming interfaces are currently under development. These interfaces are implemented in Python and represent toolchains used for structural analysis, FE simulations, as well as organisational and administrative tasks in research and teaching.

One or more students with solid Python experience are sought to support further code development as part of a student project.

The project work will include:

- Familiarisation with the existing code architecture and requirements
- Development of concepts for new procedures
- Research and selection of sufficient open-source packages
- Independent coordination of programming tasks
- Close communication with all persons involved and the chair
- Maintenance of the respective repositories
- Careful documentation of code functionality
- Presentation of the final approach

Start: December 2025

Duration: 4-6 months

Scope of work: Project course, e.g.

- M.Sc.Aerospace/M.Sc.Maschinenwesen: [LRG0003]/[ED100042] *Practical Research Course*
or [LRG0004]/[ED100041] *Team Project*
- B.Sc.Aerospace: [LRG0202] *Engineering Project*

Working hours: flexible, with weekly meetings

Location: Campus Ottobrunn and remote

Requirements:

- strong interest in programming
- willingness to work and communicate in a team
- solid experience in object-oriented Python programming
- experience with the version control system Git
- high motivation to deepen knowledge in relevant topics

Beneficial experience:

- FEM simulation
 - Structural mechanics
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Applications may be sent to niklas.moser@tum.de as long as the position is announced on the chair's webpage.